**California Independent System Operator Corporation**

**Fifth Replacement FERC Electric Tariff**

**(Open Access Transmission Tariff)**

**Effective as of Aug 5, 2026**

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# 1. Definitions and Interpretation

## 1.1 General Provisions of Article I Applicable To CAISO Tariff

## 1.2 Definitions

Capitalized terms used in this CAISO Tariff shall have the meanings set out in the Master Definitions Supplement set out in Appendix A unless otherwise stated or the context otherwise requires. If two or more capitalized terms are used together in a manner not uniquely defined in Appendix A to this CAISO Tariff, the meanings of each defined term apply.

## 1.3 Rules Of Interpretation

### 1.3.1 "Includes" Means "Including Without Limitation"

In this CAISO Tariff "includes" or "including" shall mean "including without limitation".

### 1.3.2 Specific Rules Of Interpretation Subject to Context

(a) the singular shall include the plural and vice versa;

(b) references to a Section or Appendix shall mean a section or appendix of this CAISO Tariff;

(c) references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(d) any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case, whether or not having separate legal personality;

(e) any reference to a day, month, week or year is to a calendar day, month, week or year;

(f) if the provisions of a CAISO Protocol and a section of the CAISO Tariff conflict, the provisions of the CAISO Tariff will prevail to the extent of the inconsistency;

(g) a reference to this CAISO Tariff or to a given agreement, or instrument shall be a reference to this CAISO Tariff or to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(h) if the provisions of this CAISO Tariff and those of an existing contract conflict, with respect to Outage coordination, the existing contract will prevail to the extent of the inconsistency;

(i) time references are references to prevailing Pacific time;

(j) the Operating Procedures or Business Practice Manuals referenced in this CAISO Tariff, as may be amended from time to time, shall be posted on the CAISO Website, except as provided in Section 22.11, and such references in this CAISO Tariff shall be to the Operating Procedures or Business Practice Manuals then posted on the CAISO Website;

(k) if the provisions of an Operating Procedure or a Business Practice Manual and this CAISO Tariff conflict, the CAISO Tariff will prevail to the extent of the inconsistency;

(l) any reference to a day or Trading Day, week, month or year is a reference to a calendar day, week, month or year except that a reference to a Business Day shall have the meaning set forth in Appendix A; and

(m) the captions and headings in this CAISO Tariff are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the rates, terms, and conditions of this CAISO Tariff.

## 2. Access to the CAISO Controlled Grid

### 2.1 Open Access

The CAISO shall, subject to Sections 2.2 and 3, provide to all Eligible Customers open and non-discriminatory access to the CAISO Controlled Grid regardless of the locations of their connections to the CAISO Controlled Grid in accordance with the terms of this CAISO Tariff including, in particular, the procedures for bidding and scheduling and Congestion Management. Energy and Ancillary Services may be transmitted for an Eligible Customer into, out of or through the CAISO Controlled Grid only through the submission of Bids or Self-Schedules by a Scheduling Coordinator. A Scheduling Coordinator must ensure that each Eligible Customer which it represents has all appropriate licenses or authorizations from the Local Regulatory Authority, FERC or any other regulatory body.

### 2.2 Customer Eligibility for Direct Access or Wholesale Sales

The eligibility of an End-Use Customer to be treated as a Direct Access End-User will be determined in accordance with the eligibility and phase-in procedures (if any) adopted by the Local Regulatory Authority. Any dispute as to whether an End-Use Customer meets the eligibility criteria must be resolved by the Local Regulatory Authority prior to the CAISO treating that End-Use Customer as a Direct Access End-User. A Wholesale Customer shall not be entitled to participate in Wholesale Sales through a Scheduling Coordinator if it is not entitled to wholesale transmission service pursuant to the provisions of FPA Section 212(h).

## 3. Local Furnishing, Other Tax Exempt Bond Facility Financing

This Section 3 applies only to transmission facilities which are under the Operational Control of the CAISO and are owned by a Local Furnishing Participating TO or other Tax Exempt Participating TO. Nothing in this CAISO Tariff or the TCA shall compel (and the CAISO is not authorized to request) any Local Furnishing Participating TO or other Tax Exempt Participating TO to violate: (1) restrictions applicable to facilities which are part of a system that was financed in whole or part with Local Furnishing Bonds or other Tax Exempt Debt or (2) the contractual restrictions and covenants regarding the use of any transmission facilities specified in Appendix B to the TCA.

Each Local Furnishing Participating TO and other Tax Exempt Participating TO shall cooperate with and provide all necessary assistance to the CAISO in developing a CAISO Protocol to meet the objectives of the first paragraph of this Section 3 and shall keep the CAISO fully informed of any changes necessary to that CAISO Protocol from time to time.

The CAISO shall implement the CAISO Protocol referred to in this Section 3 provided that the Local Furnishing Participating TOs and other Tax Exempt Participating TOs shall bear sole responsibility for the development of that CAISO Protocol including the interpretation of all relevant legislation and the tax and other financial consequences of its implementation.

# 4. Roles and Responsibilities

## 4.1 [Not Used]

## 4.2 Market Participant Responsibilities

### 4.2.1 Comply with Dispatch Instructions and Operating Instructions

With respect to this Section 4.2, all Market Participants, including Scheduling Coordinators, Utility Distribution Companies, Participating Transmission Owners, Participating Generators, Participating Loads, Demand Response Providers, Distributed Energy Resource Providers, Balancing Authorities (to the extent the agreement between the Balancing Authority and the CAISO so provides), and MSS Operators within the CAISO Balancing Authority Area and all System Resources shall comply fully and promptly with the Dispatch Instructions and Operating Instructions, unless such compliance (1) would impair public health or safety; (2) is otherwise exempted pursuant to Section 34.13.1; or (3) it is physically impossible for the Market Participant to perform in compliance with the Dispatch Instruction or Operating Instruction. Shedding Load for a System Emergency does not constitute impairment to public health or safety. The Market Participant shall immediately notify the CAISO of its inability to perform in compliance with the Operating Instruction.

### 4.2.2 Implementation of Instructions

All Market Participants shall respond to CAISO instructions with no more delay than specified in the response times set out in the CAISO Tariff, Operating Procedures and Business Practice Manuals.

## 4.3 Relationship between CAISO and Participating TOs

### 4.3.1 Nature of Relationship

Each Participating TO shall enter into the Transmission Control Agreement with the CAISO. In addition to converting Existing Rights in accordance with Section 16.1.4, and except as provided in Section 4.3.1.3, New Participating TOs will be required to turn over Operational Control of all facilities and Entitlements that: (1) satisfy the FERC's functional criteria for determining transmission facilities that should be placed under CAISO Operational Control; (2) satisfy the criteria adopted by the CAISO Governing Board identifying transmission facilities for which the CAISO should assume Operational Control; and (3) are the subject of mutual agreement between the CAISO and the Participating TOs. The CAISO shall notify Market Participants when an application has been received from a potential Participating TO and shall

notify Market Participants that a New Participating TO has executed the Transmission Control Agreement and the date on which the CAISO will have Operational Control of the transmission facilities.

**4.3.1.1** In any year, a Participating TO applicant must declare its intent in writing to the CAISO to become a New Participating TO by January 1 or July 1, and provide the CAISO with an application within fifteen (15) days of such notice of intent. Neither the written declaration of intent nor the application requirement applies to Approved Project Sponsors. Applicable agreements will be negotiated and filed with the Federal Energy Regulatory Commission as soon as possible for the New Participating TO, such that the agreements can be effective the following July 1 or January 1 or, for Participating TOs that are Approved Project Sponsors, upon energization of the transmission facilities that are subject to an Approved Project Sponsor Agreement made effective in accordance with its terms.

**4.3.1.2** With respect to its submission of Bids, including Self-Schedules, to the CAISO, a New Participating TO shall become a Scheduling Coordinator or obtain the services of a Scheduling Coordinator that has been certified in accordance with Section 4.5.1, which Scheduling Coordinator shall not be the entity's Responsible Participating TO in accordance with the Responsible Participating Transmission Owner Agreement, unless mutually agreed, and shall operate in accordance with the CAISO Tariff and applicable agreements.

The New Participating TO shall assume responsibility for paying all Scheduling Coordinators' charges regardless of whether the New Participating TO elects to become a Scheduling Coordinator or obtains the services of a Scheduling Coordinator.

For the period between the effective date of this provision and ending December 31, 2010, the TAC Transition Date pursuant to Section 4.2 of Appendix F, Schedule 3, New Participating TOs that have joined the CAISO and turned over Operational Control of their facilities and Entitlements shall receive the IFM Congestion Credit in accordance with Section 11.2.1.5, which IFM Congestion Credit shall only be applicable to those facilities and Entitlements in existence on the effective date of the CAISO's initial assumption of Operational Control over the facilities and Entitlements of a New Participating TO.

**4.3.1.2.1** New Participating TOs shall complete TRTC Instructions for their Converted Rights as provided in Section 16.4.5. To the extent such Converted Rights derive from ETCs with Original Participating TOs, the New Participating TOs and the appropriate Original Participating TO shall develop the TRTC

Instructions together.

**4.3.1.2.2** Subscriber Participating TOs must complete TRTC Instructions for their Subscriber Rights as provided in Section 16.4.5.

**4.3.1.3 CAISO Relationship with Specific Participating TOs**

(a) **Western Path 15.** Western Path 15 shall be required to turn over to CAISO Operational Control only its rights and interests in the Path 15 Upgrade and shall not be required to turn over to CAISO Operational Control Central Valley Project transmission facilities, Pacific AC Intertie transmission facilities, California-Oregon Transmission Project facilities, or any other new transmission facilities or Entitlements not related to the Path 15 Upgrade. For purposes of the CAISO Tariff, Western Path 15 shall be treated with respect to revenue recovery as a Project Sponsor in accordance with Section 24.14.3.1.

(b) **New Participating TOs After April 1, 2014.** An Approved Project Sponsor that was not a Participating TO as of April 1, 2014, shall be required to turn over to CAISO Operational Control only its rights and interests in the Regional Transmission Facilities it has been selected to finance, construct and own under section 24.5. Such a Participating Transmission Owner will be subject to all obligations of a Participating TO with regard to the facilities placed under CAISO Operational Control, except the obligation in Section 4.3.1.1 to declare its intent and submit an application to become a Participating TO and the obligation in Section 2.2 of the Transmission Control Agreement to apply to become a Participating TO.

(c) **Subscriber Participating TOs.** A Subscriber Participating TO will be subject to all obligations of a Participating TO with regard to facilities placed under CAISO Operational Control. The Subscriber Participating TO is subject to the obligations under Section 4.3.1.1 to declare its intent and submit an application to become a Participating TO and the obligation in Section 2.2 of the Transmission Control Agreement to apply to become a Participating TO.

**4.3.1.4** The capacity provided to the CAISO under the Transmission Exchange Agreement originally accepted by FERC in Docket No. ER04-688 is deemed to be CAISO Controlled Grid facilities and is

subject to all terms and conditions of the CAISO Tariff.

**4.3.1.5** Each Participating TO must provide its Local Reliability Criteria to the CAISO, as required by the TCA.

**4.3.1.6 Converted Rights**

A recipient of transmission service under an Existing Contract that chooses to become a Participating TO and convert its rights to CAISO transmission service, and the Participating TO which provides the transmission service under the Existing Contract, shall change the terms and conditions of the contract to provide that:

(a) The recipient of the transmission service received under an Existing Contract that has converted its rights to CAISO transmission service shall turn over Operational Control of its transmission Entitlement to the CAISO for management by the CAISO in accordance with the CAISO Tariff, applicable Operating Procedures, and Business Practice Manuals;

(b) The recipient of the transmission service under an Existing Contract that has converted its rights to CAISO transmission service shall obtain all future transmission services within, into (starting at the CAISO Controlled Grid), out of, or through the CAISO Controlled Grid using the CAISO's bidding, scheduling, and operational procedures, the CAISO Tariff, and any applicable TO Tariff, provided that this provision shall not affect the rights, if any, of the contract parties to extend Existing Contracts;

(c) For the capacity represented by its rights, the recipient of firm transmission service under an Existing Contract that has converted its rights to CAISO transmission service shall be entitled to receive all Wheeling revenue credits throughout the term that the capacity is available under the Existing Contract;

(d) The recipient of the transmission service received under an Existing Contract that has converted its rights to CAISO transmission service shall continue to have the obligation to pay the provider of the service for its transmission service at the rates provided in the Existing Contract, as they may change from time to time under the terms of the Existing Contract, or as mutually agreed between the contract parties, through the term of the contract, subject to the terms and conditions of the contract, including the rights of the

parties to the contract to seek unilateral or other changes pursuant to Section 205 or Section 206 of the Federal Power Act and the FERC's Rules and Regulations or as otherwise provided by law.

(e) Other aspects of such an Existing Contract may also need to be changed. If the parties to the contract are unable to negotiate such changes, they shall seek appropriate changes through the mechanisms provided within the contract, including the rights, if any, to seek unilateral or other changes pursuant to Section 205 or Section 206 of the Federal Power Act and the FERC's Rules and Regulations or as otherwise provided by law.

#### 4.3.1.7 Transmission Maintenance Coordination Committee

In accordance with the Transmission Control Agreement, the CAISO shall convene a Transmission Maintenance Coordination Committee to perform the functions described in Appendix C of the Transmission Control Agreement. The Transmission Maintenance Coordination Committee will function as an advisory body to CAISO management and the CAISO will provide all necessary administrative support and sufficient resources to ensure that the Transmission Maintenance Coordination Committee can fulfill the obligations specified in the Transmission Control Agreement.

### 4.3A Relationship Between the CAISO and Subscriber Participating TOs

#### 4.3A.1 Nature of Relationship

A transmission owner or developer of a transmission project may apply to join the CAISO Balancing Authority Area as a Subscriber Participating TO with planned or existing transmission assets and Entitlements subject to Encumbrances, pursuant to Subscription Agreements, that will ultimately be administered pursuant to a Subscriber Participating TO Tariff, the Transmission Control Agreement and the CAISO Tariff. The Subscriber Participating TO's initial project will consist of transmission components and any associated generation components located outside of the then-existing CAISO Balancing Authority Area, with the transmission component being funded solely by the Subscriber Participating TO based on the Subscribers' commitments used to provide Subscriber Rights. The Subscriber Participating TO may, as provided for under relevant provisions of the CAISO tariff, subsequently construct additions or upgrades to the initial transmission project that are funded solely by FERC-approved Transmission Revenue Requirements and not used to provide Subscriber Rights to the extent authorized under Section

24 or Section 25 of the CAISO Tariff.

### 4.3A.2 Application and Approval Processes

An applicant to become a Subscriber Participating TO will follow the processes set forth in Section 4.3.1.1 of the CAISO Tariff and Section 2.2 of the Transmission Control Agreement. The applicant will provide written information to the CAISO regarding the applicant's transmission assets and Entitlements and Subscriber Encumbrances used to provide Subscriber Rights that includes: (1) the size and location of the transmission assets and Entitlements; (2) the original or projected cost to build the transmission assets, for which the applicant may request confidential treatment pursuant to Section 20; (3) a schedule for depreciation of the transmission assets, for which the applicant may make a request for confidential treatment pursuant to Section 20; and (4) the initial Subscriber Encumbrance term for the transmission assets and any rollover rights specified in Section 3 of the Subscriber Participating TO's application to become a Participating TO. If the CAISO Governing Board approves the application, the Subscriber Participating TO will execute an Applicant Participating Transmission Owner Agreement with the CAISO to establish the relationship between the Subscriber Participating TO and the CAISO during the period from CAISO Governing Board approval until the Subscriber Participating TO either (1) satisfies the requirements of Section 4.3A.5 or (2) informs the CAISO in writing of the Subscriber Participating TO's decision to not move forward with the project's becoming part of the CAISO Controlled Grid.

### 4.3A.3 Transmission Planning Process for Subscriber Participating TO Facilities Used to Provide Subscriber Rights

A Subscriber Participating TO's transmission assets, Entitlements and Subscriber Encumbrances used to provide Subscriber Rights will be included in the Transmission Planning Process pursuant to Section 24 after (1) the CAISO Governing Board approves the associated application to become a Subscriber Participating TO, (2) FERC accepts an Applicant Participating Transmission Owner Agreement between the applicant to become a Subscriber Participating TO and the CAISO, (3) FERC accepts any applicable Generator Interconnection Agreements for Generating Facilities due to their interconnection to the CAISO Controlled Grid on the transmission assets, Entitlements, and Subscriber Encumbrances of the applicant seeking to become a Subscriber Participating TO, (4) the Subscriber Participating TO has begun the interconnection studies required by the interconnecting Transmission Owner(s), and (5) the Subscriber

Participating TO provides a notice in writing to the CAISO acknowledging that Construction Activities have begun.

#### 4.3A.4 Interconnection of Subscriber Participating TO Transmission Facilities Used to Provide Subscriber Rights

##### 4.3A.4.1 Interconnection Study Process

The CAISO will study the interconnection of all Generating Facilities to the Subscriber Participating TO's transmission assets not using Subscriber Encumbrances to provide Subscriber Rights, pursuant to Section 25 and Appendix DD. The CAISO will study the interconnection of all Generating Facilities to the Subscriber Participating TO's transmission assets using Subscriber Encumbrances to provide Subscriber Rights through the transmission interconnection process undertaken by the Participating TOs according to Section 25.1(g).

###### 4.3A.4.1.1 TP Deliverability Allocation Process

The initial Subscriber Participating TO project will follow the TP Deliverability allocation process set forth in Appendix DD. The Interconnection Customers of the generation projects connected to the Subscriber Participating TO that own the necessary Subscriber Rights shall become eligible to apply into the TP Deliverability allocation process when (1) the Subscriber PTO has successfully met all requirements identified under Section 4.3A.3; and (2) all Transmission Owners have completed the interconnection studies.

##### 4.3A.4.2 Treatment of Needed Upgrades

(a) If the Transmission Planning Process identifies a need for Delivery Network Upgrades related to Generating Facilities to be served by a Subscriber Participating TO's transmission assets and Encumbrances used to provide Subscriber Rights for purposes of meeting a resource portfolio requirement established by the CPUC or other Local Regulatory Authority, and such Delivery Network Upgrades are included in an approved Transmission Plan, the Subscriber Participating TO's Subscribers will have the first option to acquire the additional Deliverability made possible by the Delivery Network Upgrades, up to the amount of Deliverability included in the CPUC or other Local Regulatory Authority resource portfolio requirement.

(b) If the Transmission Planning Process identifies a need for Upgrades related to Generating Facilities due to their interconnection to a Subscriber Participating TO's transmission assets and Encumbrances in addition to those Upgrades identified under Section 4.3A.4.2(a), such applicable Generating Facilities shall be required to apply for interconnection to the CAISO Controlled Grid in accordance with the provisions in Section 25 and Appendix DD.

### 4.3A.5 Addition to the CAISO Controlled Grid of Subscriber Participating TO Transmission Facilities Used to Provide Subscriber Rights

The CAISO will add Subscriber Participating TO transmission assets and Entitlements and Subscriber Encumbrances used to provide Subscriber Rights to the CAISO Controlled Grid after (1) the associated Subscriber Participating TO satisfies the requirements of the Transmission Control Agreement, (2) FERC approves any revisions to the Transmission Control Agreement to include the Subscriber Participating TO, (3) the Subscriber Participating TO energizes its project and turns the project over for CAISO Operational Control in accordance with the Transmission Control Agreement, and (4) FERC approves a Subscriber Participating TO Tariff for the Subscriber Participating TO. The Subscriber Participating TO will have its own TAC Area and its transmission assets and Entitlements will have their own Scheduling Points.

### 4.3A.6 Processes Applicable to Construction of Subscriber Participating TO Transmission Facilities Not Used to Provide Subscriber Rights

A Subscriber Participating TO may construct additions and upgrades to its transmission assets and Entitlements and Subscriber Encumbrances used to provide Subscriber Rights pursuant to Section 24, but such additions and upgrades will not provide additional Subscriber Rights. Requests for interconnection to the Subscriber Participating TO's additions and upgrades will be pursuant to Section 25 and Appendix DD.

### 4.3A.7 Cost Recovery and Usage Costs for Subscriber Participating TO Transmission Facilities

#### 4.3A.7.1 Amounts from Subscribers

A Subscriber Participating TO must recover costs of its transmission assets and Entitlements and Subscriber Encumbrances used to provide Subscriber Rights solely from Subscribers pursuant to Subscription Agreements. Subscribers that Self-Schedule using CRNs on the transmission assets and

Entitlements will not pay Access Charges for such use.

**4.3A.7.2 Amounts from Non-Subscribers**

A Subscriber Participating TO may receive Non-Subscriber Usage Payment Amounts for use by Non-Subscribers of transmission assets and Entitlements and unscheduled Subscriber Rights pursuant to Section 15 of Schedule 3 of Appendix F. The Subscriber Participating TO will be responsible for obtaining FERC approval of the Non-Subscriber Usage Rate that is a required component of the calculation of Non-Subscriber Usage Payment Amounts. For a two-year period, Non-Subscriber Usage Payment Amounts will be calculated for import Schedules at a Scheduling Point on the Subscriber Participating TO's transmission facilities but not collected or allocated to the Subscriber Participating TO in accordance with CAISO Tariff, Appendix F, Section 15.1. The two-year period will commence upon the Commercial Operation Date of the last Generating Unit interconnected to the Subscriber Participating TO's transmission facilities on which that last Generating Unit is entitled to schedule using Subscriber Rights, and will include the period from the date that the Subscriber Participating TO turns over Operational Control of its transmission facilities to the CAISO to the commencement of the two-year period. This exception will apply to the first Subscriber Participating TO that turns over Operational Control of its transmission facilities and any other Subscriber Participating TO that may turn over Operational Control of its transmission facilities during this period, provided it will end for all Subscriber Participating TOs upon the expiration of the two-year period. During this entire period, the CAISO will publish annually the amount of import Schedules and the Non-Subscriber Usage Payment Amount that would have resulted absent this Section 4.3A7.2.

**4.3A.7.3 Transmission Revenue Requirement**

(a) A Subscriber Participating TO may not seek FERC approval of a Transmission Revenue Requirement for the original costs or any subsequent incurred costs for transmission assets and Entitlements and Subscriber Encumbrances used to provide Subscriber Rights or receive revenue for such transmission assets and Entitlements from the Regional Access Charge, even after all Subscriber Encumbrances on the transmission assets and Entitlements terminate. This Section will not prevent a Subscriber Participating TO from obtaining FERC approval of the Non-Subscriber Usage Rate.

(b) A Subscriber Participating TO may seek FERC approval of a Transmission Revenue Requirement for additions and upgrades to its transmission assets and Entitlements undertaken to facilitate an interconnection or pursuant to Section 24, unless such additions or upgrades are for the benefit of Subscribers in the use of their Subscriber Rights. Upon FERC approval, any reference in the CAISO Tariff to a Participating TO's Revenue Requirement or Transmission Revenue Requirement will be read as a reference to the Subscriber Participating TO's rates or revenue requirement as approved by FERC. A Subscriber Participating TO may receive revenue from the Regional Access Charge only with respect to generator Network Upgrades or Network Upgrades identified and approved in the Transmission Planning Process under Section 24 and Section 25 and in Appendix DD for existing Participating TOs that are not used to provide Subscriber Rights.

**4.3A.8 Access to Available Transmission Capacity of a Subscriber Participating TO**

The CAISO will make transmission capacity on Subscriber Participating TO facilities available for the purpose of: (1) scheduling Subscriber Rights transactions consistent with the Subscription Agreement, a Subscriber Participating TO's TRTC Instructions, and the CAISO Tariff; and (2) scheduling transactions for Market Participants in accordance with the CAISO Tariff, provided such use does not conflict with Subscriber Rights. The transmission capacity of a Subscriber Participating TO that is not subject to an Encumbrance as of the date of the Subscriber Participating TO's application to become a Subscriber Participating TO will not be treated as Subscriber Rights, and the CAISO will be the provider of transmission service pursuant to the CAISO Tariff for the use of this available transmission capacity. To the extent Subscribers do not schedule their Encumbrance in the Real-Time Market, the transmission capacity underlying the Encumbrance will be available for use in the CAISO Markets in accordance with Section 16 of the CAISO tariff.

**4.3A.9 Subscriber Participating TO Conversion of Subscriber Rights to CRRs**

Subscribers may release Subscriber Rights they hold for use by the CAISO in exchange for CRRs to effectuate a conversion as provided below. Except as provided below, the CRRs created by the conversion of Subscriber Rights will be administered in accordance with Section 36 in the same manner

as other CRRs. Additional details about the associated timelines, procedures, and characteristics of this conversion and the treatment of CRRs generally are set forth in the Business Practice Manuals.

**(a) CRR Conversion Procedures**

(1) A Subscriber must register and qualify as a Candidate CRR Holder in order to convert Subscriber Rights to CRRs or to acquire CRRs in the Secondary Registration System. Once a Subscriber is a CRR Holder, all rights and obligations pertaining to a CRR Holder shall apply to the Subscriber.

(2) On a quarterly basis at least 10 calendar days prior to the release of the Full Network Model for the first month of each quarter, a Subscriber may instruct the CAISO to release all or a portion of the Subscriber Rights it holds for administration under the CAISO Tariff. The Subscriber conversion instruction must specify: (i) the CRR Source and CRR Sink, which must be associated with an eligible and registered individual PNode, an aggregate PNode, or a Scheduling Point on the Subscriber Participating TO's transmission facilities, (ii) the direction of the Subscriber Rights, (iii) the MW quantity of Subscriber Rights, and (iv) the time duration by quarter in consecutive full-quarter increments.

(3) The Subscriber Participating TO must submit updated TRTC Instructions commensurate with the release of Subscriber Rights by a Subscriber, which in total must not exceed the Subscriber Rights on the Subscriber Participating TO's transmission facilities. The Subscriber Rights and the associated TRTC Instructions must reflect releases by quarter for a minimum of one quarter and remain unchanged for the entire quarter and any subsequent quarters specified in the conversion instructions.

(4) Upon conversion of Subscriber Rights, the associated CRRs will be released for both on-peak and off-peak time periods and will not be available for a CRR Allocation or CRR Auction. Once Subscriber Rights have been converted, the CRR Holder may transfer its CRRs using the Secondary Registration System for the full duration that the rights have been released.

(5) The CAISO will make available all released Subscriber Rights for use by Market Participants in accordance with the CAISO Tariff consistent with the Subscriber Rights as

provided in the Transmission Control Agreement, subject to any restriction necessary to honor any associated Subscriber Encumbrance consistent with the TRTC Instructions and associated details submitted by the Subscriber Participating TO. The CAISO will account for a reduction in Subscriber Rights equal to the quantity of CRRs granted following the quarterly election process. Subscriber Rights converted to CRRs will lose their status as an Existing Contract throughout the entire time that they have been converted to CRRs.

**(b) Converted CRR Characteristics**

(1) CRRs created by the conversion of Subscriber Rights will be administered and settled as CRR Options when a Congestion price difference in the Integrated Forward Market exists between the CRR Source and CRR Sink. No Congestion settlement will be made for Real-Time Market Congestion differences between the CRR Source and CRR Sink.

(2) For each constrained flowgate or Intertie, CRRs created by the conversion of Subscriber Rights will not be subject to CRR underfunding allocation and will be derated hourly based on the ratio of the operating transfer capability (OTC) (*i.e.*, the TTC as reduced by the constraint) and the TTC (absent the OTC reduction) of the flowgate or Intertie and the direction associated with the CRR Source to CRR Sink combination derived from the Subscriber Rights.

## 4.4 Relationship Between CAISO and UDCs

### 4.4.1 General Nature of Relationship Between CAISO and UDCs

The CAISO shall not be obliged to accept Bids which would require Energy to be transmitted to or from the Distribution System of a UDC directly connected to the CAISO Controlled Grid unless the relevant UDC has entered into a UDC Operating Agreement. The UDC Operating Agreement shall require UDCs to comply with the applicable provisions of this Section 4.4 and any other expressly applicable Sections of this CAISO Tariff as these may be amended from time to time.

The CAISO shall operate the CAISO Controlled Grid, and each UDC shall operate its Distribution System at all times in accordance with Good Utility Practice and in a manner that ensures safe and reliable operation. The CAISO shall, pursuant to its obligations set forth in this Section 4.4, have the right by

agreement to delegate certain operational responsibilities to the relevant Participating TO or UDC pursuant to this Section 4.4. All information made available to UDCs by the CAISO shall also be made available to Scheduling Coordinators. All information pertaining to the physical state or operation, maintenance and failure of the UDC Distribution System affecting the operation of the CAISO Controlled Grid that is made available to the CAISO by the UDC shall also be made available to Scheduling Coordinators upon receipt of reasonable notice.

### 4.4.2 UDC Responsibilities

Recognizing the CAISO's duty to ensure efficient use and reliable operation of the CAISO Controlled Grid consistent with the Applicable Reliability Criteria, each UDC shall:

(a) operate and maintain its facilities, in accordance with the applicable safety and reliability standards, regulatory requirements, applicable operating guidelines, applicable rates, tariffs, statutes and regulations governing its provision of service to its End-Use Customers and Good Utility Practice so as to avoid any material adverse impact on the CAISO Controlled Grid;

(b) provide the CAISO each year with a schedule of upcoming maintenance (including all equipment Outages) that has a reasonable potential of impacting the CAISO Controlled Grid in accordance with Section 9.3.6 and in accordance with the other scheduling procedures described in the CAISO Tariff;

(c) coordinate with the CAISO, Participating TOs, and Generators to ensure that the CAISO Controlled Grid Critical Protective Systems, including relay systems, are installed and maintained in order to function on a coordinated and complementary basis with UDCs', Generators', and Participating TOs' protective systems.

(d) coordinate any requests for emergency Outages on point of interconnection equipment directly with the appropriate CAISO Control Center as specified in Section 7.1.

### 4.4.3 System Emergency Reports: UDC Obligations

Each UDC shall maintain all appropriate records pertaining to a System Emergency and each UDC shall cooperate with the CAISO in the preparation of an Outage review pursuant to Section 7.7.13.

### 4.4.4 Coordination of Expansion or Modifications to UDC Facilities

Each UDC and the Participating TO with which it is interconnected shall coordinate in the planning and implementation of any expansion or modifications of a UDC's or Participating TO's system that will affect their transmission interconnection, the CAISO Controlled Grid or the transmission services to be required by the UDC. The Participating TO shall be responsible for coordinating with the CAISO.

### 4.4.5 Information Sharing

#### 4.4.5.1 System Planning Studies

The CAISO, Participating TOs and UDCs shall share information such as projected Load growth and system expansions necessary to conduct necessary System Planning Studies to the extent that these may impact the operation of the CAISO Controlled Grid.

#### 4.4.5.2 System Surveys and Inspections

The CAISO and each UDC shall cooperate with each other in performing system surveys and inspections to the extent these relate to the operation of the CAISO Controlled Grid.

#### 4.4.5.3 Reports

The CAISO shall make available to the UDCs any public annual reviews or reports regarding performance standards, measurements and incentives relating to the CAISO Controlled Grid and shall also make available, upon reasonable notice, any such reports that the CAISO receives from the Participating TOs. Each UDC shall make available to the CAISO any public annual reviews or reports regarding performance standards, measurements and incentives relating to the UDC's Distribution System to the extent these relate to the operation of the CAISO Controlled Grid.

#### 4.4.5.4 Maintenance

The CAISO and UDCs shall develop an operating procedure to record requests received for Maintenance Outages by the CAISO and the completion of the requested maintenance and turnaround times. The UDCs shall maintain records that substantiate all maintenance performed on UDC facilities that are under the Operational Control of the CAISO. These records shall be made available to the CAISO upon receipt of reasonable notice.

### 4.4.6 Installation of and Rights of Access to UDC Facilities

#### 4.4.6.1 Installation of Facilities

##### 4.4.6.1.1 Metering Service Obligations

The CAISO and the UDC shall each have the right on reasonable notice to install or to have installed equipment (including metering equipment) or other facilities on the property of the other, to the extent that such installation is necessary for the installing party to meet its service obligations unless to do so would have a negative impact on the reliability of the service provided by the party owning the property.

##### 4.4.6.1.2 Governing Agreements for Installations

The CAISO and the UDC shall enter into agreements governing the installation of equipment or other facilities containing customary, reasonable terms and conditions.

#### 4.4.6.2 Access to Facilities

The UDCs shall grant the CAISO reasonable access to UDC facilities free of charge for purposes of inspection, repair, maintenance, or upgrading of facilities installed by the CAISO on the UDC's system, provided that the CAISO must provide reasonable advance notice of its intent to access UDC facilities and opportunity for UDC staff to be present. Such access shall not be provided unless the parties mutually agree to the date, time and purpose of each access. Agreement on the terms of the access shall not be unreasonably withheld.

#### 4.4.6.3 Access During Emergencies

Notwithstanding any provision in this Section 4.4 the CAISO may have access, without giving prior notice, to any UDC's equipment or other facilities during times of a System Emergency or where access is needed in connection with an audit function.

### 4.4.7 Provision of Information for CRRs to Reflect Load Migration

Each UDC shall provide to the CAISO information as provided in Section 36.8.5.1 that enables the CAISO to perform transfers of CRRs that reflect Load Migration in a timely manner as required in Section 36.8.5.

### 4.4.8 UDC Facilities Under CAISO Control

The CAISO and each UDC shall enter into an agreement in relation to the operation and maintenance of

the UDC's facilities that are under the CAISO's Operational Control.

## 4.5 Responsibilities of a Scheduling Coordinator

### 4.5.1 Scheduling Coordinator Certification

Only Scheduling Coordinators that the CAISO has certified as having met the requirements of this Section 4.5.1 may participate in the Day-Ahead Market or Real-Time Market or submit Supply Plans or RA Plans. Scheduling Coordinators offering Ancillary Services shall additionally meet the requirements of Section 8.

Each Scheduling Coordinator shall:

(a) demonstrate to the CAISO's reasonable satisfaction that it is capable of performing the functions of a Scheduling Coordinator under this CAISO Tariff including (without limitation) the functions specified in Sections 4.5.3 and 4.5.4 as applicable;

(b) identify each of the Eligible Customers (including itself if it trades for its own account) which it is authorized to represent as Scheduling Coordinator and confirm that the metering requirements under Section 10 are met in relation to each Eligible Customer that it represents under this CAISO Tariff;

(c) identify each of the Convergence Bidding Entities that it is authorized to represent as Scheduling Coordinator;

(d) confirm that each of the End-Use Customers it represents is eligible for service as a Direct Access End User;

(e) confirm that none of the Wholesale Customers it represents is ineligible for wholesale transmission service pursuant to the provisions of FPA Section 212(h);

(f) demonstrate to the CAISO's reasonable satisfaction that it meets the financial criteria set out in Section 12;

(g) enter into a Scheduling Coordinator Agreement with the CAISO; and

(h) provide NERC tagging data, as applicable.

#### 4.5.1.1 Procedure to become a Scheduling Coordinator

##### 4.5.1.1.1 Scheduling Coordinator Application

To become a Scheduling Coordinator, a Scheduling Coordinator Applicant must submit a completed

application, as set forth in the applicable Business Practice Manual, to the CAISO by mail, electronic submission, or in person. A Scheduling Coordinator Applicant may retrieve the application and necessary information from the CAISO Website.

#### 4.5.1.1.2 CAISO Information

The CAISO will provide the following information, in its most current form, on the CAISO Website. Upon a request by a Scheduling Coordinator Applicant, the CAISO will send the following information by electronic mail:

(a) the Scheduling Coordinator Application Form, as set forth in the applicable Business Practice Manual;

(b) the CAISO Tariff and Business Practice Manuals; and

(c) forms for a credit application for Scheduling Coordinator Applicants applying for Unsecured Credit Limits and for provision of Financial Security to be provided pursuant to Section 12.

#### 4.5.1.1.3 Duplicate Information

If two or more Scheduling Coordinators apply simultaneously to register with the CAISO for a single meter or Meter Point for a CAISO Metered Entity or if a Scheduling Coordinator applies to register with the CAISO for a meter or Meter Point for a CAISO Metered Entity for which a Scheduling Coordinator has already registered, the CAISO will return the application with an explanation that only one Scheduling Coordinator may register with the CAISO for the meter or Meter Point in question and that a Scheduling Coordinator has already registered or that more than one Scheduling Coordinator is attempting to register for that meter or Meter Point. The CAISO will notify the Scheduling Coordinator Applicant of the applicable Scheduling Coordinator or Scheduling Coordinator Applicant. Nothing in this Section 4.5.1.1.3 shall prohibit one Scheduling Coordinator from registering with the CAISO to submit Bids for Demand Response Services from a Proxy Demand Resource or Reliability Demand Response Resource associated with a given meter (or Meter Point) where a different Scheduling Coordinator is registered for purposes of serving the demand of the Load associated with that meter (or Meter Point).

#### 4.5.1.1.4 Scheduling Coordinator Applicant Returns Application

At least 120 days before the proposed commencement of service, the Scheduling Coordinator Applicant

must return a completed application form with the non-refundable application fee of $7,500 to cover the application processing costs.

#### 4.5.1.1.5 Notice of Receipt

Within three (3) Business Days of receiving the application, the CAISO will send electronic notification to the Scheduling Coordinator Applicant that it has received the application and the non-refundable fee.

#### 4.5.1.1.6 Other Scheduling Coordinator Application Requirements

##### 4.5.1.1.6.1 Information Requirements

The Scheduling Coordinator Applicant must submit with its application:

(a) the proposed date for commencement of service, which may not be less than 120 days after the date the application was filed, unless waived by the CAISO;

(b) financial and credit information as set forth in Section 12; and

(c) the prescribed non-refundable application fee of $7,500.

##### 4.5.1.1.6.2 Scheduling Coordinator Applicant's Obligation for Contracts

A Scheduling Coordinator Applicant must certify that it is duly authorized to represent the Generators and Loads that are its Scheduling Coordinator Customers and must further certify that:

(a) represented Generators or other suppliers have entered into Participating Generator Agreements, Net Scheduled Participating Generator Agreements, or Pseudo Tie Participating Generator Agreements as provided in Appendices B.2, B.3, and B.16, respectively with the CAISO or other contracts that obligate the supplier to comply with the terms of the CAISO Tariff, as applicable;

(b) represented UDCs have entered into UDC Operating Agreements as provided in Appendix B.8 with the CAISO;

(c) represented CAISO Metered Entities have entered into Meter Service Agreements for CAISO Metered Entities as provided in Appendix B.6 with the CAISO;

(d) none of the Wholesale Customers it will represent are ineligible for wholesale transmission service pursuant to the provisions of the FPA Section 212(h); and

(e) each End-Use Customer it will represent is eligible for service as a Direct Access End User pursuant to an established program approved by the California Public Utilities

Commission or a Local Regulatory Authority.

A Scheduling Coordinator Applicant that seeks to serve as Scheduling Coordinator for one or more Convergence Bidding Entities must certify that it is duly authorized to represent those Convergence Bidding Entities and to submit and settle Virtual Bids on their behalf.

#### 4.5.1.1.7 Deficient Application

In the event that the CAISO has determined that the application is deficient, the CAISO will send an electronic notification of the deficiency to the Scheduling Coordinator Applicant within ten (10) Business Days of receipt by the CAISO of the application explaining the deficiency and requesting additional information.

##### 4.5.1.1.7.1 Scheduling Coordinator Applicant's Additional Information

Once the CAISO requests additional information, the Scheduling Coordinator Applicant has five (5) Business Days, or such longer period as the CAISO may agree, to provide the additional material requested by the CAISO.

##### 4.5.1.1.7.2 No Response from Scheduling Coordinator Applicant

If the Scheduling Coordinator Applicant does not submit additional information within five (5) Business Days or the longer period referred to in Section 4.5.1.1.7.1, the application may be rejected by the CAISO.

#### 4.5.1.1.8 CAISO Approval or Rejection of an Application

##### 4.5.1.1.8.1 Approval or Rejection Notification

(a) If the CAISO approves the application, it will send an electronic notification of approval. In addition, the CAISO will provide a Scheduling Coordinator Agreement, a Meter Service Agreement for Scheduling Coordinators as provided in Appendix B.7, if applicable, any other applicable agreements, and any required CAISO network connectivity security agreement for the Scheduling Coordinator Applicant's signature.

(b) If the CAISO rejects the application, the CAISO will send an electronic notification of rejection stating one or more of the following grounds:

(i) incomplete information;

(ii) non-compliance with credit requirements pursuant to Section 12;

(iii) non-compliance with third party contractual obligations;

(iv) non-compliance with technical requirements; or

(v) non-compliance with any other CAISO Tariff requirements.

Upon request, the CAISO will provide guidance as to how the Scheduling Coordinator Applicant can cure the grounds for the rejection.

**4.5.1.1.8.2 Time for Processing Application**

The CAISO will make a decision whether to accept or reject the application within ten (10) Business Days of receipt of the application. If more information is requested, the CAISO will make a final decision within ten (10) Business Days of the receipt of all outstanding or additional information requested.

**4.5.1.1.9 Scheduling Coordinator Applicant's Response**

**4.5.1.1.9.1 Scheduling Coordinator Applicant's Acceptance**

If the CAISO accepts the application, the Scheduling Coordinator Applicant must return an executed Scheduling Coordinator Agreement, Meter Service Agreement for Scheduling Coordinators, if applicable, any other applicable agreements, and a completed credit application and Financial Security provided pursuant to Section 12, as applicable.

**4.5.1.1.9.2 Scheduling Coordinator Applicant's Rejection**

**4.5.1.1.9.2.1 Resubmittal**

If an application is rejected, the Scheduling Coordinator Applicant may resubmit its application at any time. An additional application fee will not be required for the second application submitted within six (6) months after the CAISO's issuance of a rejection notification.

**4.5.1.1.9.2.2 Appeal**

The Scheduling Coordinator Applicant may also appeal against the rejection of an application by the CAISO. An appeal must be submitted within twenty (20) Business Days following the CAISO's issuance of a notification of rejection of its application.

**4.5.1.1.10 Post Application Procedures Prior to Final Certification**

**4.5.1.1.10.1 Scheduling Coordinator's Administrative, Financial and Technical Requirements**

The CAISO will not certify that a Scheduling Coordinator Applicant has become a Scheduling Coordinator until the Scheduling Coordinator Applicant has completed all of the following requirements:

(a) provided the technical/operational information required in Tariff Section 4.5 as set forth in the applicable Business Practice Manual, and to comply with Section 10.3;

(b) executed a network connectivity security agreement for access to the CAISO's software used in conducting business with the CAISO and compliance with the CAISO's system security requirements in a form approved by the CAISO, if applicable;

(c) obtained and installed any required software for functional interface for Validation, Estimation and Editing meter values (VEE), if applicable;

(d) undertaken required training and testing regarding the use of the CAISO's market, operating, and technical systems, as specified in the applicable Business Practice Manual;

(e) provided its bank account information and arranged for Fedwire transfers, with the Scheduling Coordinator being obligated to maintain at all times an account with a bank capable of Fedwire transfer and being permitted, at its option, to arrange for ACH payment service;

(f) provided an emergency plan specifying the procedures by which Scheduling Coordinator operations and contacts with the CAISO will be maintained during an emergency, containing information specified in the applicable Business Practice Manual; and

(g) obtained and installed a computer link and any necessary software in order to communicate with the CAISO, as specified in the applicable Business Practice Manual.

Additional instructions for completing the foregoing requirements will be set forth in a Business Practice Manual posted on the CAISO Website. The Scheduling Coordinator is also responsible for ongoing compliance with all tariff requirements applicable to Scheduling Coordinators.

**4.5.1.1.10.2 Application Closure after 12 Months**

The CAISO will not certify a Scheduling Coordinator Applicant as a Scheduling Coordinator until the Scheduling Coordinator Applicant has completed all of the requirements for certification set forth in this Section 4.5 to the CAISO's satisfaction within twelve (12) months following the CAISO's acceptance of the application for processing. If the Scheduling Coordinator Applicant has not completed all the above referenced requirements within twelve (12) months after the CAISO's acceptance of the application, the

CAISO may close the Scheduling Coordinator Applicant's application. The CAISO shall provide the Scheduling Coordinator Applicant thirty (30) days advance notice of its intent to close the application. If the CAISO closes the application, the Scheduling Coordinator Applicant must submit a new application and non-refundable application fee if it continues to request certification as a Scheduling Coordinator.

#### 4.5.1.1.11 Final Certification of Scheduling Coordinator Applicant

The Scheduling Coordinator Applicant will become a Scheduling Coordinator when:

(a) its application has been accepted;

(b) it has entered into a Scheduling Coordinator Agreement, a Meter Service Agreement for Scheduling Coordinators, if applicable, and any other applicable agreements with the CAISO;

(c) it has met the credit requirements of Section 12; and

(d) it has fulfilled all technical/operational requirements of Sections 4.5.4.1 and 4.5.1.1.10.1.

The CAISO will not certify a Scheduling Coordinator Applicant as a Scheduling Coordinator until the Scheduling Coordinator Applicant has completed all the above referenced requirements to the CAISO's satisfaction, at least ten (10) Business Days before the commencement of service.

#### 4.5.1.1.12 Generation Affiliate Disclosure Requirements

Each Scheduling Coordinator Applicant will notify the CAISO of any Affiliate that owns, controls, and/or schedules resources that may provide Energy or Ancillary Services in the CAISO Markets. The Scheduling Coordinator Applicant will provide the CAISO with information on each such Affiliate, including information concerning the corporate relationship of such Affiliate and the business purpose of such Affiliate. These requirements will continue to apply after a Scheduling Coordinator Applicant becomes a Scheduling Coordinator.

#### 4.5.1.1.13 Resource Control Agreements

Each Scheduling Coordinator Applicant will register with the CAISO any resource it or any Affiliate that satisfies the criteria set forth in Section 4.5.1.1.12 controls through a Resource Control Agreement to which the Scheduling Coordinator Applicant and/or any Affiliate that satisfies the criteria set forth in Section 4.5.1.1.12 is a party. Each Scheduling Coordinator Applicant that is a party to a Resource Control Agreement, or that has any Affiliate that satisfies the criteria set forth in Section 4.5.1.1.12 and is

a party to a Resource Control Agreement, will submit information regarding the Resource Control Agreement to the CAISO. These requirements will continue to apply after a Scheduling Coordinator Applicant becomes a Scheduling Coordinator. The applicable Business Practice Manual sets forth the procedures for registering a resource controlled through a Resource Control Agreement and for providing information regarding a Resource Control Agreement to the CAISO. Any utility subject to the jurisdiction of a Local Regulatory Authority is not obligated to disclose Resource Control Agreements entered into by an unregulated Affiliate unless the Resource Control Agreement is between the utility and the unregulated Affiliate. Such an unregulated Affiliate is not treated as an Affiliate of the utility for purposes of determining supply portfolios pursuant to Section 39.7.2.2.

**4.5.1.2 Scheduling Coordinator's Ongoing Obligations After Certification**

**4.5.1.2.1 Scheduling Coordinator's Obligation to Report Changes**

**4.5.1.2.1.1 Obligation to Report a Change in Filed Information**

Each Scheduling Coordinator has an ongoing obligation to inform the CAISO of any changes to any of the information submitted by it to the CAISO as part of the application process including, but not limited to, any changes to the information requested by the CAISO, any changes in its credit ratings, any changes regarding its Affiliates that satisfy the requirements of Section 4.5.1.1.12, any changes regarding resources controlled through Resource Control Agreements that satisfy the requirements of Section 4.5.1.1.13, and any changes to information regarding a Resource Control Agreement provided pursuant to Section 4.5.1.1.13. The applicable Business Practice Manual sets forth the procedures for changing the Scheduling Coordinator's information and the timing of notifying the CAISO of such changes.

**4.5.1.2.1.2 Obligation to Report a Change in Credit Rating or Material Change in Financial Condition**

The Scheduling Coordinator has an ongoing obligation to inform the CAISO within five (5) Business Days of any change to its credit ratings or any Material Change in Financial Condition.

**4.5.1.2.2 CAISO's Response for Failure to Inform**

**4.5.1.2.2.1 Failure to Promptly Report a Material Change**

If a Scheduling Coordinator fails to inform the CAISO of a material change in its information provided to the CAISO, which may affect the reliability or safety of the CAISO Controlled Grid, or the Financial

Security of the CAISO, the CAISO may suspend or terminate the Scheduling Coordinator's rights under the CAISO Tariff in accordance with the terms of Sections 12 and 4.5 respectively. If the CAISO intends to terminate the Scheduling Coordinator's rights it shall file a notice of termination with FERC, if required by FERC rules, in accordance with the terms of the Scheduling Coordinator Agreement. Such termination shall be effective upon acceptance by FERC of a notice of termination, if required by FERC rules, or as otherwise permitted by FERC rules.

#### 4.5.1.3 Additional Scheduling Coordinator ID Code Registration

A Scheduling Coordinator Applicant is granted one Scheduling Coordinator ID Code (SCID) with its application fee. Requests may be made for additional Scheduling Coordinator ID Codes. The fee for each additional Scheduling Coordinator Identification Code is specified in Schedule 1 of Appendix F.

### 4.5.2 Eligible Customers and Convergence Bidding Entities

#### 4.5.2.1 SCs Representing Eligible Customers

Each Scheduling Coordinator shall within ten (10) days of a request by the CAISO provide the CAISO with a list of the Eligible Customers that it represents at the date of the request.

#### 4.5.2.2 SCs Representing Convergence Bidding Entities

Each Scheduling Coordinator that is or represents one or more Convergence Bidding Entities will provide the CAISO with a list of the Convergence Bidding Entities that it represents and the SCIDs that the Scheduling Coordinator will use to submit Virtual Bids for each Convergence Bidding Entity, at least eleven (11) Business Days prior to the Scheduling Coordinator's initial submission of a Virtual Bid on behalf of any of those Convergence Bidding Entities. This list must satisfy the requirements of Section 4.14.2.3. In the event that the Scheduling Coordinator will represent additional Convergence Bidding Entities or modifies any of the SCIDs that the Scheduling Coordinator will use to submit Virtual Bids on behalf of any Convergence Bidding Entity, the Scheduling Coordinator will provide the CAISO with an updated list of Convergence Bidding Entities and/or SCIDs at least eleven (11) Business Days prior to submitting a Virtual Bid involving a Convergence Bidding Entity and/or SCID not already included in the most recent list provided to the CAISO. The CAISO will incorporate the information provided pursuant to this Section 4.5.2.2 into the CAISO's official list of the Convergence Bidding Entities that Scheduling Coordinators represent and will incorporate the SCIDs that Scheduling Coordinators use to submit Virtual

Bids on behalf of Convergence Bidding Entities into the Master File within eleven (11) Business Days after the CAISO determines that the information in each list or updated list provided by a Scheduling Coordinator or Convergence Bidding Entity is accurate and complete.

### 4.5.3 Responsibilities of a Scheduling Coordinator

Each Scheduling Coordinator shall be responsible for:

#### 4.5.3.1 Obligation to Pay

Paying the CAISO's charges in accordance with this CAISO Tariff;

#### 4.5.3.2 Submit Bids and Interchange Schedules

**4.5.3.2.1** Submitting Bids, including Self-Schedules, in CAISO Markets that relate to the Market Participants for which it serves as Scheduling Coordinator;

**4.5.3.2.2** Submitting Interchange Schedules prepared in accordance with all NERC, WECC and CAISO requirements, including providing E-Tags for all applicable transactions pursuant to WECC practices. The CAISO shall not accept E-Tags for ten-minute recallable reserve transactions (i.e., transactions with a WECC energy product code of "C-RE") , unless the E-Tag is associated with delivery of emergency assistance Energy between another Balancing Authority Area and the CAISO Balancing Authority Area. The CAISO is not, and shall not be listed as, the "Purchasing Selling Entity" for purposes of E-Tags. Title to Energy shall pass directly from the entity that holds title when the Energy enters the CAISO Controlled Grid to the entity that removes the Energy from the CAISO Controlled Grid, in each case in accordance with the terms of this CAISO Tariff.

#### 4.5.3.3 Modifications in Demand Supply

Coordinating and allocating modifications in Demand and exports and Generation and imports at the direction of the CAISO in accordance with this CAISO Tariff;

#### 4.5.3.4 Inter-SC Trades

Submitting any applicable Inter-SC Trades that the Market Participants intend to have settled through the CAISO Markets, pursuant to this CAISO Tariff;

#### 4.5.3.5 Tracking and Settling Trades

Tracking and settling all intermediate trades, including bilateral transactions and Inter-SC Trades, among the entities for which it serves as Scheduling Coordinator;

**4.5.3.6 Ancillary Services**

Providing Ancillary Services in accordance with Section 8;

**4.5.3.7 [Not Used]**

**4.5.3.8 Business Practice Manuals**

Complying with all CAISO Business Practice Manuals and ensuring compliance by each of the Market Participants which it represents with all applicable provisions of the Business Practice Manuals;

**4.5.3.9 Interruptible Imports**

Identifying any Interruptible Imports included in its Bids or Inter-SC Trades;

**4.5.3.10 Participating Intermittent Resources**

Submitting Bids, including Self-Schedules, for Participating Intermittent Resources consistent with the CAISO Tariff;

**4.5.3.11 Day-Ahead Market Published Schedules and Awards**

Starting-up units and timely achieving specified operating levels in response to Dispatch Instructions, in accordance with CAISO published Schedules and awards;

**4.5.3.12 Financial Responsibility**

Assuming financial responsibility for all Schedules, AS Awards and Dispatch Instructions issued in the CAISO Markets, and all Virtual Awards in accordance with the provisions of this CAISO Tariff;

**4.5.3.13 Compliance with Environmental Constraints, Operating Permits and Applicable Law**

Submitting Bids so that any service provided in accordance with such Bids does not violate environmental constraints, operating permits or applicable law. All submitted Bids must reflect resource limitations and other constraints as such are required to be reported to the CAISO Control Center;

**4.5.3.14 Tax Compliance**

Providing, as described in the Business Practice Manuals, resale certificates or other proof acceptable to CAISO that its purchases of energy are exempt from any sales and use taxes that otherwise might apply; and

**4.5.3.15 SQMD Plan**

Complying with the SQMD Pan for eligible entities it serves pursuant to Section 10.3.7.

#### 4.5.3.16 RA Plans and Supply Plans

Providing RA Plans for LSEs or CPEs for which it serves as Scheduling Coordinator and providing Supply Plans for Resource Adequacy Resources for which it serves as Scheduling Coordinator. If a CPE is also a Load Serving Entity and the CPE and Load Serving Entity are represented by the same Scheduling Coordinator, that Scheduling Coordinator must use distinct Scheduling Coordinator ID Codes for its activities related to the CPE and Load Serving Entity functions.

### 4.5.4 Operations of a Scheduling Coordinator

#### 4.5.4.1 Maintain Twenty-four (24) Hour Scheduling Centers

Each Scheduling Coordinator other than a Scheduling Coordinator that represents only Convergence Bidding Entities shall operate and maintain a twenty-four (24) hour, seven (7) days per week, scheduling center. Each Scheduling Coordinator shall designate a senior member of staff as its scheduling center manager who shall be responsible for operational communications with the CAISO and who shall have sufficient authority to commit and bind the Scheduling Coordinator.

#### 4.5.4.2 [Not Used]

#### 4.5.4.3 Dynamic Scheduling

##### 4.5.4.3.1 Dynamic Scheduling of Imports

Scheduling Coordinators may submit Bids for imports of Energy, Imbalance Reserves, Reliability Capacity, and Ancillary Services for which associated Energy is delivered from Dynamic System Resources located outside of the CAISO Balancing Authority Area, provided that: (a) such dynamic scheduling is technically feasible and consistent with NERC and WECC reliability standards and any requirements of the NRC, (b) all operating, technical, and business requirements for dynamic scheduling functionality, as set forth in the Dynamic Scheduling Protocol in Appendix M or posted in standards on the CAISO Website, are satisfied, (c) the Scheduling Coordinator for the Dynamic System Resource executes a Dynamic Scheduling Agreement for Scheduling Coordinators as provided in Appendix B.5 with the CAISO for the operation of dynamic scheduling functionality, and (d) all affected Balancing Authorities each execute with the CAISO a Dynamic Scheduling Host Balancing Authority Operating Agreement as provided in Appendix B.9, or a special operating agreement particular to the operation of dynamic

functionality.

#### 4.5.4.3.2 Dynamic Scheduling of Exports of Energy

Scheduling Coordinators may submit Bids for Dynamic Schedules of exports of Energy from Generating Units located in the CAISO Balancing Authority Area, provided that: (a) such dynamic scheduling is technically feasible and consistent with NERC and WECC reliability standards and any requirements of the NRC, (b) all operating, technical, and business requirements for dynamic scheduling functionality, as set forth in the Dynamic Scheduling Protocol in Appendix M or posted in standards on the CAISO Website, are satisfied, (c) the Scheduling Coordinator for the Generating Unit executes a Dynamic Scheduling Agreement for Scheduling Coordinators as provided in Appendix B.5 with the CAISO for the operation of dynamic scheduling functionality, and (d) all affected Balancing Authorities each execute with the CAISO an operating agreement particular to the operation of dynamic functionality. Scheduling Coordinators may not submit Bids for Dynamic Schedules of exports of Ancillary Services from resources located in the CAISO Balancing Authority Area, nor may Scheduling Coordinators submit Bids for Dynamic Schedules of exports from Loads located in the CAISO Balancing Authority Area.

### 4.5.4.4 Termination of Scheduling Coordinator Agreement and Suspension of Certification

(a) A Scheduling Coordinator's Scheduling Coordinator Agreement may be terminated by the CAISO on written notice to the Scheduling Coordinator:

(i) if the Scheduling Coordinator no longer meets the requirements for eligibility set out in Section 4.5 and fails to remedy the default within a period of five (5) Business Days after the CAISO has given written notice of the default;

(ii) if the Scheduling Coordinator fails to pay any sum under this CAISO Tariff and fails to remedy the default within a period of five (5) Business Days after the CAISO has given written notice of the default;

(iii) if the Scheduling Coordinator commits any other default under this CAISO Tariff or any of the CAISO Business Practice Manuals which, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given it written notice of the default; or

(iv) if the Scheduling Coordinator does not participate in the CAISO’s markets for

Energy, Imbalance Reserves, Reliability Capacity, or Ancillary Services for a period of twelve (12) consecutive months and fails to comply with the provisions of Section 4.5.4.4.2 within 120 days after the CAISO has given it written notice of the CAISO's intent to terminate its Scheduling Coordinator Agreement.

(b) A Scheduling Coordinator's Scheduling Coordinator Agreement may be terminated by the Scheduling Coordinator on ninety (90) days written notice to the CAISO, provided that such notice shall not be effective to terminate the Scheduling Coordinator Agreement until the Scheduling Coordinator has complied with all applicable requirements of Section 4.5.2.

(c) The CAISO shall, following termination of a Scheduling Coordinator Agreement and within thirty (30) days of being satisfied that no sums remain owing by the Scheduling Coordinator under the CAISO Tariff, return or release to the Scheduling Coordinator, as appropriate, any money or credit support provided by such Scheduling Coordinator to the CAISO under Section 12.

**4.5.4.4.1** Pending the effective date of termination of service pursuant to Section 4.5.4.5.1, the CAISO will suspend the certification of a Scheduling Coordinator which has received a notice of termination under Section 4.5.4.4(a) and the Scheduling Coordinator will not be eligible to participate in the CAISO's markets for Energy, Imbalance Reserves, Reliability Capacity, and Ancillary Services.

**4.5.4.4.2** A Scheduling Coordinator that has received a notice of the CAISO's intent to terminate its Scheduling Coordinator Agreement for failure to participate in the CAISO's markets for Energy, Imbalance Reserves, Reliability Capacity, and Ancillary Services for a period of twelve (12) consecutive months pursuant to Section 4.5.4.4(a)(iv) will avoid having its Scheduling Coordinator Agreement terminated and will have its certification reinstated if it completes the testing and training required for Scheduling Coordinator certification as set forth in the applicable Business Practice Manual within 120 days after the CAISO's issuance of the notice of intent to terminate.

**4.5.4.5 Notification of Termination**

The CAISO shall, promptly after providing written notice of default to a Scheduling Coordinator as specified in Section 4.5.4.4(a), notify the Scheduling Coordinators that could be required to represent End

User Eligible Customers of the Scheduling Coordinator under Section 4.5.4.6.2 if the default is not cured. The CAISO shall, as soon as reasonably practicable following the occurrence of any of the events specified in Section 4.5.4.4, notify the Scheduling Coordinator and the Scheduling Coordinators that could be required to represent End User Eligible Customers of the defaulting Scheduling Coordinator, and the UDCs, and shall as soon as reasonably practicable after the issuance of such notice of termination post such notice on the CAISO Website. Termination of the Scheduling Coordinator Agreement will automatically remove the Scheduling Coordinator's certification under Section 4.5 and Section 8.4.

**4.5.4.5.1 Filing of Notice of Termination**

Any notice of termination given pursuant to Section 4.5.4.4 shall also be filed by the CAISO with FERC, if required by FERC rules, if the non-compliance is not remedied within the period specified in Section 4.5.4.4, and it shall be effective in accordance with FERC rules.

**4.5.4.6 Continuation of Service on Termination**

**4.5.4.6.1 Option for Eligible Customers to choose a new Scheduling Coordinator**

When the CAISO suspends the certification of a Scheduling Coordinator pending termination, Eligible Customers of the defaulting Scheduling Coordinator shall be entitled to select another Scheduling Coordinator to represent them. The CAISO will post notice of any suspension on the CAISO Website. Until the CAISO is notified by another Scheduling Coordinator that it represents an Eligible Customer of the defaulting Scheduling Coordinator, the Eligible Customer of the defaulting Scheduling Coordinator will receive interim service in accordance with Section 4.5.4.6.2.

**4.5.4.6.2 Interim Service**

The CAISO shall maintain a list of Scheduling Coordinators willing to represent Eligible Customers of a defaulting Scheduling Coordinator, which list may be differentiated by UDC service area. Scheduling Coordinators who indicate to the CAISO their desire to be on such list shall be placed thereon by the CAISO in random order.

(a) When the CAISO suspends the certification of a Scheduling Coordinator in accordance with Section 4.5.4.4.1, Eligible Customers of the defaulting Scheduling Coordinators shall be assigned to all Scheduling Coordinators on the list established pursuant to this Section 4.5.4.6.2 in a non-discriminatory manner to be established by the CAISO, and

each Eligible Customer shall thereafter be represented by the Scheduling Coordinator to which it is assigned unless and until it selects another Scheduling Coordinator in accordance with Section 4.5.4.6.1, subject to this Section 4.5.4.6.2 subsection (b).

(b) Unless the CAISO is notified by another Scheduling Coordinator that it represents an Eligible Customer of a defaulting Scheduling Coordinator within seven (7) days of the notice of termination being posted on the CAISO Website, the Scheduling Coordinator to which that Eligible Customer has been assigned in accordance with subsection (a) may establish a reasonable minimum period for service, not to exceed thirty (30) days.

(c) In the event no Scheduling Coordinator indicates its willingness to represent Eligible Customers of a defaulting Scheduling Coordinator, the UDC that has the obligation to serve End-Use Customers of the Eligible Customer, if any, shall arrange to serve those End-Use Customers of such Eligible Customers that are located within the service area of the UDC. Such service will be provided in a manner consistent with that which the UDC provides, pursuant to the rules and tariffs of the Local Regulatory Authority, for its bundled End-Use Customers.

(d) This Section shall not in any way require a UDC to provide or arrange for Scheduling Coordinator service for wholesale Eligible Customers.

### 4.6 Relationship Between CAISO and Generators

The CAISO shall not accept Bids for any Generating Unit interconnected to the electric grid within the CAISO Balancing Authority Area (which includes a Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area) otherwise than through a Scheduling Coordinator. The CAISO shall further not be obligated to accept Bids from Scheduling Coordinators relating to Generation from any Generating Unit, including Generating Units participating as Non-Generator Resources, interconnected to the electric grid within the CAISO Balancing Authority Area (which includes a Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area) unless the relevant Generator undertakes in writing, by entering into a Participating Generator Agreement or, if eligible to enter such an agreement under the applicable terms of the CAISO tariff, a Net Scheduled PGA, Pseudo-Tie Participating Generator Agreement, or Metered Subsystem Agreement, with the CAISO to comply with all applicable provisions of this CAISO Tariff as

they may be amended from time to time, including, without limitation, the applicable provisions of this Section 4.6 and Section 7.7. The CAISO shall not accept Bids from Scheduling Coordinators relating to Participating Loads using the Non-Generator Resource model unless the resource owner or operator undertakes in writing, by entering into a Participating Load Agreement, to comply with all applicable provisions of this CAISO Tariff as they may be amended from time to time including, without limitation, the applicable provisions of this Section 4.6 and Section 7.7.

### 4.6.1 General Responsibilities

#### 4.6.1.1 Operate Pursuant to Relevant Provisions of CAISO Tariff

Participating Generators shall operate, or cause their facilities to be operated, in accordance with the relevant provisions of this CAISO Tariff, including, but not limited to, the operating requirements for normal and emergency operating conditions specified in Section 7 and the requirements for the dispatch and testing of Ancillary Services specified in Section 8.

(i) Each Participating Generator shall immediately inform the CAISO, through its respective Scheduling Coordinator, of any change or potential change in the current status of any Generating Units that are under the Dispatch control of the CAISO. This will include, but not be limited to, any change in status of equipment that could affect the maximum output of a Generating Unit, the Minimum Load of a Generating Unit, the ability of a Generating Unit to operate with automatic voltage regulation, operation of the PSSs (whether in or out of service), the availability of a Generating Unit governor, or a Generating Unit's ability to provide Ancillary Services as required. Each Participating Generator shall immediately report to the CAISO, through its Scheduling Coordinator, any actual or potential concerns or problems that it may have with respect to Generating Unit direct digital control equipment, Generating Unit voltage control equipment, or any other equipment that may impact the reliable operation of the CAISO Controlled Grid.

(ii) In the event that a Participating Generator cannot meet its Generation schedule as specified in the Day-Ahead Schedule, or comply with a Dispatch Instruction, whether due to a Generating Unit trip or the loss of a piece of equipment causing a reduction in capacity or output, the Participating Generator shall notify the CAISO, through its

Scheduling Coordinator, at once. If a Participating Generator will not be able to meet a time commitment or requires the cancellation of a Generating Unit Start-Up, it shall notify the CAISO, through its Scheduling Coordinator, at once.

(iii) In addition to complying with the other requirements of this Section 4.6.1.1 regarding the operation of its Generating Unit, a Participating Generator with a Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area shall comply with the requirements of Section 1.2.1 and related provisions of the Pseudo-Tie Protocol in Appendix N.

**4.6.1.2 Operate Pursuant to Relevant Operating Procedures**

Participating Generators shall operate, or cause their Generating Units and associated facilities to be operated, in accordance with the relevant Operating Procedures and Business Practice Manuals established by the CAISO or, prior to the establishment of such procedures, the Operating Procedures established by the TO or UDC owning the facilities that interconnect with the Generating Unit of the Participating Generator.

**4.6.2 [Not Used]**

**4.6.3 Requirements for Certain Participating Generators**

**4.6.3.1 Participating Generators Directly Connected to a Distribution System**

With regard to any Generating Unit directly connected to a Distribution System, a Participating Generator shall comply with applicable UDC tariffs, requirements of the Local Regulatory Authority, interconnection requirements and generation agreements. With regard to a Participating Generator's Generating Units directly connected to a Distribution System, the CAISO and the UDC or MSS, as applicable, will coordinate to develop procedures to avoid conflicting CAISO and UDC or MSS, as applicable, operational directives.

**4.6.3.2 Exemption for Generating Units Less Than One (1) MW**

A Generator with a Generating Unit directly connected to a Distribution System will be exempt from compliance with this Section 4.6 and Section 10.1.3 in relation to that Generating Unit provided that (i) the rated capacity of the Generating Unit is less than one (1) MW, and (ii) the Generator does not use the Generating Unit to participate in the CAISO Markets. This exemption in no way affects the calculation of

or any obligation to pay the appropriate charges or to comply with all the other applicable Sections of this CAISO Tariff. A Generating Unit with a rated capacity of less than 500 kW, unless the Generating Unit is (a) participating in an aggregation agreement approved by the CAISO or (b) a storage resource with a rated capacity of 100 kW or more, is not eligible to participate in the CAISO Markets and the Generator is not a Participating Generator for that Generating Unit.

With regard to any Generating Unit directly connected to a UDC system, a Participating Generator shall comply with applicable UDC tariffs, interconnection requirements and generation agreements. With regard to a Participating Generator's Generating Units directly connected to a UDC system, the CAISO and the UDC will coordinate to develop procedures to avoid conflicting CAISO and UDC operational directives. With regard to Regulatory Must-Take Generation, the CAISO will honor applicable terms and conditions of existing agreements, including Existing QF Contracts, as specified in Section 4.6.3.2. Qualifying Facilities that are not Regulatory Must-Take Generation subject to an Existing QF Contract shall comply with the requirements applicable to Participating Generators, as specified in Section 4.6.3.3.

**4.6.3.3 Qualifying Facilities and Combined Heat and Power Resources**

The owner or operator of (1) a Qualifying Facility, (2) a resource that is subject to an Amended QF Contract, or (3) a Combined Heat and Power Resource may satisfy the requirements of Section 4.6, to the extent applicable, by entering into Net Scheduled Participating Generator Agreement (Net Scheduled PGA) with the CAISO, in which case it shall comply with the provisions of the Net Scheduled PGA and Section 4.6.3.4. In order to be eligible to enter into the Net Scheduled PGA, a Participating Generator must demonstrate to the CAISO (a) that its Generating Unit (1) has established QF status pursuant to PURPA, (2) is a party to an Amended QF Contract; or (3) is a CHP Resource and (b) that the Self-provided Load of the Participating Generator that is served by the resource either (1) has and continues through the term of the Net Scheduled PGA to have, standby service from a UDC or MSS Operator under terms approved by the Local Regulatory Authority or FERC, as applicable, or (2) is curtailed concurrently with any Outage of the Generation serving that Self-provided Load in an amount sufficient to cover that Outage.

**4.6.3.4 Participating Generator with a Net Scheduled PGA**

A Participating Generator that is eligible for and has entered into a Net Scheduled Participating Generator

Agreement shall be subject to the provisions of this Section 4.6.3.4, as reflected in the terms of the Net Scheduled PGA.

#### 4.6.3.4.1 Revenue Metering for a Net Scheduled Generating Unit

In accordance with the terms of the Net Scheduled PGA and Section 10.1.3.3, a Participating Generator that has entered into a Net Scheduled PGA may net the revenue metering value for the Generation produced by each Net Scheduled Generating Unit listed in the Net Scheduled PGA and the revenue metering value for the Demand of the Self-provided Load that is (i) served by the Net Scheduled Generating Unit and (ii) electrically located on the same side of the Point of Demarcation.

#### 4.6.3.4.2 Telemetry for a Net Scheduled Generating Unit

A Participating Generator that has entered into a Net Scheduled PGA may satisfy the provisions of Section 7.6.1(d) for the installation of telemetry by installing telemetry at the Point of Demarcation for the purpose of recording the net impact of the Net Scheduled Generating Unit upon the CAISO Controlled Grid; provided that the installed telemetry satisfies the technical, functional, and performance requirements for telemetry set forth in the CAISO Tariff and the applicable Business Practice Manual.

#### 4.6.3.4.3 Market and Settlement Processes for a Net Scheduled Generating Unit

For bidding, scheduling, billing, and Settlement purposes regarding the Net Scheduled Generating Unit Self-provided Load of a Participating Generator that has entered into a Net Scheduled PGA, measurements of Generation or Demand of the Net Scheduled Generating Unit shall be made at the Point of Demarcation. In all other respects, the Generation and Load of the Net Scheduled Generating Unit shall be subject to the applicable provisions of the CAISO Tariff regarding bidding, scheduling, billing, and Settlements.

#### 4.6.3.4.4 Operating Requirements for a Net Scheduled Generating Unit

A Participating Generator that has entered into a Net Scheduled PGA shall abide by CAISO Tariff provisions regarding the CAISO's ability to dispatch or curtail Generation from the Net Scheduled Generating Units listed in its Net Scheduled PGA. The CAISO shall only dispatch or curtail a Net Scheduled Generating Unit of the Participating Generator: (a) to the extent the Participating Generator bids Energy, Imbalance Reserves, Reliability Capacity, or Ancillary Services from the Net Scheduled Generating Unit into the CAISO Markets or the Energy is otherwise available to the CAISO under Section

40, subject to the restrictions on Dispatch Instructions or Operating Instructions set forth below; or (b) if the CAISO must dispatch or curtail the Net Scheduled Generating Unit in order to respond to an existing or imminent System Emergency or condition that would compromise CAISO Balancing Authority Area integrity or reliability as provided in Sections 7 and 7.6.1.

The CAISO will not knowingly issue a Dispatch Instruction or Operating Instruction to a Participating Generator that has entered into a Net Scheduled PGA that: (1) requires a Participating Generator to reduce its Generation below the delineated minimum operating limit, other than in a System Emergency; (2) conflicts with operating limitations provided to the CAISO by the Participating Generator; or (3) results in damage to the Participating Generator's equipment, provided that any such equipment limitation has been provided to the CAISO and incorporated in the Participating Generator's operating limitations. If the Participating Generator: (1) receives a Schedule which requires operation below the minimum operating limit, and (2) deviates from that Schedule to continue to operate at the minimum operating limit, it will not be subject to any penalties or sanctions as a result of operating at the minimum operating limit. The Participating Generator's consequences for deviating from Schedules in Real-Time will be governed by the CAISO Tariff.

The CAISO shall have the authority to coordinate and approve Generation Outage schedules for the Generating Unit(s) listed in a Net Scheduled PGA, in accordance with the provisions of Section 9.

**4.6.3.5 [Not Used]**

### 4.6.4 Identification of Generating Units

Each Participating Generator shall provide data identifying each of its Generating Units and such information regarding the capacity and the operating characteristics of the Generating Unit as may be reasonably requested from time to time by the CAISO. Each Participating Generator shall provide information on its governor setting and certify that it has not inhibited the real power response of any Generating Unit by any means that would override the governor response except as necessary to address physical operational constraints for reasons that include ambient temperature limitations, outages of mechanical equipment or regulatory considerations. In the event there is a need to inhibit the real power response of any Generating Unit, the Participating Generators shall provide a written description of this limitation with its certification. All information provided to the CAISO regarding the

operational and technical constraints in the Master File must be an accurate reflection of the design capabilities of the resources and its constituent equipment when operating at maximum sustainable performance over Minimum Run Time, recognizing that resource performance may degrade over time. Information registered in the Master File by a Scheduling Coordinator must also conform to any additional definitional requirements in Appendix A as may exist as to that information. A Scheduling Coordinator may not submit a Bid for a Generating Unit or offer to provide any other service in the CAISO Markets if that Bid or offer could not be delivered feasibly based on the operational and technical constraints for that Generating Unit registered in the Master File. All information registered in the Master File shall be consistent with the offers and services provided by the resources in the CAISO Markets. The Pump Ramping Conversion Factor is configurable and need not reflect a resource's design capabilities.

### 4.6.5 NERC and WECC Requirements

#### 4.6.5.1 Participating Generator Performance Standard

Participating Generators shall, in relation to each of their Generating Units, meet all Applicable Reliability Criteria, including any standards regarding governor response capabilities, use of power system stabilizers, voltage control capabilities and hourly Energy delivery.

Participating Generators with governor controls that are synchronized to the CAISO Controlled Grid must respond immediately and automatically outside a deadband in proportion to frequency deviations through the action of a governor to help restore frequency to the scheduled value. Participating Generators shall set the governor droop for each Generating Unit with governor controls no higher than 4 percent droop for combustion turbines and 5 percent droop for other technology types; with a deadband no larger than +/- 0.036 Hz. Participating Generators will not inhibit the real power response of their Generating Units with governor controls by any means that would override the governor response except as necessary to address physical operational constraints for reasons that include ambient temperature limitations, outages of mechanical equipment or regulatory considerations. For each Generating Unit with governor controls, Participating Generators shall coordinate all plant control systems, locally or remotely controlled, so that they include frequency bias to ensure that each Generating Unit can respond immediately and automatically in proportion to frequency deviations to help restore frequency to the scheduled value. Unless otherwise agreed by the CAISO, a Generating Unit must be capable of operating at capacity

registered in the CAISO Controlled Grid interconnection data, and shall follow the voltage schedules issued by the PTO or, from time to time, the CAISO.

**4.6.5.2 [Not Used]**

**4.6.5.3 [Not Used]**

**4.6.6 Forced Outages**

Procedures equivalent to those set out in Section 9.3 shall apply to all Participating Generators in relation to Forced Outages.

**4.6.7 Recordkeeping; Information Sharing**

**4.6.7.1 Requirements for Maintaining Records**

Participating Generators shall provide to the CAISO such information and maintain such records as are reasonably required by the CAISO to plan the efficient use and maintain the reliability of the CAISO Controlled Grid.

**4.6.7.2 Providing Information to Generators**

The CAISO shall provide to any Participating Generator, upon its request, copies of any operational assessments, studies or reports prepared by or for the CAISO (unless such assessments studies or reports are subject to confidentiality rights or any rule of law that prohibits disclosure) concerning the operations of such Participating Generator's Generating Units, including, but not limited to, reports on major Generation Outages, Available Transfer Capability, and Congestion.

**4.6.7.3 Preparation of Reports on Major Incidents**

In preparing any report on a major incident the CAISO shall have due regard to the views of any Participating Generator involved or materially affected by such incident.

**4.6.8 Sharing Information on Reliability of CAISO Controlled Grid**

The CAISO and each Participating Generator shall have the obligation to inform each other, as promptly as possible, of any circumstance of which it becomes aware (including, but not limited to, abnormal temperatures, storms, floods, earthquakes, and equipment depletions and malfunctions and deviations from the Registered Data and operating characteristics) that is reasonably likely to threaten the reliability of the CAISO Controlled Grid or the integrity of the Participating Generator's facilities. The CAISO and each Participating Generator shall also inform the other as promptly as possible of any incident of which it

becomes aware (including, but not limited to, equipment Outages, over-loads or alarms) which, in the case of a Participating Generator, is reasonably likely to threaten the reliability of the CAISO Controlled Grid or, in the case of the CAISO, is reasonably likely to adversely affect the Participating Generator's facilities. Such information shall be provided in a form and content which is reasonable in all the circumstances and sufficient to provide timely warning to the other party of the potential impact.

**4.6.9 Access Right**

A Participating Generator shall, at the request of the CAISO and upon reasonable notice, provide access to its facilities and records (including those relating to communications, telemetry and direct control requirements) as necessary to permit the CAISO or a CAISO approved meter inspector to perform such testing as is necessary (i) to test the accuracy of any meters upon which the Participating Generator's compensation is based, or performance is measured, (ii) to test the Participating Generator's compliance with any performance standards pursuant to Section 4.6.5, or (iii) to obtain information relative to a Forced Outage, or (iv) for Participating Intermittent Resources, to ensure compliance with provisions relating to the Participating Intermittent Resource Export Fee.

**4.6.10 RMTMax for CHP Resources**

**4.6.10.1 Initial Determination**

Each Generating Unit that provides Regulatory Must-Take Generation from a CHP Resource must establish an RMTMax, which is determined as follows:

(a) If the Generating Unit's Scheduling Coordinator is a UDC or MSS and there is a power purchase agreement between the Generating Unit's owner or operator and its Scheduling Coordinator, by agreement of the two entities, or if not, by agreement of the Generating Unit's owner or operator and the CAISO, subject to subsection (d) below.

(b) In the event agreement cannot be reached or there is insufficient evidence of any agreement, by affidavit of an independent California-licensed certified engineer based on the engineer's assessment of the annual and seasonal requirements of the host and the resulting electrical output. Unless otherwise agreed upon, the cost of the engineer will be evenly shared by the Generating Unit's owner or operator and its Scheduling Coordinator if the Scheduling Coordinator is a UDC or MSS and there is a power purchase agreement

between the Generating Unit's owner or operator and the Scheduling Coordinator, or paid entirely by the Generating Unit's owner or operator, if the Scheduling Coordinator is not a UDC or MSS.

(c) Based on an agreement between the Generating Unit owner or operator and the Scheduling Coordinator, if it is a UDC or MSS and there is a power purchase agreement between the Generating Unit's owner or operator and the Scheduling Coordinator, or, otherwise, between the Generating Unit owner or operator and the CAISO, two daily RMTMax values may be established, one for off-peak and one for on-peak, as those terms are defined by NERC.

(d) RMTMax may not be established at a level that will conflict with the terms and conditions of a power purchase agreement negotiated by the Generating Unit owner or operator and the UDC or MSS.

**4.6.10.2 Redetermination**

The RMTMax must be reestablished on an annual basis using the methodologies described in section 4.6.10.1. It may be reestablished more frequently than once a year subject to the Master File change process if agreed by the Generating Unit's owner or operator and its Scheduling Coordinator, if the Scheduling Coordinator is a UDC or MSS, or by agreement of the Generating Unit's owner or operator and the CAISO.

**4.6.10.3 Usage Profile**

As part of the initial and annual recertification process, the Generating Unit owner or operator must provide the CAISO and its Scheduling Coordinator, if the Scheduling Coordinator is a UDC or MSS, with an annual non-binding indicative Regulatory Must-Take Generation usage profile.

**4.6.11 Storage Operating Characteristics**

Pursuant to Section 4.6.4, a Scheduling Coordinator for a storage resource participating as a Non-Generator Resource or Pumped-Storage Hydro Unit must submit to the CAISO the operational and technical constraints to the Master File representing an accurate reflection of the resource's design capabilities and its constituent equipment when operating at maximum sustainable performance over Minimum Run Time, recognizing that resource performance may degrade over time. Non-Generator

Resources, Hybrid Resources, and Pumped-Storage Hydro Units may include among their Master File parameters the constraints listed in Section 27.9 to the extent they comply with this Section.

### 4.7 Relationship Between CAISO and Participating Loads

The CAISO shall only accept Bids for Supply of Energy, Imbalance Reserves, Reliability Capacity, or Ancillary Services or Submissions to Self-Provide Ancillary Services from Loads if such Loads are those of a Participating Load that has entered into a Participating Load Agreement with the CAISO and which meet standards adopted by the CAISO and published on the CAISO Website. The CAISO shall not accept submitted Bids for Supply of Energy, Imbalance Reserves, Reliability Capacity, or Ancillary Services from a Participating Load other than through a Scheduling Coordinator. The CAISO shall not accept Bids from Scheduling Coordinators for Participating Loads using the Non-Generator Resource model unless the resource owner or operator undertakes in writing, by entering into a Participating Load Agreement, to comply with all applicable provisions of this CAISO Tariff as they may be amended from time to time.

### 4.8 Relationships Between CAISO and Intermittent Resources

#### 4.8.1 Bidding and Settlement

The CAISO shall not accept Bids for an Eligible Intermittent Resource other than through a Scheduling Coordinator. Any Eligible Intermittent Resource that is not a Participating Intermittent Resource, or any Participating Intermittent Resource for which Bids are submitted shall be bid and settled as a Generating Unit for the associated Settlement Periods (except that the Forecast Fee shall apply in such Settlement Periods).

#### 4.8.2 Forecasting

All Scheduling Coordinators for Eligible Intermittent Resources are subject to the forecasting requirements and the Forecast Fee as described below. All Eligible Intermittent Resources must provide the CAISO meteorological data as specified in Appendix Q. Scheduling Coordinators for Variable Energy Resources not located in the CAISO Balancing Authority Area that elect to use the forecast provided by the CAISO are also subject to the Forecast Fee. Scheduling Coordinators for Hybrid Resources that include an individual component that is capable of being separately registered with the CAISO as an Eligible Intermittent Resource must provide the CAISO with the meteorological data for that component

that would be required by Appendix Q, if it were registered with the CAISO as an Eligible Intermittent Resource. Scheduling Coordinators electing to use the forecast provided by the CAISO also are subject to the Forecast Fee.

#### 4.8.2.1 Forecast Requirements

##### 4.8.2.1.1 Use of Own Forecast

For purposes of participating in the CAISO Markets, Eligible Intermittent Resource may opt to use their own forecast of their resource's output, and not use the forecast of their output provided by the CAISO, only to the extent the CAISO has certified that the Eligible Intermittent Resource has completed the certification requirements specified in the Business Practice Manuals. If the Eligible Intermittent Resources is certified to provide their own forecast, they must provide at a minimum a three-hour rolling forecast with fifteen- (15) minute granularity, updated every fifteen minutes, and may provide in the alternative a three-hour rolling forecast at five- (5) minute granularity, updated every five minutes. If an Eligible Intermittent Resource opts to provide the forecast of their output at a five-minute granularity, the CAISO will use the average of the projected Energy output for the relevant three five (5)-minute forecasts to determine the Variable Energy Resource Self-Schedule for the Fifteen Minute Market as specified in Section 34. An Eligible Intermittent Resource that has elected to use its own forecast of its output must also submit the meteorological and outage data specified in Appendix Q. For purposes of participating in the CAISO Markets, Participating Intermittent Resources may opt to use their own output forecast if they are certified to do so by the CAISO pursuant to the rules specified in the Business Practice Manuals, in which case: (1) the resource will retain its status as a Participating Intermittent Resource; (2) the CAISO will not submit the updated output forecast for that resource through the Real-Time Market; and (3) the resource will be subject to the same requirements that apply to Eligible Intermittent Resource that use their own output forecast as specified in the CAISO Tariff.

##### 4.8.2.1.2 Use of Forecast from Independent Forecast Provider

For purposes of participating in the CAISO Markets, Eligible Intermittent Resources have the option to use a forecast of their output provided by CAISO. Variable Energy Resources that are located outside the CAISO Balancing Authority Area may also elect to use the output forecast provided by the CAISO,

provided that: (1) they agree to provide the CAISO with the meteorological data specified in Appendix Q; and (2) they are certified to do so by the CAISO pursuant to the rules specified in the Business Practice Manuals. Once the election to use the output forecast provided by the CAISO is complete, the CAISO will specify the election status for the Eligible Intermittent Resource or the external Variable Energy Resource in the Master File. The Eligible Intermittent Resource and any Variable Energy Resource located outside of the CAISO Balancing Authority Area opting to use the forecast of their output provided by the CAISO, must provide the meteorological and outage data as specified in Appendix Q. Any changes to this election will be subject to the timeline and rule changes that apply to the Master File as specified in Section 30.7.3.2.

#### 4.8.2.2 Application of the Forecast Fee

All Eligible Intermittent Resources are subject to the forecast fee specified in Section 2.4.1 of Appendix Q, regardless of whether the resource elects to use the CAISO-created forecast or relies on its own forecast. Variable Energy Resources located outside the CAISO Balancing Authority Area that elect to use the forecast of their output provided by the CAISO are also subject to the Forecast Fee specified in Section 2.4.1 of Appendix Q.

### 4.8.3 [Not Used]

## 4.9 Metered Subsystems

### 4.9.1 General Nature of Relationship Between CAISO and MSS

**4.9.1.1** An entity that is determined by the CAISO to qualify as a Metered Subsystem and that undertakes in writing, by entering into a Metered Subsystem Agreement with the CAISO, to comply with all applicable provisions of the CAISO Tariff as specified in that MSS Agreement as they may be amended from time to time, including, without limitation, the applicable provisions of this Section 4.9, shall be considered an MSS Operator and shall have the rights and obligations set forth in this Section 4.9. The CAISO shall not be obligated to accept Bids that would require Energy to be transmitted to or from a Metered Subsystem unless the MSS Agreement of the MSS Operator of the Metered Subsystem has become effective.

### 4.9.2 Coordination of Operations

Each MSS Operator shall operate its MSS at all times in accordance with Good Utility Practice and Applicable Reliability Criteria, including WECC and NERC criteria, and in a manner which ensures safe

and reliable operation. All information pertaining to the physical state or operation, maintenance and failure of the MSS affecting the operation of the CAISO Balancing Authority Area that is made available to the CAISO by the MSS Operator shall also be made available to Scheduling Coordinators, provided that the CAISO shall provide reasonable notice to the MSS Operator. The CAISO shall not be required to make information available to the MSS Operator other than information that is made available to Scheduling Coordinators.

### 4.9.3 Coordinating Maintenance Outages of MSS Facilities

Each MSS Operator shall make appropriate arrangements to coordinate Outages of Generating Units. Each MSS Operator shall make appropriate arrangements to coordinate Outages of transmission facilities forming part of its MSS that will have an effect, or are reasonably likely to have an effect, on any interconnection between the MSS and the system of a Participating TO, prior to the submission by that Participating TO of its Maintenance Outage requirements under Section 9.3. The CAISO will coordinate Outages of other Participating TOs transmission facilities that may affect the MSS.

### 4.9.4 MSS Operator Responsibilities

The MSS Operator's MSS Agreement with the CAISO shall obligate the MSS Operator to comply with all provisions of the CAISO Tariff, as amended from time to time, applicable to the UDCs, including, without limitation, the applicable provisions of Section 4.4 and Section 7.7. In addition, recognizing the CAISO's responsibility to promote the efficient use and reliable operation of the CAISO Controlled Grid and the CAISO Balancing Authority Area consistent with the Applicable Reliability Criteria, each MSS Operator shall:

**4.9.4.1** operate and maintain its facilities, in accordance with applicable safety and reliability standards, regulatory requirements, applicable operating guidelines, applicable rates, tariffs, statutes and regulations governing their provision of service to their End-Use Customers and Good Utility Practice so as to avoid any material adverse impact on the CAISO Controlled Grid, it being understood that, if the MSS Operator does not so operate and maintain its facilities and the CAISO concludes, after notice is provided to the MSS Operator, that such failure impairs or threatens to impair the reliability of the CAISO Controlled Grid, the CAISO may suspend MSS status, in accordance with this Section 4.9, until the MSS Operator

demonstrates the ability and willingness to so operate and maintain its facilities;

**4.9.4.2** provide the CAISO each year with a schedule of upcoming maintenance of facilities forming part of the MSS that will affect, or is reasonably likely to affect, the CAISO Controlled Grid in accordance with Section 9.3.6;

**4.9.4.3** coordinate with the CAISO, Participating TOs, and Generators to ensure that the CAISO Controlled Grid Critical Protective Systems, including relay systems, are installed and maintained in order to function on a coordinated and complementary basis with the protective systems of the MSS, Participating TOs, and Generators, and notify the CAISO as soon as is reasonably possible of any condition that it becomes aware of that may compromise the CAISO Controlled Grid Critical Protective Systems;

**4.9.4.4** be responsible for any Reliability Must-Run Generation and Voltage Support required for reliability of the MSS, including the responsibility for any costs of such Reliability Must-Run Generation, and Voltage Support and may satisfy this requirement through Generating Units owned by the MSS Operator or under contract to the MSS Operator; and

**4.9.4.5** [Not Used]

**4.9.4.6** be responsible for Congestion Management and transmission line Outages within or at the boundary of the MSS, and all associated costs of actions the MSS Operator has to take to resolve such Congestion internal to the MSS and not be responsible for Congestion Management elsewhere, except to the extent that a Scheduling Coordinator is delivering Energy, Imbalance Reserves, Reliability Capacity, or Ancillary Services to or from the MSS. An MSS Operator must notify and communicate with the CAISO regarding transmission line Outages to the extent such Outages impact the CAISO Controlled Grid.

### 4.9.5 Scheduling by or on Behalf of a MSS Operator

All Bids, including but not limited to Self-Schedules, submitted on behalf of an MSS Operator for the delivery of Energy, Imbalance Reserves, Reliability Capacity, and Ancillary Services to Loads connected to the MSS and for the delivery of Energy, Imbalance Reserves, Reliability Capacity, and Ancillary Services from Generating Units forming part of the MSS or System Units shall be submitted by a Scheduling Coordinator that complies with all applicable provisions of the CAISO Tariff, which Scheduling

Coordinator may be the MSS Operator, provided that the MSS Operator complies with all applicable requirements for Scheduling Coordinators. A Scheduling Coordinator shall separately identify Bids that it submits on behalf of an MSS Operator.

**4.9.5.1** Without limiting the foregoing, the Scheduling Coordinator for the MSS must submit gross generation information for the System Unit, Generating Unit, and information regarding imports, exports and Gross Loads to the CAISO in the format and in accordance with the timelines applicable to other Scheduling Coordinators.

**4.9.5.2** The Scheduling Coordinator for the MSS will designate, in discrete quantities and with prices for Energy, Imbalance Reserves, Reliability Capacity, and Ancillary Services: (1) Bids in the Day-Ahead Market and Real-Time Market (including Bids for internal Generation and internal Demand within the MSS), (2) Submissions to Self-Provide Ancillary Services or Bids for Regulation, Spinning Reserve, and Non-Spinning Reserve, capacity and associated Bid for Energy, or (3) any feasible combination thereof.

**4.9.5.3 MSS Demand Forecast**

The Scheduling Coordinator for the MSS shall provide CAISO with Demand forecasts of the MSS. To the extent that the Scheduling Coordinator does not provide requisite Demand Forecast for the MSS it represents, the CAISO shall produce a Demand Forecast for each MSS Load Take-Out Point.

**4.9.6 System Emergencies**

**4.9.6.1** The CAISO has authority to suspend MSS control and direct, via communications with the MSS Operator, the operation of Generating Units within the MSS, including Generating Units that may comprise a System Unit, if such control is necessary to maintain CAISO Controlled Grid reliability.

**4.9.6.2** If Load Shedding is required to manage System Emergencies, the CAISO will determine the amount and location of Load to be reduced pursuant to Section 7.7.5.1 and 7.7.5.2. Each MSS Operator shall be responsible for notifying its customers and Generators connected to its system of curtailments and service interruption.

**4.9.6.3 System Emergency Reports: MSS Obligations**

**4.9.6.3.1** Each MSS Operator shall maintain all appropriate records pertaining to a System Emergency.

**4.9.6.3.2** Each MSS Operator shall cooperate with the CAISO in preparation of an Outage in review pursuant to Section 7.7.13.

### 4.9.7 Coordination of Expansion or Modification to MSS Facilities

Each MSS Operator and any Participating TO with which its system is interconnected, if applicable, shall coordinate in the planning and implementation of any expansion or modifications of a MSS's or Participating TO's system that will affect their transmission interconnection, the CAISO Controlled Grid or the transmission services to be required by the MSS Operator. The MSS Operator and any Participating TO with which the MSS is interconnected shall be responsible for coordinating with the CAISO.

### 4.9.8 Ancillary Services Obligations for MSS

**4.9.8.1** Ancillary Services Obligations will be allocated to the Scheduling Coordinator bidding or scheduling Load within a MSS in accordance with the CAISO Tariff. The CAISO shall have the right to call upon the Self-Provided Ancillary Service of a Scheduling Coordinator for an MSS or procured by the CAISO from such Scheduling Coordinator in accordance with the CAISO Tariff. The Scheduling Coordinator representing the MSS Operator may provide a Submission to Self-Provide an Ancillary Service or bid (including self-provide) Ancillary Services from a System Unit or from individual Generating Units or Participating Loads, or Proxy Demand Resources in the MSS. Alternatively, the Scheduling Coordinator representing the MSS may purchase Ancillary Services from the CAISO or third parties to meet all or part of its Ancillary Services Obligations in accordance with the CAISO Tariff.

**4.9.8.2** If the MSS Operator desires to follow internal Load with a System Unit or Generating Units in the MSS, and also to provide Regulation to the CAISO, the MSS must provide adequate telemetry consistent with the CAISO Tariff and all applicable standards to allow performance in response to CAISO AGC signals to be measured at the interconnection of the MSS to the CAISO Controlled Grid.

### 4.9.9 [Not Used]

### 4.9.10 Information Sharing

#### 4.9.10.1 System Planning Studies and Forecasts

The CAISO, the MSS Operator and Participating TOs shall share information such as projected Load growth and system expansions necessary to conduct necessary system planning studies to the extent that these may impact the operation of the CAISO Balancing Authority Area. Each MSS Operator shall provide to the CAISO annually its ten-year forecasts of Demand growth, internal Generation, and expansion of or replacement for any transmission facilities that are part of the MSS that will or may

significantly affect any point of interconnection between the MSS and the CAISO Controlled Grid. Such forecasts shall be provided on the date that UDCs are required to submit forecasts to the CAISO under Section 4.4.5.1. Each MSS Operator or each Scheduling Coordinator for an MSS Operator shall also submit weekly and monthly peak Demand Forecasts in accordance with the CAISO's Business Practice Manuals.

#### 4.9.10.2 System Surveys and Inspections

The CAISO and each MSS Operator shall cooperate with each other in performing system surveys and inspections to the extent these relate to the operation of the CAISO Balancing Authority Area.

#### 4.9.10.3 Reports

**4.9.10.3.1** The CAISO shall make available to each MSS Operator any public annual reviews or reports regarding performance standards, measurements and incentives relating to the CAISO Controlled Grid and shall also make available, upon reasonable notice, any such reports that the CAISO receives from Participating TOs. Each MSS Operator shall make available to the CAISO any public annual reviews or reports regarding performance standards, measurements and incentives relating to the MSS's Distribution System to the extent these relate to the operation of the CAISO Controlled Grid.

**4.9.10.3.2** The CAISO and the MSS Operators shall develop an operating procedure to record requests received for Maintenance Outages by the CAISO and the completion of the requested maintenance and turnaround times.

**4.9.10.3.3** Each MSS Operator shall promptly provide such information as the CAISO may reasonably request concerning the MSS Operator's operation of the MSS to enable the CAISO to meet its responsibility under the CAISO Tariff to conduct reviews and prepare reports following major Outages. Where appropriate, the CAISO will provide appropriate assurances that the confidentiality of commercially sensitive information shall be protected. The CAISO shall have no responsibility to prepare reports on Outages that affect customers on the MSS, unless the Outage also affects customers connected to the system of another entity within the CAISO Balancing Authority Area. The MSS Operator shall be solely responsible for the preparation of any reports required by any governmental entity or the WECC with respect to any Outage that affects solely customers on the MSS.

#### 4.9.10.3.4 Reliability Information

Each MSS Operator shall inform the CAISO, and the CAISO shall inform each MSS Operator, in each case as promptly as possible, of any circumstance of which it becomes aware (including, but not limited to, abnormal temperatures, storms, floods, earthquakes, and equipment depletions and malfunctions and deviations from Registered Data and operating characteristics) that is reasonably likely to threaten the reliability of the CAISO Controlled Grid or the integrity of the MSS respectively. Each MSS Operator and the CAISO each shall also inform the other as promptly as possible of any incident of which it becomes aware (including, but not limited to, equipment Outages, over-loads or alarms) which, in the case of the MSS Operator, is reasonably likely to threaten the reliability of the CAISO Controlled Grid, or, in the case of the CAISO, is reasonably likely to adversely affect the MSS. Such information shall be provided in a form and content which is reasonable in all the circumstances, sufficient to provide timely warning to the entity receiving the information of the threat and, in the case of the CAISO, not unduly discriminatory with respect to the CAISO's provision of similar information to other entities.

#### 4.9.10.3.5 Forms

The CAISO shall, in consultation with MSS Operators, jointly develop and, as necessary, revise, any necessary forms and procedures for collection, study, treatment, and transmittal of system data, information, reports and forecasts.

**4.9.10.4** Each MSS Operator shall provide to the CAISO information as provided in Section 36.8.5.2 that enables the CAISO to perform transfers of CRRs to reflect Load Migration in a timely manner as required in Section 36.8.5.

### 4.9.11 Installation of and Rights of Access to MSS Facilities

#### 4.9.11.1 Installation of Facilities.

#### 4.9.11.1.1 Meeting Service Obligations.

The CAISO and each MSS Operator shall each have the right, if mutually agreed, on reasonable notice to install or to have installed equipment (including metering equipment) or other facilities on the property of the other, to the extent that such installation is necessary for the installing party to meet its service obligations unless to do so would have a negative impact on the reliability of the service provided by the party owning the property.

#### 4.9.11.1.2 Governing Agreements for Installations.

The CAISO and the MSS Operator shall enter into agreements governing the installation of equipment or other facilities containing customary and reasonable terms and conditions.

#### 4.9.11.2 Access to Facilities.

Each MSS Operator shall grant the CAISO reasonable access to MSS facilities free of charge for purposes of inspection, repair, maintenance, or upgrading of facilities installed by the CAISO on the MSS's system, provided that the CAISO must provide reasonable advance notice of its intent to access MSS facilities. Such access shall not be provided unless the parties mutually agree to the date, time and purpose of each access. Agreement on the terms of the access shall not be unreasonably withheld.

#### 4.9.11.3 Access During Emergencies.

Notwithstanding any provision in this Section 4.9, the CAISO may have access, without giving prior notice, to any MSS Operator's equipment or other facilities during times of a System Emergency or where access is needed in connection with an audit function.

### 4.9.12 MSS System Unit

**4.9.12.1** A MSS Operator may aggregate one or more Generating Units, Participating Loads, Reliability Demand Response Resources, and/or Proxy Demand Resources as a System Unit. A System Unit must be modeled as an aggregated Generating Unit and must provide a set of Generation Distribution Factors. Except as specifically provided in the MSS Agreement referred to in Section 4.9.1.1, all provisions of the CAISO Tariff applicable to Participating Generators and to Generating Units (and, if the System Unit includes a Load, to Participating Loads, Reliability Demand Response Resources, and Proxy Demand Resources), shall apply fully to the System Unit and the Generating Units and/or Loads included in it. The MSS Operator's MSS Agreement with the CAISO in accordance with Section 4.9.1.1 shall obligate the MSS Operator to comply with all provisions of the CAISO Tariff, as amended from time to time, applicable to the System Unit, including, without limitation, the applicable provisions of Sections 4.6.1 and 7.7. In accordance with Section 7.6.1, the CAISO will obtain control over the System Unit, not the individual Generating Unit, except for Regulation, to comply with Section 4.6.

**4.9.12.2** Without limiting the generality of Section 4.9.12.1, a MSS Operator that owns or has an entitlement to a System Unit:

**4.9.12.2.1** is required to have a direct communication link to the CAISO's EMS satisfying the requirements applicable to Generating Units owned by Participating Generators, Participating Loads or Proxy Demand Resources, as applicable, for the System Unit and the individual resources that make up the System Unit;

**4.9.12.2.2** shall provide resource-specific information regarding the Generating Units and Loads comprising the System Unit to the CAISO through telemetry to the CAISO's EMS;

**4.9.12.2.3** shall obtain CAISO certification of the System Unit's Ancillary Service capabilities in accordance with Sections 8.4 and 8.9 before the Scheduling Coordinator representing the MSS may self-provide its Ancillary Service Obligations or bid into the CAISO Markets from that System Unit;

**4.9.12.2.4** shall provide the CAISO with control over the AGC of the System Unit, if the System Unit is supplying Regulation to the CAISO or is designated to self-provide Regulation;

**4.9.12.2.5** shall install CAISO certified meters on each individual resource or facility that is aggregated to a System Unit; and

**4.9.12.2.6** shall provide, through the Scheduling Coordinator representing the MSS Operator, Settlement Quality Meter Data for the System Unit's Proxy Demand Resources and Reliability Demand Response Resources.

**4.9.12.3** Subject to Section 4.9.12.4, the CAISO shall have the authority to exercise control over the System Unit to the same extent that it may exercise control pursuant to the CAISO Tariff over any other Participating Generator, Generating Unit or, if applicable, Participating Load, Reliability Demand Response Resource, or Proxy Demand Resource, but the CAISO shall not have the authority to direct the MSS Operator to adjust the operation of the individual resources that make up the System Unit to comply with directives issued with respect to the System Unit.

**4.9.12.4** When and to the extent that Energy from a System Unit is self-scheduled to provide for the needs of Loads within the MSS and is not being bid to the CAISO Markets, the CAISO shall have the authority to dispatch the System Unit only to avert or respond to a circumstance described in the third sentence of Section 7.6.1 or, pursuant to Section 7.7.2.3, to a System Emergency.

**4.9.13 MSS Elections and Participation in CAISO Markets**

MSS Operators must make an election or choice on three (3) issues that govern the manner in which the

MSS participates in the CAISO Markets. The MSS Operator must choose either: (i) net Settlements or gross Settlements, (ii) to Load follow or not Load follow with its generating resources, and (iii) whether or not to charge the CAISO for their Emissions Costs as provided in Section 11.7.4. The MSS Operator shall make annual elections regarding these three (3) sets of options pursuant to the timeline specified for such elections in the Business Practice Manuals.

The MSS Operator's prior year election will be the default if the MSS Operator does not make a timely election, unless the MSS Operator has been found to have violated Load following requirements and is no longer eligible for making such elections. If the MSS Operator fails to elect net Settlement as specified in Section 11.2.3.2, the default mechanism for all MSS Settlements shall be gross Settlement as specified in Section 11.2.3.1.

The Load following and net or gross Settlement elections of an MSS Operator change certain aspects of, but do not preclude, the participation of the MSS in the CAISO Markets. An MSS Operator may: (i) bid to supply Energy to, or purchase Energy from, the CAISO Markets, (ii) bid to provide available capacity in RUC, and (iii) bid or make a Submission to Self-Provide an Ancillary Service from a System Unit or from individual Generating Units, Participating Loads or Proxy Demand Resources within the MSS. An MSS Operator also may purchase Ancillary Services from CAISO or third parties to meet its Ancillary Service Obligations under the CAISO Tariff.

#### 4.9.13.1 Gross or Net Settlement

An MSS Operator has the option to settle with the CAISO on either a gross basis or a net basis for its Load and generating resources. This election shall be made annually for a period consistent with annual CRR Allocation. If the MSS Operator elects net Settlement, then CRRs would be allocated on MSS net Load and the MSS may choose the MSS LAP as its CRR Sink in the first tiers of CRR Allocation. If the MSS Operator elects gross Settlement, then CRRs would be allocated on a gross Load basis and the MSS may not choose the MSS LAPs as its CRR Sink in the first tiers of CRR Allocation.

#### 4.9.13.2 Load-Following or Non Load-Following Election

The MSS Operator has the option to elect to operate a System Unit or Generating Units in the MSS to follow its Load, provided that: (a) the Scheduling Coordinator for the MSS Operator shall remain

responsible for purchases of Energy in accordance with the CAISO Tariff if the MSS Operator does not operate its System Unit or Generating Units and bid or schedule imports into the MSS, to match the metered Demand in the MSS and exports from the MSS; and (b) if the deviation between Generation and imports into the MSS and metered Demand and exports from the MSS exceeds the MSS Deviation Band, then the Scheduling Coordinator for the MSS Operator shall pay the additional amounts specified in Section 11.7. If an MSS Operator elects Load-following and net Settlements, all generating resources within the MSS must be designated as Load-following resources. If an MSS Operator elects Load-following and gross Settlements, generating resources within the MSS can be designated as either Load-following or non-Load-following resources. Consistent with these requirements, the MSS Operator may also modify the designation of generating resources within the MSS within the timing requirements specified for such Master File changes as described in the Business Practice Manuals.

If the MSS Operator has elected gross Settlement and is a Load-following MSS: (i) it must designate in the Master File which of its generating resources are Load-following resources, (ii) it must complying with the additional bidding requirements in Section 30.5.2.5, and (iii) the generation resources designated as Load-following resources cannot set Real-Time prices. However, Load-following resources will be eligible to receive Bid Cost Recovery to ensure that the price paid for Energy dispatched by the CAISO is not less than the MSS Operator's accepted Bid price. Bid Cost Recovery for a Load-following MSS resource is only applicable to generation capacity provided to the CAISO Markets by that MSS resource and is not applicable for the generating capacity that is designated or used by an MSS Operator to follow its own Load.

An MSS Operator may designate RMR Resources as Load-following. Load-following RMR Resources must be available to the CAISO for Dispatch up to the RMR Contract Capacity specified in the RMR Contract. Energy shall be accounted for as a delivery from the MSS to the CAISO for the purposes of determining if the MSS Operator followed its metered Demand and exports from the MSS as described in this Section 4.9.13.2 except that Energy from an RMR Resources in a Day-Ahead Schedule can be used for Load-following to satisfy Day-Ahead scheduled Demand like any other non-RMR Resource Load-following resource. If no RMR Dispatch Notice is received for a Load-following RMR Resource, such Load-following RMR Resource may participate in the CAISO Markets as any other non-RMR Load-

following resource subject to Section 30.5.2.5.

### 4.10 Candidate CRR Holder and CRR Holder Registration

Only entities that are registered and qualified as a Candidate CRR Holder or CRR Holder shall: 1) submit nominations to CRR Allocations; 2) submit Bids to CRR Auctions; and 3) register as a CRR Holder through the Secondary Registration System. In order to be registered and qualified as Candidate CRR Holders or CRR Holders, entities must have met the all of the requirements specified in this Section 4.10.

#### 4.10.1 Procedure to Become a Candidate CRR Holder

##### 4.10.1.1 Candidate CRR Holder Application

To become a Candidate CRR Holder, a Candidate CRR Holder applicant must submit a completed written application, as provided in the applicable form posted on the CAISO Website, to the CAISO by mail, electronic submission, or in person. A Candidate CRR Holder applicant may retrieve the application and necessary information from the CAISO Website.

##### 4.10.1.2 CAISO Information

The CAISO will provide the following information, in its most current form, on the CAISO Website and, upon request by a Candidate CRR Holder applicant, the CAISO will send the requested information by electronic mail:

(a) the Candidate CRR Holder application form;

(b) the CAISO Tariff and Business Practice Manuals; and

(c) an application for an Unsecured Credit Limit for Candidate CRR Holder applicants requesting an Unsecured Credit Limit in lieu of another form of Financial Security.

##### 4.10.1.3 Candidate CRR Holder Applicant Submits Application

At least sixty (60) days before the proposed commencement of the CRR Allocation or CRR Auction, or the effective date of the CRR transfer through the Secondary Registration System, in which a Candidate CRR Holder desires to participate as applicable, the Candidate CRR Holder applicant must return a completed application form with the non-refundable application fee set by the CAISO Governing Board to cover the application processing costs and the costs of furnishing the CAISO Tariff and other documents.

##### 4.10.1.4 Notice of Receipt

Within three (3) Business Days of receiving the application, the CAISO will send a written notification to

the Candidate CRR Holder applicant that it has received the application and the non-refundable fee.

#### 4.10.1.5 CAISO Review of Application

Within ten (10) Business Days after receiving an application, the CAISO will notify the Candidate CRR Holder applicant whether the Candidate CRR Holder applicant has fulfilled all necessary information as set forth in Section 4.10.1. If the Candidate CRR Holder applicant fails to fulfill all application requirements within a year from the date that the CAISO acknowledges receipt of the Candidate CRR Holder application, the application will be nullified and the applicant will be required to resubmit a new application in order to reinstate its status as a Candidate CRR Holder applicant.

##### 4.10.1.5.1 Information Requirements

The Candidate CRR Holder applicant must complete all of the following requirements as part of the application process:

(a) the proposed date for commencement of the CRR Allocation, CRR Auction or Secondary Registration System in which the applicant intends to qualify to participate, which may not be less than sixty (60) days after the date the application was filed, unless waived by the CAISO;

(b) financial and credit information as set forth in Section 12;

(c) proof of completion of CRR training or expected completion of CRR training;

(d) the prescribed non-refundable application fee; and

(e) identity of the applicant's Affiliates, as described in Section 39.9.

##### 4.10.1.5.2 Candidate CRR Holder Load Serving Entity Certifications

A Candidate CRR Holder applicant that intends to obtain CRRs through the CRR Allocation process must certify that it qualifies as a Load Serving Entity as defined in the CAISO Tariff. A Candidate CRR Holder applicant that intends to participate in the CRR Allocation for load it serves located outside the CAISO Balancing Authority Area must certify that it qualifies as that load's load serving entity and prior to actual participation in the CRR Allocation will also be required to fulfill the requirements in Section 36.9.

#### 4.10.1.6 Deficient Application

In the event that the CAISO has determined that the Candidate CRR Holder application as submitted is deficient the CAISO will send a written notification of the deficiency to the Candidate CRR Holder

applicant within ten (10) Business Days of receipt by the CAISO of the application explaining the deficiency and requesting additional information.

#### 4.10.1.6.1 Candidate CRR Holder Applicant's Additional Information

Once the CAISO requests additional information, the Candidate CRR Holder applicant has five (5) Business Days, or such longer period as the CAISO may agree, to provide the additional material requested by the CAISO

#### 4.10.1.6.2 No Response from Candidate CRR Holder Applicant

If the Candidate CRR Holder applicant does not submit additional information within five (5) Business Days or the longer period referred to in Section 4.10.1.6.1, the application may be rejected by the CAISO.

### 4.10.1.7 CAISO Acceptance or Rejection of an Application

#### 4.10.1.7.1 Acceptance or Rejection Notification

(a) If the CAISO accepts the application, it will send a written notification to the Candidate CRR Holder applicant stating that its application has been accepted.

(b) If the CAISO rejects the application, the CAISO will send a rejection letter stating one or more of the following grounds:

(i) incomplete information;

(ii) non-compliance with Financial Security requirements; or

(iii) non-compliance with any other CAISO Tariff requirements.

Upon request, the CAISO will provide guidance as to how the Candidate CRR Holder applicant can cure the grounds for the rejection.

#### 4.10.1.7.2 Time for Processing Application

The CAISO will make a decision whether to accept or reject the application within ten (10) Business Days of receipt of the application. If more information is requested, the CAISO will make a final decision within ten (10) Business Days of the receipt of all outstanding or additional information requested.

### 4.10.1.8 Candidate CRR Holder Applicant's Response

#### 4.10.1.8.1 Candidate CRR Holder Applicant's Acceptance

If the CAISO accepts the application, the Candidate CRR Holder applicant must return an executed CRR Entity Agreement and any required financial and credit information pursuant to Section 12 of the CAISO

tariff.

#### 4.10.1.8.2 Candidate CRR Holder Applicant's Rejection

##### 4.10.1.8.2.1 Resubmittal

If a Candidate CRR Holder's application is rejected, the Candidate CRR Holder applicant may resubmit its application at any time. An additional application fee will not be required for the second application submitted within six (6) months after the CAISO's issuance of a rejection.

##### 4.10.1.8.2.2 Appeal

The Candidate CRR Holder applicant may also appeal against the rejection of an application by the CAISO. An appeal must be submitted within twenty (20) Business Days following the CAISO's issuance of a rejection of its application.

#### 4.10.1.9 Final Registration and Qualification of Candidate CRR Holder Applicant.

##### 4.10.1.9.1 Notice of Completed Registration and Qualification of Candidate CRR Holder

Once the CAISO has accepted a Candidate CRR Holder applicant's application, the CAISO will provide the Candidate CRR Holder applicant with a final written notice to certify that a Candidate CRR Holder applicant has become a Candidate CRR Holder. The CAISO shall issue such final written notice of full registration and qualification as a Candidate CRR Holder after the CAISO has determined that the Candidate CRR Holder applicant has fully satisfied all the following requirements:

(a) fully executed a CRR Entity Agreement with the CAISO;

(b) provided its bank account information and arranged for Fedwire transfers, with the Candidate CRR Holder being obligated to maintain at all times an account with a bank capable of Fedwire transfer and being permitted, at its option, to arrange for ACH payment service;

(c) met the Financial Security requirements of Section 12;

(d) certified that it has attended required CRR training; and

(e) obtained and installed any necessary software for communication with the CAISO as necessary.

##### 4.10.1.9.2 Market Notice

The CAISO shall issue a Market Notice stating the new Candidate CRR Holder status.

### 4.10.2 Ongoing Obligations after Registration and Qualifications

#### 4.10.2.1 Candidate CRR Holder and CRR Holder Obligation to Report Changes

##### 4.10.2.1.1 Obligation to Report a Change in Filed Information

Each Candidate CRR Holder and CRR Holder has an ongoing obligation to inform the CAISO of any changes to any of the information submitted by it to the CAISO as part of its application to become a Candidate CRR Holder, including any changes to the additional information requested by the CAISO. The applicable Business Practice Manual sets forth the procedures for changing the Candidate CRR Holder or CRR Holder information and timing of notifying the CAISO of such changes.

##### 4.10.2.1.2 Obligation to Report a Material Change in Financial Condition

The Candidate CRR Holder or CRR Holder that has been granted Unsecured Credit Limit has an ongoing obligation to inform the CAISO within five (5) Business Days of any Material Change in Financial Condition including but not limited to credit rating changes described in Section 12.

#### 4.10.2.2 Failure to Promptly Report a Material Change

If a Candidate CRR Holder or CRR Holder fails to inform the CAISO of a material change in its information provided to the CAISO including a Material Change in Financial Condition, that may affect the Financial Security of the CAISO, the CAISO may suspend or terminate the Candidate CRR Holder or CRR Holder's rights under the CAISO Tariff in accordance with the terms of Sections 12 and 4.10.3.2, respectively. If the CAISO intends to terminate the Candidate CRR Holder's status, it shall file a notice of termination with FERC in accordance with the terms of the CRR Entity Agreement. Such termination shall be effective upon acceptance by FERC of a notice of termination in accordance with the terms of the CRR Entity Agreement.

### 4.10.3 Termination of a CRR Entity Agreement

#### 4.10.3.1 Prior Notice Requirements

(a) A CRR Entity Agreement may be terminated by the CAISO on written notice to the Candidate CRR Holder or CRR Holder that is a party to the CRR Entity Agreement in accordance with the terms of the CRR Entity Agreement:

(i) if the Candidate CRR Holder or CRR Holder no longer meets the requirements for eligibility set out in Section 4.10 and fails to remedy the default within a period of seven (7) days after the CAISO has given written notice of the default;

(ii) if the Candidate CRR Holder or CRR Holder fails to pay any sum under this CAISO Tariff and fails to remedy the default within a period of five (5) Business Days after the CAISO has given written notice of the default; or

(iii) if the Candidate CRR Holder or CRR Holder commits any other default under this CAISO Tariff or any of the Business Practice Manuals which, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given it written notice of the default.

(b) The Candidate CRR Holder or CRR Holder may terminate its CRR Entity Agreement in accordance with the provisions of that agreement.

(c) Upon termination of the CRR Entity Agreement, Candidate CRR Holders or CRR Holders shall continue to be liable for any outstanding financial or other obligations incurred under the CAISO Tariff as a result of their status as a Candidate CRR Holder or CRR Holder.

(d) The CAISO shall, following termination of a CRR Entity Agreement and within thirty (30) days of being satisfied that no sums remain owing by the Candidate CRR Holder or CRR Holder under the CAISO Tariff, return or release to the Candidate CRR Holder or CRR Holder, as appropriate, any Financial Security support provided by such Candidate CRR Holder or CRR Holder to the CAISO under Section 12.

#### 4.10.3.2 Suspension of Registration and Qualification

Pending FERC acceptance of termination of service pursuant to the filing of a notice of termination of the CRR Entity Agreement, the CAISO will suspend the registration and qualification of a Candidate CRR Holder or CRR Holder that has received a notice of termination under the CRR Entity Agreement and the Candidate CRR Holder will not be able to submit nominations in the CRR Allocation or bids in the CRR Auction, or to register as a CRR Holder in the Secondary Registration System.

## 4.11 Relationship Between CAISO and SUDCs

### 4.11.1 General Nature of Relationship Between CAISO and SUDCs

**4.11.1.1** The CAISO shall not be obliged to accept Bids, including Self-Schedules, or Bids for Ancillary Services which would require Energy to be transmitted to or from the Distribution System of a SUDC directly connected to the CAISO Controlled Grid unless the relevant SUDC has entered into a SUDC Operating Agreement. The SUDC Operating Agreement shall require SUDCs to comply with the applicable provisions of this Section 4.11 and any other expressly applicable Sections of this CAISO Tariff and the CAISO Protocols, as they may be amended from time to time. The CAISO shall maintain a pro forma SUDC Operating Agreement available for SUDCs to enter into with the CAISO, as set forth in Appendix B.10.

**4.11.1.2** The CAISO shall operate the CAISO Balancing Authority Area and the CAISO Controlled Grid and each SUDC shall operate its Distribution System at all times in accordance with Good Utility Practice and in a manner which ensures safe and reliable operation. The CAISO shall, in respect of its obligations set forth in this Section 4.11, have the right by mutual agreement to delegate certain operational responsibilities to the relevant Participating TO or SUDC pursuant to this Section 4.11. All information made available to SUDCs by the CAISO shall also be made available to Scheduling Coordinators. Any information, pertaining to the physical state, operation, maintenance or failure of the SUDC Distribution System that may cause a material adverse affect to the operation of the CAISO Controlled Grid, that is made available to the CAISO by the SUDC shall also be made available to Scheduling Coordinators upon receipt of reasonable notice.

### 4.11.2 Coordinating Maintenance Outages of SUDC Facilities

Each SUDC and the Participating TO with which it is interconnected shall coordinate their Outage requirements with respect to their transmission interconnection facilities prior to the submission by that Participating TO of its maintenance Outage requirements under Section 9.3.

### 4.11.3 SUDC Responsibilities

Recognizing the CAISO's duty to ensure efficient use and reliable operation of the CAISO Balancing Authority Area and the CAISO Controlled Grid consistent with the Applicable Reliability Criteria, each SUDC shall:

**4.11.3.1** operate and maintain its Distribution System in accordance with the applicable reliability standards, statutes and regulations, and Good Utility Practice so as to avoid any material adverse impact

on the reliability of the CAISO Balancing Authority Area and the CAISO Controlled Grid; and

**4.11.3.2** provide the CAISO each year with a schedule of upcoming maintenance on its transmission interconnection facilities with the CAISO Controlled Grid that has a reasonable potential of causing a material adverse impact to the reliability of the CAISO Controlled Grid.

**4.11.4 System Emergencies**

**4.11.4.1** In the event of a System Emergency, SUDCs shall comply with all directions from the CAISO concerning the management and alleviation of the System Emergency and shall comply with all procedures concerning SUDCs for System Emergencies set out in the individual SUDC Operating Agreements.

**4.11.4.2** During a System Emergency, the CAISO and SUDCs shall communicate in accordance with procedures established in individual SUDC Operating Agreements.

**4.11.5 Load Reduction**

**4.11.5.1** If the CAISO declares an emergency alert pursuant to its System Emergency Operating procedure that requests Load curtailment, the SUDC shall use any reasonably available local communication infrastructure to request that its customers curtail their electricity usage. The SUDC shall not be called separately to manually shed Load. Load restoration of any voluntary Load reduction will occur once the CAISO declares that a System Emergency no longer exists.

**4.11.5.2** If the Participating TO sheds the SUDC Load associated with the Participating TO's transmission facilities, the Participating TO will provide timely information and work with the SUDC regarding SUDC Load restoration.

**4.11.6 System Emergency Reports: SUDC Obligations**

**4.11.6.1** Each SUDC shall maintain all appropriate records pertaining to a System Emergency in accordance with the SUDC's then-existing record retention practice or policy, provided the records are kept for a minimum of six (6) years.

**4.11.6.2** In accordance with its SUDC Operating Agreement, each SUDC shall provide available information to the CAISO regarding the CAISO's preparation of an Outage review.

**4.11.7 Coordinating Expansion or Modifications to SUDC Facilities**

Each SUDC and the Participating TO with which it is interconnected shall coordinate in the planning and

implementation of any expansion or modifications of a SUDC's or Participating TO's system that will materially affect the reliability of their transmission interconnection facilities, the CAISO Controlled Grid or the transmission services to be required by the SUDC. The Participating TO shall be responsible for coordinating with the CAISO.

**4.11.8 Information Sharing**

**4.11.8.1 System Planning Studies**

The CAISO, Participating TOs and SUDCs shall share available information such as projected SUDC Load growth and SUDC system expansions necessary for the CAISO or the Participating TOs to conduct necessary system planning studies to the extent that such SUDC Load growth or SUDC system expansions will materially impact the operation of the CAISO Balancing Authority Area and the CAISO Controlled Grid.

**4.11.8.2 System Surveys and Inspections**

The CAISO, each UDC and each SUDC shall cooperate, to the extent economically feasible for the SUDC, in performing system surveys and inspections regarding the operation of the CAISO Balancing Authority Area and the CAISO Controlled Grid.

**4.11.8.3 Reports**

**4.11.8.3.1** The CAISO shall make available to the SUDCs any public annual reviews or reports regarding performance standards, measurements and incentives relating to the CAISO Balancing Authority Area and the CAISO Controlled Grid and shall also make available, upon reasonable notice, any such reports that the CAISO receives from the Participating TOs. Each SUDC shall make available to the CAISO upon request any public annual reviews or reports regarding performance standards, measurements and incentives relating to the SUDC's Distribution System to the extent these relate to the operation of the CAISO Balancing Authority Area and the CAISO Controlled Grid.

**4.11.8.3.2** The CAISO and SUDCs shall develop an operating procedure for the CAISO to record requests received from the SUDC for Maintenance Outages and the completion of the requested maintenance and turnaround times.

**4.11.9 Equipment Installation and Access Rights to SUDC Facilities**

**4.11.9.1 Installation of Facilities**

The CAISO and the SUDC shall each have the right on reasonable notice to install or to have installed equipment (including metering equipment) or other facilities on the property of the other, to the extent that such installation is necessary for the installing party to meet its service obligations unless to do so would have a negative impact on the reliability of the service provided by the party owning the property. The CAISO and the SUDC shall enter into agreements governing the installation of such equipment or other facilities containing customary, reasonable terms and conditions.

#### 4.11.9.2 Access to Facilities

The SUDCs shall grant, free of charge, the CAISO reasonable access to SUDC facilities for purposes of inspection, repair, maintenance, or upgrading of facilities installed by the CAISO on the SUDC's system, provided that the CAISO must provide reasonable advance notice of its intent to access SUDC facilities and opportunity for SUDC staff to be present. Such access shall not be provided unless the parties mutually agree to the date, time and purpose of each access. Agreement on the terms of the access shall not be unreasonably withheld.

#### 4.11.9.3 Access During Emergencies

Notwithstanding any provision in this Section 4.11 the CAISO may have access, without giving prior notice, to any SUDC's equipment or other facilities during times of a System Emergency.

#### 4.11.9.4 Access for Audit Functions

Notwithstanding any provision in this Section 4.11 the CAISO may have access, without giving prior notice, to any SUDC's equipment or other facilities where the CAISO has a reasonable basis to believe the SUDC has failed to comply with the SUDC Operating Agreement, applicable CAISO Tariff or CAISO Protocol provisions and access is required to conduct an audit to gather relevant facts.

### 4.12 Relationship of CAISO and Resource-Specific System Resources

The CAISO shall not accept Bids for any Resource-Specific System Resource otherwise than through a Scheduling Coordinator. The CAISO shall further not be obligated to provide Bid Cost Recovery to any Resource-Specific System Resource unless the relevant Resource-Specific System Resource owner undertakes in writing, by entering into a Resource-Specific System Resource Agreement, to comply with all applicable provisions of this CAISO Tariff as they may be amended from time to time, including, without limitation, the applicable provisions of this Section 4.12. Except as otherwise provided in this

Section 4.12, Resource-Specific System Resources shall have the same rights and obligations as other System Resources, including the ability to have Bids submitted for either full or partial output from the RSSR, provided that a Bid must be for at least the Minimum Load of the resource in order to be eligible for Bid Cost Recovery.

### 4.12.1 General Responsibilities

#### 4.12.1.1 Operate Pursuant to Relevant Provisions of CAISO Tariff

Resource-Specific System Resource owners shall operate, or cause their facilities to be operated, in accordance with the relevant provisions of this CAISO Tariff, including but not limited to the following.

(i) A Resource-Specific System Resource shall only be eligible for Bid Cost Recovery if the Resource-Specific System Resource has complied with a Start-Up Instruction or Dispatch Instruction issued by the CAISO as specified in Section 11.8.

(ii) In order to be eligible for Bid Cost Recovery, a Resource-Specific System Resource owner shall ensure that its Scheduling Coordinator makes an election for Default Start-Up Bids and Default Minimum Load Bids pursuant to Sections 30.4 and 30.5.2.4.

(iii) A Resource-Specific System Resource owner shall ensure that any Ancillary Services Bids submitted by its Scheduling Coordinator are submitted in accordance with Section 30.5.2.6.

(iv) Owners of Dynamic Resource-Specific System Resources that are Resource Adequacy Resources shall comply with additional availability requirements to the extent required by Section 40.6.5.1.

(v) Each Resource-Specific System Resource owner shall immediately inform the CAISO, through its respective Scheduling Coordinator and using the CAISO's outage management system as described in Section 9, of any change or potential change in the current status of any Resource-Specific System Resource that may affect a submitted Bid. This will include, but not be limited to, any change in status of equipment that could affect the maximum output of a Resource-Specific System Resource, the Minimum Load of a Resource-Specific System Resource, or the ability of a Resource-Specific System Resource to provide Ancillary Services in accordance with its Bid.

(vi) In the event that a Resource-Specific System Resource owner cannot meet its Day-Ahead Schedule, or comply with a Dispatch Instruction, whether due to a Resource-Specific System Resource trip or the loss of a piece of equipment causing a reduction in capacity or output, the Resource-Specific System Resource owner shall notify the CAISO, through its Scheduling Coordinator, at once. If a Resource-Specific System Resource owner will not be able to meet a time commitment or requires the cancellation of a Resource-Specific System Resource Start-Up, it shall notify the CAISO, through its Scheduling Coordinator, at once.

#### 4.12.1.2 Operate Pursuant to Relevant Operating Procedures

Resource-Specific System Resource owners shall operate, or cause their Resource-Specific System Resources and associated facilities to be operated, in accordance with the relevant Operating Procedures and Business Practice Manuals established by the CAISO.

### 4.12.2 Identification of Resource-Specific System Resources

Each Resource-Specific System Resource owner shall provide data identifying each of its Resource-Specific System Resources and such information regarding the capacity and the operating characteristics of the Resource-Specific System Resource as may be reasonably requested from time to time by the CAISO. All information provided to the CAISO regarding the operational and technical constraints in the Master File must be an accurate reflection of the design capabilities of the resources and its constituent equipment when operating at maximum sustainable performance over Minimum Run Time, recognizing that resource performance may degrade over time. Information registered in the Master File by a Scheduling Coordinator must also conform to any additional definitional requirements in Appendix A as may exist as to that information. Pursuant to Sections 8.9 and 8.10, the CAISO may verify, inspect and test the capacity and operating characteristics of the resource provided to the CAISO.

### 4.12.3 Telemetry Data to Demonstrate Compliance

The Resource-Specific System Resource owner shall provide SCADA data by telemetry to the CAISO EMS at the Resource-Specific System Resource owner's expense in order to demonstrate compliance with CAISO Start-Up Instructions in order to be eligible for BCR. Telemetry data from Dynamic Resource-Specific System Resources shall be provided in accordance with the requirements of the CAISO's

Dynamic Scheduling Protocol in Appendix M. For Non-Dynamic Resource-Specific System Resources, the Resource-Specific System Resource owner shall have the option of providing the required telemetry data by transmittal directly to the CAISO EMS in accordance with the CAISO's standards for direct telemetry or by means of transmittal to the CAISO EMS through the EMS of its Host Balancing Authority Area by use of the inter-control center communications protocol (ICCP).

#### 4.12.4 Recordkeeping

Resource-Specific System Resource owners shall provide to the CAISO such information and maintain such records as are reasonably required by the CAISO to implement the provisions of the CAISO Tariff applicable to Resource-Specific System Resources.

#### 4.12.5 Access Rights

A Resource-Specific System Resource owner shall, at the request of the CAISO and upon reasonable notice, provide access to its facilities and records (including those relating to communications and telemetry) as necessary to permit the CAISO to perform such testing as is necessary to test the accuracy of any telemetry equipment upon which the Resource-Specific System Resource owner's performance is measured.

### 4.13 DRPs, RDRRs, and PDRs

#### 4.13.1 Relationship Between CAISO and DRPs

Consistent with Section 30.6, the CAISO shall only accept Bids from Reliability Demand Response Resources and Proxy Demand Resources if such Reliability Demand Response Resources or Proxy Demand Resources are represented by a Demand Response Provider that has entered into a Demand Response Provider Agreement with the CAISO, has accurately provided the information required in the Demand Response System, has satisfied all Reliability Demand Response Resource or Proxy Demand Resource registration requirements, and has met standards adopted by the CAISO and published on the CAISO Website. Reliability Demand Response Resources and Proxy Demand Resources may not participate in a Distributed Energy Resource Aggregation. The CAISO shall not accept Bids from a Demand Response Provider other than through a Scheduling Coordinator, which Scheduling Coordinator may be the Demand Response Provider itself or another entity. Proxy Demand Response Resources providing Ancillary Services must submit Meter Data for the interval preceding, during, and following the

Trading Interval(s) in which they were awarded Ancillary Services for the purposes of determining settlement pursuant to Section 8.10.8.

**4.13.2 Applicable Requirements for RDRRs, PDRs and DRPs**

A single Demand Response Provider must represent each Reliability Demand Response Resource or Proxy Demand Resource and may represent more than one (1) Reliability Demand Response Resource or Proxy Demand Resource. Each Reliability Demand Response Resource or Proxy Demand Resource that is not within a MSS must be associated with a single Utility Distribution Company. A Demand Response Provider may be, but is not required to be, a Load Serving Entity or a Utility Distribution Company. Each Reliability Demand Response Resource or Proxy Demand Resource is required to be located in a single Sub-LAP. All underlying locations of a Reliability Demand Response Resource or Proxy Demand Resource must be located in a single Sub-LAP. Each Demand Response Provider is required to satisfy registration requirements and to provide information to allow the CAISO to establish performance evaluation methodologies in accordance with Section 4.13.4 and the applicable Business Practice Manuals. Registration of a location for participation in Reliability Demand Response Resources or Proxy Demand Resources requires the approval of the CAISO resulting from its registration process. As part of the submitted registration process, both the appropriately Demand Response Provider designated Load Serving Entity and Utility Distribution Company will have an opportunity to review the location detail and provide comments with regard to its accuracy. Disputes regarding the acceptances or rejections of a registration of a location shall be undertaken with the applicable Local Regulatory Authority and shall not be arbitrated or in any way resolved through a CAISO dispute resolution mechanism or process. A location cannot be registered to both a Reliability Demand Response Resource and a Proxy Demand Resource for the same Trading Day.

**4.13.3 Identification of RDRRs and PDRs**

Each Demand Response Provider shall provide data, as described in the Business Practice Manual, identifying each of its Reliability Demand Response Resources or Proxy Demand Resources and such information regarding the capacity and the operating characteristics of the Reliability Demand Response Resource or Proxy Demand Resource as may be reasonably requested from time to time by the CAISO. All information provided to the CAISO regarding the operational and technical constraints in the Master

File shall be accurate and actually based on physical characteristics of the resources. For Proxy Demand Resources and Reliability Demand Response Providers whose maximum Load curtailment is 1 MW or more, Demand Response Providers may elect to specify in the Master File the maximum number of Operating Hours in which the CAISO could commit or dispatch the Proxy Demand Resources or Reliability Demand Response Resources in the Operating Day. Demand Response Providers for Proxy Demand Resources and Reliability Demand Response Resources may elect to specify in the Master File how the Proxy Demand Resource and Reliability Demand Response Resources will bid and be dispatched in the Real-Time Market: in (i) Hourly Blocks, (ii) fifteen (15) minute intervals, or (iii) five (5) minute intervals. Proxy Demand Resources using the load-shift methodology described in Section 4.13.4.7 may elect to bid and be dispatched in the Real-Time Market in fifteen (15) minute intervals or five (5) minute intervals. If Demand Response Providers do not submit an election in the Master File, the CAISO will set Hourly Blocks as the default.

**4.13.4 Performance Evaluation Methodologies for PDRs and RDRRs**

The following methodologies may be utilized to calculate Customer Load Baselines and Demand Response Energy Measurements for Proxy Demand Resources and Reliability Demand Response Resources. Proxy Demand Resources and Reliability Demand Response Resources consisting of residential End Users may elect to use the ten-in-ten methodology, metering generator output methodology, control group methodology, five-in-ten methodology, or weather matching methodology. Proxy Demand Resources and Reliability Demand Response Resources consisting of non-residential End Users may elect to use the ten-in-ten methodology, metering generator output methodology, control group methodology, or weather matching methodology. Proxy Demand Resources with behind-the-meter energy storage also may elect to use the load-shift methodology. If an EVSE elects to participate as a Proxy Demand Resource and use a different methodology than its co-located Load, it must adhere to Section 4.13.4.6. Proxy Demand Resources providing Ancillary Services must submit Meter Data for the intervals immediately preceding, during, and following the Trading Interval(s) in which the Proxy Demand Resources were awarded Ancillary Services. As specified in the Business Practice Manual, the CAISO will retain authority to calculate or correct Customer Load Baselines and Demand Response Energy Measurements for those resources that used the CAISO's Demand Response System, until all relevant

metering, settlement, and correction windows have lapsed since the CAISO retired its ability to calculate on behalf of Scheduling Coordinators in the Demand Response System.

#### 4.13.4.1 Ten-in-Ten Load Baseline Methodology

Scheduling Coordinators will be responsible for calculating the Customer Load Baseline for Proxy Demand Resources or Reliability Demand Response Resources using the ten-in-ten methodology as follows:

(a) Meter Data will be collected for the Proxy Demand Resource or Reliability Demand Response Resource for calendar days preceding the Trading Day on which the Demand Response Event occurred. Where the Proxy Demand Resource or Reliability Demand Response Resource uses behind-the-meter generation to offset Demand, the Proxy Demand Resource or Reliability Demand Response Resource may elect to provide, at all times, Meter Data reflecting the total gross consumption, independent of any offsetting Energy produced by behind-the-meter generation. The calendar days for which the Meter Data will be collected will be determined by working sequentially backwards from the Trading Day under examination up to a maximum of forty-five (45) calendar days prior to the Trading Day, including only business days if the Trading Day is a business day, including only non-business days if the Trading Day is a non-business day, and excluding calendar days on which the Proxy Demand Resource was subject to an Outage or previously provided Demand Response Services (other than capacity awarded for AS or RUC) or the Reliability Demand Response Resource was subject to an Outage as described in the Business Practice Manual or previously provided Demand Response Services, except as discussed below. The collection of Meter Data for this purpose stops upon reaching the target number of calendar days, which is ten (10) calendar days if the Trading Day is a business day or four (4) calendar days if the Trading Day is a non-business day. If these targets cannot be met, a minimum of five (5) calendar days if the Trading Day is a business day or a minimum of four (4) calendar days if the Trading Day is a non-business day must be collected. If these targets cannot be met, Meter Data will be collected for the calendar days on which the Proxy Demand Resource was subject to

an Outage or previously provided Demand Response Services (other than capacity awarded for AS or RUC) or the Reliability Demand Response Resource was subject to an Outage as described in the Business Practice Manual or previously provided Demand Response Services, and for which the amount of totalized load was highest during the hours when the Demand Response Services were provided in the forty-five (45) calendar days prior to the Trading Day.

(b) The Scheduling Coordinator will be responsible for calculating the simple hourly average of the collected Meter Data to determine a baseline amount of Energy provided by the Proxy Demand Resource or Reliability Demand Response Resource.

(c) Unless otherwise requested by the Demand Response Provider and approved by the CAISO, the Scheduling Coordinator will be responsible for multiplying the amount calculated pursuant to Section 4.13.4.1(b) by a percentage equal to the ratio of (i) the average load of the Proxy Demand Resource or Reliability Demand Response Resource during the second, third, and fourth hours preceding the hour of the Trading Day on which the Proxy Demand Resource or Reliability Demand Response Resource provided the Demand Response Services during the Demand Response Event to (ii) the average load of the Proxy Demand Resource or Reliability Demand Response Resource during the same second, third, and fourth hours of the calendar days for which Meter Data has been collected pursuant to Section 4.13.4.1(a). To provide a maximum adjustment factor of twenty (20) percent, the adjusted percentage can have a maximum value of one hundred-twenty (120) percent and a minimum value of eighty (80) percent.

(d) If the Proxy Demand Resource or Reliability Demand Response Resource elects to provide Meter Data reflecting the total gross Demand at all times, independent of any offsetting Energy, the offsetting Energy must be metered separate from Load to enable the accurate calculation of total gross consumption.

#### 4.13.4.2 Metering Generator Output Methodology

For behind-the-meter generation registered in Proxy Demand Resources or Reliability Demand Response Resources and settling Energy Transactions pursuant to Section 11.6.2, the Generator Output Baseline

will be calculated as follows:

(a) Meter Data will be collected for the behind-the-meter generation for the same hour as the Trading Hour on calendar days preceding the Trading Day on which the Demand Response Event occurred for which the Generator Output Baseline is calculated. Meter Data will consist of Energy output of the behind-the-meter generation up to, but not including, output that represent an export of energy from that location. To determine the hours for which the Meter Data will be collected, the calculation will work sequentially backwards from the Trading Day under examination up to a maximum of forty-five (45) calendar days prior to the Trading Day, including only business days if the Trading Day is a business day, including only non-business days if the Trading Day is a non-business day, and excluding hours in which the Proxy Demand Resource was subject to an Outage or previously provided Demand Response Services (other than capacity awarded for AS or RUC) pursuant to a Bid at or above the net benefits test set forth in Section 30.6.3, or the Reliability Demand Response Resource was subject to an Outage as described in the Business Practice Manual or previously provided Demand Response Services pursuant to a Bid at or above the net benefits test set forth in Section 30.6.3, except as discussed below. The calculation will have complete Meter Data for this purpose if and when it is able to collect Meter Data for its target number of hours the same as the Trading Hour, which target number is ten (10) hours if the Trading Day is a business day or four (4) hours if the Trading Day is a non-business day. If it is not possible to collect Meter Data for the target number of hours, the Meter Data will include a minimum of five (5) hours if the Trading Day is a business day or a minimum of four (4) hours if the Trading Day is a non-business day. If it is not possible to collect Meter Data for the minimum number of hours described above, the Generator Output Baseline will be set at zero.

(b) The baseline amount of Energy provided by the behind-the-meter generation will be calculated on the simple hourly average of the collected Meter Data.

(c) In calculating the Generator Output Baseline pursuant to Section 4.13.4.2(a), the Meter

Data must be set to zero in any Settlement Interval in which the behind-the-meter generation is charging.

(d) In any Settlement Interval where the behind-the-meter generation is exporting Energy (i.e., where the behind-the-meter generation Energy output exceeds its location Demand), the Meter Data will consist of the Energy output of the behind-the-meter generation up to, but not including, the output greater than its facility Demand that would represent an export of Energy from that location.

**4.13.4.3 Control Group Methodology**

Scheduling Coordinators will be responsible for calculating the Customer Load Baseline for Proxy Demand Resources or Reliability Demand Response Resources using the control group methodology as follows:

(a) Prior to any Demand Response Event, a randomized control group of End Users that are registered in the Demand Response System but not responding to CAISO dispatch as Proxy Demand Resources or Reliability Demand Response Resources must be submitted to the CAISO. But for any Demand Response Event, the control group must have nearly identical Demand patterns in aggregate as the Proxy Demand Resources or Reliability Demand Response Resources. The control group must be geographically similar to the Proxy Demand Resources or Reliability Demand Response Resources such that they experience the same weather patterns and grid conditions. The control group must consist of 150 distinct End Users or more. Prior to use of the control group baseline methodology, Scheduling Coordinators will be responsible for validating the control group pursuant to Section 4.13.4.3(c).

(b) The control group's aggregate Demand during the same Trade Date and Trading Hour(s) as the Demand Response Event, divided by the relevant number of End Users, will constitute the Customer Load Baseline.

(c) Scheduling Coordinators are responsible for validating that the control group accurately represents its Proxy Demand Resources or Reliability Demand Response Resources. As described in the Business Practice Manual, to validate the control group, Meter Data of

the control group and the Proxy Demand Resources or Reliability Demand Response Resources from the previous seventy-five (75) days must be evaluated, excluding days where the Proxy Demand Resources or Reliability Demand Response Resources provided Demand Response Services or participated in a utility demand response program. Using the most recent days, at least twenty (20) eligible days of Meter Data must be used for validation. From these days, an average of the hourly load profile from 12 p.m. to 9 p.m. must be developed for the Proxy Demand Resources or Reliability Demand Response Resources and the control group by day and by hour. The average hourly Demand of the Proxy Demand Resources or Reliability Demand Response Resources is then regressed against the average hourly Demand of the control group. As described in the Business Practice Manual, the control group must statistically demonstrate (i) lack of bias and (ii) sufficient statistical precision with (iii) sufficient confidence. Control groups that fail these screens may not be used.

(d) For Proxy Demand Resources or Reliability Demand Response Resources whose number of End Users have not changed by more than ten (10) percent in the prior month, the control group must be re-validated every other month. For Proxy Demand Resources or Reliability Demand Response Resources whose number of End Users have changed by more than ten (10) percent in the prior month, control groups must continue to be re-validated monthly.

(e) Control group randomization, equivalence, and validation, and all Demand Response Event calculations are subject to CAISO audit for three (3) years from the date Demand Response Event. All results must be reproducible, including underlying interval data, randomization, validation, bias, confidence, precision, and analysis.

**4.13.4.4 Five-in-Ten Methodology**

Scheduling Coordinators will be responsible for calculating the Customer Load Baseline for Proxy Demand Resources or Reliability Demand Response Resources using the five-in-ten methodology as follows:

(a) Meter Data for the Proxy Demand Resource or Reliability Demand Response Resource

will be collected for calendar days preceding the Trading Day on which the Demand Response Event occurred for the Customer Load Baseline. Where the Proxy Demand Response or Reliability Demand Response Resource may elect to provide, at all times, Meter Data reflecting the total gross consumption, independent of any offsetting Energy produced by behind-the-meter generation. The calendar days for which the Meter Data will be collected will be determined by working sequentially backwards from the Trading Day under examination up to a maximum of forty-five (45) calendar days prior to the Trading Day, including only business days if the Trading Day is a business day, including only non-business days if the Trading Day is a non-business day, and excluding calendar days on which the Proxy Demand Resource was subject to an Outage or previously provided Demand Response Services (other than capacity awarded for AS or RUC) or the Reliability Demand Response Resource was subject to an Outage as described in the Business Practice Manual or previously provided Demand Response Services, except as discussed below. The collection of Meter Data for this purpose stops upon reaching the target number of calendar days, which is ten (10) calendar days if the Trading Day is a business day or five (5) calendar days if the Trading Day is a non-business day. From the target days, the five (5) business days and three (3) non-business days with the highest totalized load during the hours when the Demand Response Services were provided will be used. If these targets cannot be met, the Meter Data will instead be used for the calendar days on which the Proxy Demand Resource was subject to an Outage or previously provided Demand Response Services (other than capacity awarded for AS or RUC) or the Reliability Demand Response Resource was subject to an Outage as described in the Business Practice Manual or previously provided Demand Response Services, and for which the amount of totalized load was highest during the hours when the Demand Response Services were provided in the forty-five (45) calendar days prior to the Trading Day.

(b) For business days, the Scheduling Coordinator will be responsible for calculating the simple hourly average of the collected Meter Data to determine a baseline amount of

Energy provided by the Proxy Demand Resource or Reliability Demand Response Resource. For non-business days, the Scheduling Coordinator will be responsible for calculating a weighted average of the collected Meter Data to determine a baseline as follows: the day closest to the Demand Response Event receives a weight of fifty (50) percent, the next closest receives a weight of thirty (30) percent, and the furthest receives a weight of twenty (20) percent.

(c) Unless otherwise requested by the Demand Response Provider and approved by the CAISO, the Scheduling Coordinator will be responsible for multiplying the amount calculated pursuant to Section 4.13.4.4(b) by a percentage of the ratio of:

(i) the average Demand of Proxy Demand Resource or Reliability Demand Response Resource during (a) the period from four (4) to two (2) hours preceding the Trading Intervals, and (b) the period from two (2) to four (4) hours following the Trading Intervals on which the Proxy Demand Resource or Reliability Demand Response Resource provided Demand Response Services during the Demand Response Event to

(ii) the average Demand of the Proxy Demand Resource or Reliability Demand Response Resource during (a) the period from four (4) to two (2) hours preceding the Trading Intervals, and (b) the period from (2) to four (4) hours following the Trading Intervals for which Meter Data was collected pursuant to Section 4.13.4.4(a).

To provide maximum adjustment factor of 1.4, the adjusted percentage can have a maximum value of one hundred-forty (140) percent and a minimum value of seventy-one (71) percent.

(d) If the Proxy Demand Resource or Reliability Demand Response Resource elects to provide Meter Data reflecting the total gross Demand at all times, independent of any offsetting Energy, the offsetting Energy must be separated from Load to enable the accurate calculation of total gross consumption.

**4.13.4.5 Weather Matching Methodology**

Scheduling Coordinators will be responsible for calculating the Customer Load Baseline for Proxy Demand Resources or Reliability Demand Response Resources using the weather matching methodology as follows:

(a) The Scheduling Coordinator will be responsible for collecting Meter Data for the Proxy Demand Resource or Reliability Demand Response Resource for calendar days preceding the Trading Day on which the Demand Response Event occurred. Where the Proxy Demand Response or Reliability Demand Response Resource uses behind-the-meter generation to offset Demand, the Proxy Demand Resource or Reliability Demand Response Resource may elect to provide, at all times, Meter Data reflecting the total gross consumption, independent of any offsetting Energy produced by behind-the-meter generation. The calendar days for which the Meter Data will be collected will be determined by working sequentially backwards from the Trading Day under examination up to a maximum of ninety (90) calendar days prior to the Trading Day, including only business days if the Trading Day is a business day, including only non-business days if the Trading Day is a non-business day, and excluding calendar days on which the Proxy Demand Resource was subject to an Outage or previously provided Demand Response Services (other than capacity awarded for AS or RUC) or the Reliability Demand Response Resource was subject to an Outage as described in the Business Practice Manual or previously provided Demand Response Services. As detailed in the Business Practice Manual, from the ninety (90) calendar days prior to the Trading Day, the four (4) days with the closest daily maximum temperature to the Trading Day will be used to calculate the baseline.

(b) The Scheduling Coordinator will be responsible for calculating the simple hourly average of the collected Meter Data to determine a baseline amount of Energy provided by the Proxy Demand Resource or Reliability Demand Response Resource.

(c) Unless otherwise requested by the Demand Response Provider and approved by the CAISO, the Scheduling Coordinator will be responsible for multiplying the amount calculated pursuant to Section 4.13.4.5(b) by a percentage equal to the ratio of:

(i) the average Demand of the Proxy Demand Resource or Reliability Demand Response Resource during (a) the period from four (4) to two (2) hours preceding the Trading Intervals, and (b) the period from two (2) to four (4) hours following the Trading Intervals on which the Proxy Demand Resource or Reliability Demand Response Resource provided the Demand Response Services during the Demand Response Event to

(ii) the average Demand of the Proxy Demand Resource or Reliability Demand Response Resource during (a) the period from four (4) to two (2) hours preceding the Trading Intervals, and (b) the period from two (2) to four (4) hours following the Trading Intervals for which Meter Data was collected pursuant to Section 4.13.4.5(a).

To provide a maximum adjustment factor of 1.4, the adjusted percentage can have a maximum value of one hundred-forty (140) percent and a minimum value of seventy-one (71) percent.

(d) If the Proxy Demand Resource or Reliability Demand Response Resource elects to provide Meter Data reflecting the total gross Demand at all times, independent of any offsetting Energy, the offsetting Energy must be metered separate from Load to enable the accurate calculation of total gross consumption.

**4.13.4.6 Electric Vehicle Supply Equipment (EVSE)**

Proxy Demand Resources may include or consist entirely of EVSEs. Proxy Demand Resources may elect to use different methodologies to calculate the Customer Load Baselines and Demand Response Energy Measurements of (i) their EVSEs, including electric vehicle charging Load, and (ii) any other Load or behind-the-meter Generation participating as Proxy Demand Resources. Where a Proxy Demand Resource elects to do so, the EVSE Load must be metered separately from any other Load or Generation. Individual EVSEs may be aggregated into Proxy Demand Resources consistent with Section 4.13.2. Where the Load at the EVSE's Location also participates as a Proxy Demand Resource, the EVSE must participate in the same Proxy Demand Resource, but may elect to have a separately metered Customer Load Baseline and Demand Response Energy Measurement consistent with this Section. To

calculate EVSE Customer Load Baselines and Demand Response Energy Measurements under this section, non-residential EVSEs may use the ten-in-ten methodology, and residential EVSEs may use the ten-in-ten methodology and the five-in-ten methodology. Scheduling Coordinators for EVSEs participating under this section will not apply an adjustment factor pursuant to subsection (c) of either methodology. Non-EVSE Load also participating in the EVSE's Proxy Demand Resource may use any eligible methodology for its Customer Load Baseline and Demand Response Energy Measurement.

#### 4.13.4.7 Load-Shift Methodology

Only Proxy Demand Resources using behind-the-meter energy storage may elect to use the load-shift methodology described in this Section. The energy storage must be metered separately from other Load or Generation. Proxy Demand Resources using this methodology will consist of two Resource IDs:

- A consumption Resource ID to account for the energy storage charging alone; and
- A curtailment Resource ID to account for the energy storage discharging to offset onsite Demand and, including if the Demand Response Provider elects, any Demand curtailment by the onsite Load independent of the energy storage.

The CAISO will use reasonable efforts to optimize both Resource IDs to avoid conflicting Schedules. Scheduling Coordinators will be responsible for calculating separate Customer Load and Generator Output Baselines for the curtailment Resource ID and the consumption Resource ID.

(a) Meter Data will be collected for each Resource ID for the fifteen (15) minute interval as the Trading Interval on calendar days preceding the Trading Day on which the Demand Response Event occurred for which the baselines are calculated. To determine the fifteen (15) minute intervals for which the Meter Data will be collected, the calculation will work sequentially backwards from the Trading Day under examination up to a maximum of forty-five (45) calendar days prior to the Trading Day, including only business days if the Trading Day is a business day, including only non-business days if the Trading Day is a non-business day, and excluding intervals in which the Proxy Demand Resource was subject to an Outage or previously provided Demand Response Services (other than capacity awarded for AS or RUC). The calculation will have complete Meter Data for this

purpose if and when it is able to collect Meter Data for its target number of intervals the same as the Trading Interval, which target number is ten (10) intervals if the Trading Day is a business day or four (4) intervals if the Trading Day is a non-business day. If these targets cannot be met, a minimum of five (5) intervals if the Trading Day is a business day or a minimum of four (4) intervals if the Trading Day is a non-business day must be collected. If these targets cannot be met, the baselines will be set at zero.

(b) Meter Data for the consumption Resource ID will include only Meter Data at or below 0 MWh. In intervals where the Meter Data is above 0 MWh, the Scheduling Coordinator will consider the Meter Data at 0 MWh for the consumption Resource ID.

(c) Meter Data for the curtailment Resource ID will include only Meter Data at or above 0 MWh. In intervals where the Meter Data is below 0 MWh, the Scheduling Coordinator will consider the Meter Data at 0 MWh for the curtailment Resource ID. The Scheduling Coordinator will exclude Meter Data for Energy from the curtailment Resource ID that exceeds the onsite Demand.

(d) The Scheduling Coordinator will be responsible for calculating the simple hourly average of the collected Meter Data to determine the baseline amounts of Energy provided or consumed by each Resource ID.

The Demand Response Provider may elect to include Demand Response Energy Measurements for the onsite Load, which the Scheduling Coordinator will add to the Demand Response Energy Measurement for the curtailment Resource ID pursuant to Section 11.6.7. If the Demand Response Provider elects to do so, the Scheduling Coordinator will calculate a separate Customer Load Baseline for the onsite Load, excluding the Energy or Demand from the energy storage. If the onsite Load is residential, the Scheduling Coordinator may calculate its Customer Load Baseline using the ten-in-ten methodology, five-in-ten methodology, or weather matching methodology performance methodology. If the onsite Load is non-residential, the Scheduling Coordinator may calculate its Customer Load Baseline using the ten-in-ten methodology or weather matching methodology performance methodology.

**4.13.5 Characteristics of PDRs and RDRRs**

**4.13.5.1 Availability to Provide Demand Response Services**

Each Proxy Demand Resource and Reliability Demand Response Resource shall become available to provide Demand Response Services pursuant to the Demand Response Provider Agreement following the date on which the Demand Response Provider Agreement is executed by all parties thereto, as specified by the parties, and shall be available to provide Demand Response Services until the Demand Response Provider Agreement is terminated as set forth in the Demand Response Provider Agreement.

#### 4.13.5.2 Size Limits for PDRs and RDRRs

##### 4.13.5.2.1 PDRs

The minimum Load curtailment of a Proxy Demand Resource shall be no smaller than 0.1 MW. Loads may be aggregated together to achieve the 0.1 MW threshold. There is no upper limit on the maximum Load curtailment of a Proxy Demand Resource.

##### 4.13.5.2.2 RDRRs

The minimum Load curtailment of a Reliability Demand Response Resource shall be no smaller than 0.5 MW. Loads may be aggregated together to achieve the 0.5 MW threshold. The maximum Load curtailment of a Reliability Demand Response Resource that selects the Discrete Real-Time Dispatch Option shall be no larger than 100 MW. The CAISO will approve uses above 100 MW where:

(a) the Demand Response Provider attests that the Reliability Demand Response Resource (1) is located at a single site; (2) cannot safely or operationally be split into multiple loads; and (3) does not have the ability to operate under the Marginal Real-Time Dispatch Option; and

(b) the CAISO determines that the Reliability Demand Response Resource's use of the Discrete Real-Time Dispatch Option does not cause significant reliability issues.

There is no upper limit on the maximum Load curtailment of a Reliability Demand Response Resource that selects the Marginal Real-Time Dispatch Option.

#### 4.13.5.3 Dispatch Parameters for RDRRs

Each Reliability Demand Response Resource shall be capable of reaching its maximum Load curtailment within forty (40) minutes after it receives a Dispatch Instruction, and shall be capable of providing Demand Response Services for at least four (4) consecutive hours per Demand Response Event. Each Reliability Demand Response Resource shall have a minimum run time of no more than one (1) hour.

### 4.14 Relationship Between the CAISO and CBEs

Only entities that satisfy all of the requirements specified in this Section 4.14 will be certified by the CAISO to be Convergence Bidding Entities and thus be authorized by the CAISO to submit Virtual Bids. A Convergence Bidding Entity may submit Virtual Bids only through a Scheduling Coordinator, which can be either the Convergence Bidding Entity itself or another entity that is a Scheduling Coordinator. A Convergence Bidding Entity may be represented by only one Scheduling Coordinator at any given time.

### 4.14.1 Procedure to Become a Convergence Bidding Entity

#### 4.14.1.1 Convergence Bidding Entity Application

To become a Convergence Bidding Entity, a Convergence Bidding Entity applicant must submit a completed written application, as provided in the applicable form posted on the CAISO Website, to the CAISO by mail, electronic submission, or in person.

#### 4.14.1.2 CAISO Information

The CAISO will provide the following information, in its most current form, on the CAISO Website and, upon request by a Convergence Bidding Entity applicant, the CAISO will send the requested information by electronic mail:

(a) the Convergence Bidding Entity application form; and

(b) the CAISO Tariff and Business Practice Manuals.

#### 4.14.1.3 Convergence Bidding Entity Applicant Submits Application

At least sixty (60) Business Days before the date on or after which the Convergence Bidding Entity applicant proposes to start submitting Virtual Bids, the Convergence Bidding Entity applicant must return a completed application form.

#### 4.14.1.4 Notice of Receipt

Within three (3) Business Days of receiving the application, the CAISO will send written notification to the Convergence Bidding Entity applicant that it has received the application.

#### 4.14.1.5 CAISO Review of Application

Within ten (10) Business Days after receiving an application, the CAISO will notify the Convergence Bidding Entity applicant whether the Convergence Bidding Entity applicant has submitted all necessary information as set forth in Section 4.14.1.

##### 4.14.1.5.1 Information Requirements

The Convergence Bidding Entity applicant must submit with its application:

(a) the proposed date on or after which the Convergence Bidding Entity applicant proposes to start submitting Virtual Bids, which may not be less than sixty (60) Business Days after the date the application was filed, unless waived by the CAISO;

(b) an explanation of whether the Convergence Bidding Entity applicant is a Rated or Unrated Public/Private Corporation, a Rated or Unrated Governmental Entity, a Local Publicly Owned Electric Utility, or another type of entity, and a chart, or equivalent information, depicting the Convergence Bidding Entity applicant's corporate structure, including all parent companies of the Convergence Bidding Entity applicant, all subsidiaries of the Convergence Bidding Entity applicant, and all Affiliates of the Convergence Bidding Entity applicant that meet the requirements of Section 4.14.2.1; and

(c) the name of the Scheduling Coordinator and SCID(s) that the Convergence Bidding Entity anticipates will be used for submitting Virtual Bids on behalf of the Convergence Bidding Entity.

Additional instructions for completing the foregoing requirements will be set forth in the applicable Business Practice Manual(s) posted on the CAISO Website.

#### 4.14.1.6 Deficient Application

In the event that the CAISO determines that the application is deficient, the CAISO will send an electronic notification of the deficiency to the Convergence Bidding Entity applicant within ten (10) Business Days of receipt by the CAISO of the application explaining the deficiency and requesting additional information.

##### 4.14.1.6.1 Additional Information

Once the CAISO requests additional information, the Convergence Bidding Entity applicant has five (5) Business Days, or such longer period as the CAISO may agree not to exceed five (5) additional Business Days, to provide the additional material requested by the CAISO.

##### 4.14.1.6.2 CAISO Approval or Rejection of an Application

If the Convergence Bidding Entity applicant does not submit additional information within five (5) Business Days or the longer period referred to in Section 4.14.1.6.1, the application may be rejected by the CAISO.

#### 4.14.1.7 CAISO Approval or Rejection of an Application

##### 4.14.1.7.1 Approval or Rejection Notification

(a) If the CAISO approves the application, it will send a written notification of approval. In addition, the CAISO will provide an executable Convergence Bidding Entity Agreement.

(b) If the CAISO rejects the application, the CAISO will send an electronic notification of rejection stating one or more of the following grounds:

(i) incomplete information; or

(ii) non-compliance with any other CAISO Tariff requirements.

Upon request, the CAISO will provide guidance as to how the Convergence Bidding Entity applicant can cure the grounds for the rejection.

##### 4.14.1.7.2 Time for Processing Application

The CAISO will make a decision whether to accept or reject the application within ten (10) Business Days of receipt of the application. If more information is requested, the CAISO will make a final decision within ten (10) Business Days of the receipt of all outstanding or additional information requested.

#### 4.14.1.8 Convergence Bidding Entity Applicant's Response

##### 4.14.1.8.1 Convergence Bidding Entity Applicant's Acceptance

If the CAISO accepts the application, the Convergence Bidding Entity applicant must return the partially executed Convergence Bidding Entity Agreement previously provided by the CAISO.

##### 4.14.1.8.2 Convergence Bidding Entity Applicant's Rejection

###### 4.14.1.8.2.1 Resubmittal

If the CAISO rejects the application, the Convergence Bidding Entity applicant may resubmit its application at any time.

###### 4.14.1.8.2.2 Appeal

The Convergence Bidding Entity applicant may also appeal the rejection of an application by the CAISO. An appeal must be submitted within twenty (20) Business Days following the CAISO's issuance of a notification of rejection.

#### 4.14.1.9 Final Certification

The Convergence Bidding Entity applicant will become a Convergence Bidding Entity when:

(a) its application has been accepted;

(b) it has entered into a Convergence Bidding Entity Agreement and any other applicable agreements with the CAISO; and

(c) it has fulfilled all requirements of Section 4.14.1.5.1.

The CAISO will not certify a Convergence Bidding Entity applicant as a Convergence Bidding Entity until the Convergence Bidding Entity applicant has completed all the above-referenced requirements to the CAISO's satisfaction, at least ten (10) Business Days before the commencement of service.

### 4.14.2 Convergence Bidding Entity's Ongoing Obligations

#### 4.14.2.1 Affiliate Disclosure Requirements

Each Convergence Bidding Entity applicant will notify the CAISO of any Affiliate that is a Market Participant, any Affiliate that participates in an organized electricity market in North America, and any guarantor of any such Affiliate. Upon request, a Convergence Bidding Entity applicant will provide the CAISO with information on each such Affiliate, including information concerning the ownership structure of such Affiliate and the business purpose of such Affiliate. These requirements will continue to apply after a Convergence Bidding Entity applicant becomes a Convergence Bidding Entity.

#### 4.14.2.2 Obligation to Report a Change in Filed Information

Each Convergence Bidding Entity has an ongoing obligation to inform the CAISO of any changes to any of the information submitted by it to the CAISO as part of the application process, including but not limited to any changes to such information after the application is initially submitted, any changes to the additional information requested by the CAISO, and changes regarding its Affiliates that satisfy the requirements of Section 4.14.2.1, within five (5) Business Days of when each such change occurs. The applicable Business Practice Manual sets forth the procedures for changing the Convergence Bidding Entity's information.

#### 4.14.2.3 Identification of SCIDs

Each Convergence Bidding Entity will provide the CAISO with a list of the SCIDs that the Scheduling Coordinator that represents the Convergence Bidding Entity will use to submit Virtual Bids for that Convergence Bidding Entity, at least eleven (11) Business Days prior to the Scheduling Coordinator's submission of a Virtual Bid on behalf of the Convergence Bidding Entity. If there is a subsequent change

to the list of the SCIDs that the Scheduling Coordinator will use to submit Virtual Bids on behalf of the Convergence Bidding Entity or the identity of the Scheduling Coordinator that represents the Convergence Bidding Entity, the Convergence Bidding Entity will provide the CAISO with an updated list of SCIDs that the Scheduling Coordinator that represents the Convergence Bidding Entity will use to submit Virtual Bids on behalf of the Convergence Bidding Entity, at least eleven (11) Business Days prior to the Scheduling Coordinator's submittal of a Virtual Bid involving a Convergence Bidding Entity and/or SCID not already included in the most recent list provided to the CAISO. The identification of the Scheduling Coordinator and list of SCIDs provided by the Convergence Bidding Entity and the list of SCIDs provided by the Scheduling Coordinator regarding that Convergence Bidding Entity pursuant to Section 4.5.2.2 must correspond. In the event these lists do not correspond, the CAISO will inform the applicable Scheduling Coordinator and Convergence Bidding Entity, and the parties will provide revised lists that correspond prior to the Scheduling Coordinator's submission of a Virtual Bid on behalf of that Convergence Bidding Entity. The CAISO will incorporate the information provided pursuant to this Section 4.14.2.3 into the CAISO's official list of the Scheduling Coordinators that are eligible to submit Virtual Bids on behalf of Convergence Bidding Entities and the SCIDs used on their behalf will be incorporated into the Master File within eleven (11) Business Days after the CAISO determines that the information in each list, updated list, or revised list provided by a Scheduling Coordinator or Convergence Bidding Entity is accurate and complete.

#### 4.14.2.4 Failure to Promptly Report a Material Change

If a Convergence Bidding Entity fails to inform the CAISO of a material change in its information provided to the CAISO, the CAISO may limit, suspend, or terminate the Convergence Bidding Entity's rights under the CAISO Tariff and terminate the Convergence Bidding Entity Agreement in accordance with the terms of Sections 4.14.3, 12, and 39.11.2. If the CAISO intends to terminate the Convergence Bidding Entity Agreement, it will file a notice of termination with FERC, if required by FERC rules, in accordance with the terms of the Convergence Bidding Entity Agreement. Such termination will be effective upon acceptance by FERC of a notice of termination, if required by FERC rules, or as otherwise permitted by FERC rules.

### 4.14.3 Termination of a Convergence Bidding Entity Agreement

(a) A Convergence Bidding Entity Agreement may be terminated by the CAISO on written

notice to the Convergence Bidding Entity in accordance with the terms of the Convergence Bidding Entity Agreement:

(i) if the Convergence Bidding Entity no longer meets the requirements for eligibility set out in Section 4.14and fails to remedy the default within a period of seven (7) Business Days after the CAISO has given written notice of the default;

(ii) if the Scheduling Coordinator that represents the Convergence Bidding Entity fails to pay any sum under this CAISO Tariff and fails to remedy the default within a period of five (5) Business Days after the CAISO has given written notice of the default; or

(iii) if the Convergence Bidding Entity commits any other default under this CAISO Tariff or any of the Business Practice Manuals which, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given it written notice of the default.

(b) The Convergence Bidding Entity may terminate the Convergence Bidding Entity Agreement in accordance with the provisions of that agreement.

(c) Upon termination of the Convergence Bidding Entity Agreement, the Scheduling Coordinator that represents the Convergence Bidding Entity will continue to be liable for any outstanding financial or other obligations incurred under the CAISO Tariff as a result of the Convergence Bidding Entity's status as a Convergence Bidding Entity.

(d) The CAISO will, following termination of a Convergence Bidding Entity Agreement and within thirty (30) days of being satisfied that no sums remain owing by the Scheduling Coordinator that represents the Convergence Bidding Entity under the CAISO Tariff, return or release to the Scheduling Coordinator, as appropriate, any Financial Security support provided by such Scheduling Coordinator to the CAISO under Section 12.

### 4.15 Relationships Between CAISO and Pseudo-Ties to CAISO

A Generator that desires a Pseudo-Tie of its Generating Unit from a Native Balancing Authority Area to the CAISO Balancing Authority Area shall comply with the applicable provisions of the Pseudo-Tie Protocol in Appendix N in addition to all provisions of this CAISO Tariff applicable to Participating

Generators, except as expressly provided, including that it shall be required to enter into a Pseudo-Tie Participating Generator Agreement with the CAISO rather than a Participating Generator Agreement.

### 4.16 Relationships Between CAISO and Pseudo-Ties Out

A Pseudo-Tie of the output of a generating unit out of the CAISO Balancing Authority Area to an Attaining Balancing Authority Area shall comply with the applicable provisions of the Pseudo-Tie Protocol in Appendix N, including being the subject of a special operating agreement with the CAISO.

### 4.17 Distributed Energy Resource Aggregations

#### 4.17.1 CAISO Relationship with Distributed Energy Resource Providers

The CAISO will accept Bids from Distributed Energy Resource Aggregations only if such Distributed Energy Resource Aggregations are represented by a Distributed Energy Resource Provider that has entered into a Distributed Energy Resource Provider Agreement with the CAISO to comply with all applicable provisions of the CAISO Tariff as they may be amended from time to time. The CAISO will not accept Bids from a Distributed Energy Resource Aggregation other than through a Scheduling Coordinator. The Scheduling Coordinator may be the Distributed Energy Resource Provider itself or another entity.

#### 4.17.2 Responsibilities of Distributed Energy Resource Providers

The following general responsibilities apply to Distributed Energy Resource Providers:

(a) Each Distributed Energy Resource Provider will operate and maintain its Distributed Energy Resource Aggregations consistent with applicable provisions of the CAISO Tariff.

(b) Each Distributed Energy Resource Provider will comply with applicable Utility Distribution Company or Metered Subsystem tariffs and operating procedures incorporated therein as well as applicable requirements of the Local Regulatory Authority, if any. Each Distributed Energy Resource Provider will ensure that Distributed Energy Resources that comprise a Distributed Energy Resource Aggregation under its control comply with applicable Utility Distribution Company or Metered Subsystem tariffs and operating procedures incorporated therein as well as applicable requirements of the Local Regulatory Authority, if any.

(c) Each Distributed Energy Resource Provider will comply with Applicable Reliability

Criteria to the extent they apply.

(d) Each Distributed Energy Resource Provider will operate and maintain its Distributed Energy Resource Aggregation(s) consistent with applicable Operating Procedures and Business Practice Manuals established by the CAISO.

(e) Each Distributed Energy Resource Provider will operate its Distributed Energy Resource Aggregation(s) in a manner consistent with limitations established by or operating orders of the Utility Distribution Company or Metered Subsystem.

(f) The CAISO will coordinate with the applicable Utility Distribution Company or Metered subsystem to avoid conflicting operational directives, which may include but is not limited to sharing Dispatch Instructions.

**4.17.3 Requirements for Distributed Energy Resource Aggregations**

The following requirements apply to Distributed Energy Resource Aggregations:

(a) A Distributed Energy Resource Aggregation will consist of one (1) or more Distributed Energy Resources.

(b) A Distributed Energy Resource may not participate in more than one Distributed Energy Resource Aggregation.

(c) A Distributed Energy Resource participating in a Distributed Energy Resource Aggregation may not participate as a resource in the CAISO Market separate from the Distributed Energy Resource Aggregation.

(d) Each Distributed Energy Resource Aggregation must be located in a single Sub-LAP.

(e) A Distributed Energy Resource Aggregation must provide a net response at its PNode(s) within its sub-LAP that is consistent with CAISO Dispatch Instructions and applicable Generation Distribution Factors submitted through the Distributed Energy Resource Aggregation's Bid or as registered in the Master File.

(f) Distributed Energy Resource Aggregations are Scheduling Coordinator Metered Entities. Scheduling Coordinators for a Distributed Energy Resource Aggregation must have entered into a Scheduling Coordinator Metering Agreement with the CAISO. A Distributed Energy Resource participating in a Distributed Energy Resource Aggregation

may not also participate in the CAISO Markets as a CAISO Metered Entity.

(g) A Distributed Energy Resource Aggregation may not receive compensation for capacity, Energy, or other services it provides in CAISO's markets if it provides the same services in retail programs.

(h) Distributed Curtailment Resources may participate in Distributed Energy Resource Aggregations pursuant to these rules and Section 4.17.7.

**4.17.4 Identification of Distributed Energy Resources**

Each Distributed Energy Resource Provider will provide information, as described in the Business Practice Manual, identifying each of its Distributed Energy Resource Aggregations and such information regarding the location, capacity, operating characteristics and applicable Generation Distribution Factors of its Distributed Energy Resource Aggregation(s) as may be reasonably requested from time to time by the CAISO, and when the information changes due to the removal, addition, or modification of a Distributed Energy Resource or Distributed Curtailment Resource within the Distributed Energy Resource Aggregation. All information provided to the CAISO by a Distributed Energy Resource Provider regarding the operational and technical characteristics of its Distributed Energy Resource Aggregation(s) must be an accurate reflection of the design capabilities of the resources and its constituent equipment when operating at maximum sustainable performance over Minimum Run Time, recognizing that resource performance may degrade over time. Information registered in the Master File by a Scheduling Coordinator must also conform to any additional definitional requirements in Appendix A as may exist as to that information.

As further described in the Business Practice Manual, the CAISO will share any necessary information and data about the Distributed Energy Resources comprising a Distributed Energy Resource Aggregation with the applicable Utility Distribution Company or Metered Subsystem. The Utility Distribution Company or Metered Subsystem will have an opportunity to provide written comments within thirty (30) days regarding the accuracy of the information about Distributed Energy Resources comprising a Distributed Energy Resource Aggregation(s) or raise concerns with respect to whether the Distributed Energy Resources (1) are participating in another Distributed Energy Resource Aggregation; (2) are participating as a Proxy Demand Response resource or a Reliability Demand Response Resource; (3) do not comply

with applicable Utility Distribution Company tariffs or requirements of the relevant Local Regulatory Authority; (4) receive compensation from retail programs for capacity, Energy, or other services that would be offered to the CAISO Markets; or (5) may pose a significant threat to the safe and reliable operation of the Distribution System, if operated as part of a Distributed Energy Resource Aggregation. The Utility Distribution Company or Metered Subsystem review of criterion (5) must be limited to those impacts resulting from the aggregation, exclusive of issues previously considered during the interconnection study process for each Distributed Energy Resource. The CAISO will provide the Distributed Energy Resource Provider with the Utility Distribution Company or Metered Subsystem's written comments and any other information regarding the Distributed Energy Resources provided by the Utility Distribution Company or Metered Subsystem to CAISO, and the Distributed Energy Resource Provider will resolve any concerns with the Utility Distribution Company or Metered Subsystem prior to the CAISO allowing the individual Distributed Energy Resource to participate in a Distributed Energy Resource Aggregation. Parties may resolve any disputes regarding any issues related to the distribution utility review process with the applicable Governmental Authority for the Utility Distribution Company or Metered Subsystem or under Section 13 of the CAISO tariff, as applicable to the dispute.

#### 4.17.4.1 Modifications to Distributed Energy Resource Aggregations

The Distributed Energy Resource Provider will notify the CAISO of any changes to the information it provided during the registration process due to the removal, addition, or modification of a Distributed Energy Resource or Distributed Curtailment Resource within the Distributed Energy Resource Aggregation. The Distributed Energy Resource Provider also will notify the CAISO of any changes to its Distributed Energy Resource Aggregation's physical or operational characteristics. The CAISO will notify the applicable Utility Distribution Company or Metered Subsystem of any changes, and the Utility Distribution Company or Metered Subsystem will have fourteen (14) days to provide the CAISO any written comments raising concerns under Section 4.17.4.

### 4.17.5 Characteristics of Distributed Energy Resource Aggregations

#### 4.17.5.1 Size Limits

A Distributed Energy Resource Aggregation will be no smaller than 100kW. A Distributed Energy Resource Aggregation that includes Distributed Energy Resources located at different PNodes will be no

larger than 20 MW.

#### 4.17.5.2 Metering and Telemetry

Scheduling Coordinators shall submit to the CAISO Actual Settlement Quality Meter Data or Estimated Settlement Quality Meter Data for Distributed Energy Resource Aggregations they represent for each Settlement Period in an Operating Day. Distributed Energy Resources and Distributed Curtailment Resources participating in a Distributed Energy Resource Aggregation will be directly metered pursuant to a meter that complies with any applicable Utility Distribution Company tariff and any standards of the relevant Local Regulatory Authority or, if no such tariff exists or no standards have been set by that Local Regulatory Authority, the metering standards as further detailed in the CAISO's Business Practice Manual. Distributed Energy Resource Providers must make Settlement Quality Meter Data from individual Distributed Energy Resources and Distributed Curtailment Resources comprising a Distributed Energy Resource Aggregation available to the CAISO upon request.

Distributed Energy Resource Providers shall provide information regarding Distributed Energy Resource Aggregation(s) with a rated capacity of 10 MW or greater or, if the Distributed Energy Resource Aggregation(s) provides Ancillary Services, through telemetry to the CAISO's EMS in accordance with the CAISO's standards for direct telemetry and consistent with the requirement for telemetry set forth in Section 7.6.1. Distributed Energy Resource Providers are not required to have their own direct telemetry on each DER, and may acquire the data required to provide the CAISO with accurate telemetry data for the DERA by any means, including calculation.

### 4.17.6 Operating Requirements

Distributed Energy Resource Aggregations will respond to (1) CAISO Dispatch Instructions and (2) instructions from the Utility Distribution Company to maintain the safety and reliability of the Distribution System. The CAISO may dispatch a Distributed Energy Resource Aggregation to the extent the Distributed Energy Resource Aggregation bids or schedules into the CAISO Markets and receives an award. The CAISO may also issue an Exceptional Dispatch Instruction for the Distributed Energy Resource Aggregation for reliability pursuant to Section 34.11. Distributed Energy Resource Aggregations shall respond to Dispatch Instructions consistent with Generation Distribution Factors for the Distributed Energy Resource Aggregation.

Each Distributed Energy Resource Provider will operate its Distributed Energy Resource Aggregation(s) in a manner consistent with limitations or operating orders established by the Utility Distribution Company or Metered Subsystem. Scheduling Coordinators for Distributed Energy Resources Providers shall submit Outages to the CAISO as necessary to reflect any distribution constraints impacting Distributed Energy Resources that comprise a Distributed Energy Resource Aggregation under its control. The CAISO shall have the authority to coordinate and approve Outage schedules for the Distributed Energy Resource Aggregation(s) listed in a Distributed Energy Resource Provider Agreement, in accordance with the provisions of Section 9. Where the Utility Distribution Company requires its own direct communication with the Distributed Energy Resource Provider for the safety and reliability of the Distribution System, those communication and data protocols will be established in Schedule 4 to the Distributed Energy Resource Provider Agreement.

**4.17.7 Distributed Energy Resource Aggregations with Demand Curtailment**

Distributed Energy Resource Aggregations that include Distributed Curtailment Resources are subject to all the requirements in Section 4.17 and this subsection. The Scheduling Coordinator for a Distributed Energy Resource Aggregation that includes a Distributed Curtailment Resource will submit Bids for Energy or Ancillary Services or Energy Self-Schedules representing the net injection of Energy from the Distributed Energy Resources that are not Distributed Curtailment Resources, if any, plus the Demand curtailment from the Distributed Curtailment Resources. Scheduling Coordinators must include Bid parameters consistent with Section 30.5.2.6. A Distributed Energy Resource Aggregation must provide a net response of Energy, Demand curtailment, or both at its PNode(s) within its sub-LAP that is consistent with CAISO Dispatch Instructions and applicable Generation Distribution Factors submitted through the Distributed Energy Resource Aggregation's Bid or as registered in the Master File. To calculate the Demand curtailment provided by the Distributed Curtailment Resources within a Distributed Energy Resource Aggregation, the Scheduling Coordinator must calculate a Demand Response Energy Measurement for the Distributed Curtailment Resources, excluding any Distributed Energy Resources that are injecting Energy and not Distributed Curtailment Resources, consistent with the requirements in Sections 4.13.4 and 11.6.

### 4.18 Hybrid Resources

In addition to the rights and obligations of this section, Hybrid Resources are Generating Units subject to Section 4.6. Scheduling Coordinators for Hybrid Resources will provide data regarding the capacity and the operating characteristics of their components as may be reasonably requested from time to time by the CAISO. All information provided to the CAISO regarding the operational and technical constraints in the Master File must be an accurate reflection of the design capabilities of the Hybrid Resources and their constituent equipment when operating at maximum sustainable performance over Minimum Run Time, recognizing that performance may degrade over time. Hybrid Resources are not Variable Energy Resources or Eligible Intermittent Resources; however, consistent with Section 4.8.2, Hybrid Resources that include a variable component must provide the CAISO with the data for that component that would be required by Appendix Q. Hybrid Resources with a variable or intermittent component also must provide the CAISO with telemetry and Meter Data on the variable components in addition to the Generating Facility's metering requirements under Section 10. Hybrid Resources' telemetry must include the High Sustainable Limit. Hybrid Resources that include an energy storage component must provide the CAISO with telemetry on the energy storage component's State of Charge.

## 5. Black Start and System Restoration

### 5.1 Black Start Capability

The CAISO shall determine the amount and location of Black Start Generation it requires through a system restoration plan that meets the requirements of Applicable Reliability Criteria. In making this determination, the CAISO shall consult with Participating Transmission Owners.

Participating Transmission Owners with their own system restoration plans that include transmission lines and associated facilities that are part of the CAISO Controlled Grid shall upon the request of the CAISO provide the CAISO with these system restoration plans. The CAISO shall consider Participating Transmission Owners' system restoration plans in developing a system restoration plan for the CAISO Balancing Authority Area and may identify Black Start Generation needs for the CAISO Balancing Authority Area not identified in Participating Transmission Owner's system restoration plans.

### 5.2 Black Start Units

The CAISO shall contract annually (or for such other period as the CAISO may determine is economically advantageous) for Black Start services. The CAISO will select Black Start Generating Units in locations where adequate transmission capacity can be made readily available (assuming no transmission damage) to connect the Black Start Generating Unit to energize the station service bus or dead transmission bus of a Generating Unit designated by the CAISO. Black Start Generating Units:

(a) must be located in the CAISO Balancing Authority Area;

(b) may be located anywhere in the CAISO Balancing Authority Area provided that the Black Start Generating Unit is capable of meeting the CAISO performance requirements for starting and interconnecting to the CAISO Controlled Grid; but

(c) must be dispersed throughout the CAISO Balancing Authority Area.

### 5.3 Black Start Services

(a) All Participating Generators with Black Start Generating Units must satisfy technical requirements specified in Appendix D of the CAISO Tariff and the Participating Generators' Black Start Agreement in relation to the Black Start Generating Units.

(b) The CAISO shall from time to time undertake performance tests, with or without prior notification.

(c) The CAISO shall have the sole right to determine when the operation of Black Start Generating Units is required to respond to conditions on the CAISO Controlled Grid.

(d) If the CAISO has suspended the market for Energy and/or Ancillary Services pursuant to Section 7.7.3, the price paid by the CAISO for Black Start services shall be sufficient to permit the relevant Participating Generator to recover its costs over the period that it is directed to operate by the CAISO.

(e) If a Black Start Generating Unit fails to achieve a Black Start when called upon by the CAISO, or fails to pass a performance test administered by the CAISO, the Market Participant that has contracted to supply Black Start service from the Generating Unit shall be subject to remedies or penalties as specified in its Black Start Agreement.

(f) The CAISO will dispatch Black Start Generating Units as required in accordance with the applicable Black Start Agreement.

# 6. Communications

## 6.1 Methods of Communication

### 6.1.1 Full-Time Communications Facility Requirements

Each Scheduling Coordinator, Utility Distribution Company, Participating TO, Participating Generator, Balancing Authority (to the extent the agreement between the Balancing Authority and the CAISO so provides), and MSS Operator must provide a communications facility manned twenty-four (24) hours a day, seven (7) days a week capable of receiving Dispatch Instructions issued by the CAISO.

### 6.1.2 Information Transfer from Scheduling Coordinator to CAISO

Unless otherwise agreed by the CAISO, Scheduling Coordinators who wish to submit Bids into CAISO Markets must submit the information to the CAISO's secure communication system. Scheduling Coordinators that wish to submit Dynamic Schedules or Bids for Ancillary Services to the CAISO must also comply with the applicable requirements of Sections 4.5.4.3, 8.3.7, and 8.4.5.

### 6.1.3 Submitting Information to the Secure Communication System

For Scheduling Coordinators submitting information to the CAISO's secure communication system, each such Scheduling Coordinator shall establish a network connection with the CAISO's secure communication system. Link initialization procedures shall be necessary to establish a connection to the CAISO's secure communication system. In order to log in, each Scheduling Coordinator will be furnished a digital certificate by the CAISO.

**6.1.3.1** The CAISO will make available data templates and validation rules information that provides a description of the templates which will be utilized to enter data into the CAISO's secure communication system.

### 6.1.4 Information Transfer from CAISO to Scheduling Coordinator

Unless otherwise agreed between a Scheduling Coordinator and the CAISO, the CAISO shall furnish scheduling information to Scheduling Coordinators by electronic transfer as described in Section 6. If electronic data transfer is not available, the information may be furnished by facsimile. If it is not possible to communicate with the Scheduling Coordinator using the primary means of communication, an alternate means of communication shall be selected by the CAISO.

### 6.1.5 Information to be Provided by Connected Entities to CAISO

Each Connected Entity shall provide the CAISO:

(a) A single and alternative telephone number and a single and alternative facsimile number by which the CAISO may contact twenty-four (24) hours a day a representative of the Connected Entity in, or in relation to, a System Emergency; and

(b) The names or titles of the Connected Entity's representatives who may be contacted at such telephone and facsimile numbers.

**6.1.5.1** Each representative specified pursuant to this Section 6.1.5 shall be a person having appropriate experience, qualification, authority, responsibility and accountability within the Connected Entity to act as the primary contact for the CAISO in the event of a System Emergency.

**6.1.5.2** The details required under this Section 6.1.5 shall at all times be maintained up to date and the Connected Entity shall notify the CAISO of any changes promptly and as far in advance as possible.

## 6.2 CAISO's Secure Communication System

### 6.2.1 Scheduling Coordinators

**6.2.1.1** Scheduling Coordinators shall arrange access to the CAISO's secure communication system. Scheduling Coordinators shall maintain a secure electronic communication system for receiving Dispatch Instructions that is approved by the CAISO.

**6.2.1.2** Details of the technical aspects of the CAISO's secure communication system, including information on how to change mechanisms and back-up procedures for individual Scheduling Coordinator failures, will be made available by the CAISO to Scheduling Coordinators on request. It is assumed that each Scheduling Coordinator has made application for and signed a Scheduling Coordinator Agreement. As such, each Scheduling Coordinator will already be familiar with and have arranged the mechanism, including security arrangements, by which it will initially communicate with the CAISO.

#### 6.2.1.3 Individually Assigned Login Accounts

The CAISO will provide an interface for data exchange between the CAISO and Scheduling Coordinators who shall each have individually assigned login accounts via digital certificates. Through the use of the security provisions of CAISO's secure communication system, data will be provided by the CAISO to Scheduling Coordinators on a confidential basis (such as Day-Ahead Schedules and resource-specific pricing data resulting from the enforcement of a natural gas constraint as specified in Section 27.11 for

individual Scheduling Coordinators). Other CAISO data that is not confidential (such as CAISO Demand Forecasts) will be published on the public access reporting system of the CAISO Website and be available to anyone.

#### 6.2.1.4 Failure or Corruption of the CAISO's Secure Communication System

The CAISO shall, in consultation with Scheduling Coordinators, make provision for procedures to be implemented in the event of a total or partial failure of the CAISO's secure communication system or the material corruption of data on the CAISO's secure communication system. The CAISO shall ensure that such alternative communications systems are tested periodically.

#### 6.2.1.5 Confidentiality

All information posted on the CAISO's secure communication system shall be subject to the confidentiality obligations contained in Section 20.

#### 6.2.1.6 Standards of Conduct

The CAISO and all Market Participants shall comply with their obligations, to the extent applicable, under the standards of conduct set out in 18 C.F.R. §37.

### 6.2.2 Public Market Information

#### 6.2.2.1 Non-Discriminatory Access to Information

The CAISO shall provide non-discriminatory access to information concerning the status of the CAISO Controlled Grid or facilities that affect the CAISO Controlled Grid by posting that information on the CAISO Website, or other similar computer communications device, or by telephone or facsimile in the event of computer systems failure.

#### 6.2.2.2 Open Access Same-Time Information System

The CAISO shall provide a public access information reporting system, Open Access Same-Time Information System (OASIS), to deliver market operations and grid management information to accommodate users other than Market Participants. OASIS will be accessible to the public via a link on the CAISO Website.

## 6.3 Communication of Dispatch Instruction

Normal verbal and electronic communication of Dispatch Instructions between the CAISO and Generators, Participating Loads, Distributed Energy Resource Providers, or Demand Response Providers

will be via the relevant Scheduling Coordinator.

### 6.3.1 SC Responsibility for Communications to Generator or Load

Each Scheduling Coordinator must immediately pass on to the Generator, Participating Load, Distributed Energy Resource Provider, or Demand Response Provider concerned any communication for the Generator, Participating Load, or Demand Response Provider which it receives from the CAISO. Communication delays by the Scheduling Coordinator may result in Uninstructed Deviation Penalties or other adjustments pursuant to this CAISO Tariff. The CAISO may, with the prior permission of the Scheduling Coordinator concerned, communicate with and give Dispatch Instructions to the operators of Generating Units, Participating Loads, Distributed Energy Resource Providers, and to Demand Response Providers, directly without having to communicate through their appointed Scheduling Coordinator. In situations of deteriorating system conditions or emergency, the CAISO reserves the right to communicate directly with the Generator(s), Distributed Energy Resource Providers, and Demand Response Providers as required to ensure System Reliability.

### 6.3.2 Recording of Dispatch Instructions

The CAISO shall maintain records of all electronic, fax and verbal communications related to a Dispatch Instruction. The CAISO shall maintain a paper or electronic copy of all Dispatch Instructions delivered by fax and all Dispatch Instructions delivered electronically. The CAISO shall record all voice conversations that occur related to Dispatch Instructions on the Dispatch Instruction communication equipment. These records, copies and recordings may be used by the CAISO to audit the Dispatch Instruction, and to verify the response of the Market Participant concerned to the Dispatch Instruction.

### 6.3.3 Contents of Dispatch Instructions

Dispatch Instructions shall include, but are not limited to, the following information:

(a) specific resource being dispatched;

(b) specific MW value of the resource being dispatched;

(c) specific type of instruction (action required);

(d) time the resource is required to being initiating the Dispatch Instruction;

(e) time the resource is required to achieve the Dispatch Instruction;

(f) time of notification of the Dispatch Instruction; and

(g) any other information which the CAISO considers relevant.

### 6.4 Communication of Operating Instructions

The CAISO shall use normal verbal and electronic communication to issue Operating Instructions to the Connected Entity.

### 6.5 CAISO Communications

The CAISO will provide a secure communication system to publish confidential information and communicate with Scheduling Coordinators, and OASIS to publish public information. All prices released by the CAISO either as published on its Open Access Same-Time Information System (OASIS) or provision of prices directly to Market Participants are subject to price corrections and changes pursuant to Section 35.

#### 6.5.1 Communication with Market and CRR Participants and Public

##### 6.5.1.1 Market Participants with Non-Disclosure Agreements

**6.5.1.1.1** Annually, the CAISO shall provide information that will include, but is not limited to, the following:

(a) CRR Full Network Model;

(b) Transmission Constraints and Transmission Interface definitions;

(c) Load Distribution Factors for each CRR Allocation and CRR Auction that is published prior to the CRR Allocation and CRR Auction; and

(d) Nominations and/or parameters to be used for modeling in each annual CRR Allocation and CRR Auction processes: Transmission Ownership Rights, Existing Contracts and Converted Rights expected usage, and Merchant Transmission CRRs.

**6.5.1.1.2** Monthly, the CAISO shall provide information that will include, but is not limited to, the following:

(a) CRR Full Network Model;

(b) Transmission Constraints and Transmission Interface definitions;

(c) Load Distribution Factors for each CRR Allocation and CRR Auction that is published prior to the CRR Allocation or CRR Auction; and

(d) Nominations and/or parameters to be used for modeling in each monthly CRR Allocation and CRR Auction processes: Transmission Ownership Rights, Existing Contracts and

Converted Rights expected usage, and Merchant Transmission CRRs.

**6.5.1.2 CRR Participants without Non-Disclosure Agreements**

**6.5.1.2.1** Annually, the CAISO shall provide CRR information specific to that CRR Holder or Candidate CRR Holder as it relates to participation in the annual CRR Allocation or CRR Auction.

**6.5.1.2.2** Monthly, the CAISO shall provide CRR information specific to that CRR Holder or Candidate CRR Holder as it relates to participation in the monthly CRR Allocation or CRR Auction.

**6.5.1.3 Public Market Information**

**6.5.1.3.1** Annually, the CAISO shall publish the following information including, but not limited to:

(a) Market Clearing Prices for all Aggregated PNodes used in the CRR Auction clearing for on-peak and off-peak.

(b) CRR Holdings by CRR Holder (including):

(i) CRR Sources name(s);

(ii) CRR Sink name(s);

(iii) CRR quantity (MW) for each CRR Source(s) and CRR Sink(s);

(iv) CRR start and end dates;

(v) Time of use specifications for the CRR(s); and

(vi) Whether the CRR is a CRR Option or CRR Obligation.

**6.5.1.3.2** Monthly, the CAISO shall publish the following information, including, but not limited to:

(a) Market Clearing Prices for all Aggregated PNodes used in the CRR Auction clearing for on-peak and off-peak.

(b) CRR Holdings by CRR Holder (including):

(i) CRR Sources name(s);

(ii) CRR Sink name(s);

(iii) CRR quantity (MW) for each CRR Source(s) and CRR Sink(s);

(iv) CRR start and end dates;

(v) Time of use specifications for the CRR(s); and

(vi) Whether the CRR is a CRR Option or a CRR Obligation.

(c) Information on how the CAISO has settled CRRs based on Transmission Constraint-specific factors pursuant to Section 11.2.4.

**6.5.1.3.3** Seasonally, the CAISO shall publish the following information including, but not limited to:

(a) Set of LDFs that represent typical seasonal on-peak and off-peak values, not used for Settlements, before the new season.

**6.5.1.4 Requirements to Obtain the CRR Full Network Model**

To permit participants to review and use the Confidential Information disclosed by the CAISO solely in connection with review and analysis of the CAISO Markets, the CAISO shall distribute the CRR Full Network Model only to those Market Participants and non-Market Participants that satisfy the following requirements and the related procedures set forth in the Business Practice Manual.

(a) A Market Participant that is a member of the WECC and that requests the CRR Full Network Model: (i) shall execute the Non-Disclosure Agreement for CRR Full Network Model Distribution that is posted on the CAISO Website and (ii) shall provide to the CAISO a non-disclosure statement, the form of which is attached as an exhibit to the Non-Disclosure Agreement executed by the Market Participant, executed by each employee and consultant of the Market Participant who will have access to the CRR Full Network Model.

(b) A Market Participant that is not a member of the WECC and that requests the CRR Full Network Model: (i) shall execute the Non-Disclosure Agreement for CRR Full Network Model Distribution that is posted on the CAISO Website, (ii) shall provide to the CAISO a fully executed WECC Non-Member Confidentiality Agreement for WECC Data, and (iii) shall provide to the CAISO a non-disclosure statement, the form of which is attached as an exhibit to the Non-Disclosure Agreement executed by the Market Participant, executed by each employee and consultant of the Market Participant who will have access to the CRR Full Network Model.

(c) A non-Market Participant that is a member of the WECC and that requests the CRR Full Network Model: (i) shall reasonably demonstrate a legitimate business or governmental interest in the CAISO Markets, (ii) shall execute the Non-Disclosure Agreement for CRR

Full Network Model Distribution that is posted on the CAISO Website, and (iii) shall provide to the CAISO a non-disclosure statement, the form of which is attached as an exhibit to the Non-Disclosure Agreement executed by the non-Market Participant, executed by each employee and consultant of the non-Market Participant who will have access to the CRR Full Network Model.

(d) A non-Market Participant that is not a member of the WECC and that requests the CRR Full Network Model: (i) shall reasonably demonstrate a legitimate business or governmental interest in the CAISO Markets, (ii) shall execute the Non-Disclosure Agreement for CRR Full Network Model Distribution that is posted on the CAISO Website, (iii) shall provide to the CAISO a fully executed WECC Non-Member Confidentiality Agreement for WECC Data, and (iv) shall provide to the CAISO a non-disclosure statement, the form of which is attached as an exhibit to the Non-Disclosure Agreement executed by the non-Market Participant, executed by each employee and consultant of the non-Market Participant who will have access to the CRR Full Network Model.

**6.5.1.5 Non-Disclosure Agreement**

The CAISO's Non-Disclosure Agreement for CRR Full Network Model Distribution shall be posted on the CAISO Website. This Non-Disclosure Agreement shall provide for the CAISO to receive the costs of litigation, including attorneys' fees, related to the Non-Disclosure Agreement if the CAISO prevails in litigation. Recipients of the CRR Full Network Model may use the CRR Full Network Model and related studies in pleadings to the FERC provided they request confidential treatment of all information subject to the Non-Disclosure Agreement.

**6.5.1.6 Obligation to Report Violations of Section 6.5.1.4**

Each Market Participant, non-Market Participant, employee of a Market Participant, employee of a non-Market Participant, consultant, and employee of a consultant to whom the CAISO distributes the CRR Full Network Model shall be obligated to immediately report to the CAISO any violation of the requirements of Section 6.5.1.4.

### 6.5.2 Communications Prior to the Day-Ahead Market

#### 6.5.2.1 Communications Regarding the State of the CAISO Controlled Grid

The CAISO shall use OASIS to provide public information to Market Participants regarding the CAISO Controlled Grid or facilities that affect the CAISO Controlled Grid. Such information may include but is not limited to:

(a) Future planned Outages of transmission facilities;

(b) Total Transfer Capability (TTC); and

(c) Available Transfer Capability (ATC) for WECC paths and Transmission Interfaces with external Balancing Authority Areas.

#### 6.5.2.2 Communications with Scheduling Coordinators

##### 6.5.2.2.1 Bid Adder Eligibility

**6.5.2.2.1.1** By the 20th of each month, the CAISO will notify Scheduling Coordinators of Bid Adder eligibility, applicable Bid Adder value for the following month, and Frequently Mitigated Units that are eligible for a Bid Adder.

**6.5.2.2.1.2** Scheduling Coordinators shall have one week to review Bid Adder information and provide comment back to the CAISO by the 27th of each month.

##### 6.5.2.2.2 Day-Ahead Market Bid Submittal

Seven (7) days prior to any Trading Day, Scheduling Coordinators can begin submitting Bids for the Day-Ahead Market for that Trading Day.

##### 6.5.2.2.3 Advisory Day-Ahead Market Results

The CAISO may provide to the responsible Scheduling Coordinator its resource's hourly Energy schedules produced in the non-financially binding RUC process the CAISO conducts two (2) days prior to the Trading Day based on Bids and forecasts of system conditions as available in the CAISO Market systems at the time the CAISO conducts the non-financially binding RUC process. This information is advisory and is not financially binding.

#### 6.5.2.3 Public Market Information

##### 6.5.2.3.1 Demand Forecasts

**6.5.2.3.1.1** Beginning seven (7) days prior to the target Day-Ahead Market, and updated as necessary,

the CAISO will publish the CAISO Forecast of CAISO Demand.

**6.5.2.3.1.2** By 6:00 p.m. the day prior to the target Day-Ahead Market, the CAISO will publish the updated CAISO Forecast of CAISO Demand. To the extent that the CAISO does not provide this data on any given Operating Day, the CAISO will endeavor to provide this data within the next thirty (30) days, after which the data will not be provided.

**6.5.2.3.2 Network and System Conditions**

By 6:00 p.m. the day prior to the target Day-Ahead Market, the CAISO will publish known network and system conditions, including but not limited to TTC and ATC, the total capacity of inter-Balancing Authority Area Transmission Interfaces, and the available capacity.

**6.5.2.3.3 Ancillary Service Requirements**

By 6:00 p.m. the day prior to the target Day-Ahead Market, the CAISO will publish forecasted Ancillary Services requirements and regional constraints by AS Region.

**6.5.2.3.4 Greenhouse Gas Prices**

The CAISO will publish daily greenhouse gas price indices when available.

**6.5.2.3.5 Extremely Long-Start Unit Commitment**

The CAISO will communicate commitment instructions to Scheduling Coordinators for Extremely Long-Start Resources by 3:00 p.m. two (2) days in advance of the Operating Day through a secure communication system.

**6.5.2.3.6 Virtual Bid Reference Prices**

The CAISO will publish Virtual Bid Reference Prices prior to the applicable reference period for the Virtual Bid Reference Prices.

**6.5.2.3.7 Constraint Relaxation Threshold**

Annually, the CAISO will post on its OASIS the Constraint Relaxation Thresholds for the CAISO Balancing Authority Area and the Balancing Authority Areas participating in the CAISO Energy Imbalance Market.

**6.5.2.3.8 Energy Bid Parameters**

Prior to Market Close, to the extent practicable, the CAISO will notify Scheduling Coordinators whether they may submit Demand Bids, Export Bids, Virtual Bids and Bids for Non-Resource-Specific System

Resources above the Soft Energy Bid Cap.

#### 6.5.2.3.9 Hourly Shaping Factor

Daily, to the extent practicable, the CAISO will post on OASIS the hourly shaping factors used to calculate the Maximum Import Bid Price for the Day-Ahead Market and the Real-Time Market.

### 6.5.3 Day-Ahead Market Communications

#### 6.5.3.1 Communications with Scheduling Coordinators

**6.5.3.1.1** Prior to 6:00 a.m., the CAISO will continuously screen Inter-SC Trades of Energy for the DAM submitted by Scheduling Coordinators and will provide feedback to the Scheduling Coordinators about the consistency and validity of these Inter-SC Trades based on information available to the CAISO.

**6.5.3.1.2** Between 6:00 a.m. and the end of the Day-Ahead Inter-SC Trade Period, the CAISO performs the validation of Inter-SC Trades of Energy for the DAM and will notify the participants of the status of these Inter-SC Trades.

**6.5.3.1.3** Between 5:00 a.m. and 10:00 a.m., the CAISO will provide feedback to Scheduling Coordinators about their validated ETC and TOR quantities, and calculated Default Energy Bids curves and in addition, the RMR Proxy Bids for Energy and the Minimum Load Bid and Start-Up Bid curves for Legacy RMR Units.

**6.5.3.1.4** After the close of the DAM bidding at 10:00 a.m., the CAISO will send a message to the Scheduling Coordinators regarding the outcome of the Bid validation.

**6.5.3.1.5** By 1:00 p.m., the CAISO will publish the result of the DAM and the resource will be flagged if it is being dispatched under its Legacy RMR Contract and will be deemed an RMR Dispatch Notice under the Legacy RMR Contract.

**6.5.3.1.6** After the results of the DAM are published by 1:00 p.m., the CAISO performs the Inter-SC Trade of Energy post-market validation and communicates the results back to the applicable Scheduling Coordinator.

**6.5.3.1.7** The results of the Day-Ahead Market will be published by 1:00 p.m. and will include:

(a) Unit Commitment status for resources committed in the IFM;

(b) Day-Ahead Schedules and prices;

(c) Day-Ahead AS Awards and prices;

(d) RUC Awards and RUC Capacity and resource-specific RUC Prices;

(e) RUC Start-Up Instructions;

(f) Start-Up Instructions resulting from the ELC Process;

(g) Post-market summary of Day-Ahead and Real-Time Energy Schedules, Ancillary Service Awards, RMR Dispatches, and Legacy RMR Units;

(h) Day-Ahead final resource Bid mitigation results; and

(i) Day-Ahead finally qualified Load following capacity.

**6.5.3.1.8** All Expected Energy results will be published at one (1) day after the Trading Day and will include post-market Energy accounting results for Settlement calculations.

**6.5.3.2 Public Market Information**

**6.5.3.2.1** Before 10:00 a.m. one (1) day before the Operating Day the CAISO will publish updated Outage information regarding the transmission system on OASIS. The updated Outage information will include planned and actual Outage events per Transmission Interface, including Outage description, Outage start time and end time, and rating of the curtailed line.

**6.5.3.2.2** The results of the Day-Ahead Market will be published on OASIS by 1:00 p.m. and will include:

(a) Total Day-Ahead Schedules (MWh) for total Supply and Demand by TAC Area and for the entire CAISO Balancing Authority Area;

(b) Total Day-Ahead Schedules (MWh) of imports and exports by Transmission Interface;

(c) Total Day-Ahead AS Awards by AS Region and AS type;

(d) RUC Prices by PNode and APNodes, RUC Forecast Demand for each RUC Zone, hourly RUC Capacity from Generation, and hourly RUC Capacity from imports for each TAC Area and the entire CAISO Balancing Authority Area;

(e) Day-Ahead LMP for Energy for each PNode and APNode, including the Energy, MCC and MCL components;

(f) Day-Ahead ASMP by AS Region and AS type;

(g) Day-Ahead mitigation indicator;

(h) CAISO Forecast of CAISO Demand for each TAC Area and the entire CAISO Balancing

Authority Area;

(i) Shadow Prices of binding Transmission Constraints and an indication of whether the Transmission Constraints were binding because of the base operating conditions or a Contingency, and if caused by a Contingency, the identity of the specific Contingency; and

(j) Total Day-Ahead system Marginal Losses in MWh and Marginal Cost of Losses for each Trading Hour of the next Trading Day.

**6.5.3.2.3** After the results of the Day-Ahead Market are published pursuant to Section 6.5.3.2.2, the CAISO will publish on OASIS a daily market report that includes a summary of aggregate information regarding MWh and dollar amounts of submitted and cleared physical quantities and Virtual Awards.

**6.5.3.2.4 [Not Used]**

**6.5.4 RTM Communications Before the Trading Hour**

**6.5.4.1 Communications with Scheduling Coordinators**

**6.5.4.1.1** Before one hundred thirty-five (135) minutes before the Trading Hour, the CAISO will continuously screen Inter-SC Trades of Energy for the RTM, Inter-SC Trades of Ancillary Services, and Inter-SC Trades of IFM Load Uplift Obligations submitted by Scheduling Coordinators and will communicate with the Scheduling Coordinators about the consistency and validity of these Inter-SC Trades based on information available to the CAISO.

**6.5.4.1.2** Between one hundred thirty-five (135) minutes before the Trading Hour and forty-five (45) minutes before the Trading Hour, the CAISO will perform the pre-market validation check for Inter-SC Trades for the RTM and Inter-SC Trades of Ancillary Services and will provide feedback to the Scheduling Coordinators about the validity of these Inter-SC Trades based on information available to the CAISO.

**6.5.4.1.3** At approximately seventy-five (75) minutes before the Trading Hour, the CAISO will send a message to the Scheduling Coordinators regarding the outcome of the Bid validation.

**6.5.4.1.4** In between two hundred seventy (270) minutes before the Trading Hour and the top of the Trading Hour, the CAISO will issue RTM Start-Up Instructions for Short Start Units consistent with the resource's Start-Up Time.

**6.5.4.1.5** No later than forty-five (45) minutes before the Trading Hour, on an hourly basis, the CAISO will

publish via the secure communication system results of the HASP processes.

**6.5.4.1.6 [Not Used]**

**6.5.4.1.7** At approximately thirty (30) minutes before the Trading Hour, the CAISO performs the Inter-SC Trade of Energy post-market validation and sends the results back to the applicable Scheduling Coordinators.

**6.5.4.1.8** After thirty (30) minutes before the Trading Hour, on an hourly basis, the CAISO will publish via the secure communication system the following:

(a) Advisory Resource-Specific Settlement Interval LMPs, and

(b) Resource-Specific ASMPs.

**6.5.4.2 Public Market Information**

**6.5.4.2.1** By one hundred five (105) minutes before the Trading Hour the CAISO will publish information regarding Outages on the transmission system on OASIS that will be used for Congestion Management, HASP Block Intertie Schedules and HASP Advisory Schedules that involve an Intertie transaction.

**6.5.4.2.2** No later than forty (40) minutes before the Trading Hour, on an hourly basis, the CAISO will publish on OASIS the following:

(a) Total HASP Block Intertie Schedules and HASP Advisory Schedules that involve an Intertie transaction for imports and exports by TAC Area and for the entire CAISO Balancing Authority Area;

(b) HASP advisory LMPs by PNode and APNode;

(c) HASP Shadow Prices of binding Transmission Constraints and an indication of whether the constraints were binding because of the base operating conditions or contingencies and if caused by a contingency, the identity of the specific contingency; and

(d) Total HASP system Marginal Losses in MWh for the next Operating Hour.

**6.5.4.2.3** The CAISO will publish the natural gas price indices used for the Real-Time Market when available.

**6.5.5 Real-Time Market Communications During the Trading Hour**

The CAISO shall issue Dispatch Instructions to Scheduling Coordinators determined pursuant to the RTM throughout any given day.

**6.5.5.1 Communications with Scheduling Coordinators**

Communications between the CAISO and Scheduling Coordinators shall take place via the CAISO's secure communication system to a dedicated terminal at the Scheduling Coordinator's scheduling center. If there is a failure of electronic communications with a Scheduling Coordinator, then, at the CAISO's discretion, the Scheduling Coordinator may communicate by phone or other communication method. Communication that is not electronic requires verbal approval by the CAISO.

**6.5.5.1.1** Every fifteen (15) minutes, the CAISO will communicate via the secure communication system Start-Up and Shut-Down Instructions and Real-Time AS Awards to internal resources (which include Pseudo-Ties of Generating Units to the CAISO Balancing Authority Area).

**6.5.5.1.2** Every five (5) minutes for Target T+10, the CAISO will send Dispatch Instructions via the secure communication system. The Dispatch Instruction will be flagged if a resource is being dispatched under a Legacy RMR Contract.

**6.5.5.2 Public Market Information**

**6.5.5.2.1** Every hour the CAISO shall post via OASIS information regarding the status of the RTM. This information shall include but is not limited to the following:

(a) Mitigation indicator.

**6.5.5.2.2** Every fifteen (15) minutes the CAISO shall post via OASIS information regarding the status of the RTM. This information shall include but is not limited to the following:

(a) Total Real-Time AS Awards by AS Region and AS type;

(b) Real-Time ASMPs by AS Region and AS type; and

(c) FMM LMP.

**6.5.5.2.3 [Not Used]**

**6.5.5.2.4** Every five (5) minutes the CAISO shall post via OASIS information regarding the status of the RTM. This information shall include but is not limited to the following:

(a) CAISO Forecast of CAISO Demand;

(b) Total Real-Time dispatched Energy and Demand on a 24-hour delayed basis;

(c) Real-Time Dispatch Interval LMP;

(d) Real-Time system losses;

(e) Actual Operating Reserve; and

(f) The Real-Time shadow price of binding Transmission Constraints and an indication of whether the constraints were binding because of the base operating conditions or contingencies and if caused by a contingency, the identity of the specific contingency.

### 6.5.6 Market Bid Information

#### 6.5.6.1 Public Market Information

##### 6.5.6.1.1 Day-Ahead and Real-Time Market Bids

The following information shall be published on OASIS ninety (90) days following the applicable Trading Day, with the exclusion of the information that is specific to Scheduling Coordinators:

(a) AS market Bids;

(b) Energy market Bids, including Virtual Bids separately identified as such; and

(c) RUC market Bids.

##### 6.5.6.1.2 Start-Up and Minimum Load Costs

Within seven (7) days after the Trading Day, the CAISO will publish via OASIS total Start-Up Costs and Minimum Load Costs for CAISO committed resources.

##### 6.5.6.1.3 CRR Auction Bids

The CAISO will publish Monthly CRR Auction bids ninety (90) days after the close of the applicable monthly CRR Auctions, with the exclusion of the information that is specific to CRR Holders or Candidate CRR Holders. The CAISO will publish Seasonal CRR Auction bids, in quarterly increments after the expiration of each set of Seasonal CRRs, with the exclusion of the information that is specific to CRR Holders or Candidate CRR Holders.

### 6.5.7 Monthly Report on Conforming Transmission Constraints

The CAISO will post on its website a monthly report or incorporate into a monthly report on the degree of adjustments to Transmission Constraints made pursuant to Section 27.5.6. To the extent that in any given month the CAISO does not post on its website such reports, the CAISO will provide the report in the subsequent month. If it is not reasonably feasible to provide such the monthly report two months after the applicable month of the report, the information for the missed month will not be provided.

### 6.5.8 Virtual Award Information

The CAISO will post on OASIS the net cleared quantities of Virtual Awards at each Eligible PNode or Eligible Aggregated PNode by the close of the Real-Time Market for each Trading Day.

### 6.5.9 Transmission Flowgate Constraint Information

The CAISO will post on OASIS all transmission flowgate Constraints with the corresponding Shadow Prices.

### 6.5.10 Protected Communications with Market Participants

#### 6.5.10.1 Protected Data

The CAISO will provide to parties that have signed a Non-Disclosure Agreement in accordance with Section 6.5.10, the following Protected Data:

##### 6.5.10.1.1 Transmission Constraints Enforcement List

After the results of the Day-Ahead Market are posted, the CAISO will provide the daily post-Day-Ahead Market Transmission Constraints Enforcement List, which consists of the list of Transmission Constraints, including Contingencies and Nomograms that are enforced and not enforced in that day's Day-Ahead Market. Subsequently and prior to the next Day-Ahead Market, the CAISO will provide to parties the pre-Day-Ahead Market Transmission Constraints Enforcement List, which consists of the daily list of information for the Transmission Constraints, including Contingencies and Nomograms, the CAISO plans to enforce or not enforce for the next day's Day-Ahead Market. To the extent that the CAISO does not make either of these two reports available on any given Operating Day, the CAISO will instead provide within the next thirty (30) days only the list of Transmission Constraints, including Contingencies and Nomograms, that were enforced or not enforced for the applicable Day-Ahead Market, after which the information will not be provided.

##### 6.5.10.1.2 Load Distribution Factors

Three (3) days after the applicable Trading Day, the CAISO will provide the actual Load Distribution Factors used in the Integrated Forward Market for the applicable Trading Day. The CAISO will provide the Load Distribution Factors for each of the Default LAPs' underlying Pricing Nodes for all Pricing Nodes that are identified by the responsible Utility Distribution Company as Pricing Nodes at which there is more than just a single customer. For Pricing Nodes that the responsible Utility Distribution Company has not identified as Pricing Nodes at which there is more than just a single customer, the ISO will publish the

respective Load Distribution Factors in a single aggregated location capturing all such nodes. To the extent that the CAISO fails to provide this report on any given Operating Day, the CAISO will endeavor to provide this report within the next thirty (30) days for the applicable Integrated Forward Market, after which the information will not be provided.

#### 6.5.10.1.3 Power Transfer Distribution Factors

Three (3) days after the applicable Trading Day, the CAISO will provide the Integrated Forward Market, HASP and Real-Time Dispatch Power Transfer Distribution Factors for each binding Transmission Constraint in the respective markets. To the extent that the CAISO fails to provide this report on any given Operating Day, the CAISO will endeavor to provide this report for any given successful Integrated Forward Market, HASP and Real-Time Dispatch run within the next thirty (30) days, after which the information will not be provided.

#### 6.5.10.1.4 Transmission Constraint Limits

Three (3) days after the applicable Trading Day, the CAISO will provide a report on the limits associated with all Transmission Constraints, including Nomograms, branch groups, and individual transmission facilities, under both base case and contingencies, that are enforced in the Integrated Forward Market, FMM and Real-Time Dispatch, and that based on the flows in the respective market runs are approaching the limits. To the extent that the CAISO fails to provide this report on any given Operating Day, the CAISO will endeavor to provide this report within the next thirty (30) days for any given successful Integrated Forward Market, FMM and Real-Time Dispatch run, after which the information will not be provided.

#### 6.5.10.1.5 Intertie Flow Information

After the results of the Day-Ahead Market are posted, the CAISO will provide: 1) the hourly unscheduled flow at each Intertie considered in the Day-Ahead Market; and 2) a summary of whether the CAISO enforced physical flow constraints on the Interties pursuant to Section 31.8.2, and if it did not, a short description of the reasons for non-enforcement. After the results of the Real-Time Market are posted, the CAISO will provide the unscheduled flow at each Intertie considered in the Real-Time Market. At the same time that the CAISO posts the information specified in Section 6.5.3.2.4, the CAISO will also provide the accuracy metric by Intertie for each Trading Hour as Protected Data. To the extent that the

CAISO fails to provide any of these reports on any given Operating Day, the CAISO will endeavor to provide any of these reports within the next thirty (30) days for the applicable Day-Ahead Market and Real-Time Market, after which the information will not be provided.

**6.5.10.2 Requirements to Obtain the Protected Data**

The CAISO shall provide the Protected Data only to those Market Participants and non-Market Participants that satisfy the following requirements.

(a) To obtain access to the Protected Data, a Market Participant that is a member of the WECC that requests the Protected Data must: (i) execute and submit to the CAISO the Non-Disclosure Agreement for Protected Data that is posted on the CAISO Website; and (ii) provide to the CAISO a non-disclosure statement, the form of which is attached as an exhibit to the Non-Disclosure Agreement executed by the Market Participant, executed by each employee and consultant of the Market Participant who will have access to the Protected Data.

(b) To obtain access to the Protected Data, a Market Participant that is not a member of the WECC that requests the Protected Data must: (i) execute and submit to the CAISO the Non-Disclosure Agreement for Protected Data that is posted on the CAISO Website, (ii) provide to the CAISO a fully executed WECC Non-Member Confidentiality Agreement for WECC Data, and (iii) provide to the CAISO a non-disclosure statement, the form of which is attached as an exhibit to the Non-Disclosure Agreement executed by the non-WECC Market Participant, executed by each employee and consultant of the non-WECC Market Participant who will have access to the Protected Data.

(c) To obtain access to the Protected Data a non-Market Participant that is a member of the WECC that requests the Protected Data must: (i) reasonably demonstrate a legitimate business or governmental interest in the CAISO Markets, (ii) execute the Non-Disclosure Agreement for Protected Data posted on the CAISO Website, and (iii) provide to the CAISO a non-disclosure statement, the form of which is attached as an exhibit to the Non-Disclosure Agreement executed by the non-Market Participant, executed by each employee and consultant of the non-Market Participant who will have access to the

Protected Data.

(d) To obtain access to the Protected Data, a non-Market Participant that is not a member of the WECC that requests the Protected Data must: (i) reasonably demonstrate a legitimate business or governmental interest in the CAISO Markets, (ii) execute the Non-Disclosure Agreement for Protected Data that is posted on the CAISO Website, (iii) provide to the CAISO a fully executed WECC Non-Member Confidentiality Agreement for WECC Data, and (iv) provide to the CAISO a non-disclosure statement, the form of which is attached as an exhibit to the Non-Disclosure Agreement executed by the non-Market Participant, executed by each employee and consultant of the non-Market Participant who will have access to the Protected Data.

(e) To obtain access to the Protected Data specified in Section 6.5.10.1.5, all Market Participants or non-Market Participants that otherwise qualify to obtain the Protected Data pursuant to the requirements in this Section 6.5.10.2, must also certify in writing to the CAISO that the Market Participant or non-Market Participant has executed the WECC Universal Non-Disclosure Agreement.

**6.5.10.3 Obligation to Report Violations of Section 6.5.10**

Each Market Participant, non-Market Participant, employee of a Market Participant, employee of a non-Market Participant, consultant, and employee of a consultant to whom the CAISO distributes the Protected Data shall be obligated to immediately report to the CAISO any violation of the requirements of Section 6.5.10.

**6.5.11 Aggregate Generation Outage Data**

On the day prior to the applicable Day-Ahead Market, the CAISO will post an aggregated Day-Ahead forecast of the expected hourly output of Eligible Intermittent Resources. Approximately 90 minutes before the applicable Trading Hour, the CAISO will post an hourly aggregate forecast of the expected output of Eligible Intermittent Resources. Each day, the CAISO will post for the prior Trading Day by the Trading Hour the actual aggregated hourly output of the Eligible Intermittent Resources. The forecast and actual output will be provided at an hourly aggregated level by the Existing Zone Trading Hubs. To the extent that the CAISO fails to provide this report on any given Operating Day, the CAISO will endeavor to

provide this report for any given Trading Day within the next thirty (30) days, after which the information will not be provided.

**6.5.12 Aggregated Outage Data for Existing Zone Trading Hubs**

Each day prior to the applicable Integrated Forward Market, the CAISO will publish Generation outage data for each Existing Zone Trading Hub aggregated by fuel category, for example thermal, hydro or renewable, to the extent such disclosure is consistent with the confidentiality requirements in Section 20. The report will be for the current Trading Day and for twenty-nine (29) days that follow the current Trading Day. To the extent that the CAISO fails to provide this report on any given Operating Day, the CAISO will endeavor to provide this report within the next thirty (30) days for any given successful Integrated Forward Market run, after which the information will not be provided.

**6.5.13 Suspension of Publication**

The CAISO may delay or suspend any data releases specified in Section 6.5 if the CAISO has determined that the publication of such data results in anti-competitive or detrimental impacts to market efficiency.

**6.5.14 Order No. 844 Zonal Uplift Report**

Within 20 days of the end of each calendar month, the CAISO will post on OASIS a monthly report reflecting daily payments to resources by transmission zone within the CAISO or EIM Entity Balancing Authority Area for each of the following categories of costs:

(a) IFM Bid Cost Uplift;

(b) RTM Bid Cost Uplift;

(c) Exceptional Dispatch uplift;

(d) Excess Cost Payments;

(e) monthly Exceptional Dispatch CPM payments;

(f) Emissions Cost payments;

(g) Start-Up Cost payments;

(h) RUC Availability Payments; and

(i) Payment Rescission of RUC Availability Payments.

For purposes this report, a transmission zone within the CAISO shall reflect the Transmission Access

Charge Area of each Participating Transmission Owner. For purposes this report, a transmission zone within an EIM Entity shall reflect the EIM Entity Balancing Authority Area.

**6.5.15 Order No. 844 Resource-Specific Uplift Report**

Within 90 days of the end of each calendar month, the CAISO will post on OASIS a monthly report reflecting monthly payments to resources for each of the following categories of costs:

(a) IFM Bid Cost Uplift;

(b) RTM Bid Cost Uplift'

(c) Exceptional Dispatch uplift;

(d) Excess Cost Payments;

(e) monthly Exceptional Dispatch CPM payments;

(f) Emissions Cost payments;

(g) Start-Up Cost payments;

(h) RUC Availability Payments; and

(i) Payment Rescission of RUC Availability Payments.

**6.5.16 Order No. 844 Operator-Initiated Commitment Report**

Within 30 days of the end of each calendar month, the CAISO will post on OASIS a monthly report reflecting operator commitments by transmission zone that will include the following information:

(a) size of the commitment reflecting the MW value dispatched;

(b) commitment reason; and

(c) commitment start time.

For purposes this report, a transmission zone within the CAISO Balancing Authority Area shall reflect the Transmission Access Charge Area of each Participating Transmission Owner. For purposes of this report, commitment reasons shall reflect, among other reasons, the following: (i) system-wide capacity; (ii) constraint management; or (iii) voltage support as further specified in the CAISO's Business Practice Manual.

# 7. System Operations Under Normal and Emergency Conditions

## 7.1 CAISO Control Center Operations

### 7.1.1 Maintain CAISO Control Center

The CAISO shall maintain a WECC approved Balancing Authority Area and Primary CAISO Control Center to direct the operation of all facilities forming part of the CAISO Controlled Grid, including Reliability Must-Run Units, System Resources, and Generating Units providing Ancillary Services.

### 7.1.2 Maintain Back-Up Control Facility

The CAISO shall maintain back-up control facilities remote from the Primary CAISO Control Center sufficient to enable the CAISO to continue to direct the operation of the CAISO Controlled Grid, Reliability Must-Run Units, System Resources and Generating Units providing Ancillary Services in the event of the Primary CAISO Control Center becoming inoperable. The CAISO may delegate responsibilities to the Backup Control Center in which case the Primary CAISO Control Center shall serve as the back-up control facility for those responsibilities.

### 7.1.3 CAISO Control Center Authorities

The CAISO shall have full authority, subject to this CAISO Tariff, to direct the operation of the facilities referred to in Section 7.1.1 and 7.1.2 including (without limitation), to:

(a) direct the physical operation by the Participating TOs of transmission facilities under the Operational Control of the CAISO, including (without limitation) circuit breakers, switches, voltage control equipment, protective relays, metering, and Load Shedding equipment;

(b) commit and dispatch Reliability Must-Run Units, except that the CAISO shall only commit Reliability Must-Run Generation for Ancillary Services capacity according to Section 41;

(c) order a change in operating status of auxiliary equipment required to control voltage or frequency;

(d) take any action it considers to be necessary consistent with Good Utility Practice to protect against uncontrolled losses of Load or Generation and/or equipment damage resulting from unforeseen occurrences;

(e) control the output of Generating Units, Interconnection schedules, and System Resources that are selected to provide Ancillary Services or Energy;

(f) Dispatch Curtailable Demand and Demand Response Services which have been scheduled to provide Non-Spinning Reserve or Energy from Participating Loads or Proxy Demand Resources or which have been scheduled to provide Energy from Reliability Demand Response Resources or which have been scheduled to provide Energy from Reliability Demand Response Resources;

(g) procure Energy for a threatened or imminent System Emergency;

(h) require the operation of resources which are at the CAISO's disposal in a System Emergency, as described in Section 7.7;

(i) exercise Operational Control of all transmission lines greater than 230kV and associated equipment on the CAISO Controlled Grid;

(j) exercise Operation Control of all Interconnections; and

(k) exercise Operational Control of all 230kV and lower voltage transmission lines and associated station equipment identified in the CAISO Register as that portion of the CAISO Controlled Grid.

The CAISO will exercise its authority under this Section 7.1.3 by issuing Dispatch Instructions to the relevant Market Participants using the relevant communications method described in this CAISO Tariff.

### 7.2 Operating Reliability Criteria

The CAISO shall exercise Operational Control over the CAISO Controlled Grid in compliance with all Applicable Reliability Criteria and Operating Procedures. The North American Electric Reliability Corporation's (NERC) Qualified Path Unscheduled Flow Relief for the Western Electricity Coordinating Council (WECC), Reliability Standard WECC-IRO-STD-006-0 filed by NERC in FERC Docket No. RR07-11-000 on March 26, 2007, and approved by FERC on June 8, 2007, and any amendments thereto, are hereby incorporated and made part of this CAISO Tariff. See www.nerc.com for the current version of the NERC's Qualified Path Unscheduled Flow Relief Procedures for WECC.

### 7.3 Transmission Planning Authority

#### 7.3.1 Criteria for CAISO's Operational Control

The CAISO shall exercise Operational Control over the CAISO Controlled Grid to meet planning and Operating Reserve criteria no less stringent than those established by WECC and NERC as those

standards may be modified from time to time, and Local Reliability Criteria that are in existence on the CAISO Operations Date and have been submitted to the CAISO by each Participating TO pursuant to Section 2.2.1(v) of the TCA. All Market Participants and the CAISO shall comply with the CAISO Reliability Criteria, standards, and procedures.

### 7.3.2 Planning Guidelines; Revision of Local Reliability Criteria

The CAISO Governing Board may establish planning guidelines more stringent than those established by NERC and WECC as needed for the secure and reliable operation of the CAISO Controlled Grid. The CAISO may revise the Local Reliability Criteria subject to and in accordance with Section 5 of the TCA.

### 7.3.3 NAESB Standards

The following standards of the Wholesale Electric Quadrant (WEQ) of the North American Energy Standards Board (NAESB) are incorporated by reference, except to the extent FERC has granted waiver of such NAESB WEQ standards:

- WEQ-000, Abbreviations, Acronyms, and Definition of Terms (WEQ Version 003.1, September 30, 2015) (including only the definitions of Interconnection Time Monitor, Time Error, and Time Error Correction);
- WEQ-000, Abbreviations, Acronyms, and Definition of Terms (excluding the WEQ cybersecurity standards) (WEQ Version 003.3, March 30, 2020);
- WEQ-001, Open Access Same-Time Information Systems (OASIS), (excluding the WEQ cybersecurity standards) (WEQ Version 003.3, March 30, 2020), excluding standards WEQ-001-9 preamble text, WEQ-001-10 preamble text, and exclusively as to standards WEQ-001-13.1.1, 001-13.1.4, 001-13.1.5, 001-16, 001-28-1.3, and 001-28-1.3.1;
- WEQ-002, Open Access Same-Time Information Systems (OASIS) Business Practice Standards and Communication Protocols (S&CP), (excluding the WEQ cybersecurity standards), (WEQ Version 003.3, March 30, 2020);
- WEQ-003, Open Access Same-Time Information Systems (OASIS) Data Dictionary, (WEQ Version 003.3, March 30, 2020);
- WEQ-004, Coordinate Interchange (WEQ Version 003.3, March 30, 2020);
- WEQ-005, Area Control Error (ACE) Equation Special Cases (WEQ Version 003.3, March 30, 2020);
- WEQ-006, Manual Time Error Correction (WEQ Version 003.1, Sept. 30, 2015);
- WEQ-007, Inadvertent Interchange Payback (WEQ Version 003.3, March 30, 2020);
- WEQ-008, Transmission Loading Relief (TLR)—Eastern Interconnection (WEQ Version 003.3, March 30, 2020);

- WEQ-011, Gas/ Electric Coordination (WEQ Version 003.3, March 30, 2020);
- WEQ-012, Public Key Infrastructure (PKI) (WEQ Version 003.3, March 30, 2020); WEQ-013, Open Access Same-Time Information Systems (OASIS) Implementation Guide, (WEQ Version 003.3, March 30, 2020);
- WEQ-015, Measurement and Verification of Wholesale Electricity Demand Response (WEQ Version 003.3, March 30, 2020);
- WEQ-021, Measurement and Verification of Energy Efficiency Products (WEQ Version 003.3, March 30, 2020);
- WEQ-022, Electric Industry Registry (WEQ Version 003.3, March 30, 2020);
- WEQ-023, Modeling. (WEQ Version 003.3, March 30, 2020); and
- WEQ-024, Cybersecurity (WEQ Version 004, July 31, 2023).

Pursuant to FERC's Order on Requests for Waiver, Docket No. ER25-2603-000 (September 25, 2025), 192 FERC ¶ 61,248, the CAISO has been granted a waiver of the following NAESB WEQ standards:

- WEQ-001, Open Access Same-Time Information Systems (OASIS), (WEQ Version 003.3, March
- 30, 2020), excluding standards WEQ-001-9 preamble text, WEQ-001-10 preamble text, and except as set forth above;
- WEQ-002, Open Access Same-Time Information Systems (OASIS) Business Practice Standards and Communication Protocols (S&CP), (WEQ Version 003.3, March 30, 2020);
- WEQ-003, Open Access Same-Time Information Systems (OASIS) Data Dictionary, (WEQ Version 003.3, March 30, 2020);
- WEQ-006, Manual Time Error Correction, (WEQ Version 003.1, Sept. 30, 2015) and only as to standards WEQ-006-5 and 006-9;
- WEQ-012, Public Key Infrastructure (PKI), (WEQ Version 003.3, March 30, 2020) to the extent it applies to OASIS applications;
- WEQ-013, Open Access Same-Time Information Systems (OASIS) Implementation Guide, (WEQ Version 003.3, March 30, 2020);
- WEQ-023, Modeling, (WEQ Version 003.3, March 30, 2020) and only as to standards WEQ-023- 5; WEQ-023-5.1; WEQ-023-5.1.1; WEQ-023-5.1.2; WEQ-023-5.1.2.1; WEQ-023-5.1.2.2; WEQ-
- 023-5.1.2.3; WEQ-023-5.1.3; WEQ-023-5.2; WEQ-023-6; WEQ-023-6.1; WEQ-023-6.1.1; WEQ-
- 023-6.1.2; and WEQ-023-A Appendix A; and
- WEQ-024, Cybersecurity (WEQ Version 004, July 31, 2023) and only as to standard WEQ-024-1.

### 7.4 General Standard of Care

When the CAISO is exercising Operational Control of the CAISO Controlled Grid, the CAISO and Market Participants shall comply with Good Utility Practice.

### 7.5 Routine Operation of the CAISO Controlled Grid

The CAISO shall operate the CAISO Controlled Grid in accordance with the standards described in Section 7.2 and within the limit of all applicable Nomograms and established operating limits and procedures.

#### 7.5.1 CAISO Controlled Facilities

##### 7.5.1.1 General

The CAISO shall have Operational Control of all transmission lines and associated station equipment that have been transferred to the CAISO Controlled Grid from the Participating TOs as listed in the CAISO Register.

#### 7.5.2 Clearing Equipment for Work

The clearance procedures of the CAISO and the relevant UDC and Participating TO must be adhered to by all parties, to ensure the safety of all personnel working on CAISO Controlled Grid transmission lines and equipment. In accordance with Section 9.3, no work shall start on any equipment or line which is under the Operational Control of the CAISO unless final approval has first been obtained from the appropriate CAISO Control Center. Prior to starting the switching to return any line or equipment to service the CAISO shall confirm that all formal requests to work on the cleared line or equipment have been released.

#### 7.5.3 Equipment De-Energized for Work

In some circumstances, System Reliability requirements may require a recall capability that can only be achieved by allowing work to proceed with the line or equipment de-energized only (i.e. not cleared and grounded). Any personnel working on such de-energized lines and equipment must take all precautions as if the line or equipment were energized. Prior to energizing any such lines or equipment de-energized for work, the CAISO shall confirm that all formal requests to work on the de-energized line or equipment have been released.

#### 7.5.4 Hot-Line Work

The CAISO has full authority to approve requests by Participating TOs to work on energized equipment

under the Operational Control of the CAISO, and no such work shall be commenced until the CAISO has given its approval.

#### 7.5.5 Intertie Switching

The CAISO and the appropriate single point of contact for the relevant Participating TO and the adjacent Balancing Authority Area shall coordinate during the de-energizing or energizing of any Interconnection.

#### 7.5.6 Operating Voltage Control Equipment

##### 7.5.6.1 Operating Voltage Control Equipment Under CAISO Control

The CAISO will direct each Participating TO's single point of contact in the operation of voltage control equipment that is under the CAISO's Operational Control.

##### 7.5.6.2 Operating Voltage Control Equipment Under CAISO Control

Each UDC must operate voltage control equipment under UDC control in accordance with existing UDC voltage control guidelines.

##### 7.5.6.3 Special CAISO Voltage Control Requirements

The CAISO may request a Participating TO via its single point of contact or a UDC via its single point of contact to operate under special voltage control requirements from time to time due to special system conditions.

### 7.6 Normal System Operations

#### 7.6.1 Actions for Maintaining Reliability of CAISO Controlled Grid

The CAISO shall obtain the control over Generating Units that it needs to control the CAISO Controlled Grid and maintain reliability by ensuring that sufficient Energy, Imbalance Reserves, Reliability Capacity, and Ancillary Services are procured through the CAISO Markets. When the CAISO responds to events or circumstances, it shall first use the generation control it is able to obtain from market processes to respond to the operating event and maintain reliability. Only when the CAISO has used the Energy, Imbalance Reserves, Reliability Capacity, and Ancillary Services that are available to it and that are effective in responding to the problem and the CAISO is still in need of additional control over Generating Units, shall the CAISO assume supervisory control over other Generating Units. It is expected that at this point, the operational circumstances will be so severe that a Real-Time system problem or emergency

condition could be in existence or imminent.

Each Participating Generator shall take, at the direction of the CAISO, such actions affecting such Generator as the CAISO determines to be necessary to maintain the reliability of the CAISO Controlled Grid. Such actions shall include (but are not limited to):

(a) compliance with Dispatch Instructions including instructions to deliver Energy and Ancillary Services in Real-Time pursuant to the AS Awards, Day-Ahead Schedules and FMM Schedules, and FMM AS Awards;

(b) compliance with the system operation requirements set out in this Section 7;

(c) notification to the CAISO of the persons to whom an instruction of the CAISO should be directed on a 24-hour basis, including their telephone and facsimile numbers; and

(d) the provision of communications, telemetry and direct control requirements, including the establishment of a direct communication link from the control room of the Generator to the CAISO in a manner that ensures that the CAISO will have the ability, consistent with this CAISO Tariff, to direct the operations of the Generator as necessary to maintain the reliability of the CAISO Controlled Grid, except that a Participating Generator will be exempt from CAISO requirements imposed in accordance with this subsection (d) with regard to any Generating Unit with a rated capacity of less than ten (10) MW, unless that Generating Unit is certified by the CAISO to provide Ancillary Services.

## 7.7 Management of Abnormal System Conditions

### 7.7.1 CAISO Actions in Imminent or Actual System Emergency

**(a) Declaration of System Emergency.** When, in the judgment of the CAISO, a System Emergency has occurred or is imminent, the CAISO will declare a System Emergency and issue an Emergency Notice to that effect, setting forth the actions that the CAISO is taking to address the System Emergency.

**(b) Subsequent Notices Regarding System Emergency.** Each time that the CAISO initiates any of the actions in Section 7.7.1(c) in response to a System Emergency, and at such time that the CAISO terminates any such action or resolves the System Emergency, the CAISO will issue a subsequent Emergency Notice setting forth the action or determination.

**(c) Actions in Response to System Emergency.** In response to a System Emergency, the CAISO may take any or all of the following actions as necessary to preserve or restore reliable, safe, and efficient service as quickly as reasonably practicable:

(1) suspend the CAISO Markets and apply an Administrative Price in accordance with Section 7.7.3;

(2) authorize full use of Black Start Generating Units;

(3) initiate full control of manual Load Shedding, in accordance with Section 7.7.3(c);

(4) authorize the curtailment of Curtailable Demand (even though not scheduled as an Ancillary Service) in accordance with Section 7.7.3(c); and

(5) take such other action that it considers necessary to preserve or restore stable operation of the CAISO Controlled Grid, to the extent such actions are consistent with Good Utility Practice and Applicable Reliability Criteria and not inconsistent with the CAISO Tariff.

**(d) Termination of System Emergency.** The CAISO will terminate the System Emergency and suspend the actions taken in response to the System Emergency when it determines, after conferring, as necessary, with Reliability Coordinators within the WECC, that the major factors contributing to the System Emergency have been corrected, and all involuntarily interrupted Demand is back in service (except interrupted Curtailable Demand selected as an Ancillary Service).

**(e) Coordination with Neighboring Balancing Authority Areas.** The CAISO shall keep system operators in adjacent Balancing Authority Areas informed, as necessary, as to the nature and extent of the System Emergency in accordance with WECC procedures.

**(f) Emergency Guidelines.** The CAISO shall issue guidelines for all Market Participants to follow during a System Emergency consistent with the responsibilities set forth in Section 7.7.2 and in applicable Operating Procedures.

**7.7.2 Market Participant Responsibilities in System Emergencies.**

**(a) Response to CAISO Dispatch Instructions.** All Market Participants shall respond immediately to CAISO Dispatch Instructions during System Emergencies.

**(b) Responsibilities of UDCs and MSS Operators During a System Emergency**

**(1) Compliance with Directions and Procedures.** In the event of a System Emergency, UDCs and MSS Operators shall comply with all directions from the CAISO concerning the avoidance, management, and alleviation of the System Emergency and shall comply with all procedures concerning System Emergencies set forth in this CAISO Tariff, the Business Practice Manuals, and the Operating Procedures. and shall comply with all procedures concerning System Emergencies set forth in the CAISO Tariff, Business Practice Manuals and Operating Procedures.

**(2) Communications.** During a System Emergency, the CAISO shall communicate with the UDCs and MSS Operators through their respective control centers and in accordance with procedures established in individual UDC and MSS Operating Agreements.

**(3) Notifications of End-Use Customers.** Each UDC and MSS Operator will notify its End-Use Customers connected to the UDC's or the MSS's Distribution System of any voluntary curtailments notified to the UDC or to the MSS Operator by the CAISO pursuant to the provisions of the Electrical Emergency Plan.

**(c) Responsibilities of Generating Units, System Units and System Resources During System Emergencies**

**(1) In General.** All Generating Units and System Units that are owned or controlled by a Participating Generator are (without limitation to the CAISO's other rights under this CAISO Tariff) subject to control by the CAISO during a System Emergency and the CAISO shall have the authority to instruct a Participating Generator to bring its Generating Unit on-line or off-line or to increase or curtail the output of the Generating Unit and to alter scheduled deliveries of Energy and Ancillary Services into or out of the CAISO Controlled Grid, if such an instruction is reasonably necessary to prevent an imminent or threatened System Emergency or to retain Operational Control over the CAISO Controlled Grid during an actual System Emergency.

**(2) Prerequisite for Dispatch Instructions.** The CAISO shall, where reasonably practicable, use Ancillary Services which it has the contractual right to instruct and which are capable of contributing to containing or correcting the actual, imminent, or threatened System Emergency prior to issuing instructions to a Participating Generator under this subsection, except that the CAISO need not take such action if it determines such action is unlikely to be effective.

**(3) Legacy RMR Condition 2 Units.**

**(A) Prerequisite for Dispatch Instructions.** The CAISO shall only instruct a Legacy RMR Unit whose owner has selected Condition 2 of its Legacy RMR Contract to start-up and change its output if the CAISO has reasonably used all other available and effective resources to prevent a threatened System Emergency without declaring that a System Emergency exists.

**(B) Compensation.** If the CAISO dispatches a Condition 2 RMR Unit pursuant to subparagraph (A), it shall compensate that unit in accordance with Section 11.5.6.3 and allocate the costs in accordance with Section 11.5.6.3.2.

**(4) Qualifying Facilities.** A Scheduling Coordinator that represents a QF subject to an Existing QF Contract that is not subject to a PGA or Net Scheduled PGA will make reasonable efforts to require such QFs to comply with the CAISO's instructions during a System Emergency without penalty for failure to do so.

**7.7.3 Suspension of CAISO Markets and Application of Administrative Price.**

**(a) In General.** In the absence of a Market Disruption, the CAISO may suspend the CAISO Markets and apply Administrative Prices as provided in Section 7.7.9, if the CAISO determines that such suspension is necessary in order to prevent, contain, or correct a System Emergency in accordance with this Section 7.7.3.

**(b) Suspension of DAM.**

**(1) Condition for Suspension.** The CAISO will not suspend the operation of the

Day-Ahead Market to manage a System Emergency unless there has been a total or major collapse of all or part of the CAISO Controlled Grid and the CAISO is in the process of restoring it or if the CAISO anticipates that it will not publish DAM results for any reason.

**(2) Notification.** In the event the CAISO determines it may suspend the DAM, it will notify Market Participants as set forth in Section 7.7.9(b)(2).

**(c) Suspension of RTM.** Before suspending the RTM to prevent or manage a System Emergency, the CAISO may take any or all of the following actions that it deems effective to mitigate the System Emergency –

(1) dispatch all reasonably effective Supply Bids offered or available to it regardless of price (including all Energy Bids and Ancillary Services Bids);

(2) subject to Section 3, notify the UDCs when the conditions to implement their existing Load curtailment programs have been met in accordance with their terms;

(3) dispatch or curtail all price-responsive Demand that has been bid into the Day-Ahead Market and exercise its rights under all Load curtailment contracts available to it;

(4) at its discretion, require direct control over Curtailable Demand;

(5) dispatch all interruptible Loads made available by UDCs to the CAISO in accordance with the relevant agreements with UDCs; or

(6) direct a UDC or an MSS Operator to disconnect load from the CAISO Controlled Grid in accordance with the prioritization schedule developed pursuant to Section 7.7.4(b), and exercise Load Shedding to curtail Demand on an involuntary basis, to the extent that the CAISO considers necessary or as instructed by the Reliability Coordinator.

**(d)** If a Load curtailment is required to manage System Emergencies, the CAISO will determine the amount and location of Load to be reduced. In those instances when the CAISO requires load-shedding assistance from the entire CAISO Balancing Authority

Area to preserve or restore stable operation of the CAISO Controlled Grid and to the extent practicable, the CAISO will allocate a portion to each UDC or MSS Operator based on the ratio of its Demand (at the time of the Balancing Authority Area annual peak for the previous year) to total Balancing Authority Area annual peak Demand for the previous year taking into account system considerations and the UDC's or MSS Operator's curtailment rights under their tariffs. Each UDC or MSS Operator shall be responsible for notifying its customers and Generators connected to its system of curtailments and service interruption.

**(e) Termination of Market Suspension.** The suspension will cease as soon as conditions allow.

**7.7.4 Preparatory Actions for a System Emergency**

**(a) Periodic Tests of Emergency Procedures.** The CAISO shall develop and administer periodic tests of System Emergency procedures designed to ensure that Participating Transmission Owners and Scheduling Coordinators received the information required to respond to operating conditions, including System Emergencies.

**(b) Prioritization Schedule for Shedding And Restoring Load.** On an annual basis, the CAISO will, in collaboration with UDCs and MSSs and subject to the provisions of Section 3, develop a prioritization schedule for Load Shedding should a System Emergency require such action, which shall also establish a sequence for the restoration of Load in the event that multiple UDCs or MSSs are affected by service interruptions and Load must be restored in blocks.

**7.7.5 Actions Subsequent to a System Emergency**

(a) **Review of Major Outages.** The CAISO, with the cooperation of any affected UDC, shall jointly perform a review following a major Outage that affects at least ten (10) percent of the Load served by the Distribution System of a UDC or any Outage that results in major damage to the CAISO Controlled Grid or to the health and safety of personnel, which shall address the cause of the Outage, the response time and effectiveness of emergency management efforts, and whether the operation, maintenance, or scheduling

practices of the CAISO, any Participating TOs, Participating Generators, Eligible Customers, or UDCs enhanced or undermined the ability of the CAISO to maintain or restore service efficiently and in a timely manner.

**(b) Report.** The CAISO shall prepare a report on all major outages described in subsection (a) and shall share the report with Participating TOs, Participating Generators, Eligible Customers, and UDCs.

**(c) Provision of Information and Opportunity to Comment.** The CAISO shall seek the views of any Participating TOs, Participating Generators, Eligible Customers, UDCs, and Scheduling Coordinators affected by a System Emergency in the preparation of a report under subsection (b), and such affected entities shall promptly provide information requested by the CAISO. The CAISO shall give such affected entities an opportunity to comment on any issues arising during the preparation of the report.

### 7.7.6 System Operations in the Event of a Market Disruption

**(a) Actions in the Event of a Market Disruption, to Prevent a Market Disruption, or to Minimize the Extent of a Market Disruption.** The CAISO may take one or more of the following actions in the event of a Market Disruption, to prevent a Market Disruption, or to minimize the extent of a Market Disruption:

(1) postpone the closure of the applicable CAISO Market;

(2) remove Bids, including Self-Schedules, that have resulted in a Market Disruption previously, pursuant to Section 7.7.7;

(3) suspend the applicable CAISO Market and manually copy Bids, including Self-Schedules, from the previous day or other applicable market period;

(4) suspend the applicable CAISO Market and use submitted Bids, including Self-Schedules, to the extent possible;

(5) suspend the applicable CAISO Market, in which case import/export schedules shall be determined by submittal of E-Tags;

(6) suspend the applicable CAISO Market and apply Administrative Prices established pursuant to Section 7.7.9;

(7) utilize Exceptional Dispatch and issue Operating Instructions for resources to be committed and dispatched to meet Demand;

(8) suspend or limit the ability of all Scheduling Coordinators to submit Virtual Bids on behalf of Convergence Bidding Entities at specific Eligible PNodes or Eligible Aggregated PNodes, or at all Eligible PNodes or Eligible Aggregated PNodes; or

(9) postpone the publication of DAM market results.

**(b) Choices of Action to Prevent a Market Disruption, in the Event of a Market Disruption, or to Minimize the Extent of a Market Disruption.** The CAISO's choice of action in the event of a Market Disruption shall depend on the CAISO Market that is disrupted, the cause of the Market Disruption, the expected time to resolve the Market Disruption, and the status of submitted Bids and Self-Schedules at the time the Market Disruption occurs.

**(c) Notification.** In the event the CAISO may not publish DAM results, it will notify Market Participants as set forth in Section 7.7.9(b)(2).

**(d) Reports.** The CAISO will report on the frequency of Market Disruptions as part of market performance reporting and post those reports on the CAISO Website.

**7.7.7 Removal of Bids in the Event of a Market Disruption, to Prevent a Market Disruption, or to Minimize the Extent of a Market Disruption**

**(a) Types of Bids.** The types of Bids that the CAISO may remove are Bids that are not feasible based on the misalignment of resource-specific conditions and physical constraints represented in the Master File, current outage information, and the Bid itself.

**(b) Removal of a Portion of a Bid.** The CAISO may remove part of a Bid, but retain other parts of the Bid for the applicable CAISO Market run and interval for the same or a different product, and may retain parts of the Bid for subsequent CAISO Market runs or intervals.

**(c) Removal of a Bid Pursuant to Section 7.7.6(a)(2).** If a Bid must be removed pursuant to Section 7.7.6(a)(2), the CAISO will remove the entire Bid for that particular service and market.

**(d)** **Resubmittal of Bids.** The Scheduling Coordinator may resubmit removed Bids in subsequent CAISO Markets, provided the Scheduling Coordinator complies with any operator instructions regarding the subject Bids.

**(e)** **RUC Bids.** In the event the CAISO removes a Bid from an IFM run, the RUC Availability Bid associated with the removed IFM Bid may still be accepted for the corresponding RUC run, unless the CAISO determines that the RUC Availability Bid is the cause of the disruption.

**(f)** **RTM Bids.** If the CAISO removes a Bid in the advisory RTUC or RTD runs during the Real-Time Market, the CAISO may still use the removed Bid in the binding runs of the Real-Time Market for the same interval if the problems previously experienced with the Bid do not arise.

**(g)** **Energy Component of Ancillary Services Bids.** If the CAISO removes an Ancillary Services Bid submitted to the Real-Time Market, the CAISO may retain the associated Energy Bid for that CAISO Market run.

**(h)** **Settlement Consequences of Removal of Bids**

**(1)** **Day-Ahead Market.** In the event that a Bid is removed from the Day-Ahead Market, the Scheduling Coordinator whose Bid is removed will not be subject to Settlement for the Day-Ahead Market for the affected service.

**(2)** **Ancillary Services.** In the case of Ancillary Services Bids, including Submissions to Self-Provide an Ancillary Service, that are removed from the Day-Ahead Market, the Scheduling Coordinator will not receive Settlement for the Ancillary Services in the Day-Ahead Market and will not receive an opportunity cost payment in the Day-Ahead Market for the offered service.

**(3)** **Exceptional Dispatch.** In the event that a Bid is removed from a CAISO Market run or interval, the CAISO may subsequently be required to issue an Exceptional Dispatch for the resource, in which case the Scheduling Coordinator will receive Exceptional Dispatch Settlement as provided in Section 11.5.6.

**(4)** **Demand Bids.** In the event that a Demand Bid is removed from the Day-Ahead

Market, because no Demand Bids for load can be submitted in the Real-Time Market, Scheduling Coordinators for the load not cleared in the Day-Ahead Market will be settled as Uninstructed Imbalance Energy as provided in Section 11.5.2.

**(i) Reporting to Affected Scheduling Coordinators.** To the extent practicable, the CAISO will contact a Scheduling Coordinator's representative before removing a Bid and advise the representative of the issues encountered with the Bid as soon as practicable, but no later than three (3) Business Days, after the applicable Bid was removed and will provide information specifying when its Bid was removed and the nature of the disruption.

**7.7.8 Under Frequency Load Shedding (UFLS).**

Each UDC's UDCOA with the CAISO and each MSS Agreement through which the MSS Operator agrees to comply with the provisions of the CAISO Tariff shall describe the UFLS program for that UDC or for that MSS.

**7.7.9 Application of Administration Prices and Use of Prior Market Results**

**(a) In General.** To manage an imminent or actual System Emergency or to prevent, manage, or minimize the extent of a Market Disruption, the CAISO will apply prior market results in accordance with this Section 7.7.9.

**(b) Day-Ahead Market.**

**(1) Market Results.** In the case of a suspension of the Day-Ahead Market –

(A) the CAISO shall use the Day-Ahead Market market results (except for Virtual Awards), as applicable, from the previous day for the Day-Ahead Market if the CAISO determines, based on expected system conditions, that using such market results will provide a reasonable profile of Schedules to meet the needs of the Real-Time;

(B) if the CAISO determines, based on expected system conditions, that using the Day-Ahead Market market results described in Section 7.7.9(b)(1)(A) will not reasonably meet the needs of the Real-Time, the CAISO may rely solely on the use of Exceptional Dispatch and other

manual instructions and on the Real-Time Market market results, as applicable for pricing and Settlement purposes, except that notwithstanding Section 11.2., Congestion Revenue Rights will be settled using the hourly average of the 15-minute FMM prices for each hour of the Real-Time Market.

**(2) Notification.** In the event the CAISO has not published the Day-Ahead Market market results or determines it may suspend the Day-Ahead Market, it will notify Market Participants by 6:00 p.m., indicating whether the CAISO anticipates it will –

(i) publish the Day-Ahead Market market results, and if so, when;

(ii) use the previous day's Day-Ahead Market market results pursuant to Section 7.7.9(b)(1)(A); or

(iii) rely on the use of Exceptional Dispatch and other manual instructions and on the Real-Time Market market results pursuant to Section 7.7.9(b)(1)(B).

**(c) Real-Time Market Not Suspended.** In the case of a Market Disruption of the Real-Time Market when the Real-Time Market has not been suspended –

(1) if market results are unavailable for fewer than four (4) consecutive 15-minute FMM intervals, the CAISO shall use the FMM market results, as applicable, for the FMM interval immediately preceding the FMM interval(s) for which FMM market results are unavailable;

(2) if market results are unavailable for fewer than twelve (12) consecutive 5-minute Dispatch Intervals, the CAISO shall use the RTD market results, as applicable, for the Dispatch Interval immediately preceding the Dispatch Interval(s) for which market results are unavailable;

(3) if market results are unavailable for at least four (4) consecutive 15-minute FMM intervals and market results are available for the RTD during those FMM intervals, the CAISO shall use the average of RTD market results, as applicable,

during each such FMM interval and use the market results as applicable from the prior intervals for which market results are unavailable as needed;

(4) if market results are unavailable for at least twelve (12) consecutive 5-minute Dispatch Intervals and market results are available for the FMM during those Dispatch Intervals, the CAISO shall use the FMM market results, as applicable, from the applicable FMM during the Dispatch Intervals;

(5) if market results are unavailable for at least four (4) consecutive 15-minute FMM intervals and market results are unavailable for the RTD during those FMM intervals, the CAISO shall use the Day-Ahead Market market results, as applicable, for the corresponding Trading Hour for which market results are unavailable; and(6) if market results are unavailable for at least twelve (12) consecutive 5-minute Dispatch Intervals and market results are unavailable for the FMM during those Dispatch Intervals, the CAISO shall use the previous day's Day-Ahead Market market results, as applicable, for the corresponding Trading Hour for which market results are unavailable.

**(d) Real-Time Market Suspended.** In circumstances where the Real-Time Market has been suspended, the CAISO shall use the previous day's Day-Ahead Market market results, as applicable, for the Trading Hour corresponding to the Trading Hour during which the Real-Time Market has been suspended.

**(e) Default Provision.** In circumstances that are not described in subsections (a) through (d) of this section or if the market results are for any reason unavailable, the CAISO shall use market results, as applicable, from the most recent preceding applicable interval that produced acceptable market results.

**7.7.10 CAISO Facility and Equipment Outage**

**(a) CAISO's Secure Communication System Unavailable**

**(1) Unavailable Critical Functions.** During a total disruption of the CAISO's secure communication system –

(A) the CAISO's scheduling infrastructure computer systems will not be able

to communicate with Scheduling Coordinators to receive any type of updated Bid or Schedule information;

(B) the CAISO's scheduling infrastructure computer systems will not be able to communicate Congestion Management information and Schedule changes to the Scheduling Coordinators; and

(C) the CAISO will not be able to communicate general information, including emergency information, to any Market Participants.

**(2) Communications.** During any period that the CAISO's secure communication system is unavailable, the CAISO shall –

(A) make all reasonable efforts to keep Market Participants aware of current CAISO Controlled Grid status using voice communications;

(B) use the most recent set of Day-Ahead Schedules, RUC Schedules, AS Awards, FMM Schedules, and Dispatch Instructions for each Scheduling Coordinator for the current and all future Settlement Periods and/or Trading Days until the CAISO's secure communication system is restored; and

(C) attempt to take critical Bids, including ETC and TOR Self-Schedules changes, from Scheduling Coordinators via voice communications as time and personnel availability allow.

**(b) Primary CAISO Control Center Unavailability.**

**(1) Loss of all Voice Communications.** In the event of loss of all voice communication at the Primary CAISO Control Center –

(A) the Primary CAISO Control Center will use alternate communications to notify the Backup CAISO Control Center of the loss of voice communications;

(B) the Backup CAISO Control Center will post information on the situation on the CAISO's secure communication system;

(C) additional voice notifications will be made as time permits; and

(D) once voice communications have been restored to the Primary CAISO Control Center, the CAISO will post this information on the CAISO's secure communication system.

**(2) Complete Unavailability.** In the event that the Primary CAISO Control Center becomes completely unavailable –

(A) the Primary CAISO Control Center will use alternate communications to notify the Backup CAISO Control Center that the Primary CAISO Control Center is unavailable;

(B) the Backup CAISO Control Center will post information on the situation on the CAISO's secure communication system;

(C) additional voice notifications will be made as time permits;

(D) the Backup CAISO Control Center will post confirmation on the CAISO's secure communication system that all computer systems are functioning normally (if such is the case) and take complete control of the CAISO Controlled Grid.

(E) the Backup CAISO Control Center will notify the Participating Transmission Owners by direct voice communication of the situation; and.

(F) once the Primary CAISO Control Center is again available, all functions will be transferred back, and the Primary CAISO Control Center will notify all Market Participants via the CAISO's secure communication system.

**(3) CAISO Energy Management System (EMS) Unavailable.** Should an outage occur to the redundant EMS computer systems in the Primary CAISO Control Center –

(A) EMS operation will transfer to the redundant EMS back up computers at the Backup CAISO Control Center;

(B) the Primary CAISO Control Center will post information on the CAISO's

secure communication system that the Primary CAISO Control Center EMS computer is unavailable and that EMS control has been transferred to the Backup CAISO Control Center; and

(C) when the Primary CAISO Control Center EMS computer is restored, the Backup CAISO Control Center will initiate a transfer of the EMS system back to the Primary CAISO Control Center and the Primary CAISO Control Center will post information on the status of the restored EMS computer system on the CAISO's secure communication system.

**(c) Backup CAISO Control Center.**

**(1) Loss of all Voice Communications.** In the event of a loss of all voice communications at the Backup CAISO Control Center –

(A) the Backup CAISO Control Center will use alternate communications to notify the Primary CAISO Control Center of the loss of voice communications;

(B) the Primary CAISO Control Center will post information on the situation via the CAISO's secure communication system;

(C) additional voice notifications will be made as time permits; and

(D) once voice communications have been restored to the Backup CAISO Control Center, the Primary CAISO Control Center will post this information on the CAISO's secure communication system.

**(2) Control Center Completely Unavailable.** In the event that the Backup CAISO Control Center becomes completely unavailable –

(A) the Backup CAISO Control Center will use alternate communications to notify the Primary CAISO Control Center that the Backup CAISO Control Center is unavailable;

(B) the Primary CAISO Control Center will post information on the situation on the CAISO's secure communication system;

(C) additional voice notifications will be made as time permits;

(D) the Primary CAISO Control Center will post confirmation on the CAISO's secure communication system that all computer systems are functioning normally (if such is the case) and take complete control of the CAISO Controlled Grid;

(E) the Primary CAISO Control Center will notify the Participating Transmission Owners by direct voice communications of the situation; and

(F) once the Backup CAISO Control Center is again available, the Primary CAISO Control Center will transfer all functions back to the Backup CAISO Control Center, and the Backup CAISO Control Center will notify all Market Participants via the CAISO's secure communication system.

**7.7.11 [Not Used]**

**7.7.12 [Not Used]**

**7.7.13 [Not Used]**

**7.7.14 [Not Used]**

**7.7.15 [Not Used]**

### 7.8 Management of Overgeneration Conditions

The CAISO's management of Overgeneration relates only to Real-Time. In the event that Overgeneration conditions occur during Real-Time, the CAISO will direct the Scheduling Coordinators to take the steps described in this Section 7.8 and Scheduling Coordinators shall implement CAISO directions without delay. Overgeneration in Real-Time will be mitigated by the CAISO as follows; provided that the CAISO Operator will have the discretion, if necessary to avoid a System Emergency, to eliminate one or more of the following steps.

#### 7.8.1 Dispatch Instructions to Reduce Generation and Imports

Commencing one hour prior to the start of the Settlement Period, the CAISO will, based on available Bids issue Dispatch Instructions to Scheduling Coordinators to reduce Generation and imports for the next Operating Hour.

#### 7.8.2 Notification of Projected Overgeneration to be Mitigated

To the extent that there are insufficient Bids available for the Operating Hour to fully mitigate the Overgeneration condition, the CAISO will notify Scheduling Coordinators of the projected amount of Overgeneration to be mitigated in that hour.

### 7.8.3 Energy Offered for Sale to Adjacent Balancing Authorities

In addition to the action taken under 7.8.2, the CAISO will, if it considers it necessary to maintain the reliable operation of the CAISO Balancing Authority Area, offer Energy for sale on behalf of Scheduling Coordinators to adjacent Balancing Authorities at the estimated LMP or, if the CAISO considers it necessary, at a price established by the CAISO on behalf of Scheduling Coordinators, to be paid to adjacent Balancing Authorities.

### 7.8.4 Instructions to SCs to Reduce Generation or Imports

To the extent that the steps described in Sections 7.8.1 through 7.8.3 fail to mitigate Overgeneration, the CAISO will instruct Scheduling Coordinators to reduce either Generation, or imports, or both. The amount of the reduction for each Scheduling Coordinator will be calculated pro rata based on the product of the total required reduction in Generation and imports (or increase in exports) and the ratio of its Demand to the total Demand in the CAISO Balancing Authority Area.

### 7.8.5 Mandatory Dispatch Instructions for Specific Reductions

To the extent that the above steps fail to fully mitigate the Overgeneration, the CAISO will issue mandatory Dispatch Instructions for specific reductions in Generating Unit output and external imports and all relevant Scheduling Coordinators shall be obligated to comply with such Dispatch Instructions.

### 7.8.6 CAISO Costs to be Reimbursed Proportionately by SCs

Any costs incurred by the CAISO in implementing Section 7.8.3 shall be reimbursed to the CAISO by Scheduling Coordinators based upon the extent to which they supplied Energy, in metered amounts, greater than the Generation and imports dispatched by the CAISO as provided in the Day-Ahead Schedule or in response to Dispatch Instructions and consumed Energy, in metered amounts, less than the Demand scheduled, as a proportion of the total amount of such excess or shortfall among all Scheduling Coordinators.

## 7.9 Suspension or Limitation of Virtual Bidding

### 7.9.1 Suspension or Limitation Generally

The CAISO may suspend or limit the ability of one or more Scheduling Coordinators to submit Virtual Bids on behalf of one or more Convergence Bidding Entities for any of the reasons set forth in Section 7.9.2. The CAISO has the authority to suspend or to limit the ability of one or more Scheduling Coordinators to submit Virtual Bids on behalf of one or more Convergence Bidding Entities regardless of whether the CAISO has evidence that the virtual bidding activities that led to the suspension of limitation were the result of actions purposely or knowingly taken by Scheduling Coordinators or Convergence Bidding Entities to cause the outcomes set forth in Section 7.9.2. The CAISO may exercise its suspension or limitation authority pursuant to this Section 7.9 at specific Eligible PNodes or Eligible Aggregated PNodes, or at all Eligible PNodes or Eligible Aggregated PNodes. The CAISO may suspend or limit Virtual Bids that have already been submitted, Virtual Bids that will be submitted in the future, or both. The CAISO's authority to suspend or limit the ability of all Scheduling Coordinators to submit Virtual Bids at specific Eligible PNodes or Eligible Aggregated PNodes, or at all Eligible PNodes or Eligible Aggregated PNodes will be governed by the Market Disruption provisions of Section 7.7.15 of the CAISO Tariff and not this Section 7.9.

### 7.9.2 Reasons for Suspension or Limitation

The CAISO may suspend or limit the ability of one or more Scheduling Coordinators to submit Virtual Bids if the CAISO determines that virtual bidding activities of one or more Scheduling Coordinators on behalf of one or more Convergence Bidding Entities detrimentally affect System Reliability or grid operations. Virtual bidding activities can detrimentally affect System Reliability or grid operations if such activities contribute to threatened or imminent reliability conditions, including but not limited to the following circumstances:

(a) Submitted Virtual Bids create a substantial risk that the CAISO will be unable to obtain sufficient Energy and Ancillary Services to meet Real-Time Demand and Ancillary Service requirements in the CAISO Balancing Authority Area.

(b) Submitted Virtual Bids render the CAISO Day-Ahead Market software unable to process Bids submitted into the Day-Ahead Market.

(c) Submitted Virtual Bids render the CAISO unable to achieve an alternating current (AC) solution in the Day-Ahead Market for an extended period of time.

(d) Submitted Virtual Bids detrimentally affect CAISO Market efficiency related to enforcement of natural gas constraint pursuant to Section 27.11.

**7.9.3 Procedures Regarding Suspension or Limitation**

(a) Whenever practicable, prior to suspending or limiting virtual bidding, the CAISO will notify affected Scheduling Coordinators and affected Convergence Bidding Entities that the CAISO intends to suspend or limit virtual bidding and will confer and exchange information with the affected Scheduling Coordinators and affected Convergence Bidding Entities in an effort to resolve any dispute as to whether suspension or limitation of virtual bidding is warranted. In cases where taking such actions prior to suspending or limiting virtual bidding is not practicable, the CAISO will promptly notify the affected Scheduling Coordinators and affected Convergence Bidding Entities that the CAISO has suspended or limited virtual bidding, and will promptly confer and exchange information with the affected Scheduling Coordinators and affected Convergence Bidding Entities in an effort to resolve any dispute as to whether suspension or limitation of virtual bidding is warranted. Within two (2) Business Days of the notice of suspension or limitation, the CAISO will provide the affected Scheduling Coordinators and affected Convergence Bidding Entities with information justifying the decision to suspend or limit virtual bidding.

(b) Suspension or limitation of virtual bidding by the CAISO will remain in effect for ninety (90) days or any shorter time period determined by the CAISO. The CAISO will have the authority to discontinue the suspension or limitation of virtual bidding at any time it determines such suspension or limitation is no longer appropriate.

# 8. Ancillary Services

## 8.1 Scope

The CAISO shall be responsible for ensuring that there are sufficient Ancillary Services available to maintain the reliability of the CAISO Controlled Grid consistent with NERC and WECC reliability standards and any requirements of the NRC. The CAISO's Ancillary Services requirements may be self-provided by Scheduling Coordinators as further provided in the Business Practice Manuals. Those Ancillary Services which the CAISO requires to be available but which are not being self-provided will be competitively procured by the CAISO from Scheduling Coordinators in the Day-Ahead and Real-Time Markets consistent with Section 8.3. The provision of Ancillary Services from the Interties with interconnected Balancing Authority Areas is limited to Ancillary Services bid into the competitive procurement processes in the IFM and RTM. The CAISO will not accept Submissions to Self-Provide Ancillary Services that are imports to the CAISO Balancing Authority Area over the Interties with interconnected Balancing Authority Areas, except from Dynamic System Resources certified to provide Ancillary Services or if provided pursuant to ETCs, TORs or Converted Rights. The CAISO will accept Submissions to Self-Provide Ancillary Services from Pseudo-Ties of Generating Units to the CAISO Balancing Authority Area if they are certified to provide Ancillary Services. The CAISO will calculate payments for Ancillary Services supplied by Scheduling Coordinators and charge the cost of Ancillary Services to Scheduling Coordinators based on their Ancillary Service Obligations.

For purposes of this CAISO Tariff, Ancillary Services are: (i) Regulation Up and Regulation Down, (ii) Spinning Reserve, (iii) Non-Spinning Reserve, and (iv) Voltage Support.

These services will be procured as stated in Section 8.3.5. Bids for these services may be submitted by a Scheduling Coordinator for resources that are capable of providing the specific service and that meet applicable Ancillary Service standards and technical requirements, as set forth in Sections 8.1 through 8.4, and are certified by the CAISO to provide Ancillary Services. Identification of specific services in this CAISO Tariff shall not preclude development of additional interconnected operation services over time. The CAISO and Market Participants will seek to develop additional categories of these unbundled services over time as the operation of the CAISO Controlled Grid matures or as required by regulatory authorities.

## 8.2 Ancillary Services Standards

All Ancillary Services shall meet the CAISO's Ancillary Services standards.

### 8.2.1 Determination of Ancillary Service Standards

The CAISO shall set the required standard for each Ancillary Service necessary to maintain the reliable operation of the CAISO Controlled Grid. Ancillary Services standards shall meet NERC and WECC reliability standards and any requirements of the NRC. In setting Ancillary Service standards, the CAISO shall consider reasonableness, cost-effectiveness, and adherence to NERC and WECC reliability standards and any requirements of the NRC. The standards developed by the CAISO shall be used as a basis for determining the quantity and type of each Ancillary Service which the CAISO requires to be available. These requirements and standards apply to all Ancillary Services whether self-provided or procured by the CAISO.

### 8.2.2 Time-Frame for Revising Ancillary Service Standards

The CAISO shall periodically undertake a review of the CAISO Controlled Grid operation to determine any revision to the Ancillary Services standards to be used in the CAISO Balancing Authority Area. At a minimum the CAISO shall conduct such reviews to accommodate revisions to NERC and WECC Reliability Standards and any requirements of the NRC. If the CAISO modifies its Ancillary Services standards, including its rules to determine minimum procurement requirements for Ancillary Services, the CAISO will notify Market Participants. The CAISO may adjust the Ancillary Services standards temporarily to take into account, among other things, variations in system conditions, Real-Time Dispatch constraints, contingencies, and voltage and dynamic stability assessments. Where practicable, the CAISO will provide notice, via the CAISO Website, of any temporary adjustments to Ancillary Service standards by 6:00 p.m. two (2) days ahead of the Operating Day to which the adjustment will apply. Periodic reviews by the CAISO may include, but are not limited to: (a) analysis of the deviation between actual and forecast Demand; (b) analysis of patterns of unplanned resource Outages; (c) analysis of compliance with NERC and WECC Reliability Standards and any requirements of the NRC; (d) analysis of operation during system disturbances; (e) analysis of patterns of shortfalls between Day-Ahead Schedules and actual Generation and Demand; and (f) analysis of patterns of unplanned transmission Outages.

### 8.2.3 Quantities of Ancillary Services Required; Use of AS Regions

For each of the Ancillary Services, the CAISO shall determine the quantity and location of the Ancillary Service which is required using Ancillary Service Regions as described in Section 8.3.3. For each of the Ancillary Services, the CAISO shall determine the required locational dispersion in accordance with CAISO Controlled Grid reliability requirements. The Ancillary Services provided must be under the direct Dispatch control of the CAISO on a Real-Time Dispatch Interval basis. The CAISO shall determine the quantities it requires as provided for in Sections 8.2.3.1 to 8.2.3.3.

#### 8.2.3.1 Regulation Service

The CAISO shall maintain sufficient resources immediately responsive to the CAISO's EMS control in order to provide sufficient Regulation service to allow the CAISO Balancing Authority Area to meet NERC and WECC reliability standards and any requirements of the NRC by continuously balancing resources to meet deviations between actual and scheduled Demand and to maintain Interchange Schedules. The quantity of Regulation Down and Regulation Up capacity needed for each Settlement Period of the Day-Ahead Market and in each fifteen (15) minute period in Real-Time shall be determined based on several factors as further described in the applicable Business Practice Manual, including but not limited to historic needs for Regulation Down and Regulation Up capacity as well as forecast operating conditions. In HASP, the CAISO will determine the amount of advisory Regulation from Dynamic System Resources required for each Settlement Period in the next Trading Hour. The advisory awards of Regulation from Dynamic System Resources in HASP are not binding and are re-optimized through the FMM and RTD processes in the Real-Time Market. The CAISO will take into account the speed and accuracy of regulation resources in its determination of Regulation requirements, including as it qualifies self-provided Regulation. Upon request of a Scheduling Coordinator, the CAISO will share with the Scheduling Coordinator its reasoning and any related data used to make the determination of whether the Scheduling Coordinator's self-provided Regulation capacity meets its regulation obligation.

The requirement for Regulation Down or Regulation Up needed for each Settlement Period of the Day-Ahead Market and in each fifteen (15) minute period in Real-Time shall each be accompanied by a requirement for Mileage as determined by the CAISO. The CAISO shall determine the Mileage requirements in any Settlement Period based on Regulation capacity requirements as well as the Bid-in

Regulation capacity for that Settlement Period. Subject to operator adjustment, the Mileage requirement for either Regulation Up or Regulation Down will reflect the minimum of (a) the product of the respective Regulation capacity requirement and the System Mileage Multiplier; (b) the average Instructed Mileage for the applicable Trading Hour from the prior seven (7) days; or (c) the product of each resource's resource specific Mileage multiplier(s) and its Bid-in Regulation capacity summed for all resources. The CAISO will publish on OASIS the estimated quantity, or the percentage used to determine the estimated quantity, of Regulation Reserves required for each hour of the Day-Ahead Market and in each fifteen (15) minute period in Real-Time for the Trading Day. The CAISO will publish on OASIS the Mileage requirements for each hour of the Day-Ahead Market and each fifteen (15) minute period in Real-Time for the Trading Day. The CAISO will also publish on OASIS the average Instructed Mileage from the prior seven (7) days for each hour of a Trading Day no later than seven (7) calendar days after the applicable Trading Day.

#### 8.2.3.1.1 Regulation Performance

The CAISO will measure the accuracy of a resource's response to CAISO EMS signals. The CAISO will sum a resource's Automatic Generation Control set points for each four (4) second Regulation interval every fifteen (15) minutes and then sum the total deviations from the Automatic Generation Control set point for each four (4) second regulation interval during that fifteen (15) minute period. The CAISO will divide the sum of the resource's Automatic Generation Control set points less the sum of the resource's total deviations by the sum of the resource's Automatic Generation Control set points. The CAISO will apply the resulting percentage to a resource's Instructed Mileage to calculate the resource's Regulation performance payments. The CAISO will adjust a resource's Automatic Generation Control set point deviations when the CAISO EMS signal sent to a resource changes direction and the resource under-responds in the prior interval. The adjusted Automatic Generation Control set point will reflect the Automatic Generation Control set point to which the EMS signal directed the resource to move in the prior interval.

The CAISO will use a resource's Historic Regulation Performance Accuracy and certified ramp capability to determine a resource-specific expected Mileage for purposes of awarding Regulation Up and Regulation Down capacity. The CAISO will calculate a separate Historic Regulation Performance

Accuracy for both Regulation Up and Regulation Down.

A minimum performance threshold of twenty-five (25) percent will apply for a resource to offer Regulation Up and Regulation Down capacity. If a resource's measured accuracy, based on a weighted average of fifteen (15) minute intervals during a calendar month using Instructed Mileage as the weight, is less than twenty-five (25) percent for Regulation Up or Regulation Down, the resource must re-certify to provide the respective service within ninety (90) days from the date the CAISO provides notice to the resource's Scheduling Coordinator of the resource's failure to meet the minimum performance threshold. In the event of lost accuracy data, the CAISO will not use data from these intervals to calculate the resource's Historic Regulation Performance Accuracy or to assess the minimum performance threshold.

**8.2.3.2 Spinning and Non-Spinning Reserves**

The CAISO shall maintain minimum contingency Operating Reserve made up of Spinning Reserve and Non-Spinning Reserve in accordance with NERC and WECC reliability standards, including any requirements of the NRC. The CAISO from time to time may determine to use more stringent criteria.

**8.2.3.3 Voltage Support**

The CAISO shall determine on an hourly basis for each day the quantity and location of Voltage Support required to maintain voltage levels and reactive margins within NERC and WECC reliability standards, and any requirements of the NRC using a power flow study based on the quantity and location of scheduled Demand. The PTO or, from time to time, the CAISO shall issue daily voltage schedules (Dispatch Instructions) to Participating Generators, Participating TOs and UDCs, which are required to be maintained for CAISO Controlled Grid reliability. All other Generating Units shall comply with the power factor requirements set forth in contractual arrangements in effect on the CAISO Operations Date, or, if no such contractual arrangements exist and the Generating Unit exists within the system of a Participating TO, the power factor requirements applicable under the Participating TO's TO Tariff or other tariff on file with the FERC.

All Participating Generators shall maintain the CAISO specified voltage schedule if required under their Generator Interconnection Agreement, while operating within the power factor range specified in their interconnection agreements. For all other Generating Units, Participating Generators shall maintain the CAISO specified voltage schedule, while operating within the power factor range specified in their

interconnection agreements, or, for Regulatory Must-Take Generation with Existing QF Contracts or Amended QF Contracts, Regulatory Must-Run Generation and Reliability Must-Run Generation, consistent with existing obligations. For Generating Units that do not operate under one of these agreements, the minimum power factor range will be within a band of 0.90 lag (producing VARs) and 0.95 lead (absorbing VARs) power factors. Participating Generators with Generating Units existing at the CAISO Operations Date that are unable to meet this operating power factor requirement may apply to the CAISO for an exemption. Prior to granting such an exemption, the CAISO shall require the Participating TO, UDC or other utility to whose system the relevant Generating Units are interconnected to notify it of the existing contractual requirements for Voltage Support established prior to the CAISO Operations Date for such Generating Units. Such requirements may be contained in CPUC Electric Rule 21 or the Interconnection Agreement with the Participating TO, UDC or other utility. The CAISO shall not grant any exemption under this Section from such existing contractual requirements. The CAISO shall be entitled to instruct Participating Generators to operate their Generating Units at specified points within their power factor ranges. Participating Generators shall receive no compensation for operating within these specified ranges.

If the CAISO requires additional Voltage Support, it shall procure this either through Reliability Must-Run Contracts or, if no other more economic sources are available**,** by instructing a Generating Unit to move its MVar output outside its mandatory range. Only if the Generating Unit must reduce its MW output in order to comply with such an instruction will it be eligible to recover its opportunity cost in accordance with Section 11.10.1.4.

All Loads directly connected to the CAISO Controlled Grid shall maintain reactive flow at grid interface points within a specified power factor band of 0.97 lag to 0.99 lead. Loads shall not be compensated for the service of maintaining the power factor at required levels within the bandwidth. A UDC interconnecting with the CAISO Controlled Grid at any point other than a Scheduling Point shall be subject to the same power factor requirement.

The CAISO will establish voltage control standards with UDCs and the operators of other Balancing Authority Areas and will enter into operational agreements providing for the coordination of actions in the event of a voltage problem occurring.

**8.2.3.4 [Not Used]**

**8.2.3.5 Ancillary Service Substitution**

The CAISO, whenever possible, will increase its purchases of an Ancillary Service that can substitute for another Ancillary Service, when doing so is expected to reduce its total cost of procuring Ancillary Services while meeting reliability requirements. Prior to making these purchases, the CAISO will first substitute Self-Provided Ancillary Services for another Ancillary Service consistent with the principles set forth in this Section. The CAISO will make such adjustments in accordance with the following principles:

(a) The Regulation requirement must be satisfied only by Regulation Bids for resources qualified to provide Regulation;

(b) Additional Regulation Up capacity can be used to satisfy requirements for Spinning Reserve, or Non-Spinning Reserve;

(c) Regulation Up and Spinning Reserve requirements must be collectively satisfied by the combination of Regulation Up and Spinning Reserve Bids. Spinning Reserve and Regulation may be provided as separate services from the same resource, provided that the sum of Spinning Reserve and Regulation Up provided is not greater than the maximum Ramp Rate of the resource (MW/minute) times ten (10);

(d) Additional Regulation Up and Spinning Reserve capacity can be used to satisfy requirements for Non-Spinning Reserve;

(e) Regulation Up, Spinning Reserve, and Non-Spinning Reserve requirements must be collectively satisfied by the combination of Regulation Up, Spinning Reserve and Non-Spinning Reserve Bids;

(f) Total MW purchased from the Regulation Up, Spinning Reserve, and Non-Spinning Reserve markets will not be changed by this Section 8.2.3.5; and

(g) Regulation Energy resulting from Regulation that substituted for another Ancillary Service continues to be treated as Regulation Energy regardless of what service it substituted.

## 8.3 Procurement; Certification and Testing; Contracting Period

### 8.3.1 Procurement of Ancillary Services

The CAISO shall operate competitive Day-Ahead and Real-Time Markets to procure Ancillary Services. The Security Constrained Unit Commitment (SCUC) and Security Constrained Economic Dispatch (SCED) applications used in the Integrated Forward Market (IFM) and the Real-Time Market (RTM) shall calculate optimal resource commitment, Energy, Imbalance Reserves, Reliability Capacity, and Ancillary Services Awards and Schedules at least cost to End-Use Customers consistent with maintaining System Reliability. Any Scheduling Coordinator representing resources, System Units, Participating Loads, Proxy Demand Resources or imports of System Resources may submit Bids into the CAISO's Ancillary Services markets provided that it is in possession of a current certificate for the resources concerned. Regulation Up, Regulation Down, and Operating Reserves necessary to meet CAISO requirements not met by self-provision will be procured by the CAISO as described in this CAISO Tariff. The amount of Ancillary Services procured in the IFM is net of (i) Self-Provided Ancillary Services from resources internal to the CAISO Balancing Authority Area (which includes Pseudo-Ties of Generating Units to the CAISO Balancing Authority Area) and Dynamic System Resources certified to provide Ancillary Services and (ii) Ancillary Services self-provided pursuant to an ETC, TOR or Converted Right. The amount of Ancillary Services procured in the Real-Time Market is net of (i) available awarded Day-Ahead Ancillary Services, (ii) Self-Provided Ancillary Services from resources internal to the CAISO Balancing Authority Area (which includes Pseudo-Ties of Generating Units to the CAISO Balancing Authority Area) and Dynamic System Resources certified to provide Ancillary Services, (iii) additional Operating Reserves procured in the FMM, and (iv) Ancillary Services self-provided pursuant to an ETC, TOR or Converted Right. The CAISO may procure incremental Ancillary Services in the Real-Time Market based in part on a determination during the FMM that any Ancillary Services capacity awarded or self-provided in the Day-Ahead Market is not available as a result of a resource constraint or Transmission Constraints. Resource constraints may include but are not limited to an Outage of a resource or Ramp Rate constraints. Incremental procurement in the Real-Time Market will exclude Ancillary Services Capacity the CAISO has determined is not available.

The CAISO will manage the Energy from both CAISO-procured and Self-Provided Ancillary Services as part of the FMM and Real-Time Dispatch. In the Day-Ahead Market, the CAISO procures one-hundred

(100) percent of its Ancillary Service requirements based on the Day-Ahead Demand Forecast net of Self-Provided Ancillary Services. After the Day-Ahead Market, the CAISO procures additional Ancillary Services needed to meet system requirements from all resources in the Real-Time Market. The amount of Ancillary Services procured in the Real-Time Market is based on the CAISO Forecast of BAA Demand for the CAISO for the Operating Hour net of Self-Provided Ancillary Services.

Awards of AS in the RTM to Non-Dynamic System Resources are for the entire next Operating Hour. The CAISO procurement of Ancillary Services from all other resources in the Real-Time Market is for a fifteen (15) minute FMM interval. The CAISO's procurement of Ancillary Services from Non-Dynamic System Resources, Dynamic System Resources and internal Generation (which includes Generation from Generating Units that are Pseudo-Ties to the CAISO Balancing Authority Area) in the Real-Time Market is based on the Ancillary Service Bids submitted or generated in the RTM consistent with the requirements in Section 30. The CAISO may also procure Ancillary Services pursuant to the requirements in Section 42.1 and as permitted under the terms and conditions of a Reliability Must-Run Contract.

The CAISO will contract for long-term Voltage Support service with owners of Reliability Must-Run Units under Reliability Must-Run Contracts. These requirements and standards apply to all Ancillary Services whether self-provided or procured by the CAISO.

### 8.3.2 Procurement from Internal and External Resources

The CAISO will procure Spinning Reserves and Non-Spinning Reserves from resources operating within the CAISO Balancing Authority Area (which includes Pseudo-Ties of Generating Units to the CAISO Balancing Authority Area) and from imports of System Resources. Scheduling Coordinators are allowed to bid Regulation from resources located outside the CAISO Balancing Authority Area by dynamically scheduling such System Resources certified to provide Regulation. Each System Resource used to bid Regulation must comply with the Dynamic Scheduling Protocol in Appendix M. Scheduling Coordinators may submit Bids for Operating Reserves from Non-Dynamic System Resources but they may not submit Bids for Regulation from such resources because these resources cannot be dynamically scheduled consistent with Appendix M. When bidding to supply Ancillary Services in the IFM or RTM, imports and Pseudo-Ties of Generating Units to the CAISO Balancing Authority Area compete for use of Intertie transmission capacity when the requested use is in the same direction, e.g., imports of Ancillary Services

and Ancillary Services from Pseudo-Ties of Generating Units to the CAISO Balancing Authority Area compete with Energy on Interties in the import direction, and exports of Ancillary Services (i.e., on demand obligations) compete with Energy on Interties in the export direction. To the extent there is Congestion, imports of Ancillary Services and suppliers of Ancillary Services from Pseudo-Ties of Generating Units to the CAISO Balancing Authority Area will pay Congestion costs in the IFM and RTM markets pursuant to Section 11.10.1.2.1.

### 8.3.3 Ancillary Service Regions and Regional Limits

The CAISO will procure Ancillary Services using Ancillary Service Regions and Ancillary Service Sub-Regions. There are two Ancillary Service Regions and eight Ancillary Service Sub-Regions. The two Ancillary Service Regions are the System Region (i.e., the CAISO Balancing Authority Area) and the Expanded System Region (i.e., the System Region and Intertie Scheduling Points with adjacent Balancing Authority Areas). As defined by a Business Practice Manual, the eight identified Ancillary Service Sub-Regions are (1) the South of Path 15 Sub-Region, (2) the Expanded South of Path 15 Sub-Region, (3) the South of Path 26 Sub-Region, (4) the Expanded South of Path 26 Sub-Region, (5) the North of Path 15 Sub-Region, (6) the Expanded North of Path 15 Sub-Region, (7) the North of Path 26 Sub-Region, and (8) the Expanded North of Path 26 Sub-Region. The eight Ancillary Service Sub-Regions are embedded within either the System Region or the Expanded System Region. The CAISO may use Ancillary Service Sub-Regions within the System Region or the Expanded System Region to ensure appropriate distribution of the Ancillary Services procured for the CAISO Balancing Authority Area. The definition of the Expanded System Region, the System Region, and the eight Sub-Regions shall apply collectively to the following Ancillary Services: Regulation Up, Regulation Down, Spinning Reserves and Non-Spinning Reserves.

#### 8.3.3.1 Use of Ancillary Service Regions and Ancillary Service Regional Limits

Within the Expanded System Region, the System Region, and the Sub-Regions, the CAISO may establish limits on the amount of Ancillary Services that can be provided from each region or must be provided within each region. When used, these Ancillary Service Regional Limits identify either a maximum or a minimum (or both a maximum and a minimum) amount of Ancillary Services to be obtained within the region. The minimum Ancillary Service limit in the Expanded System Region shall be the

quantities of each Ancillary Service required to meet NERC and WECC reliability standards, including any requirements of the NRC for the CAISO Balancing Authority Area. The CAISO may establish a restriction on the amount of Ancillary Services to be procured from outside the CAISO Balancing Authority Area by establishing a minimum limit for the System Region.

**8.3.3.2 Criteria for Use of Ancillary Service Regions and Sub-Regions**

The CAISO's use of an Ancillary Service Sub-Region occurs when the CAISO establishes a minimum or maximum limit for that Sub-Region. The CAISO's use of minimum and maximum procurement limits for Ancillary Services help to ensure that the Ancillary Services required in the CAISO Balancing Authority Area are dispersed appropriately throughout the CAISO Balancing Authority Area and accurately reflect the system topology and deliverability needs. The factors the CAISO will use in determining whether to establish or change minimum or maximum limits include, but are not limited to, the following: (a) the CAISO Forecast of CAISO Demand; (b) the location of Demand within the Balancing Authority Area; (c) information regarding network and resource operating constraints that affect the deliverability of Ancillary Services into or out of an Ancillary Service Region; (d) the locational mix of generating resources; (e) generating resource Outages; (f) historical patterns of transmission and generating resource availability; (g) regional transmission limitations and constraints; (h) transmission Outages; (i) Available Transfer Capability; (j) Day-Ahead Schedules or FMM Schedules involving Intertie transactions; (k) whether any Ancillary Services provided from System Resources requiring a NERC tag fail to have a NERC tag; and (l) other factors affecting System Reliability. Ancillary Services procured within a Sub-Region count toward satisfying the Ancillary Service requirements for the System Region or the Expanded System Region.

**8.3.3.3 Notice to Market Participants**

Pursuant to Section 6.5.2.3.3, the CAISO will publish forecasted Ancillary Service requirements, regional constraints, and the minimum and/or maximum Ancillary Service Regional Limits for the Ancillary Service Regions and any Sub-Regions by 6:00 p.m. on the day before the close of the Day-Ahead Market (two days prior to the Operating Day). After the completion of the Day-Ahead Market for a given Trading Day, the CAISO will publish the limits that were used in the IFM. If prior to the close of the RTM for a Trading Hour the CAISO makes a substantial change to a minimum and/or maximum limit for an Ancillary Service

Region or Sub-Region, it will issue a Market Notice as soon as reasonably practicable after the occurrence of the circumstances that led to the change. After the close of the RTM for a Trading Hour, the CAISO will publish the limits that were used in the RTM.

**8.3.3.4 Establishment of New Ancillary Service Regions or Sub-Regions**

The CAISO will consider adjusting the boundaries of the existing Ancillary Service Regions or creating a new Ancillary Service Region through a stakeholder process if: (a) there is a persistent difficulty in obtaining an appropriate distribution of Ancillary Services in the CAISO Balancing Authority Area using market procurement mechanisms, and (b) adjusting the boundaries of the existing Ancillary Service Regions or creating a new Ancillary Service Region would reduce the persistent difficulty in obtaining an appropriate distribution of Ancillary Services in the CAISO Balancing Authority Area using market procurement mechanisms. Factors that would affect the CAISO's determination to consider adjusting the boundaries of the existing Ancillary Service Regions or creating a new Ancillary Service Region include, but are not limited to operational reliability needs, the pattern of the growth of Demand in the CAISO Balancing Authority Area, the addition of new generating resources, the retirement of existing generating resources, the addition of new transmission facilities, changes in regional transmission limitations, changes in Available Transfer Capability, and extended transmission or generating resource Outages. If the CAISO considers adjusting the boundaries of the existing Ancillary Service Regions or creating a new Ancillary Service Region, the CAISO will conduct an analysis to determine whether the adjustments being considered create market power issues in either the new Ancillary Service Regions being considered or the pre-existing Ancillary Service Regions. The CAISO's analysis will be included in the stakeholder process and stakeholders will be able to comment on any new market power mitigation measures proposed for the CAISO's procurement of Ancillary Services.

**8.3.3.5 Base Market Model and Ancillary Services Procurement**

The Base Market Model is used in the SCUC application, which optimizes the provision of Ancillary Services and Energy in order to meet Ancillary Service requirements and Energy requirements. The Base Market Model models Transmission Constraints as described in Section 27.5.1. The Ancillary Services Awards reflect the Ancillary Service Region and Sub-Region definitions and requirements. The Ancillary Service requirements, the definition of Ancillary Service Regions and Ancillary Service Sub-

Regions, and any minimum or maximum limit that is used within an Ancillary Service Region or Ancillary Service Sub-Region are all inputs to the CAISO Markets Processes.

### 8.3.4 Certification and Testing Requirements

The owner of and Scheduling Coordinator for each resource for which a Bid to provide Ancillary Services or Submission to Self-Provide Ancillary Services is allowed under the CAISO Tariff, and all other System Resources that are allowed to submit a Bid to provide Ancillary Services under this CAISO Tariff, must comply with the CAISO's certification and testing requirements as contained in Appendix K and the CAISO's Operating Procedures. Each resource used to bid Regulation or used to self-provide Regulation must have been certified and tested by the CAISO using the process defined in Part A of Appendix K. Each Dynamic System Resource offering Regulation must comply with the Dynamic Scheduling Protocol in Appendix M. Each resource used to bid Spinning Reserve or used to self-provide Spinning Reserve must have been certified and tested by the CAISO using the process defined in Part B of Appendix K. Each resource used to bid Non-Spinning Reserve or used to self-provide Non-Spinning Reserve must have been certified and tested by the CAISO using the process defined in Part C of Appendix K. CAISO certification to provide Ancillary Services may be revoked by the CAISO under the provisions of this CAISO Tariff, including Appendix K.

### 8.3.5 Daily and Hourly Procurement

The CAISO shall procure Regulation Up, Regulation Down, Spinning Reserve, and Non-Spinning Reserve on a daily and Real-Time basis in the IFM and RTM, respectively. The CAISO shall procure Ancillary Services on a longer-term basis pursuant to Section 42.1.3 if necessary to meet Reliability Criteria. The CAISO shall contract for Voltage Support annually (or for such other period as the CAISO may determine is economically advantageous) and on a daily or hourly basis as required to maintain System Reliability.

### 8.3.6 Market-Base Prices

Public utilities under the FPA must submit Bids for Ancillary Services capped at FERC authorized cost-based rates unless and until FERC authorizes different pricing. Public utilities under the FPA shall seek FERC Ancillary Services rate approval on bases consistent with the CAISO time-frame for contracting for each Ancillary Service (hourly rate for some Ancillary Services, annual rate or otherwise for other

Ancillary Services) so that cost-based Bids and market-based Bids for each service shall be on comparable terms. All other entities may use market-based rates not subject to any restrictions apart from those found in this CAISO Tariff. Public utilities under the FPA which have not been approved to bid at market-based rates will not be paid above their cost-based Bid for the Ancillary Service concerned even if the relevant Market Clearing Price is higher.

### 8.3.7 AS Bidding Requirements

Scheduling Coordinators may submit Bids or Submissions to Self-Provide an Ancillary Service consistent with the rules specified in Section 30 and any further requirements in this Section 8.3.7. Scheduling Coordinators may (i) submit Bids or Submissions to Self-Provide an Ancillary Service from resources located within the CAISO Balancing Authority Area (which includes Pseudo-Ties of Generating Units to the CAISO Balancing Authority Area) or Dynamic System Resources certified to provide Ancillary Services, (ii) submit Submissions to Self-Provide an Ancillary Service from System Resources located outside the CAISO Balancing Authority Area if provided pursuant to ETCs, TORs, or Converted Rights, (iii) submit Bids for Ancillary Services from Dynamic and Non-Dynamic System Resources located outside the CAISO Balancing Authority Area certified to provide Ancillary Services, or (iv) submit Inter-SC Trades of Ancillary Services. Ancillary Services procured in the IFM and in the Real-Time Market are comprised of the following: Regulation Up, Regulation Down, Spinning Reserve, and Non-Spinning Reserve. Each resource for which a Scheduling Coordinator wishes to submit Ancillary Service Bids must meet the requirements set forth in this CAISO Tariff. The same resource capacity may be simultaneously offered to the same CAISO Market for multiple Ancillary Services types. Ancillary Services Bids and Submissions to Self-Provide an Ancillary Service can be submitted up to seven (7) days in advance. The CAISO will only use Operating Reserve Ramp Rates for procuring capacity associated with the specific Ancillary Services. The CAISO will issue Real-Time Dispatch Instructions in the Real-Time Market for the Energy associated with the awarded capacity based upon the applicable Operational Ramp Rate submitted with the single Energy Bid Curve in accordance with Section 30.7.7. There is no ability to procure Ancillary Services for export.

To the extent a Scheduling Coordinator has an on-demand obligation to serve loads outside the CAISO Balancing Authority Area, it can do so provided that (1) it is using export transmission capacity available

in Real-Time, and (2) the resource capacity providing Energy to satisfy the on-demand obligation is not under an RMR Contract or Resource Adequacy Capacity obligation, and has not been paid a RUC Availability Payment for the Trading Hour. All resources subject to the Ancillary Services must offer requirements, as specified in Section 40.6, must submit Bids consistent with the requirements specified therein and in Section 30.

#### 8.3.7.1 Requirement for Imports of Spinning or Non-Spinning Reserves

Scheduling Coordinators may submit Bids for imports of Spinning Reserve or Non-Spinning Reserve from System Resources located outside the CAISO Balancing Authority Area, including Dynamic System Resources, where technically feasible and consistent with NERC and WECC reliability standards and any requirements of the NRC; and provided that such Scheduling Coordinators have certified to the CAISO their ability to deliver the service to the point of interchange with the CAISO Balancing Authority Area (including with respect to their ability to make changes, or cause such changes to be made, to Interchange Schedules during any interval of a Settlement Period at the discretion of the CAISO).

#### 8.3.7.2 Requirement for Imports of Regulation

Scheduling Coordinators may bid imports of Regulation from System Resources located outside the CAISO Balancing Authority Area, where technically feasible and consistent with NERC and WECC reliability standards and any requirements of the NRC, by dynamic scheduling; provided that the Host Balancing Authority for the Host Balancing Authority Area in which the System Resources are located has entered into an operating agreement with the CAISO particular to the operation of dynamic functionality; and provided that such Scheduling Coordinator, with the cooperation of the Host Balancing Authority for the Host Balancing Authority Area in which the resources are located, has been certified by the CAISO as to their ability to dynamically adjust Interchange Schedules based on control signals issued by the CAISO anytime during a Settlement Period at the discretion of the CAISO. Such certification shall include a demonstration of their ability to support the dynamic Interchange of Regulation service based on CAISO control signals received on dedicated communications links (either directly or through EMS computers) for CAISO computer control and telemetry to provide this function in accordance with CAISO standards and procedures posted on the CAISO Website.

### 8.3.8 Procurement of Voltage Support

Any Participating Generator who is producing Energy shall, upon the CAISO's specific request, provide reactive energy output outside the Participating Generator's Voltage Support obligation defined in Section 8.2.3.3.

The CAISO shall select Participating Generators' Generating Units to provide this additional Voltage Support. Subject to any locational requirements and if feasible, the CAISO shall select the least costly Generating Units to produce additional Voltage Support in each location where Voltage Support is needed.

## 8.4 Technical Requirements for Providing Ancillary Services

All Generating Units, System Units, Participating Loads, Proxy Demand Resources, and System Resources providing Ancillary Services shall comply with the technical requirements set out in Sections 8.4.1 to 8.4.3 below relating to their operating capabilities, communication capabilities and metering infrastructure. No Scheduling Coordinator shall be permitted to submit a Bid to the CAISO for the provision of an Ancillary Service from a Generating Unit, System Unit, Participating Load, Proxy Demand Resource, or System Resource, or to provide a Submission to Self-Provide an Ancillary Service from a Generating Unit, System Unit, Participating Load, Proxy Demand Resource, or Dynamic System Resource, unless the Scheduling Coordinator is in possession of a current certificate issued by the CAISO confirming that the Generating Unit, System Unit, Participating Load, Proxy Demand Resource, or System Resource complies with the CAISO's technical requirements for providing the Ancillary Service concerned. Scheduling Coordinators can apply for Ancillary Services certificates in accordance with the requirements for considering and processing such applications in Appendix K and the CAISO's Operating Procedures. The CAISO shall have the right to inspect Generating Units, Participating Loads, Proxy Demand Resources, or the individual resources comprising System Units and other equipment for the purposes of the issue of a certificate and periodically thereafter to satisfy itself that its technical requirements continue to be met. If at any time the CAISO's technical requirements are not being met, the CAISO may suspend or withdraw the certificate for the Generating Unit, System Unit, Participating Load, Proxy Demand Resource, or System Resource concerned.

### 8.4.1 Operating Characteristics Required to Provide AS

Each resource for which a Scheduling Coordinator wishes to submit a Bid to provide Ancillary Services

must comply with the requirements for the specific Ancillary Service as set forth in Appendix K and the Business Practice Manual. The certification requirements in Section 8, Appendix K of the CAISO Tariff, and the Business Practice Manuals shall apply to Multi-Stage Generating Resources based on the MSG Configurations. Scheduling Coordinators shall submit Ancillary Services Bids or Submissions to Self-Provide Ancillary Services to the CAISO Markets only for MSG Configurations that are certified consistent with these requirements. In addition, to the extent the CAISO requires specific operating characteristics for Ancillary Services certification of Multi-Stage Generating Resources the responsible Scheduling Coordinator shall submit to the CAISO such specific operating characteristics at the MSG Configuration level. The requirements in Appendix K and the Business Practice Manuals include Ancillary Service control, capability and availability standards. The requirements also involve the following operating characteristics:

(a) Ramp Rate increase and decrease (MW/minute);

(b) power factor (leading and lagging) as required by Section 8.2.3.3;

(c) maximum output (real and reactive), except that System Resources shall be required to comply only with the requirement for maximum real power;

(d) minimum output (real and reactive), except that System Resources shall be required to comply only with the requirement for minimum real power;

(e) Capability to respond immediately to the CAISO's EMS control, control scheme, and range; and

(f) minimum length of time the resource can be available to provide the relevant Ancillary Service.

In Appendix K and the Business Practice Manuals the CAISO will differentiate the operating characteristics according to the Ancillary Service being provided.

**8.4.1.1 Regulation**

A resource offering Regulation must have the following operating characteristics and technical capabilities:

(a) it must be capable of being controlled and monitored by the CAISO EMS by means of the installation and use of a standard CAISO direct communication and direct control system,

a description of which and criteria for any temporary exemption from which, the CAISO shall publish on the CAISO Website;

(b) it must be capable of achieving at least the Ramp Rates (increase and decrease in MW/minute) stated in its Bid for the full amount of Regulation capacity offered;

(c) the Regulation capacity offered must not exceed the maximum Ramp Rate (MW/minute) of that resource times ten (10) minutes;

(d) the resource to CAISO Control Center telemetry must, in a manner meeting CAISO standards, include indications of whether the resource is on or off CAISO EMS control at the resource terminal equipment;

(e) the resource must be capable of the full range of movement within the amount of Regulation capability offered without manual resource operator intervention of any kind;

(f) each Ancillary Service Provider must ensure that its CAISO EMS control and related SCADA equipment for its resource are operational throughout the time period during which Regulation is required to be provided;

(g) Regulation capacity offered must be dispatchable on a continuous basis for at least sixty (60) minutes in the Day-Ahead Market and at least thirty (30) minutes in the Real-Time Market after issuance of the Dispatch Instruction. The CAISO will measure continuous Energy from the time a resource reaches its award capacity. In the Real-Time Market, where a storage resource using the Non-Generator Resource model will not have sufficient State of Charge to meet its Ancillary Services Schedule, Imbalance Reserves Award, or RUC Award, the CAISO will dispatch the storage resource to have sufficient State of Charge to meet its Ancillary Services Schedule, Imbalance Reserves Award, or RUC Award. Scheduling Coordinators for Non-Generator Resources located within the CAISO Balancing Authority Area that require Energy from the Real-Time Market to offer their full capacity as Regulation may request the use of Regulation Energy Management as described in Section 8.4.1.2. Consistent with the requirements of this Section, the CAISO will use all reasonable efforts to commit, schedule, and dispatch Non-Generator Resources offering Regulation while recognizing the impact of Regulation awards on their

State of Charge in the Day-Ahead and Real-Time Markets. The CAISO will include examples in the Business Practice Manual detailing how the Day-Ahead and Real-Time optimizations will account for Regulation awards in determining the State of Charge in subsequent intervals; and

(h) Regulation capacity offered must meet or exceed the minimum performance threshold of twenty-five (25) percent measured accuracy as specified in Section 8.2.3.1.1.

**8.4.1.2 Regulation Energy Management**

The CAISO will make Regulation Energy Management available to Scheduling Coordinators for Non-Generator Resources located within the CAISO Balancing Authority Area that require Energy from the Real-Time Market to offer their full capacity as Regulation. A Scheduling Coordinator for a resource using Regulation Energy Management may submit a Regulation Bid for capacity (MW) of up to four (4) times the maximum Energy (MWh) the resource can generate or curtail for fifteen (15) minutes after issuance of a Dispatch Instruction. In the Real-Time Market, a Scheduling Coordinator for a resource using Regulation Energy Management will produce energy as needed to satisfy the sixty (60) minute continuous Energy requirement for Regulation Awards in the Day-Ahead Market.

Scheduling Coordinators may request to use Regulation Energy Management for these Non-Generator Resources by submitting a request to certify such a resource to provide Regulation using Regulation Energy Management. The owner or operator of a Resource using Regulation Energy Management must comply with Section 4.6 or 4.7, as applicable, and may provide only Regulation in the CAISO Market. A resource using Regulation Energy Management may not provide Energy other than Energy associated with Regulation. Scheduling Coordinators for Resources using Regulation Energy Management may define a Ramp Rate for operating as Generation and a Ramp Rate for operating as Load, respectively. These resources shall comply with the requirements to provide Regulation as specified in this Section 8, Appendix K, and the CAISO's Operating Procedures, including the requirement to undergo a market simulation using Regulation Energy Management as part of the certification procedure.

Scheduling Coordinators for resources using Regulation Energy Management shall register these resources in the Master File. Scheduling Coordinators may only submit Bids for Regulation Up and Regulation Down and Mileage for these resources. Scheduling Coordinators may not submit Energy

Bids, Energy Self-Schedules, Residual Unit Commitment Bids, or Ancillary Service Bids other than Regulation and Mileage for these resources. Scheduling Coordinators may not submit any type of commitment costs as part of their Regulation Up and Regulation Down Bids for resources using Regulation Energy Management, including Start-Up Bids, Minimum Load Bids, Pumping Cost or Pump Shut-Down Cost Bids, or Transition Bids. All other bidding rules for Regulation set forth in Section 30 shall apply to resources using Regulation Energy Management.

The CAISO will settle Dispatches from resources using Regulation Energy Management as energy. The portion of Demand of Non-Generator Resources using Regulation Energy Management that is dispatched as Regulation in any Settlement Interval shall not be considered Measured Demand for purposes of allocating payments and charges pursuant to Section 11 during that Settlement Interval.

The CAISO shall control the resource's operating set point through its Energy Management System with the objective of maintaining the resource's operating set point at its preferred operating point. In the Day-Ahead Market and FMM, the procurement of Regulation from resources using Regulation Energy Management will not be constrained by the resource's MWh limit to generate, curtail the consumption of, or consume Energy continuously. In the Real-Time Dispatch, the CAISO will base the Dispatches on the resource's capability to provide Regulation. When the resource has a physical MWh limit, the CAISO will observe the resource's MWh constraint during Real-Time Dispatch and will assess whether the CAISO can support the resource's self-provided Regulation capacity or Regulation award with Real-Time Market Dispatches. To the extent the CAISO determines in the Integrated Forward Market or FMM that the MWh constraint of resources using Regulation Energy Management limits the capability of the CAISO, through Real-time Dispatch, to support these resources' self-provided Regulation capacity or Regulation awards, the CAISO may disqualify resources using Regulation Energy Management on a pro rata basis across the System Region from providing Regulation, which shall result in the rescission of the disqualified portion of the resources' self-provided or awarded Regulation capacity payments.

**8.4.1.3 Voltage Support**

A Generating Unit providing reactive power must be under the control of generator automatic voltage regulators at all times. A Generating Unit may be required to operate underexcited (absorb reactive power) at periods of light system Demand to avoid potential high voltage conditions, or overexcited

(produce reactive power) at periods of heavy system Demand to avoid potential low voltage conditions. Unless the CAISO directs the Generating Unit otherwise, the automatic voltage regulator will operate in voltage regulation mode and automatically control the net reactive power of the Generating Unit to regulate to the scheduled voltage as assigned by the Participating TO or the CAISO, within the constraints of the reactive power capability of the Generating Unit. A Generating Unit shall not disable voltage regulation controls, without the permission of the CAISO, while the Generating Unit is in operation.

For Asynchronous Generating Facilities, these provisions also apply to Generating Units required to provide reactive power capability pursuant to the requirements of FERC Order No. 827.

### 8.4.2 Ancillary Service Control Standards

The providers of Ancillary Services under this Tariff must comply with the following control standards:

(a) Regulation. The Area Control Error will be calculated by the CAISO Energy Management System. Control signals will be sent from the CAISO EMS to raise or lower the output of resources providing Regulation when ACE exceeds the allowable CAISO Balancing Authority Area dead band for ACE;

(b) Spinning Reserve and Non-Spinning Reserve. Each provider of Spinning Reserve or Non-Spinning Reserve must be capable of receiving a Dispatch Instruction within one (1) minute from the time the CAISO Control Center elects to Dispatch the Spinning Reserve resource or Non-Spinning Reserve resource and must ensure that its resource can be at the Dispatched operating level within ten (10) minutes after issuance of the Dispatch Instruction; and

(c) Voltage Support. Generating Units providing Voltage Support must have automatic voltage regulators which can correct the bus voltages to be within the prescribed Voltage Limits and within the machine capability in less than one (1) minute.

### 8.4.3 Ancillary Service Capability Standards

The providers of Ancillary Services under this CAISO Tariff must comply with the following capability standards for Spinning Reserve and Non-Spinning Reserve Capability. Each resource or external import of a System Resource scheduled to provide Spinning Reserve and each resource providing Non-Spinning

Reserve must be capable of converting the full capacity reserved to Energy production within ten (10) minutes after the issue of the Dispatch Instruction by the CAISO. Each resource scheduled to provide Spinning Reserve and each resource scheduled to provide Non-Spinning Reserve must be capable of maintaining that output or scheduled Interchange for at least thirty (30) minutes from the point at which the resources reaches its award capacity. In the Real-Time Market, where a storage resource using the Non-Generator Resource model will not have sufficient State of Charge to meet its Ancillary Services Schedule, the CAISO will dispatch the storage resource to have sufficient State of Charge to meet its Ancillary Services Schedule.

### 8.4.4 Ancillary Service Availability Standards

The providers of Spinning Reserve and Non-Spinning Reserve under this CAISO Tariff must comply with the following availability standards. Each Ancillary Service Provider shall ensure: (i) that its resources scheduled to provide Spinning Reserve and Non-Spinning Reserve are available for Dispatch throughout the Settlement Period for which they have been scheduled; and (ii) that its resources scheduled to provide Spinning Reserve are responsive to frequency deviations throughout the Settlement Period for which they have been scheduled.

### 8.4.5 Communication Equipment

Unless otherwise authorized by the CAISO, all Scheduling Coordinators wishing to submit an Ancillary Service Bid must have the capability to submit to and receive information from the CAISO's secure communication system. In addition, they must be capable of receiving Dispatch Instructions electronically and they must provide the CAISO with a telephone number, or fax number through which Dispatch Instructions for each resource may be given if necessary. The CAISO will determine which method of communication is appropriate; provided that the CAISO will consult with the Scheduling Coordinator, if time permits, and will consider the method of communication then utilized by such Scheduling Coordinator; provided further, that the CAISO shall make the final determination as to the additional communication methods. Ancillary Service Providers whose resources are scheduled, bid in or under contract, shall ensure that there is a twenty-four (24) hour personal point of contact with the CAISO for the resource. Scheduling Coordinators representing Proxy Demand Resources that are scheduled, bid in or under contract shall ensure that there is a twenty-four (24) hour personal point of contact with the

CAISO for the Proxy Demand Resource. An Ancillary Service Provider wishing to offer any Ancillary Service must provide a direct ring down voice communications circuit (or a dedicated telephone line available twenty-four (24) hours a day every day of the year) between the control room operator for the resource providing the Ancillary Service and the CAISO Control Center. Each Ancillary Service Provider must also provide an alternate method of voice communications with the CAISO from the control room in addition to the direct communication link required above. Operators of Dynamic System Resources from which Dynamic Schedules or Bids are submitted to the CAISO shall provide communications links meeting CAISO standards for dynamic imports from System Resources. Ancillary Service Providers whose resources provide Regulation shall also provide communication links meeting CAISO standards for direct digital control. Operators of System Resources providing Regulation shall provide communications links meeting CAISO standards for imports of Regulation. If any communication system becomes unavailable, the relevant Ancillary Service Provider and the CAISO shall take immediate action to identify the cause of the interruption and to restore the communication system. A Scheduling Coordinator that has provided a Submission to Self-Provide an Ancillary Service, or has submitted a Bid to provide or contracted for Ancillary Services, shall ensure that the resource concerned is able to receive and implement Dispatch Instructions.

### 8.4.6 Metering Infrastructure

All Participating Generators, owners or operators of Participating Loads, owners or operators of Proxy Demand Resources, and operators of System Units or System Resources which a Scheduling Coordinator wishes to bid to provide Ancillary Services shall have the metering infrastructure for the Generating Units, System Units, Participating Loads, Proxy Demand Resources, or System Resources concerned which complies with requirements to be established by the CAISO relating to:

(a) meter type;

(b) meter location;

(c) meter reading responsibility;

(d) meter capability in regard to AGC response; and

(e) any other aspect of metering infrastructure required by the CAISO under this CAISO Tariff.

### 8.5 Time Frame to Submit and Evaluate Ancillary Service Bids

All Ancillary Service Bids must be submitted pursuant to the rules provided in Section 30.5.

### 8.6 Obligations for and Self-Provision of Ancillary Services

#### 8.6.1 Ancillary Service Obligations

Each Scheduling Coordinator shall be assigned a share of the total Regulation Down, Regulation Up, Spinning Reserve, and Non-Spinning Reserve requirements by the CAISO, as set forth in Sections 11.10.2, 11.10.3 and 11.10.4, (i.e., a share of the total requirements for each Ancillary Service in the Day-Ahead Market and the Real-Time Market).

#### 8.6.2 Right to Self-Provide

Each Scheduling Coordinator may choose to self-provide all, or a portion, of its Regulation Up, Regulation Down, Spinning Reserve, and Non-Spinning Reserve obligations in the IFM, and, to the extent needed to satisfy the CAISO's additional requirement, the Real-Time Market, from resources eligible for self-provision, as may be permissible for any given Ancillary Service in these respective markets. The right to self-provide Ancillary Services from capacity that is under a contractual obligation to provide Energy, including but not limited to capacity subject to an RMR Contract and local Resource Adequacy Resources, shall be conditional; self-provision of Ancillary Services from such capacity will only be permitted to the extent that capacity is not needed for Energy as a result of the MPM process described in this CAISO Tariff. To self-provide Ancillary Services a Scheduling Coordinator must provide the CAISO with a Submission to Self-Provide an Ancillary Service. Both Ancillary Service Bids and Submissions to Self-Provide an Ancillary Service can be provided to the CAISO for the same Ancillary Service and for the same hour in the same market. To the extent the Submission to Self-Provide an Ancillary Service is from a resource that is a Partial Resource Adequacy Resource, and Energy is needed, including for purposes under Section 31.3.1.3, from that resource the CAISO shall only disqualify the self-provision of Ancillary Services from the portion of the resource's capacity that has must-offer obligation, provided that the Scheduling Coordinator has not submitted an Energy Bid for the capacity that is not subject to a must-offer obligation. The CAISO will treat resources subject to Resource Adequacy requirements consistent

with, and such resources must comply with, the bidding requirements in Section 40.6. If there is an Energy Bid submitted for the capacity of a Partial Resource Adequacy Resource that is not subject to a must-offer obligation the CAISO may disqualify the Submission to Self-Provide an Ancillary Service for the portion of the resources capacity that is not under a must-offer obligation consistent with the principles of co-optimization under the CAISO Tariff.

Prior to evaluating Ancillary Service Bids, the CAISO will determine whether Submissions to Self-Provide Ancillary Services are feasible with regard to resource operating characteristics and regional constraints and are qualified to provide the Ancillary Services in the markets for which they were submitted.

If the total Submissions to Self-Provide Ancillary Services exceed the maximum regional requirement for the relevant Ancillary Service in an Ancillary Service Region, the submissions that would otherwise be accepted by the CAISO as feasible and qualified will be awarded on a pro-rata basis among the suppliers offering to self-provide the Ancillary Service up to the amount of the Ancillary Services requirement. If a regional constraint imposes a limit on the total amount of Regulation Up, Spinning Reserve, and Non-Spinning Reserve, and the total self-provision of these Ancillary Services in that region exceeds that limit, Self-Provided AS are qualified pro rata from higher to lower quality service in three tiers: Regulation Up first, followed by Spinning Reserve, and then by Non-Spinning Reserve. Submissions to Self-Provide Ancillary Services in excess of the maximum regional requirement for the relevant Ancillary Service in an Ancillary Service Region will not be accepted and qualified by the CAISO as Self-Provided Ancillary Services.

The CAISO shall schedule Self-Provided Ancillary Services to the extent qualified in the IFM and the RTM and Dispatch Self-Provided Ancillary Services in the Real-Time. To the extent that a Scheduling Coordinator self-provides Regulation Up, Regulation Down, Spinning Reserve, and Non-Spinning Reserve, the CAISO shall correspondingly reduce the quantity of the Ancillary Services it procures from Bids submitted in the IFM and the Real-Time Market.

Scheduling Coordinators may trade Ancillary Services so that any Scheduling Coordinator may reduce its Ancillary Services Obligation through purchase of Ancillary Services capacity from another Scheduling Coordinator, or self-provide in excess of its obligation to sell Ancillary Services to another Scheduling Coordinator.

### 8.6.3 Services which may be Self-Provided

The CAISO shall permit Scheduling Coordinators to self-provide the following Ancillary Services:

(a) Regulation Up;

(b) Regulation Down;

(c) Spinning Reserve; and

(d) Non-Spinning Reserve.

Submissions to Self-Provide Ancillary Services for Regulation Up and Regulation Down capacity will be rejected if the Energy Bid provided in the submission is outside of the resource's Regulating Range. The CAISO may from time to time add other Ancillary Services to this list as it considers appropriate.

### 8.6.4 Time Frame for Informing CAISO of Self-Provision

#### 8.6.4.1 Day-Ahead Schedule

At the Day-Ahead Market, Scheduling Coordinators shall be required to submit information on Self-Provided Ancillary Services within the time frame stated in Section 30. Failure to submit the required information within the stated time frame for any hour shall lead to the self-provision for that hour being declared invalid by the CAISO.

#### 8.6.4.2 RTM

In the RTM, Scheduling Coordinators shall be required to submit information on Self-Provided Ancillary Services within the time frame stated in Section 30.1. Failure to submit the required adjusted information within the stated time frame shall lead to the self-provision being declared invalid by the CAISO.

#### 8.6.4.3 Information to be Submitted by Scheduling Coordinators for Each Service

Scheduling Coordinators electing to self-provide Ancillary Services shall submit the information for each Self-Provided Ancillary Service as described in Section 30.

In the event of an Ancillary Service Inter-SC Trade, the Scheduling Coordinators who are parties to that trade must comply with requirements in Section 28.2.

#### 8.6.4.4 Acceptance of Self-Provided Ancillary Service Submission

The CAISO will refuse to accept a Submission to Self-Provide an Ancillary Service to the extent it fails to meet the requirements contained in this CAISO Tariff. In particular, Self-Provided Ancillary Services must satisfy the following conditions:

(a) the Scheduling Coordinator has a current certificate of technical eligibility for the resource selected for the Ancillary Services in question;

(b) to the extent not provided under (a), the resources have the instrumentation, communication and metering equipment necessary to permit the CAISO to dispatch the offered Ancillary Services and verify that the services have been provided;

(c) the Bid information provided by the Scheduling Coordinator is deemed to be valid in accordance with Appendix E and other provisions of the CAISO Tariff; and

(d) the resources meet the CAISO's locational requirements for the Ancillary Services.

### 8.7 Ancillary Service Awards

The CAISO shall provide Scheduling Coordinators with Ancillary Services Awards for the Day-Ahead and Real-Time Markets consistent with the provisions of the CAISO Tariff. The CAISO shall post the Ancillary Service Awards and Ancillary Service Schedules for the applicable Day-Ahead Market no later than the publication of the Day-Ahead Schedule for the applicable Day-Ahead Market; no later than approximately forty-five (45) minutes prior to the Operating Hour of AS awarded as a result of a HASP Block Intertie Schedule; and no later than approximately twenty-two and a half (22.5) minutes prior to the next FMM Interval. Where long-term contracts are involved, the information may be treated as standing information for the duration of the contract.

Once the CAISO has given Scheduling Coordinators notice of the Day-Ahead and Real-Time Market Ancillary Service Awards and Ancillary Service Schedules, these awards and Schedules represent binding commitments made in the markets between the CAISO and the Scheduling Coordinators concerned, subject to any amendments issued as described above.

### 8.8 [Not Used]

### 8.9 Verification, Compliance Testing, and Auditing

Availability of contracted and Self-Provided Ancillary Services shall be verified by the CAISO by unannounced testing of resources, by auditing of response to CAISO Dispatch Instructions, and by analysis of the appropriate Meter Data, or Interchange Schedules. The CAISO may test the capability of any resource providing Ancillary Services. Participating Generators, owners or operators of Participating Loads, Scheduling Coordinators representing owners or operators of Proxy Demand Resources,

operators of System Units or System Resources, owners or operators of reactive devices and Scheduling Coordinators shall notify the CAISO immediately whenever they become aware that an Ancillary Service is not available in any way. All Ancillary Service Providers shall check, monitor and/or test their system and related equipment routinely to assure availability of the committed Ancillary Services. These requirements apply to Ancillary Services whether the Ancillary Services are contracted or self-provided. For a duration specified by the CAISO, the CAISO may suspend the technical eligibility certificate of a Scheduling Coordinator for a resource which repeatedly fails to perform. The CAISO shall develop measures to discourage repeated non-performance on the part of both bidders and self-providers. Further, all of these requirements apply to each MSG Configuration.

### 8.9.1 Compliance Testing for Spinning Reserve

Compliance testing for Spinning Reserve is address in Section 8.10.2.

### 8.9.2 Compliance Testing for Regulation

The CAISO may test the capability of any resource providing Regulation by using the CAISO EMS to move that resource's output over the full range of its Regulation capacity within a ten (10) minute period. For a Multi-Stage Generating Resource the full range of Regulation capacity is evaluated at the applicable MSG Configuration.

### 8.9.3 Compliance Testing for Non-Spinning Reserve

#### 8.9.3.1 Compliance Testing of a Resource

The CAISO may test the Non-Spinning Reserve capability of a resource that is not Curtailable Demand by issuing unannounced Dispatch Instructions requiring the resource to come on line and ramp up or, in the case of a Proxy Demand Resource, to reduce Demand, or, in the case of a System Resource, to affirmatively respond to Real-Time Interchange Schedule adjustment; all in accordance with the Scheduling Coordinator's Bid. Such tests may not necessarily occur on the hour. The CAISO shall measure the response of the resource to determine compliance with its stated capabilities. For a Multi-Stage Generating Resource the full range of Non-Spinning capacity is evaluated at the applicable MSG Configuration.

#### 8.9.3.2 Compliance Testing of Loads as Resources

The CAISO may test the Non-Spinning Reserve capability of a resource providing Curtailable Demand or

Proxy Demand Resource providing Demand Response Services by issuing unannounced Dispatch Instructions requiring the operator of the Participating Load or Demand Response Services of that Proxy Demand Resource to report the Curtailable Demand of that Participating Load or Demand Response Services of that Proxy Demand Resource actually being served by the operator at the time of the instruction. No Participating Load or Proxy Demand Resource will be disconnected as part of the test conducted pursuant to this Section 8.9.3.2.

**8.9.4 Compliance Testing for Voltage Support**

**8.9.4.1 Compliance Testing of a Generating Unit**

The CAISO may test the Voltage Support capability of a Generating Unit by issuing unannounced Dispatch Instructions requiring the Generating Unit to adjust its power factor outside the specified power factor band of 0.90 lag to 0.95 lead, but within the limits of the Generating Unit capability curve.

**8.9.4.2 Compliance Testing of Other Reactive Devices**

The CAISO may test the Voltage Support capability of other reactive devices (shunt capacitors, static var compensators, and synchronous condensers) by issuing unannounced Dispatch Instructions requiring operation of such devices.

**8.9.5 [Not Used]**

**8.9.6 [Not Used]**

**8.9.7 Consequences of Failure to Pass Compliance Testing**

**8.9.7.1 Notification of Compliance Testing Results**

If a resource fails a compliance test, the CAISO shall notify the Scheduling Coordinator whose resource was the subject of the test and the provider or owner or operator of the resource providing Ancillary Services of such failure by any means as soon as reasonably practicable after the completion of the test. In addition, regardless of the outcome of the test, the CAISO shall provide the Scheduling Coordinator whose resource was subject to a compliance test written notice of the results of such test. The CAISO shall at the same time send a copy of the notice to the provider or owner or operator of the resource providing Ancillary Services. For any Resource Adequacy Resource failing a compliance test, the CAISO also will provide notification of the failure to the California Public Utilities Commission, Local Regulatory Authority, or federal agency with jurisdiction over the Load Serving Entity that listed the Resource

Adequacy Resource on its Resource Adequacy Plan, and FERC.

#### 8.9.7.2 Penalties for Failure to Pass Compliance Testing

The Scheduling Coordinator whose resource fails a compliance test shall be subject to the financial penalties provided for in the CAISO Tariff. In addition, the CAISO shall institute the sanctions described in Section 8.9.16.

### 8.9.8 Performance Audits for Standard Compliance

In addition to testing under Section 8.10, the CAISO will periodically audit the performance of resources providing Ancillary Services to confirm the ability of such resources to provide or to meet the applicable Ancillary Service standard for performance and control.

### 8.9.9 Performance Audit for Regulation

The CAISO will audit the performance of a Generating Unit providing Regulation by monitoring its response to CAISO EMS control or, in the case of an external import of a System Resource providing Regulation, by monitoring the dynamic Interchange response to CAISO EMS control around its Set Point within its rated MW/minute capability over the range of Regulation capacity scheduled for the current Settlement Period. For a Multi-Stage Generating Resource the range of Regulation capacity evaluated is the range for the applicable MSG Configuration.

### 8.9.10 Performance Audit for Spinning Reserve

The CAISO will audit the performance of a resource providing Spinning Reserve by auditing its response to Dispatch Instructions and by analysis of telemetry data associated with the resource. Such audits may not necessarily occur on the hour. A resource providing Spinning Reserve shall be evaluated on its ability to respond to a Dispatch Instruction, move at the MW/minute capability stated in its Bid, reach the amount of Spinning Reserve capacity scheduled for the current Settlement Period within ten (10) minutes of issue of the Dispatch Instruction by the CAISO, and respond to system frequency deviations as specified in Appendix K. An external import of a System Resource providing Spinning Reserve shall be evaluated on its ability to respond to a Dispatch Instruction, move at the MW/minute capability stated in its Bid, reach the amount of Spinning Reserve capacity scheduled for the current Settlement Period within ten (10) minutes of issue of the Dispatch Instruction by the CAISO. For a Multi-Stage Generating Resource the range of Spinning Reserve capacity evaluated is the range for the applicable MSG Configuration.

### 8.9.11 Performance Audit for Non-Spinning Reserve

The CAISO will audit the performance of a resource providing Non-Spinning Reserve by auditing its response to Dispatch Instructions, and by analysis of telemetry data associated with the resource. Such audits may not necessarily occur on the hour. A resource providing Non-Spinning Reserve shall be evaluated on its ability to respond to a Dispatch Instruction, move in accordance with the time delay and MW/minute capability stated in its Bid, and reach the amount of Non-Spinning Reserve capacity under the control of the CAISO scheduled for the current Settlement Period within ten (10) minutes of issue of the Dispatch Instruction by the CAISO. For a Multi-Stage Generating Resource the range of Non-Spinning capacity evaluated is the range for the applicable MSG Configuration.

### 8.9.12 [Not Used]

### 8.9.13 [Not Used]

### 8.9.14 [Not Used]

### 8.9.15 Consequences of Failure to Pass Performance Audit

#### 8.9.15.1 Notification of Performance Audit Results

The CAISO shall give the Scheduling Coordinator for a provider of Ancillary Services written notice of the results of such audit. The CAISO will at the same time send a copy of the notice to the provider of Ancillary Services. For any Resource Adequacy Resource failing to pass a performance audit, the CAISO also will provide notification of the failure to the California Public Utilities Commission, Local Regulatory Authority, or federal agency with jurisdiction over the Load Serving Entity that listed the Resource Adequacy Resource on its Resource Adequacy Plan, and the FERC.

#### 8.9.15.2 Penalties for Failure to Pass Performance Audit

The Scheduling Coordinator for a provider of RUC Capacity or an Ancillary Service whose resource fails a performance audit shall be subject to the financial penalties provided for in the CAISO Tariff, including those in Section 8.10. In addition, the sanctions described in Section 8.9.16 shall apply.

### 8.9.16 Sanctions for Poor Performance

#### 8.9.16.1 Warning Notice

If an Ancillary Service resource fails a compliance test or a performance audit, the CAISO will issue a warning notice to the Scheduling Coordinator for that resource and at the same time will send a copy of

the notice to the owner and operator of the resource.

**8.9.16.2 Scheduling Coordinator's Option to Test**

On receipt of a warning notice the provider of the Ancillary Service may request the CAISO, through its Scheduling Coordinator, to test the capability of the Ancillary Service resource. The CAISO shall carry out such test as soon as practicable and the cost of such test shall be paid by the Scheduling Coordinator irrespective of the result of the test.

**8.9.16.3 Duration of Warning Notice**

A warning notice shall continue in effect until:

(a) the Ancillary Service resource is next tested by the CAISO whether such a test is called for by the Scheduling Coordinator under Section 8.9.16.2 or carried out by the CAISO under Section 8.10; or

(b) the expiration of a period of six (6) calendar months from the date upon which the CAISO notified the Scheduling Coordinator that the Ancillary Service resource failed the test or the performance audit which gave rise to the issue of the warning notice, whichever is the earlier.

**8.9.16.4 Second Failure**

An Ancillary Service resource which fails a compliance test or a performance audit conducted during the period when a warning notice for that resource is in effect shall be disqualified immediately from providing the Ancillary Service concerned (whether the Ancillary Service is part of the CAISO's auction or is part of a self-provision arrangement), and shall not be permitted to submit a Bid to the CAISO to provide the Ancillary Service concerned (or be part of an Ancillary Service self-provision arrangement) until such time as it has successfully re-passed the approval and certification procedure described in the relevant Part of Appendix K. For any Resource Adequacy Resource failing a compliance test or performance audit during the periods when a warning notice for that resource is in effect, the CAISO will notify the California Public Utilities Commission or the relevant Local Regulatory Authority of the failure and disqualification or federal agency with jurisdiction over the Load Serving Entity that listed the Resource Adequacy Resource on its Resource Adequacy Plan, and FERC.

**8.10 Periodic Testing of Units**

The CAISO shall periodically conduct unannounced tests of resources providing Ancillary Services. For Ancillary Services the unannounced tests will confirm the ability of such resources to meet the applicable Ancillary Service standard for performance and control. The CAISO may test resources in the manner described herein. The frequency of testing shall be within such time frames as are reasonable under all the circumstances. Scheduling Coordinators shall manage the resulting Energy output if notification of testing permits the Energy to be included in a Bid. If a resource fails to meet requirements in a test under this section, the CAISO shall notify the relevant Ancillary Service Provider or Scheduling Coordinator for the resource of such failure as soon as reasonably practicable after the completion of the test. Failure to meet requirements shall lead to the penalties described in Section 8.10.7.

**8.10.1 Regulation Up and Regulation Down Reserves**

The CAISO shall continuously monitor the response of a resource to the CAISO's Regulation instructions in order to determine the resource is under direct control of CAISO's Automatic Generation Control system and complies with CAISO's Dispatch Instructions.

**8.10.2 Spinning Reserve**

The CAISO shall test the Spinning Reserve capability of a resource by issuing unannounced Dispatch Instructions requiring the resource to ramp up to its ten (10) minute capability. The CAISO shall measure the response of the resource to determine compliance with requirements. Such tests may not necessarily occur on the hour. The Scheduling Coordinator for the resource shall be paid pursuant to Section 11.5.6. For a Multi-Stage Generating Resource the range of Spinning capacity evaluated is the range for the applicable MSG Configuration.

**8.10.3 Non-Spinning Reserve**

The CAISO will test the Non-Spinning Reserve capability of a resource by issuing unannounced Dispatch Instructions requiring the resource to ramp to its certified capacity within ten (10) minutes. The CAISO shall measure the response of the resource or Load to determine compliance with requirements. The Scheduling Coordinator for the resource shall be paid pursuant to Section 11.5.6. For a Multi-Stage Generating Resource the range of Non-Spinning capacity evaluated is the range at the applicable MSG Configuration.

**8.10.4 Voltage Support**

The CAISO shall monitor a Generating Unit's response to Voltage Support instructions in order to determine compliance with Dispatch Instructions.

**8.10.5 [Not Used]**

**8.10.6 [Not Used]**

**8.10.7 Penalties for Failure to Pass Tests**

A resource that fails an availability test, as determined under criteria to be established by the CAISO, shall be deemed not to have been available to provide the Ancillary Service concerned or the relevant portion of that service for the entire period the resource was committed to provide the service, unless appropriate documentation (i.e., daily test records) confirming the availability of that service during the committed period(s) is presented to the CAISO. The "committed period" is defined as the total of all the hours/days the resource was scheduled by the CAISO to provide the Ancillary Service beginning from: (i) the last successful availability test; or (ii) the last time the resource actually provided Energy or reduced Demand as part of the Ancillary Service; whichever results in a shorter committed period. The Scheduling Coordinator for a resource that fails an availability test shall not be entitled to a payment for the Ancillary Service concerned for the committed period and adjustments to reflect this shall be made in the calculation of payments to the Scheduling Coordinator, provided that any such penalty shall be reduced to reflect any adjustment made over the duration of the committed period under Section 8.10.8 or Section 31.5.7.

System Units providing Ancillary Services to the CAISO are subject to the same testing, compensation, and penalties as are applied to individual resources providing provision of Ancillary Services.

If payments for a particular Ancillary Service in a particular Settlement Period would be rescinded under more than one provision of this Section 8.10.7, the total amount to be rescinded for a particular Ancillary Service in a particular Settlement Period shall not exceed the total payment due in that Settlement Period.

**8.10.8 Rescission of Payments for Ancillary Service Capacity**

If Ancillary Services capacity that receives an AS Award or Self-Provided Ancillary Services capacity provided from a resource is Undispatchable Capacity, Unavailable Capacity, or Undelivered Capacity during the relevant Settlement Interval, then payments will be rescinded as described in this Section 8.10.8 and settled in accordance with Section 11.10.9. If the CAISO determines that non-compliance of a

resource, with an Operating Instruction or Dispatch Instruction from the CAISO, or with any other applicable technical standard under the CAISO Tariff, causes or exacerbates system conditions for which the WECC imposes a penalty on the CAISO, then the Scheduling Coordinator of such resource shall be assigned that portion of the WECC penalty which the CAISO reasonably determines is attributable to such non-compliance, in addition to any other penalties or sanctions applicable under the CAISO Tariff.

**8.10.8.1 Rescission of Payments for Undispatchable Ancillary Service Capacity**

The CAISO shall calculate the Real-Time ability of each resource to deliver Energy from Ancillary Services capacity or Self-Provided Ancillary Services capacity for each Settlement Interval based on its maximum operating capability, actual telemetered output, and Operational Ramp Rate as described in Section 30.10. To make this determination for Multi-Stage Generating Resources the CAISO shall use the MSG-Configuration-specific Maximum Operating Limit and Operational Ramp Rate. System Resources that are awarded Ancillary Services are required to electronically tag (E-Tag as prescribed by the WECC) the Ancillary Services capacity. If the amounts of Ancillary Services capacity in an electronic tag differ from the amounts of Ancillary Services capacity for the System Resource, the Undispatchable Capacity will equal the amount of the difference, and will be settled in accordance with the provisions of Section 11.10.9.1.

**8.10.8.2 Rescission of Payments for Unavailable Ancillary Service Capacity**

If the CAISO determines that a Scheduling Coordinator has supplied Uninstructed Imbalance Energy to the CAISO during a Settlement Interval from the capacity of a resource that is obligated to supply Spinning Reserve or Non-Spinning Reserve to the CAISO, payments to the Scheduling Coordinator for the Ancillary Service capacity used to supply Uninstructed Imbalance Energy shall be eliminated to the extent of the deficiency, in accordance with the provisions of Section 11.10.9.2. For Multi-Stage Generating Resources that have supplied Uninstructed Imbalance Energy from capacity obligated to supply Spinning or Non-Spinning Reserves, the CAISO shall calculate the capacity for which payments will be rescinded at the Generating Unit level, as applicable, and will use the MSG Configuration-specific Maximum Operating Limit.

**8.10.8.3 Rescission of Payments for Undeliverable Ancillary Service Capacity**

For each Settlement Interval in which a resource fails to supply Energy from Spinning Reserve or Non-

Spinning Reserve capacity in accordance with a Dispatch Instruction, or supplies only a portion of the Energy specified in the Dispatch Instruction, the capacity payment will be reduced to the extent of the deficiency, in accordance with the provisions of Section 11.10.9.3.

**8.10.8.4 Rescission of Ancillary Service Capacity Payments for Non-Generator Resources**

For Non-Generator Resources, payment for Ancillary Service capacity will be rescinded, in accordance with the provisions of Section 11.10.9, to the extent the resource is unable as a result of its MWh constraint to generate Energy or consume Energy continuously to support its self-provision or award of Ancillary Services.

**8.10.8.5 [Not Used]**

**8.10.8.6 Rescission of Payments for Regulation Up and Regulation Down Capacity**

Payment for Regulation Up and Regulation Down capacity will be rescinded, in accordance with the provisions of Section 11.10.9, if the resource providing Regulation Up and Regulation Down capacity: (i) is off Regulation or off Automatic Generation Control, (ii) is not running, (iii) is not providing sufficient Regulating Range, (iv) is generating outside the Regulating Range, (v) has a Regulating Range that overlaps with its Forbidden Operating Regions, or (vi) has telemetry equipment that is not available. In addition to these criteria, payment for Regulation Up and Regulation Down capacity to Non-Generator Resources will be rescinded, in accordance with the provisions of Section 11.10.9, to the extent the resource is unable as a result of its MWh constraint to generate Energy (or curtail Energy consumption) continuously to support its self-provision or award of Regulation Up or unable as a result of its MWh constraint to consume Energy (or increase Energy consumption) continuously to support its self-provision or award of Regulation Down, whether or not the resources use Regulation Energy Management.

**8.10.8.7 Rescission of Payments for Resource and Transmission Constraints**

If the CAISO determines that any Day-Ahead Market award for Ancillary Services capacity or Self-Provided Ancillary Services capacity is not available during the RTM as a result of a resource constraint, then payments for that capacity will be rescinded in accordance with Section 11.10 or, in the case of Self-Provided Ancillary Services capacity, that capacity will not be compensated at the user rate as described in Sections 11.10.2, 11.10.3 and 11.10.4.

If the CAISO determines that any Day-Ahead Market award for Ancillary Services capacity or Self-Provided Ancillary Services capacity is not available during the RTM as a result of a Transmission Constraint, then payments for that capacity will not be rescinded, except as provided in section 11.10.9.1 for System Resources or, in the case of Self-Provided Ancillary Services capacity, that capacity will continue to be compensated at the user rate as described in Sections 11.10.2, 11.10.3 and 11.10.4. For purposes of applying this Section to Dynamic Resources or Pseudo-Tie resources, the CAISO shall treat a reduction in the Total Transfer Capability at an Intertie between the Day-Ahead Market and RTM that is registered in the CAISO's outage management system pursuant to Section 9 as a Transmission Constraint. For all other constraints that cause the CAISO to determine that any Day-Ahead Market award for Ancillary Services capacity or Self-Provided Ancillary Services capacity from Dynamic Resource or Pseudo-Tie resources is not available, the CAISO shall treat these constraints as resource constraints.

## 8.11 Temporary Changes to Ancillary Service Penalties

### 8.11.1 Application and Termination

The temporary change, respecting Ancillary Services penalties, set out in Section 8.11.2 shall continue in effect until such time as the Chief Executive Officer of the CAISO issues a Notice of Full-Scale Operations, posted on the CAISO Website, at http://www.CAISO.com, or such other internet address as the CAISO may publish from time to time, specifying the date on which this Section 8.11 shall cease to apply, which date shall be not less than seven (7) days after the Notice of Full-Scale Operations is issued.

### 8.11.2 Exemption for Penalties Due to CAISO Software Limitations

For so long as this Section 8.11.2 remains in effect, Scheduling Coordinators shall not be liable for the penalties specified in Sections 8.10.7 and 8.10.8 if, as a result of limitations associated with the CAISO's Congestion Management software, the scheduled output of the resource from which the Scheduling Coordinator has committed to provide an Ancillary Service is adjusted by the CAISO to a level that conflicts with the Scheduling Coordinator's Ancillary Service capacity commitments, thereby resulting in a failed availability test.

# 9. Outages

## 9.1 Coordination and Approval for Outage

In accordance with the Applicable Reliability Criteria, the CAISO shall have authority to coordinate and approve Outages and returns to service of all facilities comprised in the CAISO Controlled Grid and Reliability Must-Run Units in accordance with Section 9.3. The CAISO will coordinate and approve Maintenance Outages and coordinate responses to Forced Outages of all transmission facilities in the CAISO Controlled Grid and Reliability Must-Run Units in accordance with this Section 9. Any scheduled Outages that are cancelled by CAISO Real-Time operations due to system requirements must be rescheduled with the CAISO in accordance with Section 9.3.

## 9.2 Responsibility for Authorized Work on Facilities

The CAISO shall have authority to approve requests by Participating TOs to work on all energized transmission equipment under the Operational Control of the CAISO.

## 9.3 Coordination of Outages and Maintenance

### 9.3.1 CAISO Outage Coordination Functions

#### 9.3.1.1 Coordinating Maintenance Outages of UDC Facilities

Each UDC and the Participating TO with which it is interconnected shall coordinate their Outage requirements that will have an effect on their transmission interconnection prior to the submission by that Participating TO of its Maintenance Outage requirements under Section 9.3.

#### 9.3.1.2 Coordinating Maintenance Outage of CDWR-SWP Participating Generating Units

The provisions of Section 9.3 shall apply to CDWR-SWP Participating Generating Units. The submission by CDWR-SWP of an Outage schedule, Outage request, or request to change or cancel an Approved Maintenance Outage, and the CAISO's treatment of Outage schedules and requests relating to CDWR-SWP Participating Generating Units, shall be in accordance with Section 9.3, except as otherwise provided in Section 9.3.1.2.1.

##### 9.3.1.2.1 Coordinating Maintenance Outages of CDWR-SWP

(a) In each Outage schedule, Outage request, and request to change or cancel an Approved Maintenance Outage that CDWR-SWP submits to the CAISO for a CDWR-SWP Participating Generating Unit, CDWR-SWP will state whether CDWR-SWP has

determined that the proposed maintenance work, and/or the timing of the Outage, is necessary in order for CDWR-SWP to:

(i) Comply with various federal and state legal and regulatory requirements that govern stream flow, water temperature, water quality and quantity, flood control space, after-bay, reservoir, or lake elevation, and other environmental and wildlife constraints ("CDWR-SWP Statutory Compliance Outage"); or

(ii) Maintain reliable operations of critical water infrastructure and not impair its ability to satisfy water delivery or conservation requirements ("CDWR-SWP Water System Reliability Outage").

(b) CDWR-SWP will identify each CDWR-SWP Statutory Compliance or Water System Reliability Outage by designating the Outage with an appropriate cause code in the Outage schedule, Outage request, or request to change or cancel an Approved Maintenance Outage and will provide a description of the requirement or constraint. If the designation of an Outage changes, or the Outage no longer meets the criteria of Section 9.3.1.2.1(a)(i) or (ii), CDWR-SWP will notify the CAISO about this change in status as soon as practical but no more than one (1) Business Day after it occurs.

(c) The CAISO will not deny, cancel, or reschedule a CDWR-SWP Statutory Compliance or Water System Reliability Outage that CDWR-SWP submits to the CAISO in an Outage schedule, Outage request, or request to change or cancel an Approved Maintenance Outage, provided that the Outage request is timely, designates the Outage as a CDWR-SWP Statutory Compliance or Water System Reliability Outage by an appropriate cause code and includes a description of the requirement or constraint.

(d) The CAISO may contact CDWR-SWP to inquire whether the timing of a CDWR-SWP Statutory Compliance or Water System Reliability Outage can be changed. CDWR-SWP may agree to the change or, after making best efforts to accommodate the change, may notify the CAISO that the change is not feasible as determined by CDWR-SWP in its sole discretion due to the described requirement or constraint. In the event that CDWR-SWP determines that changing the timing of the Outage is not feasible due to the described

requirement or constraint, the CAISO will not deny, cancel, or reschedule that CDWR-SWP Statutory Compliance or Water System Reliability Outage.

(e) The CAISO will process any Outage that CDWR-SWP submits in an Outage schedule, Outage request, or request to change or cancel an Approved Maintenance Outage, that is not timely, does not contain a cause code identifying the Outage as a CDWR-SWP Statutory Compliance or Water System Reliability Outage or does not include a description of the requirement or constraint, under the otherwise applicable provisions of Section 9.3 and CAISO Operating Procedures.

**9.3.1.3 Coordinating Outages of RA Resources**

**9.3.1.3.1 Maintenance Outages Requested Before Cure Period**

Other than Outage types identified in Section 9.3.1.3.3, the CAISO denies Maintenance Outage requests or Approved Maintenance Outages on RA Resources requested before the 30-day Supply Plan revision deadline in Section 40.4.7.1(c) for the RA month in which the outage would first take place if the Scheduling Coordinator for the RA Resource does not provide RA Substitute Capacity to cover the extent of the Outage impacting RA Capacity that occurs during the period for which the resource has been shown on a monthly Supply Plan. The Scheduling Coordinator for the resource will notify the CAISO whether and to what extent the Outage affects RA Capacity and any contracted non-RA Capacity (both capacity sold to CAISO Load Serving Entities that is not RA Capacity for the month and capacity sold to external Load Serving Entities for export). The Scheduling Coordinator will promptly notify the CAISO of any changes to this information. The CAISO will incorporate this information into determining RA Substitute Capacity requirements. The RA Substitute Capacity must be provided by the monthly RA Substitute Capacity deadline established in the Business Practice Manual, which cannot be more than 72 hours after the 30-day Supply Plan revision deadline in Section 40.4.7.1(c) for the RA month in which the outage would first take place.

Once the CAISO grants final approval for a Maintenance Outage and the Outage has commenced, the CAISO does not subsequently deny the Outage for failure to provide RA Substitute Capacity by monthly RA Substitute Capacity deadlines that occur after the Outage has begun. Any such period of the Maintenance Outage for which the Scheduling Coordinator does not provide RA Substitute Capacity will

be treated as a Forced Outage for purposes of assessing RAAIM under Section 40.9 but the resource may not provide RA Substitute Capacity per Section 40.9.3.6.2.

**9.3.1.3.2 Maintenance Outages Requested After Cure Period**

Other than Outage types identified in Section 9.3.1.3.3, the CAISO denies Maintenance Outage requests on RA Resources submitted after the 30-day Supply Plan revision deadline in Section 40.4.7.1(c) for the RA month in which the outage would first take place if the Scheduling Coordinator for the RA Resource does not provide RA Substitute Capacity to cover the extent of the requested Maintenance Outage impacting RA Capacity that occurs during the period for which the resource has been shown on a monthly Supply Plan. The Scheduling Coordinator for the resource will promptly notify the CAISO whether and to what extent the Outage affects RA Capacity and any contracted non-RA Capacity (both capacity sold to CAISO Load Serving Entities that is not RA Capacity for the month and capacity sold to external Load Serving Entities for export). The Scheduling Coordinator will notify the CAISO of any changes to this information. The CAISO will incorporate this information into determining RA Substitute Capacity requirements. The RA Substitute Capacity must be provided by the post-monthly RA Substitute Capacity deadline established in the Business Practice Manual, which cannot be no more than 72 hours after the Outage request.

Once the CAISO grants final approval for a Maintenance Outage and the Outage has commenced, the CAISO does not subsequently deny the Outage for failure to provide RA Substitute Capacity by monthly RA Substitute Capacity deadlines that occur after the Outage has begun. Any such period of the Maintenance Outage for which the Scheduling Coordinator does not provide RA Substitute Capacity will be treated as a Forced Outage for purposes of assessing RAAIM under Section 40.9 but the resource may not provide RA Substitute Capacity per Section 40.9.3.6.2.

**9.3.1.3.3 Exceptions to Requirement to Provide RA Substitute Capacity**

The CAISO does not automatically deny an Outage pursuant to Section 9.3.1.3.1 or Section 9.3.1.3.2 if the Maintenance Outage is: (a) an Off-Peak Opportunity RA Maintenance Outage approved Pursuant to Section 9.3.1.3.6; (b) caused by an Outage on transmission facilities in the CAISO Controlled Grid; or (c) on RA Capacity that is solely Flexible RA Capacity.

**9.3.1.3.4 Cancellation or Denial of Maintenance Outages for Reasons other than Lack of RA**

**Substitute Capacity**

Notwithstanding provision of RA Substitute Capacity, the CAISO may deny, reschedule or cancel a Maintenance Outage on a RA Resource if it determines that the Outage is likely to have a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid or the facilities of a Connected Entity.

**9.3.1.3.5 Obligations of RA Substitute Capacity**

RA Substitute Capacity provided pursuant to Section 9.3.1.3.1 or Section 9.3.1.3.2 is subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed on Resource Adequacy Resources by the CAISO Tariff, including the must-offer obligations in Section 40.6 and the RAAIM provisions in Section 40.9, for the MW amount and duration of the outage substitution period, which includes the full day of the start date and the full day of the end date of the outage.

**9.3.1.3.6 Off-Peak Opportunity RA Maintenance Outage**

(a) **Option for Off-Peak Outage.** The Scheduling Coordinator for a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may submit a request for an Off-Peak Opportunity RA Maintenance Outage without a requirement to provide RA Substitute Capacity for the unavailable capacity for the duration of the outage to be excluded from the RAAIM calculation under Section 40.9.

(b) **Request.** A request for an Off-Peak Opportunity RA Maintenance Outage must: (i) be submitted to the CAISO no less than eight (8) days prior to the start date for the outage; (ii) schedule the outage to begin during off-peak hours (as specified in the Business Practice Manuals) on a weekday, and to be completed prior to on-peak hours (as specified in the Business Practice Manuals) the following weekday, or to begin during off-peak hours (as specified in the Business Practice Manuals) on Friday, or on Saturday, Sunday, or a holiday, and to be completed prior to on-peak hours (as specified in the Business Practice Manual) on the next weekday; and (iii) otherwise comply with the requirements set forth in Section 9.

(c) **Approval.**

(1) The CAISO will consider requests for an Off-Peak Opportunity RA Maintenance Outage in the order the requests were received.

(2) If the request was submitted no less than eight (8) days prior to the start date for the outage, the CAISO may approve the request as an Off-Peak Opportunity RA Maintenance Outage if it determines that: (i) the request meets the requirements set forth in Section 9.3.1.3.6(b); and (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid.

(3) If the CAISO denies a request for an Off-Peak Opportunity RA Maintenance Outage for failing to meet the requirements in Section 9.3.1.3.6(c)(2), the Scheduling Coordinator for the Resource Adequacy Resource may request an RA Maintenance Outage With Substitution or may request that the CAISO accommodate the outage at another time.

(4) To the extent that an approved Off-Peak Opportunity RA Maintenance Outage is not completed during off-peak hours as scheduled, and extends into on-peak hours, the Scheduling Coordinator for the resource shall submit the portion of the outage that extends into on-peak hours as a new Forced Outage, which shall be subject to the RAAIM provisions in Section 40.9.

**9.3.1.3.7 Short-Notice Opportunity RA Outage**

(a) **Option for Short-Notice Outage.** The Scheduling Coordinator for a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may submit a request for a Short-Notice Opportunity RA Outage without a requirement to provide RA Substitute Capacity for the Resource Adequacy Capacity that will be on the Forced Outage to be excluded from the RAAIM calculation under Section 40.9.

(b) A Short-Notice Opportunity RA Outage shall not exceed five days in length. The request for a Short-Notice Opportunity RA Outage must: (i) be submitted no more than seven (7) days prior to the requested start date for the outage; (ii) provide the CAISO adequate time to analyze the request before the outage begins; (iii) be submitted before the outage has commenced as a Forced Outage; and (iv) otherwise comply with the requirements of Section 9.

(c) **Approval.**

(1) The CAISO will consider Short-Notice Opportunity RA Outages in the order the requests are received.

(2) If the request was submitted no more than seven days and no less than four days prior to the start date of the outage, the CAISO may approve the request as a Short Notice Opportunity RA Outage if it determines that: (i) the outage and the request meet the requirements set forth in Section 9.3.1.3.7(b); (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid; and (iii) the outage will not result in insufficient available Resource Adequacy Capacity during the outage period. The approved outage will be a Forced Outage and will not be subject to the RAAIM provisions in Section 40.9.

(3) If the request was submitted three days or less prior to the start date of the outage, the CAISO may approve the request as a Forced Outage if it determines that: (i) the outage and request meet the requirements set forth in Section 9.3.1.3.7(b); (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid; (iii) the outage will not result in insufficient available Resource Adequacy Capacity during the outage period; and (iv) the repairs are necessary to maintain system or resource reliability and require immediate attention to prevent equipment damage or

failure. A Short-Notice Opportunity RA Outage approved under this Section will be a Forced Outage and will not be subject to the RAAIM provisions in Section 40.9.

(4) To the extent that an approved Short-Notice Opportunity RA Outage is not completed during the originally approved outage schedule, the Scheduling Coordinator for the resource must submit the portion of the outage that continues from the approved completion time until the time the outage is actually completed as a new Forced Outage, which will be subject to the RAAIM provisions in Section 40.9.

**9.3.1.3.8 Outage Reporting for Resource Adequacy Resources between 1 MW and 10 MW**

Scheduling Coordinators for Resource Adequacy Resources with a PMax of at least one (1) MW but less than 10 MWs that do not meet the requirement to provide information on Forced Outages in accordance with Section 9.3.10 shall report Outages in accordance with the process set forth in the Business Practice Manual.

**9.3.1.3.9 Transition Period for Providing RA Substitute Capacity for Maintenance Outages**

Notwithstanding Sections 9.3.1.3.1 and 9.3.1.3.2, Maintenance Outages on RA Resources in the June 2021 and July 2021 RA months require RA Substitute Capacity as follows to avoid Outage denial. Maintenance Outage requests or Approved Maintenance Outages on RA Resources taken in June 2021 are reviewed for RA Substitute Capacity per the provisions of part 2 of Appendix J.

The CAISO denies Maintenance Outage requests or Approved Maintenance Outages on RA Resources planned to start or continue in July 2021 and that were requested before June 6, 2021, if the Scheduling Coordinator for the RA Resource does not provide RA Substitute Capacity to cover the extent of the Outage that occurs during the period for which the resource has been shown on a monthly Supply Plan. The RA Substitute Capacity must be provided by the July 2021 monthly RA Substitute Capacity deadline established in the Business Practice Manual. Maintenance Outage requests on RA Resources planned to start in July 2021 that are requested on or after June 6, 2021, are reviewed for RA Substitute Capacity per Section 9.3.1.3.2.

The CAISO will not subsequently deny a Maintenance Outage on a RA Resource that it permits to

commence in July 2021 for failure to provide RA Substitute Capacity by monthly RA Substitute Capacity deadlines that occur after the Outage has begun. Any such period of the Maintenance Outage for which the Scheduling Coordinator does not provide RA Substitute Capacity will be treated as a Forced Outage for purposes of assessing RAAIM under Section 40.9 but the resource may not provide RA Substitute Capacity per Section 40.9.3.6.2.

### 9.3.2 Requirement for Approval

An Operator or Scheduling Coordinator shall not take: (i) facilities that comprise the CAISO Controlled Grid; or (ii) Generating Units of Participating Generators out of service for the purposes of planned maintenance or for new construction or other work except as approved by the CAISO, except that final approval may not be required for a Transmission Maintenance Outage as provided in Section 9.3.9.1. The information relating to each Maintenance Outage submitted by a Participating Generator in accordance with Section 9.3.5, or by a Participating TO in accordance with Section 9.3.5, constitutes a request for a long-range Maintenance Outage and is not considered an Approved Maintenance Outage until the CAISO has notified the Participating Generator of such approval pursuant to Section 9.3.6, or the Participating TO pursuant to Section 9.3.6.

### 9.3.3 Request Submission and Information

The Operator or Scheduling Coordinator of facilities that comprise the CAISO Controlled Grid or of a Participating Generator, Participating Intermittent Resource, Generating Unit, System Unit, Physical Scheduling Plant, Proxy Demand Resource, Reliability Demand Response Resource, Non-Generation Resource, Participating Load, or other resource subject to the outage management requirements of Section 9, shall use the ISO's outage management system to –

(1) Submit all outage requests under Section 9.

(2) Provide the required information about the outage and work to be performed using the nature of work categories described in the Business Practice Manual.

(3) For transmission outage requests, additionally provide structured and detailed outage modeling information at the facility level and/or the breaker/switch level. If the work to be performed will require a switch position to change during the outage period, the Operator or Scheduling Coordinator must submit a separate outage request for each configuration.

(4) For resource outage requests, additionally provide the required information for the resource at the aggregate project or plant level, and also at the individual unit level for a unit de-rate greater than 50 MW, and any limitations on the resource's availability to provide each type of ancillary service for which it is certified.

(5) Notify the CAISO of temporary changes in physical characteristics specified in the Master File, including the PMax, Minimum Load, and Ramping capability of the unit, due to changes in their actual physical characteristics. Changes in the physical characteristics related to Minimum Load shall only be for temporary increases in Minimum Load due to ambient temperature, outages of mechanical equipment, or environmental regulations.

(6) For Outages that involve extending or increasing the scheduled duration of a Maintenance Outage or MW amount of capacity on Maintenance Outage, respectively, submit a new Outage request to cover the extension or increase in the extent of the Outage.

**9.3.4 Single Point of Contact**

Requests for approvals and coordination of all Maintenance Outages (consistent with Section 9.3.1) will be through a single point of contact between the CAISO and each Operator. The Operator shall provide in its initial request and specify from time to time the identification of the single point of contact along with primary and alternate means of communication pursuant to the detailed procedures referred to in Section 9.3.6.

**9.3.5 Method of Communication**

The primary method of communication from an Operator or Scheduling Coordinator to the CAISO with regard to maintenance and Outage planning will be the outage management system as described in the Operating Procedure on the CAISO Website and in the applicable Business Practice Manuals. Emergency capabilities, to be used only as a back-up if the primary communication method is unavailable, will include:

(a) voice; and

(b) electronic (E-mail, FTP file).

**9.3.5.1 Confirmation**

When electronic communication is utilized in the event the outage management system is unavailable, confirmation from the CAISO must be received by the Operator or Scheduling Coordinator to validate the receipt of the request.

**9.3.5.2 Communication of Approval or Rejection**

The CAISO shall use the outage management system as the primary method of communicating the approval or rejection of an Outage request or approval of a request to change an Approved Maintenance Outage to the relevant Operator or Scheduling Coordinator.

**9.3.5.2.1** Information regarding planned Outages for resources with an Existing QF Contract or an Amended QF Contract shall be provided to the CAISO by the Participating TO or UDC that is a party to the Existing QF Contract or an Amended QF Contract, or by a Participating Generator. Information provided will be that obtained by the Participating TO, UDC, or a Participating Generator pursuant to the terms of Existing QF Contract or an Amended QF Contract, or as requested by the CAISO. Scheduling and approvals of Maintenance Outages for resources with an Existing QF Contract or an Amended QF Contract shall continue to be coordinated as detailed in the applicable contract with the Participating TO or UDC, provided the owner of the Regulatory Must-Take Generation resource has not executed a Participating Generator Agreement or Net Scheduled PGA. If the owner of a resource has executed a Participating Generator Agreement or Net Scheduled PGA, it shall comply with Section 9.3.5 and other provisions applicable to Participating Generators.

**9.3.6 Maintenance Outage Planning**

**9.3.6.1 CRR Transmission Maintenance Outage Plan**

By July 1 of each year, each Operator shall provide the CAISO with a CRR Transmission Maintenance Outages plan that includes the proposed schedule of any known CRR Transmission Maintenance Outages it plans to take in the following year. The plan shall pertain to the Operator's transmission facilities that comprise the CAISO Controlled Grid. The Participating TOs shall develop the plan in consultation with the UDCs interconnected with that Participating TO's system and the plan shall account for each UDC's planned maintenance requirements. The plan shall include the following information for each transmission facility:

(a) the identification of the facility and location;

(b) the nature of the proposed CRR Transmission Maintenance Outage;

(c) the preferred start and finish date for each proposed CRR Transmission Maintenance Outage; and

(d) where there is a possibility of flexibility, the earliest start date and the latest finish date, along with the actual duration of the Outage once it commences.

Either the CAISO, pursuant to Section 9.3.8, or an Operator, subject to Section 9.3.6.12, may at any time request a chance to an Approved Maintenance Outage. An Operator may, as provided in Section 9.3.6.4, schedule with the CAISO a Maintenance Outage on its system, subject to the conditions of Sections 9.3.6.5.1, 9.3.6.9, and 9.3.6.10.

**9.3.6.2 Proposed Schedule of Maintenance Outage**

By October 15 of each year, each Operator or Scheduling Coordinator shall provide the CAISO with a proposed schedule of all known Maintenance Outages it wishes to undertake in the following year. The proposed schedule shall include all of the Operator's transmission facilities that comprise the CAISO Controlled Grid and Generating Units subject to a Participating Generator Agreement, Net Scheduled PGA, or Pseudo-Tie Participating Generator Agreement (including its Reliability Must-Run Units). In the case of a Participating TO's transmission facilities, that proposed schedule shall be developed in consultation with the UDCs interconnected with that Participating TO's system and shall take account of each UDC's planned maintenance requirements. The nature of the information to be provided and the detailed Maintenance Outage planning procedure shall be established by the CAISO. This information shall include:

The following information is required for each Generating Unit of a Participating Generator:

(a) the Generating Unit name and Location Code;

(b) the MW capacity unavailable;

(c) the scheduled start and finish date for each Outage; and

(d) where there is a possibility of flexibility, the earliest start date and the latest finish date, along with the actual duration of the Outage once it commences.

The following information is required for each transmission facility:

(a) the identification of the facility and location;

(b) the nature of the proposed Maintenance Outage;

(c) the preferred start and finish date for each Maintenance Outage; and

(d) where there is a possibility of flexibility, the earliest start date and the latest finish date, along with the actual duration of the Outage once it commences.

Either the CAISO, pursuant to Section 9.3.7, or an Operator or Scheduling Coordinator, subject to Section 9.3.6.12, may at any time request a change to an Approved Maintenance Outage. An Operator or Scheduling Coordinator may, as provided in Section 9.3.6.4, schedule with the CAISO a Maintenance Outage on its system, subject to the conditions of Sections 9.3.6.5.1, 9.3.6.9, and 9.3.6.10.

**9.3.6.3 Look Ahead Updates**

Each Participating Generator and Participating TO shall notify the CAISO through the CAISO's outage management system of any known changes to a Generating Unit or System Unit Outage scheduled to occur within the number of days identified in the Business Practice Manuals as the "Look Ahead Period." A Participating Generator or Participating TO may submit changes to its planned Maintenance Outage schedule at any time. Participating Generators must obtain the approval of the CAISO in accordance with Section 9. Such approval may be withheld only for reasons of System Reliability or security.

**9.3.6.4 Timeframe for Scheduling Generation and Transmission Outages**

**9.3.6.4.1 Resource Maintenance Outages**

(a) The Scheduling Coordinator for a Participating Generator, Participating Intermittent Resource, Generating Unit, System Unit, Physical Scheduling Plant, Proxy Demand Resource, Reliability Demand Response Resource, Non-Generation Resource, Participating Load, or other resource subject to the outage management requirements of Section 9, shall submit a request for a Maintenance Outage or a request to change an Approved Maintenance Outage to the CAISO no less than eight days prior to the start date for the Outage, subject to the provisions of Sections 9.3.6.5.1, 9.3.6.9, and 9.3.6.10. The CAISO timeline for submitting the required advance notice is calculated excluding the day the request is submitted and the day the Outage is scheduled to commence. Submission of a request for a Maintenance Outage or a request to change an Approved Maintenance Outage no less than eight days prior to the start of the Outage does not

guarantee that the Reliability Coordinator will complete any separate Outage approval process it may conduct in time for the Outage to commence on the requested date. Additional detail on the relationship between the CAISO Outage approval timeline and the Reliability Coordinator approval timeline is available in the Business Practice Manuals.

(b) The requirement in Section 9.3.6.4.1(a) does not preclude submission of a request for a Forced Outage under Section 9.3.10.3 where immediate corrective action is needed because equipment has failed in service, is in danger of imminent failure, or is urgently needed to protect personnel.

(c) A request for a Maintenance Outage that is submitted seven days or less prior to the start date for the Outage shall be classified as a Forced Outage.

(d) A request to change an Approved Maintenance Outage that is submitted seven days or less prior to the start date for the Outage, if approved, will remain classified as a Maintenance Outage. If the request is not approved, the Scheduling Coordinator for the resource may submit a request for a new Forced Outage for the schedule change.

**9.3.6.4.2 Transmission Maintenance Outages**

An Operator shall submit a request for a Maintenance Outage or a request to change an Approved Maintenance Outage for transmission facilities on its system in advance of the start date for the Outage, as follows:

1. An Operator shall, upon thirty (30) days notice in advance of the first day of the month the Outage is proposed to be scheduled (or within the notice period in the Operating Procedures posted on the CAISO Website), schedule with the CAISO a CRR Transmission Maintenance Outage for transmission facilities on its system, subject to the conditions of Sections 9.3.6.5.1, 9.3.6.9, 9.3.6.10, and 36.4.3.
2. An Operator shall submit a request for a Planned Transmission Maintenance Outage or a request to change an Approved Maintenance Outage to the CAISO no less than eight days prior to the start date for the Outage, subject to the provisions of Sections 9.3.6.4.2, 9.3.6.5.1, 9.3.6.9, and 9.3.6.10. The CAISO timeline for submitting the required advance

notice is calculated excluding the day the request is submitted and the day the Outage is scheduled to commence. Submission of a request for a Planned Transmission Maintenance Outage or a request to change an Approved Maintenance Outage no less than eight days prior to the start of the Outage does not guarantee that the Reliability Coordinator will complete any separate Outage approval process it may conduct in time for the Outage to commence on the requested date. Additional detail on the relationship between the CAISO Outage approval timeline and the Reliability Coordinator approval timeline is available in the Business Practice Manuals. This requirement does not preclude submission of a request for a forced outage under Section 9.3.10.3 where immediate corrective action is needed because equipment has failed in service, is in danger of imminent failure, or is urgently needed to protect personnel.

3. If an Operator submits a request for a Planned Transmission Maintenance Outage or a request to change an Approved Maintenance Outage seven days or less prior to the start date for the Outage, the CAISO may, at its discretion, reject the request as untimely, or approve the request as an Unplanned Transmission Maintenance Outage provided that the CAISO has adequate time to analyze the request before the Outage begins and the analysis determines that: (i) the Outage is necessary for reliability; (ii) system conditions and the overall Outage schedule provide an opportunity to take the facilities out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid and without disrupting efficient market operations; and (iii) the Outage has not already commenced as a Forced Outage. The CAISO will consider Unplanned Transmission Maintenance Outages in the order the requests are received.

#### 9.3.6.5 Changes to Maintenance Outages

A Participating TO may submit changes to its Maintenance Outage information at any time, provided, however, that if the Participating TO cancels an Approved Maintenance Outage after 5:00 a.m. of the day prior to the day upon which the Outage is scheduled to commence and the CAISO determines that the change was not required to preserve System Reliability, the CAISO may disregard the availability of the

affected facilities in determining the availability of transmission capacity in the Day-Ahead Market. The CAISO will, however, notify Market Participants and reflect the availability of transmission capacity in the Real-Time Market as promptly as practicable.

**9.3.6.5.1** The CAISO shall evaluate whether the requested Maintenance Outage or change to an Approved Maintenance Outage is likely to have a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid or the facilities of a Connected Entity. The CAISO may request additional information or seek clarification from Participating Generators or Participating TOs of the information submitted in relation to a planned Generating Unit and System Unit Outage or a transmission Maintenance Outage. This information may be used to assist the CAISO in prioritizing conflicting requests for Outages.

**9.3.6.6 [Not Used]**

**9.3.6.6.1 [Not Used]**

**9.3.6.7 Withdrawal or Modification of Request**

The Operator of a Participating Generator or a Participating TO's Operator may withdraw a request at any time prior to actual commencement of the Outage. The Operator of a Participating Generator or Participating TO's Operator may modify a request at any time prior to receipt of any acceptance or rejection notice from the CAISO or pursuant to Sections 9.3.8.1, and 9.3.8.2, but the CAISO shall have the right to reject such modified request for reasons of System Reliability, system security or market impact, because of the complexity of the modifications proposed, or due to insufficient time to assess the impact of such modifications.

**9.3.6.8** Each Participating Generator or Participating TO that has scheduled a Maintenance Outage pursuant to Section 9.3.4 must schedule and receive approval of the Outage from the CAISO prior to initiating the Approved Maintenance Outage. The CAISO will review the Maintenance Outages to determine if any one or a combination of Maintenance Outage requests relating to CAISO Controlled Grid facilities, Generating Units or System Units may cause the CAISO to violate the Applicable Reliability Criteria. This review will take consideration of factors including, but not limited to, the following:

(a) forecast peak Demand conditions;

(b) other Maintenance Outages, previously Approved Maintenance Outages, and anticipated

Generating Unit Outages;

(c) potential to cause Congestion;

(d) impacts on the transfer capability of Interconnections; and

(e) impacts on the market.

**9.3.6.9** The CAISO shall acknowledge receipt of each request to confirm or approve a Maintenance Outage for a Generating Unit, System Unit, or Physical Scheduling Plant. Where the CAISO reasonably determines that the requested Maintenance Outage or the requested change to an Approved Maintenance Outage, when evaluated together with existing Approved Maintenance Outages, is not likely to have a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid, the CAISO shall authorize the Maintenance Outage or change to the Approved Maintenance Outage, and shall so notify the requesting Operator and other entities who may be directly affected.

**9.3.6.10** Where, in the reasonable opinion of the CAISO, the requested Maintenance Outage or requested change to an Approved Maintenance Outage is likely to have a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid, the CAISO may reject the requested Maintenance Outage or requested change to Approved Maintenance Outage. If in the CAISO's determination, any of the Maintenance Outages would cause the CAISO to violate the Applicable Reliability Criteria, the CAISO will notify the relevant Operator, and the Operator will then revise the proposed Maintenance Outage and inform the CAISO of the proposed changes. The CAISO shall, in a rejection notice, identify the CAISO's reliability, security and market concerns which prompt the rejection and suggest possible remedies or schedule revisions which might mitigate any such concerns. The CAISO may provide each Operator in writing with any suggested amendments to those Maintenance Outage requests rejected by the CAISO. Any such suggested amendments will be considered as a CAISO maintenance request and will be approved in accordance with the process set forth in Section 9.3.7. The determination of the CAISO shall be final and binding on the Operator. If, within fourteen (14) days of having made its determination, the Operator requests the CAISO to provide reasons for its determination, it shall do so as soon as is reasonably practicable. The CAISO will give reasons for informational purposes only and without affecting in any way the finality or validity of the determination.

**9.3.6.11 Failure to Meet Requirements**

Any request to consider maintenance that does not meet the notification requirements contained in Section 9.3.8.2 will be rejected without further consideration, unless Section 9.3.10 applies.

**9.3.6.12 Cancellation of Approved Maintenance Outage**

In the event an Operator of facilities forming part of the CAISO Controlled Grid cancels an Approved Maintenance Outage after 5:00 a.m. of the day prior to the day upon which the Outage is scheduled to commence and the CAISO determines that the change was not required to preserve System Reliability, the CAISO may disregard the availability of the affected facilities in determining the availability of transmission capacity in the Day-Ahead Market, provided, however, that the CAISO will, as promptly as practicable, notify Market Participants and reflect the availability of the affected facilities in determining the availability of transmission capacity in the Real-Time Market.

**9.3.7 Maintenance Outage Requests by the CAISO**

The CAISO may at any time request a Maintenance Outage or a change to an Approved Maintenance Outage from an Operator if, in the opinion of the CAISO, the requested Maintenance Outage or change is required to secure the efficient use and reliable operation of the CAISO Controlled Grid. In addition, the CAISO may, by providing notice no later than 5:00 a.m. of the day prior to the day upon which the Outage is scheduled to commence, direct the Operator to cancel an Approved Maintenance Outage, when necessary to preserve or maintain System Reliability or, with respect to Reliability Must-Run Units or facilities that form part of the CAISO Controlled Grid, to avoid unduly significant market impacts that would arise if the Outage were to proceed as scheduled. The CAISO may direct the Operator to cancel an Approved Maintenance Outage if the Reliability Coordinator has rejected the Outage request through the Reliability Coordinator's separate Outage approval process. The Operator, acting in accordance with Good Utility Practice, shall comply with the CAISO's direction and the provisions of Sections 9.3.7.1 and 9.3.7.2 shall apply. The CAISO shall give notice of any such direction to Market Participants prior to the deadline for submission of Day-Ahead Market Bids for the day on which the Outage was to have commenced. For purposes of this section and Section 9.3.3, an "unduly significant market impact" means an unplanned event or circumstance (e.g., unseasonable weather, a Forced Outage of a facility, or other occurrence) that adversely affects the competitive nature and efficient workings of the CAISO Markets, and is of such severity that a prudent Operator would not have scheduled a Maintenance Outage of its

facility if the unplanned event or circumstance could have been anticipated.

**9.3.7.1** The Operator may: (1) refuse the request; (2) agree to the request; or (3) agree to the request subject to specific conditions. The Operator, acting in accordance with Good Utility Practice, shall make every effort to comply with requests by the CAISO. Provided, however, the Operator may not refuse the CAISO's request if the request is made because the Reliability Coordinator has rejected the Outage request. In the event that the Operator refuses the CAISO's request, it shall provide to the CAISO written justification for its position within seventy-two (72) hours.

**9.3.7.2** In response the CAISO: (1) overrule any refusal of a Maintenance Outage or a change to an Approved Maintenance Outage by an Operator, in which case the CAISO's determination shall be final; (2) accept any changes or conditions proposed by the Operator, in which case the Maintenance Outage request or the request to change an Approved Maintenance Outage shall be deemed to be amended accordingly; or (3) reject the change or condition, in which case the CAISO and the Operator shall determine if acceptable alternative conditions or changes can be agreed. If the Operator and the CAISO cannot agree on acceptable alternative conditions or changes to the CAISO's request for a Maintenance Outage, or change to an Approved Maintenance Outage, the CAISO's determination shall be final. If the Operator and the CAISO cannot agree on acceptable alternative conditions or changes to the CAISO's request for a Maintenance Outage or change to an Approved Maintenance Outage, the CAISO may notify FERC of the dispute and take any other steps that are within its authority to maintain the reliability of the CAISO Controlled Grid.

**9.3.7.3** The CAISO will compensate the applicable Participating TO or Participating Generator for any direct and verifiable costs that such Participating TO or Participating Generator incurs as a result of the CAISO's cancellation of an Approved Maintenance Outage pursuant to this Section 9.3.7. For purposes of this section, direct costs include verifiable labor and equipment rental costs that have been incurred by the applicable Participating TO or Participating Generator solely as a result of the CAISO's cancellation of the Approved Maintenance Outage. Each Participating TO or Participating Generator must make a reasonable effort to avoid incurring any such direct costs through such measures as, but not limited to, the prompt cancellation of all contractual arrangements with third parties related to the Approved Maintenance Outage.

**9.3.7.4** The amount used to compensate each applicable Participating TO and Participating Generator, as described in Section 9.3.7.3, shall be charged to the Scheduling Coordinators in proportion to their metered Demand (including exports) during the Settlement Period(s) of the originally scheduled Outage.

### 9.3.8 CAISO Notice Required Re Maintenance Outages

The CAISO shall provide notice to the Operator of the approval or disapproval of any requested Maintenance Outage. Additionally, the CAISO shall notify any Connected Entity that may in the reasonable opinion of the CAISO be directly affected by an Approved Maintenance Outage. The content of and procedures for such notice shall be established by the CAISO.

#### 9.3.8.1 Data Required

The Scheduling Coordinator for a Generating Unit owned or controlled by a Participating Generator shall submit to the CAISO, pursuant to Sections 9.3.4 and 9.3.5.2.1, its request to confirm the schedule of a planned Maintenance Outage or to change the schedule of a planned Maintenance Outage. Such request must be made to the CAISO by no less than eight days prior to the starting date of the proposed Outage (or as specified on the CAISO Website). Likewise, all Operators or Scheduling Coordinators for transmission facilities shall submit a formal request to confirm or change an Approved Maintenance Outage with respect to any CAISO Controlled Grid facility to the CAISO in accordance with Sections 9.3.6.4.2 and 9.3.8.2. The timeline for submitting the required advance notice is calculated excluding the day the request is submitted and the day the Outage is scheduled to commence.

Such schedule confirmation request shall specify the following:

(a) the Generating Unit or System Unit name and Location Code, or the identification of the transmission system element(s) to be maintained including location;

(b) the nature of work to be performed;

(c) the date and time the Outage is to begin;

(d) the date and time the Outage is to be completed;

(e) the time required to terminate the Outage and restore the Generating Unit to normal capacity or the transmission system to normal operation;

(f) identification of primary and alternate telephone numbers for the Operator’s single point of contact; and

(g) in the case of a request for a change to an Approved Maintenance Outage, the date and time of the original Approved Maintenance Outage.

**9.3.8.2 Eight-Day Prior Notification**

Any request by a Participating Generator to confirm or change an Approved Maintenance Outage must be submitted no less than eight days prior to the starting date of the Approved Maintenance Outage (or as posted on the CAISO Website). The timeline for submitting the required advance notice is calculated excluding the day the request is submitted and the day the Outage is scheduled to commence. Any request by an Operator or Scheduling Coordinator of transmission facilities to confirm or change an Approved Maintenance Outage seven (7) days or less in advance of the start date for the Outage is subject to Section 9.3.6.4.2.

**9.3.8.3 [Not Used]**

**9.3.8.4 Priority of Outage Requests**

Outage requests that are listed in the long-range maintenance schedules submitted to and approved by the CAISO will be given a priority in the scheduling and approval of Outage requests over those which have not been listed.

**9.3.8.5 Delay**

Failure to submit a request for an Outage by the proper time may mean a delay in approval from the CAISO or may cause that Outage to be designated as a Forced Outage based on the nearness of the request to the requested Outage date. The CAISO may delay its approval of a Maintenance Outage or an Approved Maintenance Outage schedule if sufficient or complete information is not received by the CAISO within the time frames provided in Sections 9.3.8.2 and 9.3.8.3.

**9.3.9 Final Approval, Delay and Withholding**

On the day on which an Approved Maintenance Outage is scheduled to commence, the Operator or Scheduling Coordinator shall contact the CAISO Control Center for final approval of the Maintenance Outage, except as provided in Section 9.3.9.1. Where a Maintenance Outage requires separate approval from the Reliability Coordinator, the Operator may not request final approval of the Maintenance Outage

unless the Reliability Coordinator separately has approved the requested Maintenance Outage. No Maintenance Outage shall commence without such final approval (including the time of release, in hours and minutes) being obtained from the CAISO Control Center whose decision shall be final. The CAISO may delay its approval of a scheduled Maintenance Outage for a Participating Generator if sufficient or complete information is not received by the CAISO within the time frames set forth in Section 9.3.8.1. The CAISO Control Center shall have the authority to withhold a Final Approval for an Approved Maintenance Outage for reasons of System Reliability, security or system status of the CAISO Controlled Grid or market impact. The CAISO Control Center shall immediately notify the relevant Operator or Scheduling Coordinator of its intention to withhold the Final Approval. The Generator Maintenance Outage or CAISO Controlled Grid facility Maintenance Outage will then be rescheduled pursuant to this CAISO Tariff.

**9.3.9.1 Transmission Maintenance Outage Final Approval**

As part of the approval process, the CAISO will determine whether an Approved Maintenance Outage for facilities that comprise the CAISO Controlled Grid will require Final Approval on the start date before the outage begins or may be initiated and completed without Final Approval. The determination will be based on the outage types identified in the Business Practice Manuals and the expected impact of the outage on system conditions, the risk to system reliability, and the Reliability Coordinator's separate Outage approval process. The CAISO will provide its determination to the Operator or Scheduling Coordinator of the transmission facilities through the outage management system.

(1) If Final Approval is required, the Operator or Scheduling Coordinator shall comply with the requirements in Section 9.3.9. The Final Approval may be requested and received through the outage management system.

(2) If Final Approval is not required, the Operator or Scheduling Coordinator may commence the outage as scheduled on the start date and conclude the outage as scheduled on the end date, and report those actions through the outage management system. If the outage does not commence or conclude as scheduled, the Operator or Scheduling Coordinator must request approval to change an Approved Maintenance Outage.

### 9.3.10 Forced Outages

**9.3.10.1** Coordination of all Forced Outages (consistent with Sections 9.3.4 and 9.3.5.2.1) will be through the single point of contact between the Operator and the CAISO Control Center.

**9.3.10.2** Each Participating TO shall report any change or potential change in equipment status of the Participating TO's transmission assets turned over to the control of the CAISO or in equipment that affects transmission assets turned over to the control of the CAISO immediately upon discovery to the CAISO (this will include line and station equipment, line protection, Remedial Action Schemes and communication problems, etc.). Each Participating TO shall also keep the CAISO immediately informed upon discovery as to any change or potential change in the Participating TO's transmission system that could affect the reliability of the CAISO Controlled Grid. This would include, but is not limited to, adverse weather conditions, fires, bomb threats, system failures, etc. To the extent possible, the CAISO shall reflect all transmission Outages in the Integrated Forward Market and Real-Time Market.

**9.3.10.3** The following requirements apply to the advance reporting to the CAISO of anticipated and actual Forced Outages:

(a) Any Operator, upon identification of a situation likely to result in a Forced Outage within the next twenty-four (24) hours unless immediate corrective action is taken, where such action requires the removing from service or reducing the maximum output capability of a Generating Unit or a Resource-Specific System Resource by ten (10) MW or more from the value most recently recorded in the CAISO's outage management system pursuant to Section 9, or removing a transmission facility from service, shall communicate directly with the CAISO Control Center.

(b) Notwithstanding Section 9.3.10.3(a), and unless otherwise exempted pursuant to the terms of a Business Practice Manual, the Operator of an Eligible Intermittent Resource with a PMax of greater than ten (10) MW for its entire generating facility, upon identification of a situation likely to result in a Forced Outage within the next twenty-four (24) hours unless immediate corrective action is taken, where such action requires the

removing from service or reducing the maximum output capability of the Eligible Intermittent Resource generating facility by one (1) MW or more from the value most recently recorded in the CAISO's outage management system pursuant to Section 9, shall communicate directly with the CAISO Control Center.

All notifications of Forced Outages shall be communicated to the CAISO Control Center with as much notice as possible in order that the necessary security analysis and CAISO Controlled Grid assessments may be performed. If prior notice of a Forced Outage cannot be given, the Operator shall notify the CAISO of the Forced Outage within thirty (30) minutes after it occurs. Any Operator, upon identification of a situation likely to result in a Forced Outage but of a nature not requiring a removal from service until some time more than twenty-four (24) hours in the future will be subject to the provisions of Section 9 with respect to any necessary Outage except the requirements imposing time limits for notification will be waived and the request will be expedited by the CAISO provided notice is given as soon as possible.

**9.3.10.3.1** The following requirements apply if prior notice of a Forced Outage cannot be given to the CAISO:

(a) The Operator of a Generating Unit or a Resource-Specific System Resource is required to notify the CAISO within sixty (60) minutes after discovering any change in the maximum output capability of at least ten (10) MW or five percent (5%) of the value registered in the Master File, whichever is greater, from the value registered in the CAISO's outage management system pursuant to Section 9 that lasts for fifteen (15) minutes or longer.

(b) Notwithstanding Section 9.3.10.3.1(a), and unless otherwise exempted pursuant to the terms of a Business Practice Manual, the Operator of an Eligible Intermittent Resource with a PMax of greater than ten (10) MW for its entire generating facility is required to notify the CAISO within sixty (60) minutes after discovering any change in the maximum output capability of the generating facility of at least one (1) MW from the value registered in the CAISO's outage management system pursuant to Section 9 that lasts for fifteen (15) minutes or longer.

**9.3.10.3.2** When a Scheduling Coordinator notifies the CAISO of a Forced Outage that constitutes

only a partial derate of the resource, it shall indicate the amount of the derate and how the derate should be allocated among RA Capacity and contracted non-RA capacity (both capacity sold to CAISO Load Serving Entities that is not RA Capacity for the month and capacity sold to external Load Serving Entities for export).

**9.3.10.4** The CAISO Control Center shall coordinate any operational changes necessary to accommodate a Forced Outage and Market Participants shall comply with the CAISO's instructions given for that purpose.

**9.3.10.5** All Forced Outages shall be communicated by the CAISO Control Center to Operators likely to be affected by the Outage using the same procedures adopted for Maintenance Outage coordination procedures.

**9.3.10.6 Review of Forced Outages.** With respect to Forced Outages of Generating Units that result in a reduction in maximum output capability that lasts fifteen (15) minutes or longer of 40 MW or more below the value registered in the Master File and ten (10) percent of the value registered in the Master File, Operators, and where applicable, Eligible Customers, Scheduling Coordinators, UDCs and MSS Operators promptly shall provide information requested by the CAISO to enable the CAISO to review the changes made to the maximum output capability or Forced Outages submitted by the Operator or Scheduling Coordinator and to prepare reports on Forced Outages. If the CAISO determines that any Forced Outage may have been the result of gaming or other questionable behavior by the Operator, the CAISO shall submit a report describing the basis for its determination to FERC. The CAISO shall consider the following factors when evaluating the Forced Outage to determine if the Forced Outage was the result of gaming or other questionable behavior by the Operator: 1) if the Forced Outage coincided with certain market conditions such that the Forced Outage may have influenced market prices or the cost of payments associated with Exceptional Dispatches; 2) if the Forced Outage coincided with a change in the Bids submitted for any units or resources controlled by the Operator or the Operator's Scheduling Coordinator; 3) if the CAISO had recently rejected a request for an Outage for, or to Shut-Down, the Generating Unit experiencing the Forced Outage; 4) if the timing or content of the notice of the Forced Outage provided to the CAISO was inconsistent with subsequent reports of or the actual cause of the Outage; 5) if the Forced Outage or the duration of the Forced Outage was inconsistent with the

history or past performance of that Generating Unit or similar Generating Units; 6) if the Forced Outage created or exacerbated Congestion; 7) if the Forced Outage was extended with little or no notice; 8) if the Operator had other alternatives to resolve the problems leading to the Forced Outage; 9) if the Operator took reasonable action to minimize the duration of the Forced Outage; or 10) if the Operator failed to provide any information or access to the generating facility requested by the CAISO within a reasonable time.

#### 9.3.10.6.1 Outage Reporting by NRS-RA Resources

The Scheduling Coordinator for a Non-Resource-Specific System Resource that provides Resource Adequacy Capacity shall report to the CAISO through the outage management system any Forced Outage of a Generating Unit or Forced Outage or Constraint of transmission facilities external to the CAISO Balancing Authority Area that directly results in the inability of the resource to deliver all or a portion of the Resource Adequacy Capacity identified in the resource's Supply Plan to the CAISO Balancing Authority Area. The Scheduling Coordinator for a Non-Resource-Specific System Resource that provides Resource Adequacy Capacity is required to provide to the CAISO notice of the Forced Outage or Constraint within sixty (60) minutes after becoming aware of the circumstance. The Scheduling Coordinator for a Non-Resource-Specific System Resource that provides Resource Adequacy Capacity shall promptly provide information requested by the CAISO to enable the CAISO to review the Forced Outage or Constraint and its impact on the ability of the resource to deliver Resource Adequacy Capacity to the CAISO Balancing Authority Area.

DMM shall identify and notify FERC's Office of Enforcement staff of instances in which the reporting of the Forced Outage or Constraint may require investigation. DMM is to make a non-public referral to FERC in all instances where DMM has reason to believe that the reporting of the Forced Outage or Constraint constitutes a Market Violation other than those Market Violations identified in Section 11.1.3 of Appendix P. While DMM need not be able to prove that a Market Violation has occurred, DMM is to provide sufficient credible information to warrant further investigation by FERC. Once DMM has obtained sufficient credible information to warrant referral to the Commission, DMM is to immediately refer the matter to FERC and desist from independent action related to the alleged Market Violation. This does not preclude DMM from continuing to monitor for any repeated instances of the activity by the same or other

entities, which would constitute new Market Violations. DMM is to respond to requests from FERC for any additional information in connection with the alleged Market Violation it has referred.

#### 9.3.10.7 Other Balancing Authority Areas

The CAISO shall make all reasonable efforts to coordinate Outages involving other Balancing Authority Areas or affecting an Intertie, import or export capability not under the Operational Control of the CAISO to the extent that they may affect the reliability of the CAISO Controlled Grid.

## 9.4 Outage Coordination for New Facilities

### 9.4.1 Coordination by CAISO

The procedure to energize and place in service any new or relocated piece of equipment, connected to the CAISO Controlled Grid, must be set out by the Operator or Connected Entity in a written procedure and coordinated by the CAISO.

### 9.4.2 Types of Work Requiring Coordination

The types of work which the CAISO will coordinate includes any new addition, replacement or modification to the CAISO Controlled Grid, including:

(a) transmission lines from part of the CAISO Controlled Grid;

(b) equipment including circuit breakers, transformers, disconnects, reactive devices, wave traps, forming part of the CAISO Controlled Grid;

(c) Generating Unit Interconnections; and

(d) protection and control schemes, including RAS, SCADA, EMS, or AGC.

### 9.4.3 Uncomplicated Work

When line rearrangements and/or station equipment work is uncomplicated and easily understood, the CAISO may determine that the work can be accomplished using Outages approved in accordance with Section 9.3.6. The CAISO will make this determination in coordination with the respective requesting Operator or Connected Entity.

### 9.4.4 Special Procedures for More Complex Work

#### 9.4.4.1 Responsibilities for Preparation

In cases to which 9.4.3 does not apply, it is the responsibility of the requesting Operator or Connected Entity to prepare a written procedure to enable the CAISO to approve Outages in a manner that enables

the necessary work to proceed. The CAISO must approve the procedure.

#### 9.4.4.2 Information to be Provided to the CAISO

The written procedure must be received by the CAISO a minimum of four (4) weeks prior to the start of procedure. Adequate drawings will be attached to the procedure to help clarify the work being performed and the Outages that will be required to complete the work must be specified. The procedure shall include all of the information referred to on the CAISO Website.

#### 9.4.4.3 Approval to the Procedure

Upon receipt of the procedure and drawings referred to in Section 9.4.4.2, the CAISO will review the procedure and notify the Operator or Connected Entity of any required modifications. The CAISO may, at its discretion, require changes to and more detail to be inserted in the procedure. The requesting Operator or Connected Entity will consult with other entities likely to be affected and will revise the procedure, following any necessary or appropriate discussions with the CAISO to reflect the requirements of the CAISO. Following the CAISO approval, an approved copy of the procedure will then be transmitted to the Operator or Connected Entity and the other entities likely to be affected.

#### 9.4.4.4 Changes to Procedure

Once the procedure is approved by the CAISO, any modifications to the procedure will require the requesting Operator or Connected Entity to notify the CAISO with as much lead time as possible of the recommended changes. The modified procedure will then have to be approved by the CAISO in accordance with Section 9.4.4.2 and 9.4.4.3.

#### 9.4.4.5 Approval of Work Requiring Coordination

No work can begin pursuant to any approved procedures unless approved by the CAISO.

### 9.5 Information About Outages

#### 9.5.1 Approved Maintenance Outages

The CAISO and all Operators shall develop procedures to keep a record of Approved Maintenance Outages as they are implemented and to report the completion of Approved Maintenance Outages. Such records are available for inspection by Operators and Connected Entities at the CAISO. Only those records pertaining to the equipment or facilities owned by the relevant Operator or Connected Entity will be made available for inspection at the CAISO, and such records will only be made available provided

notice is given in writing to the CAISO fifteen (15) days in advance of the requested inspection date.

### 9.5.2 Publication to Website

The CAISO shall publish on the CAISO Website a list of all Generating Units that have been reported to the CAISO pursuant to the CAISO Tariff or contract as undergoing Outages, together with the Generating Unit's PMax, the amount of the curtailment, the name of its Scheduling Coordinator, and other non-confidential information about these Generating Units as CAISO determines.

## 9.6 Facility Power

The facility owner shall remain solely and directly responsible for the performance of all maintenance work, whether on energized or de-energized facilities, including all activities related to providing a safe working environment.

## 9.7 Multi-Stage Generating Resources Outages

Participating Generators of Multi-Stage Generating Resources shall report Outages in accordance with the Outage reporting requirements in Section 9 for the Generating Unit and for each MSG Configuration, as applicable. In addition, to the extent that the responsible Scheduling Coordinator modifies the registered Multi-Stage Generating Resource's characteristics as provided in Section 27.8.3, the Participating Generator for the Multi-Stage Generating Resource shall modify any information or reports previously submitted pursuant to this Section 9 to account for any registered status and characteristic changes as soon as possible after receiving notice from the CAISO acceptance of the registered status or characteristics changes and no later than two (2) business days prior to the date on which the Section 27.8.3 changes are expected to be in effect.

# 10. Metering

## 10.1 General Provisions

An entity seeking to provide or process Energy, Demand, or Ancillary Services in the CAISO Markets must provide the CAISO with Meter Data. Based upon its eligibility and election, an entity provides the CAISO with either (a) Revenue Quality Meter Data as a CAISO Metered Entity or (b) Settlement Quality Meter Data as a Scheduling Coordinator Metered Entity. Pursuant to Section 10.2, the CAISO directly polls CAISO Metered Entities' certified revenue quality meters to acquire Revenue Quality Meter Data. Pursuant to Section 10.3, Scheduling Coordinators for Scheduling Coordinator Metered Entities collect and provide the CAISO with Settlement Quality Meter Data.

### 10.1.1 Role of the CAISO

The CAISO is responsible for establishing and maintaining the Revenue Meter Data Acquisition and Processing System (RMDAPS) and the Settlement Quality Meter Data Systems (SQMDS). RMDAPS will acquire Revenue Quality Meter Data for use in the CAISO's Settlement and billing process, and SQMDS acquires Scheduling Coordinators' Settlement Quality Meter Data. The CAISO is also responsible for the following for CAISO Metered Entities:

(a) setting standards and procedures for the registration, certification, auditing, testing and maintenance of revenue quality meters and Meter Data servers; and

(b) establishing procedures for the collection, security, validation and estimation of Meter Data.

### 10.1.2 Meter Data Retention by the CAISO

The CAISO will maintain the effective Revenue Quality Meter Data and Settlement Quality Meter Data provided to it, as well as the effective Settlement Quality Meter Data it produces, for a period of 18 months on site at the CAISO's facilities and for a period which, at least, allows for the re-run of data as required by this CAISO Tariff and any adjustment rules of the Local Regulatory Authority governing the Scheduling Coordinators and their End-Use Customers and FERC. The CAISO will, on reasonable notice, provide a Scheduling Coordinator with access to Settlement Quality Meter Data (actual or Scheduling Coordinator estimated) provided that the Scheduling Coordinator requesting access represented the entity for which that data was provided at the time the data was provided to the CAISO.

### 10.1.3 Netting

CAISO Metered Entities and Scheduling Coordinator Metered Entities may net Station Power only to the extent allowed by the Local Regulatory Authority and as provided below.

#### 10.1.3.1 Permitted Netting

CAISO Metered Entities and Scheduling Coordinators may, when providing Meter Data to the CAISO, net kWh or MWh values for output and Station Power electrically connected at the same point, provided that the resource is on-line and producing sufficient output to serve all of its Station Power. Where permitted by the Local Regulatory Authority, CAISO Metered Entities and Scheduling Coordinators may, when providing Metered Data to the CAISO, include Station Power within the resource's wholesale Demand or output below zero (for dispatches to charge a storage resource, for example).

#### 10.1.3.2 Prohibited Netting

CAISO Metered Entities or Scheduling Coordinators may not net values for output and Load that is not Station Power. CAISO Metered Entities or Scheduling Coordinators that serve third party Load connected to a resource's auxiliary system must add that third party Load to the resource or Generating Unit's output. Where a resource's Load or Station Power is served via a distribution line that is separate from the switchyard where the resource is connected, that resource and its Load and/or Station Power will not be considered to be electrically connected at the same point. The CAISO Metered Entity may add that third party Load to the resource's output either by means of a hard wire local meter connection between the metering systems of the third party Load and the resource or by requesting the CAISO to use RMDAPS to perform the addition. Scheduling Coordinators representing Scheduling Coordinator Metered Entities that serve third party Load connected to the auxiliary system of a resource must ensure that those Scheduling Coordinator Metered Entities add the Energy consumed by such third parties to output so as to ensure proper settlement of the gross output. The CAISO Metered Entity or the Scheduling Coordinator must ensure that the third party Load has Metering Facilities that meet the standards referred to in this Section 10 and the Business Practice Manuals.

#### 10.1.3.3 Permitted Netting for a Net Scheduled Generating Unit or a QF

A Generating Unit that is a QF subject to an Existing QF Contract is subject to the revenue metering requirements set forth in the Existing QF Contract for the QF and is not subject to the revenue metering

requirements of Section 10. A QF Generating Unit that is not operating under the terms of an Existing QF Contract is subject to the metering requirements of Section 10 prohibiting the net metering of Generation and Load, except if it is subject to a Net Scheduled PGA. A Generating Unit that is a QF or a CHP Resource and that operates under the terms of a Net Scheduled PGA is eligible for net metering treatment. Notwithstanding Section 10.1.3.2, a Participating Generator with a Net Scheduled PGA may net the value for the Generation produced by each Net Scheduled Generating Unit listed in its Net Scheduled PGA and the value for the Demand of the Self-provided Load that is (i) served by the Net Scheduled Generating Unit and (ii) electrically located on the same side of the Point of Demarcation. The Participating Generator with a Net Scheduled PGA may satisfy the provisions of Section 10 for the installation of revenue metering by installing Metering Facilities at the Point of Demarcation; provided that the installed Metering Facilities satisfy the technical, functional, and performance requirements for Metering Facilities set forth in Section 10 and the applicable Business Practice Manual.

**10.1.3.4 Storage Resources**

Pursuant to Section 10.1, storage resources must provide the CAISO with either (a) Revenue Quality Meter Data as a CAISO Metered Entity or (b) Settlement Quality Meter Data as a Scheduling Coordinator Metered Entity. Storage resources participating in the CAISO markets may not charge their resources pursuant to a CAISO wholesale rate except to provide Energy or Ancillary Services to the CAISO Markets upon discharge. To ensure that storage resources do not incur wholesale charges from the CAISO duplicative of any retail charges:

(a) CAISO Metered Entities' revenue quality meters must be installed and programmed to exclude any retail Meter Data.

(b) Scheduling Coordinator Metered Entities' SQMD Plans must describe how the Metered Entity's metering arrangement or Validation, Estimation, and Editing procedure prevents commingling retail and CAISO Meter Data.

Nothing in this Section 10.1.3.4 should be interpreted as prohibiting a CAISO storage resource's ability to participate in retail markets or net its Station Power from output pursuant to Section 10.1.3.2. Effective October 1, 2020, for any storage resource where the Utility Distribution Company or retail utility verifies in writing to the CAISO that it is unable or unwilling to net out from its retail billing any energy

purchases associated with the storage resource's charging pursuant to CAISO settlement, the CAISO will not settle the storage resource's negative Energy for charging. Scheduling Coordinators for such a storage resource must still include negative Energy for charging in the storage resource's Meter Data.

### 10.1.4 Meter Service Agreements

A CAISO Metered Entity shall enter into a Meter Service Agreement for CAISO Metered Entities with the CAISO. A Scheduling Coordinator representing a Scheduling Coordinator Metered Entity shall enter into a Meter Service Agreement for Scheduling Coordinators. If a CAISO Metered Entity is also a Scheduling Coordinator, it shall be treated as a CAISO Metered Entity for the purposes of this Section 10 and will be required to enter into a Meter Service Agreement for CAISO Metered Entities. A CAISO Metered Entity will not be required to enter into a Meter Service Agreement for Scheduling Coordinators unless it represents any Scheduling Coordinator Metered Entities. A Meter Service Agreement for Scheduling Coordinators entered into by a CAISO Metered Entity shall only apply to those Scheduling Coordinator Metered Entities that the CAISO Metered Entity represents; the Meter Service Agreement for Scheduling Coordinators shall not apply to the CAISO Metered Entity other than in its capacity as Scheduling Coordinator for those Scheduling Coordinator Metered Entities.

### 10.1.5 Access to Meter Data

The CAISO has complete authority over all rights of access to (and has authority to deny access to) the CAISO's RMDAPS and Settlement Quality Meter Data Systems including servers (where used), interface equipment, and software needed to collect the relevant information for Settlement, billing and related purposes. Each Market Participant acknowledges this CAISO authority as a condition of CAISO Controlled Grid service and participation. For CAISO Metered Entities, authority over the sealing of meters, and all related Metering Facilities, shall reside solely with the CAISO for all CAISO designated Meter Points, regardless of any remote electronic access that a CAISO Metered Entity or its Scheduling Coordinator may have provided to third parties, except as otherwise may be required by law, FERC, any Local Regulatory Authority or other provision of this CAISO Tariff. Meter Data supplied by a CAISO Metered Entity shall be made available by the CAISO to the Scheduling Coordinator representing such CAISO Metered Entity at the time the Meter Data was provided and the other authorized users identified in its Meter Service Agreement for CAISO Metered Entities, but shall not be disclosed to any other third

party except as may otherwise be required by law, FERC, any Local Regulatory Authority or other provision of this CAISO Tariff. Meter Data supplied by a Scheduling Coordinator for a Scheduling Coordinator Metered Entity shall be made available by the CAISO to the Scheduling Coordinator representing such Scheduling Coordinator Metered Entity at the time the Meter Data was provided and the other authorized users identified in its Meter Service Agreement for Scheduling Coordinators, but shall not be disclosed to any other third party except as may otherwise be required by law, FERC, any Local Regulatory Authority or other provision of this CAISO Tariff. Access by third parties other than authorized users to Meter Data held by the CAISO shall be coordinated through the Scheduling Coordinator that provided the Meter Data or that is representing the relevant CAISO Metered Entity that supplied the data and shall not be obtained directly from the CAISO on any basis including, without limitation, by accessing the RMDAPS.

### 10.1.6 Failure of CAISO Facilities or System

In the event facility and/or systems failures impact the CAISO's ability to accept, collect, and process Revenue Quality Meter Data or Settlement Quality Meter Data, alternative measures may be required by the CAISO, CAISO Metered Entities, and Scheduling Coordinator Metered Entities. These measures are described in the applicable Business Practice Manual.

### 10.1.7 Provision of Statistically Derived Meter Data

A Demand Response Provider representing a Reliability Demand Response Resource or a Proxy Demand Resource may submit a written application to the CAISO for approval of a methodology for deriving Settlement Quality Meter Data for the Reliability Demand Response Resource or Proxy Demand Resource that consists of a statistical sampling of Energy usage data, in cases where interval metering is not available for the entire population of underlying service accounts for the Reliability Demand Response Resource or Proxy Demand Resource. As specified in the Business Practice Manual, the CAISO and the Demand Response Provider will then engage in written discussion which will result in the CAISO either approving or denying the application.

## 10.2 Metering for CAISO Metered Entities

CAISO Metered Entities' revenue quality meters will be directly polled by the CAISO's RMDAPS as specified in this CAISO Tariff and Business Practice Manuals.

### 10.2.1 Responsibilities of CAISO Metered Entities

#### 10.2.1.1 Duty to Provide Revenue Quality Meter Data

CAISO Metered Entities shall ensure that Revenue Quality Meter Data from their meters directly connected to the CAISO Controlled Grid or at interconnections thereto, including interconnections between utility Service Areas which have separate UFE calculations, is made available to the CAISO RMDAPS in accordance with the requirements of this Section 10 and the Business Practice Manuals.

#### 10.2.1.2 Format for Data Submission

CAISO Metered Entities must ensure that the Meter Data obtained by the CAISO directly from their revenue quality meters is raw, unedited and unaggregated Meter Data in kWh and kVarh values, as specified in the applicable Business Practice Manual. The CAISO will be responsible for the Validation, Estimation and Editing of that Meter Data in order to produce Settlement Quality Meter Data.

#### 10.2.1.3 Provision of and Access to Settlement Quality Meter Data

Scheduling Coordinators may obtain Settlement Quality Meter Data relating to the CAISO Metered Entities they represent by directly accessing the Settlement Quality Meter Data Systems as specified in the applicable Business Practice Manual.

- For CAISO Metered Entities, Revenue Quality Meter Data obtained by successfully polled meters will be validated, estimated and edited by the CAISO to produce Settlement Quality Meter Data (actual), which will be made available to Scheduling Coordinators within seven (7) Business Days from the Trading Day (T+7B) and will be used in the Initial Settlement Statement T+9B calculation.
- In the event that Revenue Quality Meter Data remains unavailable at 10:00am on the seventh (7) Business Day after the Trading Day (T+7B) due to unsuccessfully polled meters or facility and/or systems failures, the CAISO will estimate Settlement Quality Meter Data for CAISO Metered Entities for any outstanding metered Demand and/or Generation for the Initial Settlement Statement T+9B calculation as provided in Section 11.29.7.1.1.
- If the CAISO is notified in accordance with Section 10.2.13.2 that the revenue quality meter for a CAISO Metered Entity requires repair, the CAISO will produce Settlement

Quality Meter Data (actual) for that entity using the estimation procedures referred to in Section 10.2.9, which will be made available to the Scheduling Coordinator for the CAISO Metered Entity within fifty-two (52) Business Days from the Trading Day (T+52B) and will be used in the Recalculation Settlement Statement T+70B calculation.

### 10.2.2 Duty to Install and Maintain Meters

CAISO Metered Entities, at their cost, shall install and maintain, or cause to be installed and maintained, metering equipment and associated communication devices at CAISO-designated Meter Points to meet the requirements of this Section 10 and the applicable Business Practice Manuals. The CAISO may require CAISO Metered Entities to install, at the cost of CAISO Metered Entities, additional meters and relevant metering system components, including Real-Time metering, at CAISO-specified Meter Points or other locations as deemed necessary by the CAISO, in addition to those connected to or existing on the CAISO Controlled Grid at the CAISO Operations Date. In directing the addition of meters and metering system components that would impose increased costs on a CAISO Metered Entity, the CAISO shall give due consideration to whether the expected benefits of such equipment are sufficient to justify such increased costs. Nothing in this Section 10 shall preclude CAISO Metered Entities from installing additional meters, instrument transformers and associated communications facilities not deemed necessary by the CAISO at their own cost. A CAISO Metered Entity may not commence installing such additional Metering Facilities until the CAISO has approved the CAISO Metered Entity's Proposal for Installation. If a CAISO Metered Entity installs such additional metering, such metering must: (i) be installed and maintained at the CAISO Metered Entity's cost and (ii) not unduly interfere with the accuracy of any primary meter and, if that primary meter is directly polled by the CAISO, the CAISO's ability to poll directly that meter.

### 10.2.3 Metering Standards

Each CAISO Metered Entity shall ensure that each of its meters used to provide Meter Data to the CAISO complies with the meter standards and accuracy requirements for meters set forth in this CAISO Tariff and the applicable Business Practice Manuals.

### 10.2.4 Certification of Meters

Each CAISO Metered Entity that makes Meter Data available to the CAISO shall ensure that Metering

Facilities used to produce such Meter Data have been certified by the CAISO as meeting the requirements of Section 10. Certification of the relevant Metering Facilities shall only be provided upon the production of such evidence as the CAISO may reasonably require to demonstrate that the facilities in question have been documented, inspected and successfully tested by the CAISO or a CAISO Authorized Inspector for conformance to the standards and accuracy requirements referred to in the Business Practice Manuals and this Section 10. CAISO certification pursuant to this Section 10.2.4 shall not relieve the CAISO Metered Entity from the obligation to ensure that its Metering Facilities continue to remain in compliance with the requirements of this CAISO Tariff and the applicable Business Practice Manuals.

**10.2.4.1 Requesting Certification**

A CAISO Metered Entity seeking certification of its Metering Facilities shall independently engage a CAISO Authorized Inspector to perform certification of its Metering Facilities. A CAISO Metered Entity may request the CAISO to perform the certification of its Metering Facilities if it would be impractical or impossible for that CAISO Metered Entity to engage a CAISO Authorized Inspector to perform the certification. The CAISO may refuse any such request by a CAISO Metered Entity if it is of the opinion that it is not impractical or impossible for that CAISO Metered Entity to engage a CAISO Authorized Inspector.

**10.2.4.2 Certification by the CAISO**

All requests made to the CAISO to perform the certification of Metering Facilities must be made in accordance with the certification process for Metering Facilities and technical specifications published in the Business Practice Manuals and be accompanied by the documents referred to in the applicable Business Practice Manual. If the CAISO agrees to perform the certification of Metering Facilities, the CAISO and that CAISO Metered Entity will agree the terms and conditions on which the CAISO will undertake the certification, including the assistance to be provided by the CAISO Metered Entity, the responsibility for costs and the indemnities to be provided.

**10.2.4.3 Criteria for Certification**

Subject to any exemption granted by the CAISO, the criteria for certifying the Metering Facilities of CAISO Metered Entities pursuant to the CAISO Tariff are the criteria set forth in the Business Practice Manuals.

#### 10.2.4.4 Certificate of Compliance

If the Metering Facilities satisfy the certification criteria as specified in this CAISO Tariff and in the Business Practice Manuals (after taking into account any exemptions to the certification criteria granted by the CAISO), the CAISO will issue a Certificate of Compliance of those Metering Facilities to the CAISO Metered Entity.

Subject to any exemption granted by the CAISO under this CAISO Tariff, the CAISO will not accept Revenue Quality Meter Data from a CAISO Metered Entity unless that Revenue Quality Meter Data is produced by Metering Facilities that are certified in accordance with this CAISO Tariff and the CAISO Metered Entity has a current Certificate of Compliance.

#### 10.2.4.5 Obligation to Maintain Certification

CAISO Metered Entities must ensure that their Metering Facilities continue to comply with the certification criteria referred to in the CAISO Tariff and the Business Practice Manuals.

#### 10.2.4.6 Revocation of Certification

The CAISO may revoke in full or in part any Certificate of Compliance if:

(a) it has reasonable grounds to believe that all or some of the Metering Facilities covered by that Certificate of Compliance no longer meet the certification criteria for Metering Facilities contained in the CAISO Tariff and the Business Practice Manuals; and

(b) it has given written notice to the relevant CAISO Metered Entity stating that it does not believe that the identified Metering Facilities meet the certification criteria (including the reasons for that belief) and that CAISO Metered Entity fails to satisfy the CAISO, within the time period specified in the CAISO's notice, that the Metering Facilities meet the certification criteria.

If the CAISO revokes in full or part a Certificate of Compliance, the relevant CAISO Metered Entity may seek recertification of the relevant Metering Facilities by requesting certification. Such request must indicate that it relates to Metering Facilities in respect of which the CAISO has previously revoked a Certificate of Compliance.

#### 10.2.4.7 Changes to Certified Metering Facilities

The CAISO's approval must be obtained before any modifications or changes are made to any Metering Facilities of a CAISO Metered Entity which have been certified pursuant to the CAISO Tariff. The CAISO may, at its discretion, require those Metering Facilities to be recertified.

### 10.2.5 CAISO Authorized Inspectors

#### 10.2.5.1 Published List of Inspectors

The CAISO will publish on the CAISO Website, for informational purposes only, a list of the CAISO Authorized Inspectors and details of the procedure for applying to become a CAISO Authorized Inspector.

#### 10.2.5.2 Current Certificates

It is the responsibility of the relevant CAISO Metered Entity to ensure that any inspector it engages to undertake the certification of its Metering Facilities is a CAISO Authorized Inspector at the time of inspection.

### 10.2.6 Metering Communications

The CAISO's RMDAPS shall collect and process Revenue Quality Meter Data made available by CAISO Metered Entities pursuant to Meter Service Agreements for CAISO Metered Entities and the applicable Business Practice Manual. Revenue Quality Meter Data for CAISO Metered Entities shall be made available to the CAISO's RMDAPS as specified in the applicable Business Practice Manual directly by the CAISO Metered Entity. Revenue Quality Meter Data on the CAISO's RMDAPS may be provided or made accessible to other CAISO systems as deemed necessary by the CAISO, subject to the CAISO being satisfied that such access by such authorized uses and/or systems will not adversely affect the security of the data held by the CAISO. CAISO Metered Entities shall ensure that their Metering Facilities are compatible with the CAISO's RMDAPS for these purposes. The CAISO may, at its discretion, exempt a CAISO Metered Entity from the requirement to make Revenue Quality Meter Data directly available to the CAISO's RMDAPS, for example, where the installation of communication links is unnecessary, impracticable or uneconomic. The CAISO shall maintain the RMDAPS and remedy any faults occurring in such system. Scheduling Coordinators and other authorized users requiring Settlement Quality Meter Data for CAISO Metered Entities may obtain such data by accessing the CAISO's Settlement Quality Meter Data Systems in accordance with the CAISO Tariff and applicable Business Practice Manuals.

Scheduling Coordinators and other authorized users shall not poll the CAISO revenue meters for any other purpose, unless specifically authorized in the Meter Service Agreement for CAISO Metered Entities.

### 10.2.7 Format of Meter Data

CAISO Metered Entities shall make available to the CAISO's RMDAPS Revenue Quality Meter Data meeting the format requirements of this Section 10 and in accordance with the Business Practice Manual standards and other information reasonably required by the CAISO.

### 10.2.8 Security and Meter Data Validation Procedures

The applicable Business Practice Manuals shall specify, in such detail as the CAISO may deem necessary, the Meter Data security and validation procedures that the CAISO shall apply to the Revenue Quality Meter Data made available by each CAISO Metered Entity. The CAISO may base the security and validation procedures on historical data or an appropriate alternative data source. The CAISO shall correct or replace or cause to be corrected or replaced inaccurate or missing data. The procedure may include data correction and substitution algorithms which shall estimate, substitute and flag such inaccurate or missing data. Any necessary correction or replacement shall be approved by the CAISO prior to the data being sent to the CAISO for Settlement purposes. Security and validation measures for existing Tie Point Meters shall be consistent with existing arrangements with the operators in adjacent Balancing Authority Areas. Any additional measures or changes to the existing arrangements shall only be implemented upon mutual agreement of the CAISO and the operator in the adjacent Balancing Authority Area.

#### 10.2.8.1 Meter Site Security

Metering Facilities of CAISO Metered Entities and secondary devices that could have any impact on the performance of the Metering Facilities must be sealed by the CAISO or a CAISO Authorized Inspector.

#### 10.2.8.2 Third Party Access to Meters

##### 10.2.8.2.1 Local Access

If a CAISO Metered Entity desires to grant a third party local access to its revenue quality meters, those meters must be equipped with CAISO approved communications capabilities in accordance with the applicable Business Practice Manuals. The CAISO may set the password and any other security requirements for locally accessing the revenue quality meters of CAISO Metered Entities so as to ensure

the security of those meters and their Revenue Quality Meter Data. The CAISO may alter the password and other requirements for locally accessing those meters from time to time as it determines necessary. The CAISO must provide CAISO Metered Entities with the current password and other requirements for locally accessing their revenue quality meters. CAISO Metered Entities must not give a third party other than its Scheduling Coordinator local access to its revenue quality meters or disclose to that third party the password to its revenue quality meters without the CAISO's prior approval as set forth in a schedule to the Meter Service Agreement for CAISO Metered Entities which shall not unreasonably be withheld. CAISO Metered Entities will be responsible for ensuring that a third party approved by the CAISO to access its revenue quality meters only accesses the data it is approved to access and that the data are only accessed for the purposes for which the access was approved.

#### 10.8.2.2.2 Remove Access

The CAISO may set the password and any other security requirements for remotely accessing the revenue quality meters of CAISO Metered Entities so as to ensure the security of those meters and their Revenue Quality Meter Data. The CAISO will alter the password and other requirements for remotely accessing those meters from time to time as it determines necessary. The CAISO must provide CAISO Metered Entities with the current password and other requirements for remotely accessing their revenue quality meters.

CAISO Metered Entities must not give a third party other than its Scheduling Coordinator remote access to its revenue quality meters or disclose to that third party the password to its revenue quality meters without the CAISO's prior approval as set forth in a schedule to the Meter Service Agreement for CAISO Metered Entities which shall not unreasonably be withheld. CAISO Metered Entities will be responsible for ensuring that a third party approved by the CAISO to access its revenue quality meters only accesses the data it is approved to access and that the data are only accessed for the purposes for which the access was approved.

#### 10.2.8.3 Third Party Access Withdrawn

If, in the reasonable opinion of the CAISO, access granted to a third party by a CAISO Metered Entity in any way interferes or impedes with the CAISO's ability to poll any revenue quality meter, the CAISO may require that CAISO Metered Entity to immediately withdraw any access granted to a third party.

#### 10.2.8.4 SQMDS Security

The CAISO will provide any needed information to entities that are permitted to access SQMDS. The CAISO must maintain the security and integrity of Revenue Quality Meter Data brought into SQMDS.

### 10.2.9 Validation, Estimation and Editing of Meter Data

Subject to any exemption granted by the CAISO, Revenue Quality Meter Data that CAISO Metered Entities provide to the CAISO will be processed using the Validation, Estimation and Editing procedures published in the Business Practice Manuals in order to produce Settlement Quality Meter Data.

#### 10.2.9.1 Obligation to Assist

At the request of the CAISO, CAISO Metered Entities shall assist the CAISO in correcting or replacing defective data and in detecting and correcting underlying causes for such defects. Such assistance shall be rendered in a timely manner so that the Settlement process is not delayed.

#### 10.2.9.2 Availability of Meter Data

Subject to any exemption granted by the CAISO, Meter Data of CAISO Metered Entities must be recorded at 5-minute intervals and will be collected in accordance with the provisions of the applicable Business Practice Manual. The CAISO may also collect Meter Data on demand as provided in the applicable Business Practice Manual.

#### 10.2.9.3 [Not Used]

#### 10.2.9.4 [Not Used]

### 10.2.10 Low Voltage Side Metering

#### 10.2.10.1 Requirement for CAISO Approval

CAISO Metered Entities may only install revenue quality meters on the low voltage side of step-up transformers if they have obtained the prior approval of the CAISO in accordance with Section 10.2.10. CAISO Metered Entities that have installed low voltage side metering, whether such installation was before or after the CAISO Operations Date, shall apply the Transformer and Line Loss Correction Factor in accordance with Section 10.2.10.4.

#### 10.2.10.2 Request for Approval

If a CAISO Metered Entity wishes to install low voltage side metering, it shall submit a written request to the CAISO. That CAISO Metered Entity must:

(a) request approval to apply the Transformer and Line Loss Correction Factor to its revenue quality meter or request approval to have the CAISO apply the Transformer and Line Loss Correction Factor;

(b) provide detailed reasons to support the request for low side metering;

(c) provide all of the information in relation to the Transformer and Line Loss Correction Factor required by the Business Practice Manuals; and

(d) any other information reasonably requested by the CAISO.

**10.2.10.3 CAISO's Grounds for Approval**

The CAISO shall approve a request made under Section 10.2.10.2 only if the CAISO is satisfied that adequate accuracy and security of Revenue Quality Meter Data obtained can be assured in accordance with Section 10.2.10. The CAISO's rejection of such a request may be referred to the CAISO ADR Procedures if, after using all reasonable good faith efforts, the CAISO and a CAISO Metered Entity are unable to reach agreement.

**10.2.10.4 Application of Transformer and Line Loss Correction Factor**

CAISO Metered Entities will apply the Transformer and Line Loss Correction Factor as set forth in the Business Practice Manuals. If the CAISO has approved a request from a CAISO Metered Entity for RMDAPS to apply the Transformer and Line Loss Correction Factor, RMDAPS will apply the Transformer and Line Loss Correction Factor set forth in the Business Practice Manuals. If the CAISO applies the Transformer and Line Loss Correction Factor, the CAISO may require the CAISO Metered Entity to pay the reasonable costs incurred by it in applying the Transformer and Line Loss Correction Factor.

**10.2.11 Audit, Testing Inspection and Certification Requirements**

CAISO Metered Entities are subject to CAISO audit, testing and certification requirements for their entire metering system(s), including all relevant communication facilities and instrument transformers. The CAISO will have the right to either conduct any audit or test it considers necessary or to witness such audit or test carried out by the CAISO Metered Entity or a CAISO Authorized Inspector engaged by the CAISO Metered Entity or the CAISO to carry out those audits or tests.

**10.2.12 Exemptions**

The CAISO has the authority to grant exemptions from certain CAISO metering standards for a CAISO

Metered Entity, as set forth in Section 10.4. A CAISO Metered Entity with a temporary exemption shall provide site specific Revenue Quality Meter Data to the CAISO in accordance with its Meter Service Agreement for CAISO Metered Entities and the CAISO Tariff. A Generating Unit that provides Regulatory Must-Take Generation with an Existing QF Contract or an Amended QF Contract that is connected directly to a Distribution System and that sells its entire output to the UDC or in the MSS in which the Generating Unit is located is not subject to the audit, testing or certification requirements of the CAISO.

**10.2.13 Maintenance of Metering Facilities**

**10.2.13.1 Duty to Maintain Metering Facilities**

CAISO Metered Entities must maintain their Metering Facilities so that those Metering Facilities continue to meet the standards prescribed by the CAISO Tariff and the applicable Business Practice Manuals.

**10.2.13.2 Repairs**

If a revenue quality meter of a CAISO Metered Entity requires repairs to ensure that it operates in accordance with the requirements of the CAISO Tariff and the applicable Business Practice Manuals, the CAISO Metered Entity must immediately notify the CAISO of the need for repairing that meter and must ensure that those repairs are completed in accordance with the applicable Business Practice Manual. During periods for which no Revenue Quality Meter Data is available from a meter which has a current Certificate of Compliance, the CAISO will create and provide access to Settlement Quality Meter Data for use in the Settlement Statement calculations, as provided in Section 10.2.1.3.

**10.2.14 Installation of Additional Metering Facilities**

**10.2.14.1 CAISO Requirement to Install Additional Metering**

If the CAISO determines that there is a need to install additional Metering Facilities on the CAISO Controlled Grid pursuant to Section 10.2.2, it will notify the relevant CAISO Metered Entity of that need and will process the CAISO Metered Entity's Proposal for Installation in accordance with the applicable Business Practice Manual.

**10.2.14.2 CAISO Metered Entities' Election to Install Additional Metering**

In accordance with Section 10.2.2, a CAISO Metered Entity may choose to install additional metering, including Backup Meters. If a CAISO Metered Entity installs such additional metering, such metering must, unless the CAISO agrees otherwise:

(a) be installed and maintained at the CAISO Metered Entity's cost;

(b) be located on the CAISO Metered Entity's side of any primary meter; and

(c) not interfere with the accuracy of any primary meter and, if that primary meter is directly polled by the CAISO, the CAISO's ability to directly poll that meter.

Any Meter Data produced by any such additional metering may be used by the CAISO for Settlement and billing purposes in the event of the failure, or during tests or repairs of, the primary meter provided that such additional metering has a current Certificate of Compliance, the CAISO Metered Entity gives the CAISO prior verbal notice that such meter will be used and the period for which it will be used and, if the primary meter is directly polled by the CAISO, the additional metering must also be capable of being directly polled by the CAISO.

### 10.3 Metering For Scheduling Coordinator Metered Entities

#### 10.3.1 Applicability

The requirements set forth in this Section 10.3 shall apply only to Scheduling Coordinators representing Scheduling Coordinator Metered Entities. The requirements in Section 10.1 also apply to Scheduling Coordinators. If a Scheduling Coordinator Metered Entity is also a Scheduling Coordinator, it shall be treated as a Scheduling Coordinator for the purposes of Section 10 and any references to entities that such a Scheduling Coordinator represents shall be deemed to include that Scheduling Coordinator itself.

#### 10.3.2 Responsibilities of Scheduling Coordinators and the CAISO

##### 10.3.2.1 Duty to Provide Settlement Quality Meter Data

Scheduling Coordinators shall be responsible for: (i) the collection of Meter Data for the Scheduling Coordinator Metered Entities it represents; (ii) the provision of Settlement Quality Meter Data to the CAISO; and (iii) ensuring that the Settlement Quality Meter Data supplied to the CAISO meets the requirements of Section 10. Scheduling Coordinators shall provide the CAISO with Settlement Quality Meter Data for all Scheduling Coordinator Metered Entities served by the Scheduling Coordinator no later than the day specified in Section 10.3.6 or the day specified in Section 10.3.6.4, as applicable. Settlement Quality Meter Data for these Scheduling Coordinator Metered Entities shall be an accurate measure of the actual production or consumption of Energy by each Scheduling Coordinator Metered Entity in each Settlement Period.

#### 10.3.2.1.1 Requirements of SCs Representing Demand Response Providers

Each Scheduling Coordinator for a Demand Response Provider shall aggregate the Settlement Quality Meter Data of the underlying Proxy Demand Resource or Reliability Demand Response Resource to the level of the registration configuration of the Proxy Demand Resource or Reliability Demand Response Resource in the Demand Response System. Settlement Quality Meter Data for these Scheduling Coordinator Metered Entities shall be (1) an accurate measure of the actual consumption of Energy by each Scheduling Coordinator Metered Entity in each Settlement Period; (2) the resulting Demand Response Energy Measurement calculated using a performance evaluation methodology for Proxy Demand Resources or Reliability Demand Response Resources; or (3) statistically derived meter data pursuant to Section 10.1.7.

#### 10.3.2.1.2 Requirements for SCs Representing Distributed Energy Resource Aggregations

Each Scheduling Coordinator for a Distributed Energy Resource Aggregation shall aggregate the Settlement Quality Meter Data of the underlying Distributed Energy Resources to the level of the Distributed Energy Resources Aggregation provided in the Distributed Energy Resource Provider Agreement. Settlement Quality Meter Data for these Scheduling Coordinator Metered Entities shall be an accurate measure of the actual production or consumption of Energy by each Distributed Energy Resource that comprises a Distributed Energy Resource Aggregation in each Settlement Period. Scheduling Coordinators shall retain Settlement Quality Meter Data of each Distributed Energy Resource comprising a Distributed Energy Resource Aggregation for a period of at least three (3) years and shall provide this information to the CAISO as may be reasonably requested from time to time by the CAISO.

### 10.3.2.2 Format for Data Submission

Scheduling Coordinators shall submit Settlement Quality Meter Data to the Settlement Quality Meter Data System for the Scheduling Coordinator Metered Entities they represent using one of the CAISO's approved Meter Data Exchange Formats. Subject to any exemption granted by the CAISO, Scheduling Coordinators must ensure that Settlement Quality Meter Data submitted to the CAISO is in intervals of five (5) minutes for EIM Interties, Loads providing Ancillary Services, and Generators providing Ancillary Services. Scheduling Coordinators for EIM Participating Resources or for Generators not providing Ancillary Services may elect to submit Meter Data in 5-minute or 15-minute intervals. Scheduling

Coordinators for all other Scheduling Coordinator Metered Entities may elect to submit Meter Data in 5-minute, 15-minutes, or 60-minute intervals. Elections will be recorded by the CAISO, and may not be deviated from or revised except by application. The elected interval may not be a granularity lower than what may be programmed on the Scheduling Coordinator Metered Entity's physical meter(s) or as specified in the applicable Business Practice Manual.

Each Scheduling Coordinator shall submit Settlement Quality Meter Data in kWh or MWh values for all of the Scheduling Coordinator Metered Entities for which it is responsible, aggregated by the applicable market or resource level. Scheduling Coordinators are not required to submit values in the absence of Supply, Demand, or other participation in the CAISO Markets.

### 10.3.3 Loss Factors

Where a Scheduling Coordinator Metered Entity is connected to a UDC's Distribution System, the responsible Scheduling Coordinator shall adjust the Meter Data by an estimated Distribution System loss factor to derive an equivalent CAISO Controlled Grid level measure. Such estimated Distribution System loss factors shall be approved by the relevant Local Regulatory Authority prior to their use.

### 10.3.4 Load Profile Authorization

Scheduling Coordinators shall be responsible for obtaining all necessary authorizations of Approved Load Profiles from Local Regulatory Authorities having jurisdiction over the use of profiled Meter Data and shall use Approved Load Profiles in any Settlement process in which Load profiles are used to allocate consumption to Settlement Periods.

### 10.3.5 Communication of Meter Data

Each Scheduling Coordinator shall submit Settlement Quality Meter Data for Scheduling Coordinator Metered Entities to the CAISO in accordance with Section 11.29.24.1, Section 37.5, and applicable Business Practice Manuals.

### 10.3.6 Settlement Quality Meter Data Submission

Scheduling Coordinators shall submit to the CAISO Actual Settlement Quality Meter Data or Scheduling Coordinator Estimated Settlement Quality Meter Data, as provided in Section 10.3.6.2(a), for Scheduling

Coordinator Metered Entities they represent for each Settlement Period in an Operating Day if the total Expected Energy for the Scheduling Coordinator Metered Entity is not zero for a Settlement Period. Scheduling Coordinators must submit the Settlement Quality Meter Data according to the timelines established in Section 10.3.6.2 and the CAISO Payments Calendar and as provided in the applicable Business Practice Manual. Scheduling Coordinators must also submit Settlement Quality Meter Data (actual and Scheduling Coordinator estimated) on demand as provided in the applicable Business Practice Manual.

**10.3.6.1 [Not Used]**

**10.3.6.2 Timing of SQMD Submission for Calculation of Initial Settlement Statement T+9B**

Scheduling Coordinators must submit Actual Settlement Quality Meter Data or Estimated Settlement Quality Meter Data for the Scheduling Coordinator Metered Entities they represent to the CAISO no later than 10:00am on the seventh (7) Business Day after the Trading Day (T+7B) for the Initial Settlement Statement T+9B calculation. Scheduling Coordinators can submit Estimated Settlement Quality Meter Data for Demand Response Resources.

(a) In the absence of Actual Settlement Quality Meter Data, Scheduling Coordinators may submit Scheduling Coordinator Estimated Settlement Quality Meter Data using interval metering when available, sound estimation practices, and other available information including, but not limited to bids, schedules, forecasts, temperature data, operating logs, recorders, and historical data. Scheduling Coordinator Estimated Settlement Quality Meter Data must be a good faith estimate that reasonably represents Demand and/or Generation quantities for each Settlement Period.

(b) When Actual Settlement Quality Meter Data or Scheduling Coordinator Estimated Settlement Quality Meter Data is not received by the CAISO for a Scheduling Coordinator Metered Entity within seven (7) Business Days from the Trading Day (T+7B), the CAISO will estimate the entity's Settlement Quality Meter Data for any outstanding metered Demand and/or Generation, including Demand Response Resources, for use in the Initial Settlement Statement T+9B calculation, as provided in Section 11.29.7.1.

**10.3.6.3 Timing of SQMD Submission for Recalculation Settlement Statement T+70B**

Scheduling Coordinators must submit Actual Settlement Quality Meter Data for the Scheduling Coordinator Metered Entities they represent to the CAISO no later than midnight on the fifty-second (52) Business Day after the Trading Day (T+52B) for the Recalculation Settlement Statement T+70B calculation. A Scheduling Coordinator that timely submits Actual Settlement Quality Meter Data for the Initial Settlement Statement T+9B pursuant to Section 10.3.6.2 may submit revised Actual Settlement Quality Meter Data for the Recalculation Settlement Statement T+70B no later than the fifty-second (52) Business Day after the Trading Day pursuant to this Section.

(a) When Actual Settlement Quality Meter Data is not received by the CAISO for a Scheduling Coordinator Metered Entity by fifty-two (52) Business Days after the Trading Day (T+52B), the Scheduling Coordinator has failed to submit complete and accurate meter data and is subject to Sanction as further specified in Section 37.5.2.

(b) Any Scheduling Coordinator Estimated Settlement Quality Meter Data submitted by a Scheduling Coordinator on behalf of the Scheduling Coordinator Metered Entities it represents that is not replaced with Actual Settlement Quality Meter Data by fifty-two (52) Business Days after the Trading Day (T+52B) has failed to submit complete and accurate meter data and is subject to Sanction as further specified in Section 37.5.2. In the absence of Actual Settlement Quality Meter Data, Scheduling Coordinator Estimated Settlement Quality Meter Data will be used in the Recalculation Settlement Statements.

(c) The CAISO will not estimate a Scheduling Coordinator Metered Entity's Settlement Quality Meter Data for any outstanding metered Demand and/or Generation for use in a Recalculation Settlement Statement T+70B calculation. Any previous CAISO Estimated Settlement Quality Meter Data that the Scheduling Coordinator does not replace with Actual Settlement Quality Meter Data by fifty-two (52) Business Days after the Trading Day (T+52B) will be set to zero. A Scheduling Coordinator that fails to replace CAISO Estimated Settlement Quality Meter Data with Actual Settlement Quality Meter Data by fifty-two (52) Business Days after the Trading Day (T+52B) has failed to provide complete and accurate Settlement Quality Meter Data and is subject to Sanction as further specified in Section 37.5.2.

#### 10.3.6.4 Timing of SQMD Submission for Recalculation Settlement Statement T+11M

Scheduling Coordinators may submit Actual Settlement Quality Meter Data for the Scheduling Coordinator Metered Entities they represent to the CAISO for use in Recalculation Settlement Statement T+11M up to two hundred and fourteen Business Days after the Trading Day (T+214B). Scheduling Coordinators submitting Actual Settlement Quality Meter Data after fifty-two Business Days after the Trading Day (T+52B) have failed to provide complete and accurate Settlement Quality Meter Data and are subject to Sanction as further specified in Section 37.5.2. Any Actual Settlement Quality Meter Data that is submitted by a Scheduling Coordinator after T+214B, will be rejected by the CAISO and not used in settlement calculations.

#### 10.3.6.5 Submission of Actual Settlement Quality Meter Data or Scheduling Coordinator Estimated Settlement Quality Meter Data for Reliability Demand Response Resources that Provide Demand Response Services in Real-Time

Each Scheduling Coordinator for a Demand Response Provider representing a Reliability Demand Response Resource that provides Demand Response Services only in Real-Time shall submit Actual Settlement Quality Meter Data or Scheduling Coordinator Estimated Settlement Quality Meter Data for the Reliability Demand Response Resource by 10:00am of the seventh Business Day after the Trading Day (T+7B) on which the Demand Response Services were provided, including Actual Settlement Quality Meter Data or Scheduling Coordinator Estimated Settlement Quality Meter Data for a Demand Response Event and for the forty-five (45) calendar days preceding the Trading Day for use in the CAISO's calculation of the Customer Load Baseline pursuant to Section 4.13.4.

#### 10.3.6.6 Auditing by CAISO for Demand Response Providers

To ensure accuracy and compliance with the CAISO tariff, the CAISO will have the right to audit Meter Data submitted by Scheduling Coordinators to establish performance evaluation methodologies pursuant to Section 4.13.4 or Demand Response Energy Measurements pursuant to Section 11.6.

### 10.3.7 Meter Standards

Each Scheduling Coordinator, in conjunction with the relevant Local Regulatory Authority, shall ensure that each of its Scheduling Coordinator Metered Entities connected to and served from the Distribution System of a UDC shall be metered by a revenue meter complying with any standards of the relevant

Local Regulatory Authority or, if no such standards have been set by that Local Regulatory Authority, the metering standards set forth in this CAISO Tariff and as further detailed in the Business Practice Manuals.

#### 10.3.7.1 SQMD Plan

For Scheduling Coordinator Metered Entities that were not participating as such before April 10, 2017, or that repower, modify their Meter Data interval, or add generating capacity after April 10, 2017, the Scheduling Coordinators must submit an SQMD Plan to ensure that the Scheduling Coordinator will submit and maintain the integrity of Meter Data submitted to the CAISO for that Scheduling Coordinator Metered Entity. The SQMD Plan will describe how the Scheduling Coordinator will collect, maintain, aggregate, and submit Settlement Quality Meter Data in accordance with CAISO Tariff and, where applicable, Local Regulatory Authority metering and settlement standards. SQMD Plans will include detailed descriptions of the following, as applicable, for each Scheduling Coordinator Metered Entity or Scheduling Coordinator Metered Entity aggregation or calculation:

(1) The type, programming, and configuration of all associated metering devices;

(2) How the Scheduling Coordinator or its agent will collect, validate, aggregate, and submit associated Meter Data;

(3) Single-line diagrams with professional engineer stamps (or equivalent) depicting the physical elements and relationships among the metering device(s);

(4) Any calculation or algorithm to derive Settlement Quality Meter Data from the metering device(s);

(5) Process for aggregating individual Scheduling Coordinator Metered Entities and/or Resource IDs; and

(6) Plans and schedules to perform regular tests of the metering devices and audit the associated Meter Data pursuant to CAISO Tariff requirements.

Proxy Demand Resources and Reliability Demand Response Resources may satisfy this requirement through the demand response registration process.

#### 10.3.7.2 CAISO Review of SQMD Plan

The CAISO must approve a Scheduling Coordinator Metered Entity's SQMD Plan before the Scheduling Coordinator may submit Bids on its behalf in the CAISO Markets.

#### 10.3.7.3 SQMD Plan Modifications

Scheduling Coordinator Metered Entities may propose for CAISO approval modifications to approved SQMD Plans. So long as the Scheduling Coordinator Metered Entity remains in compliance with its existing SQMD Plan, or where the proposed modification intends to bring the Scheduling Coordinator Metered Entity into compliance, the associated Scheduling Coordinator may continue to submit Meter Data for settlement while the CAISO reviews the SQMD Plan modifications.

#### 10.3.7.4 SQMD Plan Audits and CAISO Remedies

In addition to the CAISO's audit rights pursuant to this Section 10, the CAISO may perform audits or inspections to ensure that Scheduling Coordinators and Scheduling Coordinator Metered Entities have implemented and comply with their SQMD Plans. Based on an audit, inspection, or other information, the CAISO will determine whether the Scheduling Coordinator Metered Entity must modify its SQMD Plan or is subject to penalty under the CAISO Tariff, including conversion to a CAISO Metered Entity.

#### 10.3.7.5 Annual Affirmation

In addition to the auditing and testing requirements contained in its SQMD Plan, on an annual basis the Scheduling Coordinator Metered Entity must perform a self-assessment and affirm to the CAISO, in writing, that it has implemented and continues to comply with its SQMD Plan. Where the Scheduling Coordinator Metered Entity performs a self-assessment and determines that it will not be able to affirm its compliance to the CAISO, the Scheduling Coordinator Metered Entity will describe the issue to the CAISO and its plan to remedy the issue. The associated Scheduling Coordinator may continue to submit Meter Data for settlement while the CAISO reviews the plan to remedy the issue. Proxy Demand Resources and Reliability Demand Response Resources that have satisfied the SQMD Plan requirement through the demand response registration process are not required to submit an annual affirmation.

### 10.3.8 Access to Meter Data

The CAISO has complete authority over rights of access to (and has authority to deny access to) its Settlement Quality Meter Data Systems by Scheduling Coordinators and Scheduling Coordinator Metered Entities for Settlement, billing and related purposes. Each Scheduling Coordinator, on behalf of itself and Scheduling Coordinator Metered Entities that it serves or represents, acknowledges this CAISO authority as a condition of access to the CAISO Controlled Grid. Meter Data of a Scheduling Coordinator Metered Entity remains the property of that Scheduling Coordinator Metered Entity and shall be made available to third parties only with its express permission or the permission of its Scheduling Coordinator or as otherwise required by law or provided for in this CAISO Tariff.

**10.3.9 Certification of Meters**

Scheduling Coordinators shall ensure that revenue meters and related Metering Facilities of those Scheduling Coordinator Metered Entities whom they represent are certified in accordance with any certification criteria prescribed by the relevant Local Regulatory Authority or, if no such criteria have been prescribed by that Local Regulatory Authority, certified in accordance with this Section 10. Scheduling Coordinators shall upon request of the CAISO supply promptly copies of all certificates issued by the relevant Local Regulatory Authority. Scheduling Coordinators of a Distributed Energy Resource Aggregation for which no Local Regulatory Authority criteria have been prescribed for Metering Facilities may self-certify that their Metering Facilities meet the default certification criteria set forth in the CAISO Business Practice Manual. The End-Use Meter of a Scheduling Coordinator Metered Entity in place as of the CAISO Operations Date is deemed to be certified as in compliance with this CAISO Tariff and Business Practice Manuals. Once certified, meters for Scheduling Coordinator Metered Entities need not be recertified provided such meters are maintained so as to meet the standards and accuracy requirements prescribed by any relevant Local Regulatory Authority or, if no such standards have been prescribed by that Local Regulatory Authority, such requirements as referred to in the Business Practice Manuals and this Section 10. Recertification is not required by the CAISO upon an election by a Scheduling Coordinator Metered Entity to change its Scheduling Coordinator from which it takes service.

**10.3.10 Requirement for Audit and Testing**

**10.3.10.1 Audit and Testing by Scheduling Coordinator**

At least every two years, each Scheduling Coordinator shall (or engage an independent, qualified entity to

conduct) audit and test the Metering Facilities of the Scheduling Coordinator Metered Entities that it represents and the Meter Data provided to the Scheduling Coordinator in order to ensure compliance with all applicable requirements of any relevant Local Regulatory Authority and the Scheduling Coordinator Metered Entity's SQMD Plan. Scheduling Coordinators shall undertake any other actions that are reasonably necessary to ensure the accuracy and integrity of the Settlement Quality Meter Data (actual or Scheduling Coordinator estimated) provided by them to the CAISO.

#### 10.3.10.2 Audit and Testing by CAISO

Subject to any applicable Local Regulatory Authority requirements, the Metering Facilities and data handling and processing procedures of Scheduling Coordinators and Scheduling Coordinator Metered Entities are subject to audit and testing by the CAISO or a CAISO Authorized Inspector. Subject to any applicable Local Regulatory Authority requirements, the CAISO will have the right to either conduct any audit or test it considers necessary or to witness such audit or test carried out by the Scheduling Coordinator, Scheduling Coordinator Metered Entity or a CAISO Authorized Inspector engaged by the Scheduling Coordinator, Scheduling Coordinator Metered Entity or the CAISO to carry out those audits or tests.

### 10.3.11 Scheduling Coordinator to Ensure Certification

If the relevant Local Regulatory Authority has not prescribed any certification criteria for the Metering Facilities of a Scheduling Coordinator Metered Entity, the Scheduling Coordinator representing that Scheduling Coordinator Metered Entity must promptly notify the CAISO in writing that no such criteria have been prescribed. Where applicable, this notification may be included in the Scheduling Coordinator Metered Entity's SQMD Plan. Consistent with Section 10.3.9, Scheduling Coordinators of a Distributed Energy Resource Aggregation for which no Local Regulatory Authority criteria have been prescribed for Metering Facilities may self-certify that their Metering Facilities meet the default certification criteria set forth in the CAISO Business Practice Manual or their SQMD Plan.

#### 10.3.11.1 Confirmation of Certification

On the written request of the CAISO, each Scheduling Coordinator must give the CAISO written confirmation that the Metering Facilities of each Scheduling Coordinator Metered Entity that it represents are certified in accordance with either the criteria of the relevant Local Regulatory Authority, the

Scheduling Coordinator Metered Entity's SQMD Plan, and/or the criteria prescribed by the CAISO Tariff and Business Practice Manuals within five (5) Business Days of receiving a request from the CAISO.

#### 10.3.11.2 Deemed Certification

Revenue quality meters of Scheduling Coordinator Metered Entities that are subject to certification and which were installed and operational as of the CAISO Operations Date will be deemed to be certified for the purposes of the CAISO Tariff. Revenue quality meters that have been fully installed as of the CAISO Operations Date but which are not operational as of that date because they were undergoing maintenance or repairs will also be deemed to be certified in accordance with the CAISO Tariff.

### 10.3.12 [Not Used]

### 10.3.13 [Not Used]

### 10.3.14 Approval By LRA Of Security And Validation Procedures

Scheduling Coordinators shall be responsible for obtaining any necessary approval of the relevant Local Regulatory Authority to its proposed security, validation, editing and estimation procedures. The CAISO will not perform any Validation, Estimation and Editing on the Settlement Quality Meter Data it receives from Scheduling Coordinators.

#### 10.3.14.1 UDC and TO Agreements

Each Scheduling Coordinator shall be responsible for obtaining any necessary consent from the UDCs on whose Distribution Systems or the Participating TOs on whose transmission facilities the Scheduling Coordinator has Scheduling Coordinator Metered Entities as is necessary to give effect to the procedures governing Meter Data validation and security and inspection and testing of Metering Facilities. Scheduling Coordinators must verify with the relevant UDC and/or Participating TO the identity of each Scheduling Coordinator Metered Entity they represent and must notify the UDC and/or Participating TO of any discrepancies of which they become aware. Where UDCs or Participating TOs serve adjacent service areas and have elected to submit Settlement Quality Meter Data at the intratie(s), they will be required to agree on the metering configurations used for submitting Meter Data to the CAISO. If they cannot reach an agreement, the intratie(s) will be required to use revenue quality meters directly polled by the CAISO pursuant to Section 10.2.

### 10.3.15 [Not Used]

**10.3.16 [Not Used]**

**10.3.17 Meter Identification**

If a Scheduling Coordinator Metered Entity is required to identify its revenue quality meters by the relevant:

(a) Local Regulatory Authority; or

(b) UDC,

then the Scheduling Coordinator representing that Scheduling Coordinator Metered Entity must, at the CAISO's request, provide the CAISO with a copy of that information within five (5) Business Days of a request by the CAISO in a format to be prescribed by the CAISO.

If a Scheduling Coordinator Metered Entity is not required by either the relevant Local Regulatory Authority or UDC to identify its revenue quality meters, the Scheduling Coordinator representing that Scheduling Coordinator Metered Entity shall maintain an accurate record of the revenue quality meter of each of the Scheduling Coordinator Metered Entities that it represents from time to time. The record maintained by Scheduling Coordinators must include the information set out in the applicable Business Practice Manuals. The Scheduling Coordinator must, at the CAISO's request, provide the CAISO with a copy of any information contained in that record within five (5) Business Days of a request by the CAISO in a format to be prescribed by the CAISO.

**10.4 Exemptions**

**10.4.1 Authority to Grant Exemptions**

In addition to the specific exemptions granted under the CAISO Tariff, the CAISO has the authority under the CAISO Tariff to grant exemptions from compliance with certain requirements imposed by the CAISO Tariff.

**10.4.2 Guidelines for Granting Exemptions**

The CAISO will use the following guidelines when considering applications for exemptions from compliance with the provisions of Section 10.

(a) Publication of Guidelines

The CAISO will publish on the CAISO Website the general guidelines that it may use when considering applications for exemptions so as to achieve consistency in its reasoning and decision making and to give

prospective applicants an indication of whether an application will be considered favorably.

(b) Publication of Exemption Applications

The CAISO will promptly publish on the CAISO Website a description of each application it receives for an exemption.

(c) Publication of Decision

The CAISO will publish on the CAISO Website details of whether the application was approved or rejected by it and, if the CAISO considers it appropriate, the reasons for rejecting the application.

(d) Class Exemption

In addition to exemptions granted to individual entities, the CAISO may grant exemptions that will apply to a class of entities. The CAISO may grant class exemptions whether or not it has received any application for an exemption. The CAISO will publish details of the class exemptions it has granted on the CAISO Website.

### 10.4.3 Procedure for Applying for Exemptions

All applications to the CAISO for exemptions from compliance with the requirements of Section 10 must be made in writing and will be processed by the CAISO in accordance with the provisions of the applicable Business Practice Manual. The CAISO may require the applicant to provide additional information in support of its application. The applicant must provide such additional information to the CAISO within five (5) Business Days of receiving the request for additional information or within such other period as the CAISO may notify to the applicant. If the CAISO makes a request for additional information more than five (5) Business Days after the date on which it received the application, the CAISO will have an additional five (5) Business Days after receiving that additional information in which to consider the application. If the applicant does not provide the additional information requested, the CAISO may refuse the application in which case it will notify the applicant that its application has been rejected for failure to provide the additional information.

### 10.4.4 Permitted Exemptions

#### 10.4.4.1 Exemptions from Providing Meter Data Directly to RMDAPS

The CAISO has the authority under Section 10.2.6 to exempt CAISO Metered Entities from the requirement to make Meter Data directly available to the CAISO via RMDAPS. The applicable Business

Practice Manual sets forth specific exemptions available. In addition, the CAISO may, at its discretion, grant such an exemption where it considers the requirement to install communication links (or related facilities) between the CAISO Metered Entity and CAISO's secure communication system to allow the CAISO to directly poll the meters of that CAISO Metered Entity would be unnecessary, impractical or uneconomic.

#### 10.4.4.2 Exemptions from Meter Standards

The CAISO has the authority under Section 10.2.12 to exempt CAISO Metered Entities from the requirement to comply with the meter standards referred to in the CAISO Tariff. The applicable Business Practice Manual sets forth specific exemptions available.

# 11. CAISO Settlements and Billing

## 11.1 Settlement Principles

The CAISO shall calculate and account for credits and debits, and settle with Business Associates in accordance with the following principles:

(a) The CAISO shall be responsible for calculating Settlement balances for any penalty or dispute in accordance with the CAISO Tariff, and any transmission Access Charge to UDCs or MSSs and Participating TOs;

(b) The CAISO shall create and maintain computer back-up systems, including off-site storage of all necessary computer hardware, software, records and data at an alternative location that, in the event of a Settlement system breakdown at the primary location of the day-to-day operations of the CAISO, could serve as an alternative location for day-to-day Settlement operations within a reasonable period of time;

(c) The CAISO shall retain all Settlement data records for a period which, at least, allows for the re-run of data as required by this CAISO Tariff and any adjustment rules of the Local Regulatory Authority governing the Scheduling Coordinators and their End-Use Customers and FERC;

(d) The CAISO shall calculate, account for, and settle all debits and credits based on the Settlement Quality Meter Data it has received, or, if Settlement Quality Meter Data is not available, based on the best available information or estimate it has received in accordance with the provisions in Section 10 and the applicable Business Practice Manuals; and

(e) Day-Ahead Schedules, RUC Awards and AS Awards shall be settled at the relevant LMP, RUC Price, and ASMPs, respectively. FMM Schedules shall be settled at the relevant FMM LMP at the relevant Scheduling Point. FMM AS Awards shall be settled at the relevant FMM ASMP. All Dispatch Instructions shall be deemed delivered and settled at relevant Real-Time Market prices. Deviations from Dispatch Instructions shall be settled as Uninstructed Deviations.

### 11.1.1 CAISO as Counterparty

(a) The CAISO shall be the contracting counterparty, in its own name and right, to each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO for any purchase or sale of any product or service, or for any other transaction, that is financially settled by the CAISO under the CAISO Tariff, except under the following circumstances:

(i) The CAISO shall not be the contracting counterparty for transactions that procure Station Power for a Generating Unit located in Mexico or for transactions that procure Energy or Ancillary Services within Mexico; for such transactions, the CAISO will not act as principal but instead as agent for and on behalf of the relevant Scheduling Coordinators.

(ii) [Not Used]

(iii) The CAISO's status as contracting counterparty is not intended to affect the tax-exempt status of transmission facilities or entitlements subject to the CAISO's operational control.

Bids for Supply submitted by a Scheduling Coordinator for any resource funded by Municipal Tax Exempt Debt are not, and shall not be construed or deemed to be, a sale to the CAISO or other transaction that is financially settled by the CAISO to the extent that the load serving entity that holds entitlements to the resource for which such Bids for Supply are submitted is using its Entitlements to serve native load during that interval. For purposes of this subsection only, a load serving entity is using its entitlements to a resource to serve native load under the following conditions: (A) For a Load Serving Entity that is serving demand inside the CAISO Balancing Authority Area, if the total MW volume of such Bids for Supply that clear in any settlement interval is less than or equal to the metered CAISO Demand for that Settlement Interval for the Load Serving Entity that holds entitlements to the resources for which such Bids for Supply are submitted; or (B) for load serving entities that serve demand outside of the CAISO Balancing Authority Area by Wheeling Through or exporting from the CAISO Balancing Authority Area, if the total MW volume of such Bids for Supply that clear in any Settlement Interval is less than or equal to the total of wheel throughs or exports that are used to serve the native load

for the load serving entity that holds entitlements to the resources for which such Bids for Supply are submitted during that Settlement Interval. Nothing in the two preceding sentences shall affect credit requirements under Section 12 of the CAISO Tariff or settlements charges or credits issued pursuant to any section of the CAISO Tariff. The details of such Bids for Supply may be included in Settlement Statements by the CAISO for purposes of calculating settlement charges and credits other than for Supply.

(b) The purchase or sale of any products or service, or any other transaction, which is financially settled by the CAISO under the CAISO Tariff shall be deemed to occur within the State of California. To the extent permitted by applicable law, any warranties provided by the sellers to the CAISO of such products or services, whether express, implied, or statutory, are hereby passed to the Business Associates who purchase such products or services from the CAISO on a "pass through basis" and to the extent not passed through, any such warranties are hereby assigned by the CAISO to the purchasing Business Associates. Sellers to the CAISO and Business Associates acknowledge that warranties on such products are limited to that offered by the seller to the CAISO and will exist, if at all, solely between the seller to the CAISO and the purchasing Business Associate. AS BETWEEN THE PURCHASING BUSINESS ASSOCIATE AND THE CAISO AS COUNTERPARTY, NO EXPRESS OR IMPLIED WARRANTIES ARE MADE BY THE CAISO REGARDING THE PRODUCTS AND SERVICES SOLD BY THE CAISO AS COUNTERPARTY, AND ANY SUCH PRODUCTS AND SERVICES ARE PROVIDED ON AN "AS IS" AND "AS AVAILABLE" BASIS. THE CAISO MAKES NO WARRANTY OR REPRESENTATION THAT THE PRODUCTS OR SERVICES WILL BE UNINTERRUPTED OR ERROR-FREE. PURCHASING BUSINESS ASSOCIATES HEREBY WAIVE, AND THE CAISO HEREBY DISCLAIMS, ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, AND NON-INFRINGEMENT. THE CAISO DOES NOT WARRANT THAT THE PRODUCTS AND SERVICES OFFERED WILL MEET

CUSTOMER'S REQUIREMENTS. NO ORAL OR WRITTEN INFORMATION OR ADVICE GIVEN BY THE CAISO OR ANY AUTHORIZED REPRESENTATIVE OF THE CAISO SHALL CREATE A WARRANTY OR IN ANY WAY INCREASE THE SCOPE OF ANY PASS THROUGH OR ASSIGNED WARRANTY. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES IN CERTAIN CIRCUMSTANCES, SO THE ABOVE EXCLUSION APPLIES ONLY TO THE EXTENT PERMITTED BY APPLICABLE LAW.

**11.1.2 [Not Used]**

**11.1.3 [Not Used]**

**11.1.4 [Not Used]**

**11.1.5 [Not Used]**

## 11.2 Settlement of Day-Ahead Market Transactions

All transactions in the IFM and RUC as specified in the Day-Ahead Schedule, AS Awards and RUC Awards, respectively, are financially binding and will be settled based on the Day-Ahead LMP, ASMP or RUC Price for the relevant Location for the specific resource or transaction identified for the Bid. The CAISO will settle the costs of Demand, Energy, Imbalance Reserves, Reliability Capacity, or Ancillary Services as separate Settlement debits and credits for each Settlement Period as appropriate.

### 11.2.1 IFM Settlements

#### 11.2.1.1 IFM Payments for Supply of Energy and Imbalance Reserves

For each Settlement Period for which the CAISO clears Energy transactions in the IFM, the CAISO shall credit the relevant Scheduling Coordinator for the MWh quantity of Supply of Energy from all Generating Units, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources, Distributed Energy Resource Aggregations and System Resources in an amount equal to the IFM LMP at the applicable PNode or Aggregated PNode multiplied by the MWh quantity specified in the Day-Ahead Schedule for Supply (which consists of the Day-Ahead Scheduled Energy).

For each Settlement Period for which the CAISO clears Imbalance Reserves transactions in the IFM, the CAISO pays Scheduling Coordinators representing Generating Units, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources, Distributed Energy Resource Aggregations and

System Resources the product of the: (a) Locational IRU Price or Locational IRD Price at the applicable PNode or Aggregated PNode; and (b) MW quantity of the awarded IRU or IRD.

For each Settlement Period for which the CAISO clears Imbalance Reserves transactions in the IFM, the CAISO pays the congestion revenue from Transmission Constraints binding in the up and down deployment scenarios for Imbalance Reserves calculated per Section 31.3.1.6.4 to the EDAM Entity Scheduling Coordinator to distribute per the EDAM Entity's OATT or, for the CAISO BAA, as specified in Section 11.2.4.

#### 11.2.1.1.1 Greenhouse Gas in the IFM

Scheduling coordinators for resources that receive an IFM attribution to serve Demand in a GHG Regulation Area will receive a GHG settlement in the applicable Settlement Period. The GHG settlement is the product of the IFM attribution to serve Demand in a specific GHG Regulation Area and the applicable IFM Marginal GHG Cost for that respective GHG Regulation Area. For a resource within a GHG Regulation Area that does not receive an attribution to served Demand in another GHG Regulation Area, the cost of GHG compliance is embedded in the resource's LMP.

### 11.2.1.2 IFM Charges for Demand at LAPS

For each Settlement Period that the CAISO clears Energy transactions in the IFM, except as specified in Section 30.5.3.2 and except for Participating Loads, which shall be subject to the charges specified in 11.2.1.3, the CAISO shall charge Scheduling Coordinators for the MWh quantity of Demand scheduled at an individual LAP in the Day-Ahead Schedule, in an amount equal to the IFM LMP for the applicable LAP multiplied by the MWh quantity scheduled in the Day-Ahead Schedule at the relevant LAP. The applicable Default LAP IFM LMP is as described in Section 27.2.2. For Scheduling Coordinators whose Demand scheduled at the individual LAP is subject to an upward price correction as specified in Section 11.21, the CAISO will use the Price Correction Derived LMP to settle the MWh quantity of Demand scheduled in the Day-Ahead Schedule at the relevant LAP.

### 11.2.1.3 IFM Charges for Demand by Participating Loads, Including Aggregated Participating Load

For each Settlement Period that the CAISO clears Energy transactions in the IFM for Demand by Participating Loads, the CAISO shall charge the Scheduling Coordinators an amount equal to the MWh

quantity of Demand scheduled in the Day-Ahead Schedule for the relevant Participating Load at the PNode (or Custom LAP, in the case of Aggregated Participating Load), multiplied by the IFM LMP at that PNode (or Custom LAP, in the case of Aggregated Participating Load). The Custom LAP Price is determined as described in Section 27.2.2. For Scheduling Coordinators whose Demand scheduled at the individual PNode or Custom LAP is subject to an upward price correction as specified in Section 11.21, the CAISO will use the Price Correction Derived LMP to settle the MWh quantity scheduled in the Day-Ahead Schedule for that Scheduling Coordinator at the relevant PNode or Custom LAP.

#### 11.2.1.4 IFM Charges for Energy Exports at Scheduling Points

For each Settlement Period that the CAISO clears Energy transactions in the IFM, the CAISO shall charge Scheduling Coordinators for the Energy export MWh quantity at individual Scheduling Points scheduled in the Day-Ahead Schedule, an amount equal to the IFM LMP for the applicable Scheduling Point multiplied by the MWh quantity at the individual Scheduling Point scheduled in the Day-Ahead Schedule. For Scheduling Coordinators whose exports scheduled at the individual Scheduling Points is subject to an upward price correction as specified in Section 11.21, the CAISO will use the Price Correction Derived LMP to settle the MWh quantity of Energy exports scheduled in the Day-Ahead Schedule at the relevant Scheduling Point.

#### 11.2.1.5 IFM Congestion Credit for ETCs, TORs, and Converted Rights

For all Points of Receipt and Points of Delivery pairs associated with a valid and balanced ETC Self-Schedule, TOR Self-Schedule or Converted Rights Self-Schedule, the CAISO shall not impose any debit or credit to the Scheduling Coordinator related to the MCC associated with such Self-Schedules. For each Scheduling Coordinator, the CAISO shall determine the applicable IFM Congestion Credit, which can be positive or negative, as the sum of the products of the quantity scheduled in the Day-Ahead Schedule and the MCC at each eligible Point of Receipt and Point of Delivery associated with the valid and balanced portions of that Scheduling Coordinator's ETC, TOR, and Converted Rights Self-Schedules.

#### 11.2.1.6 Allocation of IFM Marginal Losses Surplus Credit

On each Settlement Statement, the CAISO shall apply the IFM Marginal Losses Surplus Credit to each Scheduling Coordinator for the period of each Settlement Statement. For each Settlement Period, the

IFM Marginal Losses Surplus Credit shall be the product of the IFM Marginal Losses Surplus rate ($/MWh) and the MWh of Measured Demand for the relevant Scheduling Coordinator net of that Scheduling Coordinator's (1) Measured Demand associated with a TOR Self-Schedule subject to the IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules as provided in Section 11.2.1.7; and (2) Measured Demand associated with a TOR Self-Schedule subject to the RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules as provided in Section 11.5.7.2.

The IFM Marginal Losses Surplus rate shall be equal to the total IFM Marginal Losses Surplus ($) divided by the sum of the total MWh of Measured Demand in the CAISO Balancing Authority Area for the relevant Settlement Period net of (1) any Measured Demand associated with a TOR Self-Schedule subject to the IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules as provided in Section 11.2.1.7; and (2) any Measured Demand associated with a TOR Self-Schedule subject to the RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules as provided in Section 11.5.7.2.

**11.2.1.7 IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules**

For all Points of Receipt and Points of Delivery pairs associated with a valid and balanced TOR Self-Schedule submitted pursuant to an existing agreement between the TOR holder and either the CAISO or a Participating TO as specified in Section 17.3.3, the CAISO shall not impose any charge or issue any credit to the Scheduling Coordinator related to the MCL associated with such TOR Self-Schedules and will instead impose any applicable losses charges as specified in the existing agreement between the TOR holder and either the CAISO or a Participating TO applicable to the relevant TOR. In any case in which the TOR holder has an existing agreement regarding its TORs with either the CAISO or a Participating TO, the provisions of the agreement shall prevail over any conflicting provisions of this Section 11.2.1.7. Where the provisions of this Section 11.2.1.7 do not conflict with the provisions of the agreement, the provisions of this Section 11.2.1.7 shall apply to the subject TORs. For each Scheduling Coordinator, the CAISO shall determine the applicable IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules, which can be positive or negative, as the sum of the products of the quantity scheduled in the Day-Ahead Schedule and the MCL at each eligible Point of Receipt and Point of Delivery associated with the valid and balanced portions of that Scheduling Coordinator's TOR Self-Schedules.

#### 11.2.1.8 Charges for Unavailable Imbalance Reserves

As provided in this Section 11.2.1.8, the CAISO charges resources with Imbalance Reserves Awards when some portion of the Imbalance Reserves Award is unavailable to the CAISO. Charges assessed pursuant to this Section 11.2.1.8 for unavailable IRU and IRD awards are subtracted from the separate allocations of IRU and IRD costs, respectively, pursuant to Section 11.2.1.9.

##### 11.2.1.8.1 Charges for Unavailable IRU awards

A resource's unavailable IRU quantity is the amount, if any, by which the resource's Day-Ahead Schedule for Supply plus Ancillary Services Awards other than for Regulation Down plus the IRU award exceeds the resource's Upper Economic Limit as adjusted by applicable Outages in the FMM. Provided, however, the unavailable IRU quantity is capped at the IRU award minus the Five-Minute Imbalance Reserve Quantity. The CAISO charges a resource with an unavailable IRU quantity the product of the unavailable quantity and the higher of the FMM Flexible Ramp Up Price or the resource's Locational IRU Price.

##### 11.2.1.8.2 Charges for Unavailable IRD awards

A resource's unavailable IRD quantity is the amount, if any, by which the resource's Lower Economic Limit as adjusted by applicable Outages in the FMM exceeds the resource's Day-Ahead Schedule for Supply minus the Ancillary Services Awards for Regulation Down minus the IRD award. Provided, however, the unavailable IRD quantity is capped at the IRD award minus the Five-Minute Imbalance Reserve Quantity. The CAISO charges a resource with an unavailable IRD quantity the product of the unavailable quantity and the higher of the FMM Flexible Ramp Down price or the resource's Locational IRD Price.

##### 11.2.1.8.3 Priority of Charges When a Resource is Unavailable for both Imbalance Reserves and Reliability Capacity

For Settlement Periods in which a resource receives both a RUC Award and Imbalance Reserves Award and is unavailable in the RTM, or only bids a portion of its combined award in the RTM, the CAISO first applies charges per Section 11.2.2.2 to the quantity of unavailable Reliability Capacity and then applies charges per this Section 11.2.1.8 to the remaining unavailable capacity. If a resource has an Ancillary Services Award, RUC Award, and Imbalance Reserves Award in the same Settlement Period and is unavailable in the RTM, then the CAISO first determines any unavailable quantities pursuant to this

Section 11.2.1.8.3 and then applies the rescission rules in Section 11.10.9.

### 11.2.1.9 Allocation of Imbalance Reserves Costs

The CAISO allocates the separate costs of IRU and IRD through distinct two-tiered allocations. For IRU, the costs allocated include the direct costs of procuring IRU, as reflected by the summation of the product of each Imbalance Reserves Award for IRU and its Locational IRU Price, and the congestion revenue calculated per Section 31.3.1.6.4 from transmission constraints binding in the up deployment scenario for Imbalance Reserves. For IRD, the costs allocated include both the direct costs, as reflected by the summation of the product of each Imbalance Reserves Award for IRD and its Locational IRD Price, of procuring IRD and the congestion revenue calculated per Section 31.3.1.6.4 from transmission constraints binding in the down deployment scenario for imbalance reserves.

A Scheduling Coordinator's allocation of IRU costs in tier 1 is the product of its IRU tier 1 cost allocation quantity, as specified in Section 11.2.1.9.1, and its IRU tier 1 cost allocation price, as specified in Section 11.2.1.9.3. A Scheduling Coordinator's allocation of IRD costs in tier 1 is the product of its IRD tier 1 cost allocation quantity, as specified in Section 11.2.1.9.2, and its IRD tier 1 cost allocation price, as specified in Section 11.2.1.9.4.

The CAISO allocates the costs of Imbalance Reserves procurement not recovered through the IRU or IRD tier 1 cost allocations to Scheduling Coordinators in Tier 2 in proportion to their metered Demand in the interval for which the CAISO procured the Imbalance Reserves.

The CAISO excludes from tier 1 and tier 2 allocations for both IRU and IRD the valid and balanced portion of ETC and TOR self-schedules based on the market (IFM or RTM) in which the Scheduling Coordinator reflected the ETC or TOR self-schedules. The CAISO does not exclude from the Imbalance Reserves cost allocations any quantities above the valid and balanced portion of ETC or TOR self-schedules.

#### 11.2.1.9.1 IRU Tier 1 Cost Allocation Quantity

A Scheduling Coordinator's total IRU tier 1 cost allocation quantity is the sum of the tier 1 quantities for the entities it represents specified as follows.

The IRU tier 1 cost allocation quantity for Generating Units, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources, Distributed Energy Resource Aggregations and

System Resources that are not scheduled as a Wheeling Through transaction is the higher of: (a) zero; and (b) the difference between the Energy portion of the Day-Ahead Schedule and the FMM Upper Economic Limit (as adjusted by Outages, a reduction in VER forecast from the Day-Ahead Market to FMM, or the E-Tag transmission profile used by the Real-Time Market).

For non-Participating Load, the IRU tier 1 cost allocation quantity is its negative Uninstructed Imbalance Energy quantity, if any.

The IRU tier 1 cost allocation quantity for an entity exporting Energy, excluding wheel through transactions, is the higher of: (a) zero; and (b) the difference between the FMM self-schedule and Energy portion of the Day-Ahead Schedule.

#### 11.2.1.9.2 IRD Tier 1 Cost Allocation Quantity

A Scheduling Coordinator's total IRD tier 1 cost allocation quantity is the sum of the tier 1 quantities for the entities it represents, specified as follows.

The IRD tier 1 cost allocation quantity for Generating Units, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources, Distributed Energy Resource Aggregations and System Resources that are not scheduled as a Wheeling Through transaction is the higher of: (a) zero; and (b) the difference between the FMM Lower Economic Limit (as adjusted by Outages, a reduction in VER forecast from the Day-Ahead Market to FMM, or the E-Tag transmission profile used by the Real-Time Market) and the Energy portion of the Day-Ahead Schedule.

For non-Participating Load, the IRD tier 1 cost allocation quantity is its positive Uninstructed Imbalance Energy quantity, if any.

The IRD tier 1 cost allocation quantity for an entity exporting Energy from the CAISO Balancing Authority Area is the higher of: (a) zero; and (b) the difference between the Energy portion of the Day-Ahead Schedule and the E-Tag transmission profile used by the Real-Time Market).

#### 11.2.1.9.3 IRU Tier 1 Cost Allocation Price

The IRU tier 1 cost allocation price in an interval is the lower of: (a) the total IRU cost, as adjusted by charges assessed per Section 11.2.1.8.1, divided by the total MWs of IRU procured; and (b) the total IRU cost, as adjusted by charges assessed per Section 11.2.1.8.1, divided by the total IRU tier 1 allocation quantity.

#### 11.2.1.9.4 IRD Tier 1 Cost Allocation Price

The IRD tier 1 cost allocation price in an interval is the lower of: (a) the total IRD cost, as adjusted by charges assessed per Section 11.2.1.8.2, divided by the total MWs of IRD procured; and (b) the total IRD cost, as adjusted by charges assessed per Section 11.2.1.8.2, divided by the total IRD tier 1 allocation quantity.

#### 11.2.1.9.5 Imbalance Reserves Cost Allocation to MSSs

The CAISO allocates costs of Imbalance Reserves to a MSS in the same fashion as any other Scheduling Coordinator irrespective of the MSS's election, per Section 4.9.13, of net Settlements or gross Settlements.

The CAISO allocates costs of Imbalance Reserves to a MSS that has elected, per Section 4.9.13, to Load follow with its generating resources based on the MSS's net portfolio Uninstructed Deviations in tier 1 and tier 2 of the IRU and IRD cost allocation based on the MSS's net portfolio Uninstructed Deviations.

### 11.2.2 Calculation of Hourly RUC Compensation

For each Settlement Period and resource, Scheduling Coordinators shall receive RUC Compensation, which is the sum of the RUC Availability Payment as determined pursuant to Section 11.2.2.1 and the RUC Bid Cost Recovery amount as determined in Section 11.8.3.

#### 11.2.2.1 Settlement of RUC Available Payment

Scheduling Coordinators shall receive RUC Availability Payments for all eligible capacity awarded in the RUC process. RMR Capacity is not eligible for RUC Availability Payments in the DAM. The RUC Availability Payment shall be calculated for each resource as the product of the RCU Availability Quantity and the RUC Price for RCU or the product of the RCD Availability Quantity and the RUC Price for RCD. The RUC Availability Payment amounts are allocated through the RUC Compensation Costs allocation in Section 11.8.6.5.

The CAISO provides a RUC Availability Payment to a Scheduling Coordinator for a MSS the same as any other Scheduling Coordinator irrespective of the MSS's election, per Section 4.9.13, of net Settlements or gross Settlements.

#### 11.2.2.2 Rescission of RUC Availability Payment

Rescission of all or a portion of the RUC Availability Payment for a resource as defined in Section 31.5.7

shall be settled in accordance with this Section 11.2.2.2.

#### 11.2.2.2.1 Undispatchable RUC Capacity

The CAISO rescinds the RUC Availability Payment in a Settlement Interval for Undispatchable Capacity related to Reliability Capacity.

In a settlement interval, a Generating Unit, Participating Load, Proxy Demand Resource, System Unit or System Resource has Undispatchable Capacity for RCU to the extent the Energy portion of the Day-Ahead Schedule plus Ancillary Services Awards other than for Regulation Down plus the IRU award plus the RCU award exceeds the lower of the resource's Upper Economic Limit or upper operating limit.

In a settlement interval, a Generating Unit, Participating Load, Proxy Demand Resource, System Unit or System Resource has Undispatchable Capacity for RCD to the extent the resource's Lower Economic Limit exceeds the Energy portion of the Day-Ahead Schedule minus the Ancillary Services Awards for Regulation Down minus the IRD award minus the RCD award.

The CAISO evaluates a Multi-Stage Generating Resource for Undispatchable Capacity related to Reliability Capacity for the entire Generating Unit and not for the MSG Configuration.

#### 11.2.2.2.2 [Not Used]

#### 11.2.2.2.3 Allocation of Rescinded RUC Availability Payments Due to Non-Performance

RUC Availability Payments rescinded due to Undispatchable Capacity are subtracted from the RUC Compensation Costs allocated per Section 11.8.6.5.3.

### 11.2.3 IFM Energy Charges and Payments for Metered Subsystems

#### 11.2.3.1 Gross Energy Settlement for Metered Subsystems

For Scheduling Coordinators that submit Bids for MSS Operators that have selected gross Energy Settlement, CAISO shall settle Energy, the MSS Demand and MSS Supply, in the Day-Ahead Schedules pursuant to Section 11.2.3.1.1 and 11.2.3.1.2.

#### 11.2.3.1.1 IFM Charges for MSS Demand under Gross Energy Settlement

The CAISO shall charge Scheduling Coordinators that submit Bids for MSS Operators that have selected or are subject to gross Energy Settlement an amount equal to the product of the MWh quantity of Demand internal to the MSS in its Day-Ahead Schedule at the price at the Default LAP where the MSS LAP is located.

#### 11.2.3.1.2 IFM Payments for MSS Supply under Gross Energy Settlement

The CAISO shall credit Scheduling Coordinators that submit Bids for MSS Operators that have selected or are subject to gross Energy Settlement an amount equal to the product of the MWh quantity of Supply from the MSS in its Day-Ahead Schedule at the corresponding PNode and the applicable IFM LMP.

#### 11.2.3.1.3 IFM Payments for MSSs providing Imbalance Reserves

A MSS that receives an Imbalance Reserves Award will be settled per Section 11.2.1.1 irrespective of that MSS's election under Section 4.9.13 of net or gross Settlement.

### 11.2.3.2 Net Energy Settlement for Metered Subsystems

For Scheduling Coordinators that submit Bids for MSS Operators that have selected net Energy Settlement, the CAISO shall settle the net MSS Demand and MSS Supply in the Day-Ahead Schedules pursuant to Section 11.2.3.2.1 and 11.2.3.2.2.

#### 11.2.3.2.1 IFM Charges for MSS Demand under Net Energy Settlement

The CAISO shall charge Scheduling Coordinators that submit Bids for MSS Operators that have selected net Energy Settlement an amount equal to the product of the net MSS Demand in the Day-Ahead Schedule and the IFM MSS Price. The net MSS Demand is the quantity of MSS Demand that exceeds MSS Generation for the applicable MSS.

#### 11.2.3.2.2 IFM Payment for MSS Supply under Net Energy Settlement

The CAISO shall credit Scheduling Coordinators that submit Bids for MSS Operators that have selected net Energy Settlement an amount equal to the product of the net MSS Supply in the Day-Ahead Schedule and the weighted average price of all IFM LMPs for all applicable PNodes within the relevant MSS. The net MSS Supply is the quantity of MSS Generation that exceeds the MSS Demand for the applicable MSS. The weights used to compute the weighted average LMPs shall be equal to MSS Generation scheduled in the Day-Ahead Schedule.

## 11.2.4 CRR Settlements

The CAISO will credit or debit CRR Holders as further specified in this Section 11.2.4 and its subsections.

### 11.2.4.1 Calculation of the IFM Congestion Charge

For each Settlement Period of the IFM, the CAISO will calculate the IFM Congestion Charge as the IFM MCC amount for all scheduled Demand and Virtual Demand Awards, minus the IFM MCC amount for all

scheduled Supply and Virtual Supply Awards.

The IFM MCC amount for all scheduled Demand and Virtual Demand Awards is the sum of part (a), part (b), and part (c) of this Section 11.2.4.1.

The IFM MCC amount for all scheduled Supply and Virtual Supply Awards is the sum of part (d), part (e) and part (f) of this Section 11.2.4.1.

Part (a) is the sum of the products of the IFM MCC of Energy and the total MWh of Demand scheduled in the Day-Ahead Schedule and Virtual Demand Awards at all the applicable PNodes and Aggregated Pricing Nodes for the Settlement Period.

Part (b) is the sum of the products of the MCC for the Locational IRU Price and the nodally distributed Upward Imbalance Reserves Requirement specified in Section 31.3.1.6.3.2, as adjusted by any procurement relaxation specified in Section 31.3.1.6.2.

Part (c) is the sum of the products of the MCC for the Locational IRD Price and the nodally distributed Downward Imbalance Reserves Requirement specified in Section 31.3.1.6.3.2, as adjusted by any procurement relaxation specified in Section 31.3.1.6.2.

Part (d) is the sum of the products of the IFM MCC and the total of the MWh of Supply scheduled in the Day-Ahead Schedule and the Virtual Supply Awards at all the applicable PNodes for the Settlement Period.

Part (e) is the sum of the products of the MCC for the Locational IRU Price and the IRU Awards.

Part (f) is the sum of the products of the MCC for the Locational IRD Price and the IRD Awards.

**11.2.4.1.1 [Not Used]**

**11.2.4.1.2 Calculation of Hourly CRR Congestion Fund**

The CAISO calculates an Hourly CRR Congestion Fund for every Transmission Constraint in the CAISO BAA that is congested in the IFM in a Settlement Period. The Hourly CRR Congestion Fund specific to a particular binding Transmission Constraint in a given Settlement Period is the sum of the: (a) portion of the IFM Congestion Charge in that Settlement Period attributable to congestion on the Transmission Constraint to which the Hourly CRR Congestion Fund corresponds; (b) charges specific to the Transmission Constraint calculated pursuant to Section 11.2.4.4.1; and (c) CRR credit adjustments the CAISO may make pursuant to Sections 11.2.4.6 or 11.2.4.7 that are associated with the Transmission

Constraint. Part (a) does not include funds needed to make a Congestion difference allocation to an EDAM Entity Balancing Authority Area as specified in Section 33.11.1.2.1. The Hourly CRR Congestion Fund for a Transmission Constraint in an EDAM Entity Balancing Authority Area is set to zero dollars ($0).

**11.2.4.2 Settlement Calculation for the Different CRR Types**

For the purposes of settling the various CRR Types, the CAISO will calculate the Settlement of CRRs as described in this Section 11.2.4.2. When a CRR Source or CRR Sink is a LAP, the CAISO will use the Load Distribution Factors used in the IFM to produce the LAP Price at which it will settle the CRR. When a CRR Source or CRR Sink is a Trading Hub, the CAISO will use the weighting factors used in the IFM, and in the CRR Allocation and CRR Auction processes, to produce the Trading Hub prices that it will use to settle the various CRR Types.

**11.2.4.2.1 [Not Used]**

**11.2.4.2.2 [Not Used]**

**11.2.4.3 Credits and Debits for Monthly and Annual Auctions**

The CAISO will charge CRR Holders for the Market Clearing Price for CRRs obtained through the clearing of the CRR Auction as described in Section 36.13.6. To the extent the CRR Holder purchases a CRR through a CRR Auction that has a negative value, the CAISO will retain the CRR Auction proceeds and apply them to credit requirements of the applicable CRR Holder, in accordance with Section 12.6.3 of the CAISO Tariff. The CAISO will net all credits and debits issued through this process to determine the net revenue amount. CRR Auction net revenue amounts for on-peak and off-peak usage from each CRR Auction will be separated. The CAISO will allocate CRR Auction revenues for each season coming from the annual auction uniformly across the three months comprising each season based on time of use. The CAISO will then add these on-peak and off-peak monthly amounts from the seasonal auctions to the corresponding monthly on-peak and off-peak amounts from the monthly CRR Auction for the same month to form the monthly net CRR Auction on-peak and off-peak revenues, respectively. Furthermore, the CAISO will convert these monthly net CRR Auction revenues into daily values and add them to the daily CRR Balancing Account. In particular, the daily CRR Balancing Account contribution will be the sum of: (1) the monthly net CRR Auction on-peak amount multiplied by the ratio of daily on-peak hours to monthly on-peak hours; and (2) the monthly net CRR Auction off-peak amount multiplied by the ratio of daily off-

peak hours to monthly off-peak hours.

#### 11.2.4.4 Hourly CRR Calculations, Daily CRR Settlement, and Potential Monthly Surplus Distribution Payments

##### 11.2.4.4.1 Calculating CRR Holders' Congestion-Supported Values

For each Settlement Period, the CAISO uses the funds in the Hourly Congestion Funds calculated in Section 11.2.4.1.2 to determine the Congestion-Supported Values credited and charged to CRR Holders, by first determining all Net Modeled CRR Flow quantities. The CAISO then determines whether the Net Modeled CRR Flow results in a credit or debit to the CRR Holder.

For a CRR Holder whose Net Modeled CRR Flow over a binding Transmission Constraint is in the prevailing direction, the Congestion-Supported Value is a credit equal to the ratio of that CRR Holder's prevailing Net Modeled CRR Flow over that Transmission Constraint (accounting for adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7), as compared to the sum of all CRR Holders' prevailing Net Modeled CRR Flow over that Transmission Constraint (accounting for adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7). The CAISO will not credit a CRR Holder from an Hourly CRR Congestion Fund in excess of the CRR Holder's Net Modeled CRR Flow multiplied by the Shadow Price of that binding Transmission Constraint, minus any adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7 that are allocated to that Transmission Constraint.

For a CRR Holder whose Net Modeled CRR Flow over a binding Transmission Constraint is in the counter-flow direction, the Congestion-Supported Value is a charge equal to the Net Modeled CRR Flow multiplied by the Shadow Price of that binding Transmission Constraint.

The lower bound of the sum of Congestion-Supported Values for a CRR Option across the Settlement Periods of a day is zero.

The CAISO transfers any funds in an Hourly CRR Congestion Fund associated with binding Transmission Constraints to which no CRR has a positive or negative difference between the source and sink PTDFs to the CRR Balancing Account.

Any funds remaining in an Hourly CRR Congestion Fund after all funds have been allocated to CRRs or transferred to the CRR Balancing Account for that hour are reserved for potential Daily CRR Surplus Distribution Payments or Monthly CRR Surplus Distribution Payments to CRR Holders. The funds the

CAISO holds in reserve for a CRR Holder pertaining to a Transmission Constraint are held in proportion to that CRR Holder's Net Modeled CRR Flow in that Settlement Period (accounting for adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7) relative to the Net Modeled CRR Flow over that Transmission Constraint for all CRR Holders in that Settlement Period (accounting for adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7).

#### 11.2.4.4.2 Calculating Daily CRR Surplus Payments

The CAISO allocates the funds in a Daily Congestion Fund as a Daily CRR Surplus Distribution Payment to CRR Holders that have funds reserved for them in a Daily CRR Congestion Fund pursuant to Section 11.2.4.4.1, and whose total Congestion-Supported Values pertaining to that Transmission Constraint during the day are less than the sum of the Net Modeled CRR Flow multiplied by the Shadow Price of that binding Transmission Constraint across the day (accounting for adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7). A Daily CRR Surplus Distribution Payments specific to a CRR Holder and Transmission Constraint cannot exceed the sum of the Net Modeled CRR Flow multiplied by the Shadow Price of that binding Transmission Constraint across all Settlement Periods of the day (accounting for adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7). The CAISO adds any funds remaining in a Daily CRR Congestion Fund after it has made all necessary Daily CRR Surplus Distribution Payments to that Transmission Constraint's Monthly CRR Congestion Fund.

#### 11.2.4.4.3 Monthly Clearing of the Monthly Constraint-Specific CRR Congestion Fund

The CAISO distributes the total of the Monthly CRR Congestion Fund at the end of each month. The CAISO first distributes the funds in a Monthly CRR Congestion Fund as Monthly CRR Surplus Distribution Payments to CRR Holders that have funds reserved for them in a Monthly CRR Congestion Fund pursuant to Section 11.2.4.4.1 and whose total Congestion-Supported Values pertaining to that Transmission Constraint during the month, plus the Daily CRR Surplus Distribution Payments, are less than the sum of the Net Modeled CRR Flow multiplied by the Shadow Price of that binding Transmission Constraint across all Settlement Periods of the month (accounting for adjustments made pursuant to Sections 11.2.4.6 or 11.2.4.7).

The CAISO distributes any funds remaining in a Monthly CRR Congestion Fund after it has made all required Monthly CRR Surplus Distribution Payments to Scheduling Coordinators in an amount equal to:

(a) the funds in the Monthly CRR Congestion Fund, multiplied by (b) the ratio of each Scheduling Coordinator's Measured Demand for the relevant Trading Month (net of the Scheduling Coordinator's Measured Demand associated with valid and balanced ETC or TOR Self-Schedule quantities, which IFM Congestion Credits and/or RTM Congestion Credits were provided in the same relevant Trading Month), divided by (c) the total Measured Demand for all Scheduling Coordinators for the relevant Trading Month (net of the total Measured Demand associated with valid and balanced ETC or TOR Self-Schedule quantities, which IFM Congestion Credits and/or RTM Congestion Credits were provided in the same relevant Trading Month).

#### 11.2.4.5 CRR Balancing Account

##### 11.2.4.5.1 Accumulation of CRR Balancing Account Funds

The CAISO will accumulate the daily CRR Balancing Account: (1) seasonal and monthly CRR Auction revenues as described in Section 11.2.4.3; (2) any funds in an Hourly CRR Congestion Fund associated with binding Transmission Constraints to which no CRR has a positive or negative difference between the source and sink PTDF; (3) any IFM Congestion Charges associated with Day-Ahead Ancillary Services Awards as provided in Section 11.10.1.1.1; and (4) IFM Congestion Fund Credits as specified in Section 11.2.1.5.

##### 11.2.4.5.2 Distribution of CRR Balancing Account Funds

The CAISO distributes the CRR Balancing Account to Scheduling Coordinators in an amount equal to: (a) the funds in the CRR Balancing Account, multiplied by (b) the ratio of each Scheduling Coordinator's Measured Demand for the relevant Trading Day (net of the Scheduling Coordinator's Measured Demand associated with valid and balanced ETC or TOR Self-Schedule quantities, which IFM Congestion Credits and/or RTM Congestion Credits were provided in the same relevant Trading Day), divided by (c) the total Measured Demand for all Scheduling Coordinators for the relevant Trading Day (net of the total Measured Demand associated with valid and balanced ETC or TOR Self-Schedule quantities, which IFM Congestion Credits and/or RTM Congestion Credits were provided in the same relevant Trading Day).

##### 11.2.4.5.3 Interest on CRR Balancing Account

Interest accruing due to the CRR Balancing Account will be at the CAISO's received interest rate and will be credited to each monthly CRR Balancing Account accrued interest fund, which is then allocated to

monthly Measured Demand excluding Measured Demand associated with valid and balanced ETC, TOR, or Converted Rights Self-Schedule quantities, which IFM Congestion Credits and/or RTM Congestion Credits were provided in the same month.

**11.2.4.6 Adjustment of CRR Credits and Debits Related to Virtual Awards**

In accordance with this Section 11.2.4.6, the CAISO will adjust the credits from the CRRs of a CRR Holder that is also a Convergence Bidding Entity whenever either of the following creates a significant impact on the value of the CRRs held by that entity: the CRR Holder/Convergence Bidding Entity submits Virtual Bids; or the CRR Holder/Convergence Bidding Entity reduces in the RTM an import or export awarded in a Day-Ahead Schedule. As set forth in Section 11.32, the CAISO will also adjust the credits and debits from the CRRs of a CRR Holder (regardless of whether the CRR Holder is also a Convergence Bidding Entity) where the Scheduling Coordinator representing that CRR Holder reduces in the RTM an import or export awarded in a Day-Ahead Schedule.

(a) For purposes of this Section 11.2.4.6 and the definition of Flow Impact, a reduction by a Scheduling Coordinator submitting Schedules on behalf of an entity that is a CRR Holder to an import or export Schedule in the RTM will be treated as a Virtual Award if the segment of Economic Bids (but not Self-Schedule) leading to the Schedule reduction is: at an Energy Bid price greater than the Day-Ahead Market LMP at the relevant intertie, in the case of an import; or at any Energy Bid price less than the Day-Ahead Market LMP at the relevant intertie, in the case of an export.

In addition, if the RTM Bid does not include the full MW quantity of the Day-Ahead Schedule through some combination of Economic Bid and Self-Schedule, then the MW range not covered by the RTM Bid that was included in the Day-Ahead Schedule will be treated as a Virtual Award.

For each CRR Holder subject to this Section 11.2.4.6, for each hour, and for each Transmission Constraint binding in the IFM or FMM the CAISO will calculate the Flow Impact of the Virtual Awards awarded to the Scheduling Coordinator that represents the CRR Holder. For the purposes of calculating the CRR adjustments as specified in this Section 11.2.4.6, the CAISO will include nodal MW constraints that the CAISO applies to

Eligible PNodes in the IFM pursuant to Section 30.10.

(b) The CAISO will determine the peak and off-peak hours of the day where Congestion on the Transmission Constraint was significantly impacted by the Virtual Awards awarded to the Scheduling Coordinator that represents the CRR Holder. Congestion on the Transmission Constraint will be deemed to have been significantly impacted by the Virtual Awards awarded to the Scheduling Coordinator that represents the CRR Holder if the Flow Impact passes two criteria. First, the Flow Impact must be in the direction to increase the sum of the CRR Holder's Notional CRR Values in their portfolio in that Settlement Period. Second, the Flow Impact must exceed the threshold percentage of the flow limit for the Transmission Constraint. The threshold percentage is ten (10) percent of the flow limit for each Transmission Constraint.

(c) For each peak or off-peak hour that passes both criteria in Section 11.2.4.6(b), the CAISO will compare the Transmission Constraint's impact on the Day-Ahead Market value of the CRR Holder's CRR portfolio with the Transmission Constraint's impact on the FMM value of the CRR Holder's CRR portfolio, as applicable.

(d) The CAISO will adjust the peak or off-peak period credits and debits from the CRR Holder's CRRs in the event that, over the peak or off-peak period of a day, the Transmission Constraint's contribution to the Day-Ahead Market value of the CRR Holder's CRR portfolio exceeds the Transmission Constraint's contribution to the FMM value of the CRR Holder's CRR portfolio, as applicable. The amount of the peak period adjustment will be the amount that the Transmission Constraint's contribution to the Day-Ahead Market value of the CRR Holder's CRR portfolio exceeds the Transmission Constraint's contribution to the FMM value of the CRR Holder's CRR portfolio for the peak-period hours that passed both criteria in Section 11.2.4.6(b), as applicable. The amount of the off-peak period adjustment will be the amount that the Transmission Constraint's contribution to the Day-Ahead Market value of the CRR Holder's CRR portfolio exceeds the Transmission Constraint's contribution to the FMM value of the CRR Holder's CRR portfolio for the off-peak period hours that passed both criteria in

Section 11.2.4.6(b), as applicable.

The CAISO includes all adjustments of CRR credits and debits calculated pursuant to this Section 11.2.4.6 in the Hourly CRR Congestion Fund for the applicable Transmission Constraint corresponding to the CRR credits and debits that would have been issued but for the revenue adjustments as specified in Section 11.2.4.1.2.

**11.2.4.7 Adjustment of CRR Credits and Debits Related to Schedules that Source and Sink in the Same Balancing Authority Area**

The CAISO will adjust the credits and debits from the CRRs of a CRR Holder where the Scheduling Coordinator representing that CRR Holder has submitted Bids (including Self-Schedules), in violation of Section 30.5.5 and the resulting Schedule(s) impacts the value of the CRRs in the DAM held by that CRR Holder. Such adjustment will occur if the following circumstances are all met:

(a) A portion of the E-Tag that uses the CAISO Controlled Grid relates to a Schedule in the Day-Ahead Market;

(b) The scheduled MW on the portion of the E-Tag using the CAISO Controlled Grid has a positive PTDF on a congested transmission element, where that congestion is measured in the direction of the CRR; and

(c) The CRR Holder would receive credits from CRRs on the congested transmission element.

If such circumstances occur, the CAISO adjusts the CRR credits and debits in that Settlement Period so that the additional net CRR revenue that otherwise would be earned from the congestion created by the Schedule that results from the Bids submitted in violation of Section 30.5.5 is not credited to the CRR Holder. Instead, the CAISO will add those amounts to the Hourly CRR Congestion Fund for the applicable Transmission Constraint.

**11.2.5 Payment by OBAALSE for CRRs Through CRR Allocation Process**

**11.2.5.1** Pursuant to Section 36.9, in addition to other requirements specified therein, an OBAALSE will be eligible to participate in the CRR Allocation process if such entity has made a pre-payment to the CAISO and has met the requirements in Section 36.9. The prepayment amount shall equal the MW of CRR requested times the Wheeling Access Charge associated with the Scheduling Point corresponding

to the CRR Sink times the number of hours in the period for each requested CRR MW amount. Except as provided in Section 36.9.2, such prepayment will be made three (3) Business Days in advance of the submission of CRR nominations for Monthly CRRs, Seasonal CRRs and Long Term CRRs to the CRR Allocation. Within thirty (30) days following the completion of the CRR Allocation process for Monthly CRRs, Seasonal CRRs and Long Term CRRs, the CAISO shall reimburse such OBAALSE the amount of money pre-paid for any CRRs that were not allocated to the entity.

#### 11.2.5.2 Annual Prepayment Option

For entities that are eligible and elect for the annual prepayment pursuant to Section 36.9.2, the annual prepayment will be due three (3) Business Days in advance of the submission of CRR nominations for Tier LT in the CRR Allocation process. For allocated Long Term CRRs, each of the nine subsequent annual payments must be made at the beginning of the annual CRR Allocation process for the following year.

#### 11.2.5.3 Monthly Prepayment Option

If the OBAALSE qualified for the monthly prepayment option as specified in Section 36.9.2, the OBAALSE shall make its payments consistent with the monthly prepayment schedule specified in the applicable Business Practice Manual.

#### 11.2.5.4 Treatment of Prepaid WAC Amounts

For the amount of CRRs that were allocated to the entity, the CAISO will exempt the Scheduling Coordinator for such entity from the WAC for any Real-Time Interchange Export Schedules at the Scheduling Point corresponding to the sink of each allocated CRR, on an hourly basis for the period for which the CRR is defined, until the pre-paid funds are exhausted. At the end of the period for which the CRR is defined any remaining balance will be allocated to the Participating TOs in accordance with Section 26.1.4.3. To the extent the pre-paid balance amount is exhausted prior to the end of the duration of the awarded CRR, the Scheduling Coordinator designated by the CRR Holder that has been allocated CRRs pursuant to Section 36.9 will be charged for the WAC in accordance with Section 26.1.4.

### 11.2.6 DAME Transition Period

#### 11.2.6.1 Opting In to DAME Transitional Measures

The CAISO applies DAME Transitional Measures to RA Capacity and Flexible RA Capacity provided from

Resource Adequacy Resources if the CAISO receives notice, in the form and manner specified in the Business Practice Manual, from both the resource's Scheduling Coordinator and the LSE's Scheduling Coordinator that they mutually elect for the CAISO to apply DAME Transitional Measures to the RA Capacity and Flexible RA Capacity the resource provides on behalf of the LSE.

An election for DAME Transitional Measures is tied to a specific resource/LSE pair and applies to all RA Capacity and Flexible RA Capacity shown on behalf of the LSE on a monthly Supply Plan for the resource submitted during the DAME Transition Period. The same resource may be part of multiple resource/LSE pairs subject to DAME Transitional Measures.

The CAISO applies DAME Transitional Measures to a resource/LSE pair retroactive to the effective date of this Section 11.2.6 if the Scheduling Coordinators for the resource and LSE complete the DAME Transitional Measures election process within sixty (60) days of the effective date of this Section 11.2.6. If the Scheduling Coordinators for a resource and LSE complete the DAME Transitional Measures election process for a resource/LSE pair more than sixty (60) days after the effective date of this Section 11.2.6, then the CAISO applies DAME Transitional Measures to the resource/LSE pair prospectively starting with the first Trading Day of the month after the month in which the Scheduling Coordinators completed the election process. Upon mutual consent of the Scheduling Coordinator for both the resource and LSE, a resource/LSE pair may end application of DAME Transitional Measures before the end of the DAME Transition Period. Such early termination of DAME Transitional Measures does not preclude re-electing application of DAME Transitional Measures later within the DAME Transition Period.

#### 11.2.6.2 Calculating Quantity of Overlapping Capacity in a Settlement Period

As specified in this Section 11.2.6.2, the CAISO determines in each Settlement Period how much of the RA Capacity and Flexible RA Capacity subject to DAME Transitional Measures overlaps separately with the subject resource's Imbalance Reserves Award for IRU, RUC Award for RCU, Imbalance Reserves Award for IRD, and RUC Award for RCD.

##### 11.2.6.2.1 Overlapping Capacity for IRU

The quantity of overlapping IRU is the lower of the: (1) Imbalance Reserves Award for IRU; or (2) higher of the RA Capacity or Flexible RA Capacity shown on that resource's monthly Supply Plan minus the Energy Schedule minus the Ancillary Services Awards other than for Regulation Down. Provided,

however, that the quantity of overlapping IRU cannot be less than zero.

#### 11.2.6.2.2 Overlapping Capacity for RCU

The quantity of overlapping RCU is the lower of the: (1) RUC Award for RCU; or (2) higher of the RA Capacity or Flexible RA Capacity shown on that resource's monthly Supply Plan minus the Energy Schedule minus the Ancillary Services Awards other than for Regulation Down minus the Imbalance Reserves Award for IRU. Provided, however, that the quantity of overlapping RCU cannot be less than zero.

#### 11.2.6.2.3 Overlapping Capacity for IRD

The quantity of overlapping IRD is the lower of the: (1) Imbalance Reserves Award for IRD; or (2) Energy Schedule minus the award for Regulation Down minus the higher of the RA Capacity or Flexible RA Capacity shown on that resource's monthly Supply Plan. Provided, however, that the quantity of overlapping IRD cannot be less than zero.

#### 11.2.6.2.4 Overlapping Capacity for RCD

The quantity of overlapping RCD is the lower of the: (1) RUC Award for RCD; or (2) Energy Schedule minus the award for Regulation Down minus the Imbalance Reserves Award for IRD minus the higher of the RA Capacity or Flexible RA Capacity shown on that resource's monthly Supply Plan. Provided, however, that the quantity of overlapping RCD cannot be less than zero.

### 11.2.6.3 Settlement of Overlapping Capacity Subject to DAME Transitional Measures

#### 11.2.6.3.1 Settlement of Overlapping IRU

The CAISO allocates the revenue from the overlapping IRU, calculated as the product of the quantity of overlapping IRU and the applicable Locational IRU Price, partially to the Scheduling Coordinator for the LSE and partially to the Scheduling Coordinator for the resource.

The CAISO allocates the opportunity cost component of that revenue, calculated as the integral of the positive difference between the Energy LMP and the Energy Bid over the capacity range of the overlapping IRU, to the Scheduling Coordinator for the resource.

The CAISO allocates the balance of the revenue from the overlapping IRU to the Scheduling Coordinator for the LSE. If the resource is part of multiple resource/LSE pairs subject to DAME Transitional Measures, then the CAISO allocates that balance of the revenue to the LSEs in proportion to the higher

of each LSE's RA Capacity or Flexible RA Capacity obligation met by that resource.

#### 11.2.6.3.2 Settlement of Overlapping RCU

The CAISO allocates the revenue from the overlapping RCU, calculated as the product of the quantity of overlapping RCU and the applicable RUC Price for RCU, to the Scheduling Coordinator for the LSE. If the resource is part of multiple resource/LSE pairs subject to DAME Transitional Measures, then the CAISO allocates that revenue to the LSEs in proportion to the higher of each LSE's RA Capacity or Flexible RA Capacity obligation met by that resource.

#### 11.2.6.3.3 Settlement of Overlapping IRD

The CAISO allocates the revenue from the overlapping IRD, calculated as the product of the quantity of overlapping IRD and the applicable Locational IRD Price, partially to the Scheduling Coordinator for the LSE and partially to the Scheduling Coordinator for the resource.

The CAISO allocates the opportunity cost component of that revenue, calculated as the integral of the positive difference between the Energy Bid over the capacity range of the overlapping IRD and the Energy LMP, to the Scheduling Coordinator for the resource.

The CAISO allocates the balance of the revenue from the overlapping IRD to the Scheduling Coordinator for the LSE. If the resource is part of multiple resource/LSE pairs subject to DAME Transitional Measures, then the CAISO allocates that balance of the revenue to the LSEs in proportion to the higher of each LSE's RA Capacity or Flexible RA Capacity obligation met by that resource.

#### 11.2.6.3.4 Settlement of Overlapping RCD

The CAISO allocates the revenue from the overlapping RCD, calculated as the product of the quantity of overlapping RCD and the applicable RUC Price for RCD, to the Scheduling Coordinator for the LSE. If the resource is part of multiple resource/LSE pairs subject to DAME Transitional Measures, then the CAISO allocates that revenue to the LSEs in proportion to the higher of each LSE's RA Capacity or Flexible RA Capacity obligation met by that resource.

### 11.2.6.4 Information Provision for RA Capacity Not Subject to DAME Transitional Measures

For RA Capacity and Flexible RA Capacity not subject to DAME Transitional Measures either because the capacity is not covered by a valid election under Section 11.2.6.1 or because the DAME Transition

Period has expired, the CAISO provides the Scheduling Coordinator for LSEs whose RA and Flexible RA obligations are met with that capacity information regarding the opportunity costs described in Section 11.2.6.3.1 and 11.2.6.3.3 and the Imbalance Reserves and Reliability Capacity revenue from that overlapping capacity.

### 11.2.7 EDAM Transfer System Resources

For Transfer System Resources associated with the CAISO Balancing Authority Area that support EDAM Transfers, the CAISO will settle such resources through a financially binding settlement in accordance with Section 11.35.1 and the marginal price described in Appendix C.

## 11.3 Settlement of Virtual Awards

### 11.3.1 Virtual Supply Awards

The CAISO will credit each Scheduling Coordinator with Virtual Supply Awards at an Eligible PNode or Eligible Aggregated PNode an amount equal to the Day-Ahead LMP at the Eligible PNode or Eligible Aggregated PNode multiplied by the MWhs of Virtual Supply Awards. Virtual Supply Awards subject to price correction will be settled as specified in Section 11.21.

The CAISO will charge each Scheduling Coordinator with Virtual Supply Awards at an Eligible PNode or Eligible Aggregated PNode an amount equal to the product of the MWhs of Virtual Supply Awards and the simple average of the four FMM LMPs for the applicable Trading Hour at the Eligible PNode or Eligible Aggregated PNode.

The CAISO pays or charges, depending on whether the value is positive or negative, the product of the virtual Forecasted Movement quantity and the difference between the FMM Flexible Ramp Up Price and the FMM Flexible Ramp Down Price.

### 11.3.2 Virtual Demand Awards

The CAISO will charge each Scheduling Coordinator with Virtual Demand Awards at an Eligible PNode or Eligible Aggregated PNode an amount equal to the Day-Ahead Market LMP at the Eligible PNode or Eligible Aggregated PNode multiplied by the MWhs of Virtual Demand Awards. Virtual Demand Awards subject to price correction will be settled as specified in Section 11.21.

The CAISO will credit each Scheduling Coordinator with Virtual Demand Awards at an Eligible PNode or Eligible Aggregated PNode an amount equal to the product of the MWhs of Virtual Demand Awards and

the simple average of the four FMM LMPs for the applicable Trading Hour at the Eligible PNode or Eligible Aggregated PNode.

The CAISO pays or charges, depending on whether the value is positive or negative, the product of the virtual Forecasted Movement quantity and the difference between the FMM Flexible Ramp Up Price and the FMM Flexible Ramp Down Price.

### 11.4 Black Start Settlements

Credits for Black Start capability shall consist of any credits under any Black Start Agreement. If the Energy price and Start-Up Costs are not specified in the Black Start Agreement, the Black Start Energy will be credited as an Exceptional Dispatch in accordance with Section 11.5.6.1 and the commitment costs for the resource will be eligible for Bid Cost Recovery under Section 11.8. Black Start Energy resulting from a performance test shall also be credited as an Exceptional Dispatch in accordance with Section 11.5.6.1. RMR Units providing Black Start are compensated in accordance with the RMR Contract rather than this Section 11.4.

#### 11.4.1 Black Start Energy

The Black Start Energy credit user rate for any Settlement Period will be calculated based on the sum of Black Start Energy credits to Scheduling Coordinators in the applicable Settlement Period divided by Measured Demand, excluding exports to neighboring Balancing Authority Areas. The Black Start Energy user charge for any Settlement Period for a Scheduling Coordinator will be the Black Start Energy credit user rate multiplied by the quantity of Measured Demand, excluding exports to neighboring Balancing Authority Areas, for which that Scheduling Coordinator is responsible in that Settlement Period.

#### 11.4.2 Black Start Capability

The CAISO shall allocate credits for Black Start capability under a Black Start Agreement as Reliability Services Costs to the Participating Transmission Owner in whose TAC Area where the Black Start Unit is located.

### 11.5 Real-Time Market Settlements

The CAISO shall calculate and account for imbalance energy for each Dispatch Interval and settle imbalance energy in the Real-Time Market for each Settlement Interval for each resource within the CAISO Balancing Authority Area and all System Resources dispatched in Real-Time. There are four (4)

categories of imbalance energy: FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Imbalance Energy. FMM Instructed Imbalance Energy includes all Energy associated with the FMM Schedule. FMM Instructed Imbalance Energy is settled pursuant to Section 11.5.1.1, including any Energy related with HASP Intertie Block Schedules cleared through the FMM. RTD Instructed Imbalance Energy is settled pursuant to Section 11.5.1.2, Uninstructed Imbalance Energy is settled pursuant to Section 11.5.2, and Unaccounted For Energy is settled pursuant to Section 11.5.3. To the extent that the sum of the Settlements Amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Energy does not equal zero, the CAISO will assess charges or issue credits for the resulting differences to all Scheduling Coordinators based on a pro rata share of their Measured Demand for the relevant Settlement Interval, as further described in Section 11.5.4. FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy due to Exceptional Dispatches, as well as the allocation of related costs, including Excess Costs Payments, are settled as described in Section 11.5.6. The CAISO shall reverse RTM Congestion Charges for valid and balanced ETC and TOR Self-Schedules as described in Section 11.5.7. The CAISO will settle Energy for emergency assistance as described in Section 11.5.8.

### 11.5.1 Imbalance Energy Settlements

#### 11.5.1.1 FMM Instructed Imbalance Energy Settlements

For each Settlement Interval, FMM Instructed Imbalance Energy consists of the following types of Energy: (1) FMM Optimal Energy; (2) FMM Minimum Load Energy; (3) FMM Exceptional Dispatch Energy; (4) FMM Derate Energy; and (5) FMM Pumping Energy. Credits and charges for FMM Instructed Imbalance Energy attributable to each resource in each Settlement Interval shall be settled by debiting or crediting, as appropriate, the specific Scheduling Coordinator's FMM IIE Settlement Amount. The FMM IIE Settlement Amounts for FMM Optimal Energy, FMM Minimum Load Energy, FMM Derate Energy, and FMM Pumping Energy shall be calculated as the product of the sum of all of these types of Energy and the FMM LMP. For MSS Operators that have elected net Settlement, the FMM IIE Settlement Amounts for Energy dispatched through the FMM optimization shall be calculated as the product of the FMM MSS Price and the sum of the following types of Energy: FMM Minimum Load Energy from System Units

dispatched in FMM, FMM Derate Energy, and FMM Pumping Energy. For MSS Operators that have elected gross Settlement, regardless of whether that entity has elected to follow its Load or to participate in RUC, the FMM Instructed Imbalance Energy for such entities is settled similarly to non-MSS entities as provided in this Section 11.5.1.1. The remaining FMM IIE Settlement Amounts for Exceptional Dispatches are settled pursuant to Section 11.5.6.

#### 11.5.1.2 RTD Instructed Imbalance Energy Settlements

For each Settlement Interval, RTD Instructed Imbalance Energy consists of the following types of Energy: (1) RTD Optimal Energy; (2) Residual Imbalance Energy; (3) RTD Minimum Load Energy; (4) RTD Exceptional Dispatch Energy; (5) Regulation Energy; (6) Standard Ramping Energy; (7) Ramping Energy Deviation; (8) RTD Derate Energy; (9) MSS Load Following Energy; (10) RTD Pumping Energy; and (11) Operational Adjustments. Credits and charges for RTD Instructed Imbalance Energy attributable to each resource in each Settlement Interval shall be settled by debiting or crediting, as appropriate, the specific Scheduling Coordinator's RTD IIE Settlement Amount. The RTD IIE Settlement Amounts for the Standard Ramping Energy shall be zero. The RTD IIE Settlement Amounts for RTD Optimal Energy, RTD Minimum Load Energy, Regulation Energy, Ramping Energy Deviation, RTD Derate Energy, and RTD Pumping Energy shall be calculated as the product of the sum of all of these types of Energy and the RTD LMP. For MSS Operators that have elected net Settlement, the RTD IIE Settlement Amounts for Energy dispatched through the RTD optimization shall be calculated as the product of the RTD MSS Price and the sum of the following types of Energy: RTD Minimum Load Energy from System Units dispatched in Real-Time, Regulation Energy, Ramping Energy Deviation, RTD Derate Energy, MSS Load Following Energy, and RTD Pumping Energy. For MSS Operators that have elected gross Settlement, regardless of whether that entity has elected to follow its Load or to participate in RUC, the RTD Instructed Imbalance Energy for such entities is settled similarly to non-MSS entities as provided in this Section 11.5.1.2. The remaining RTD IIE Settlement Amounts are determined as follows: (1) RTD IIE Settlement Amounts for Residual Imbalance Energy are determined pursuant to Section 11.5.5; and (2) RTD IIE Settlement Amounts for Exceptional Dispatches are settled pursuant to Section 11.5.6.

### 11.5.2 Uninstructed Imbalance Energy

Scheduling Coordinators shall be credited or charged a UIE Settlement Amount for each LAP, PNode or

Scheduling Point for which the CAISO calculates an Uninstructed Imbalance Energy quantity for each Settlement Interval. Uninstructed Imbalance Energy quantities are calculated for each resource that has a Day-Ahead Schedule, Dispatch Instruction, Real-Time Interchange Export Schedule or Metered Quantity. For MSS Operators electing gross Settlement, regardless of whether that entity has elected to follow its Load or to participate in RUC, the Uninstructed Imbalance Energy for such entities is settled similarly to how Uninstructed Imbalance Energy for non-MSS entities is settled as provided in this Section 11.5.2. The CAISO shall account for Uninstructed Imbalance Energy every five minutes based on the resource's Dispatch Instruction. For all resources, including Generating Units, System Units of MSS Operators that have elected gross Settlement, Physical Scheduling Plants, System Resources, Distributed Energy Resource Aggregations and all Participating Load, Reliability Demand Response Resources, and Proxy Demand Resources, the UIE Settlement Amount is calculated for each Settlement Interval as the product of its Uninstructed Imbalance Energy MWh quantity and the applicable RTD LMP. The UIE Settlement Amount for non-Participating Load and MSS Demand under gross Settlement is settled as described in Section 11.5.2.2. For MSS Operators that have elected net Settlement, the UIE Settlement Amount is calculated for each Settlement Interval as the product of its Uninstructed Imbalance Energy quantity and RTD MSS Price.

#### 11.5.2.1 Resource Specific Tier 1 UIE Settlement Interval Price

The Resource-Specific Tier 1 UIE Settlement Interval Price is calculated as the resource's total FMM IIE Settlement Amount and RTD IIE Settlement Amount, calculated pursuant to Sections 11.5.1.1 and 11.5.1.2 for that Settlement Interval divided by its total FMM Instructed Imbalance Energy quantity (MWh) calculated pursuant to Sections 11.5.1.1 and 11.5.1.2.

#### 11.5.2.2 Hourly Real-Time Demand Settlement

The Default LAP Hourly Real-Time Price will apply to CAISO Demand and MSS Demand under net Settlement of imbalance energy, except for CAISO Demand not settled at the Default LAP as provided in Section 30.5.3.2, and per the methodology as may be further defined in the Business Practice Manuals. For each Settlement Interval, the differences between the Day-Ahead Scheduled CAISO Demand and metered Demand (MWh) is settled at the Default LAP Hourly Real-Time Price or the Custom LAP Hourly Real-Time Price, as appropriate. For each Default LAP, the CAISO calculates the applicable Default LAP

Hourly Real-Time Price as the weighted average LMP of the four Default LAP FMM LMPs and the twelve (12) five-minute Default LAP RTD LMPs. The CAISO calculates the weighted average LMP for each Default LAP as the summation of the weighted average MEC, the weighted average MCC, and the weighted average MCL for that Default LAP. The CAISO calculates the weighted average MEC, MCC, and MCL for each applicable Trading Hour based on the four applicable Default LAP FMM MECs, MCCs, and MCLs, respectively, and the twelve (12) applicable Default LAP RTD MECs, MCCs, and MCLs, respectively. For each Custom LAP, the CAISO calculates the applicable Custom LAP Hourly Real-Time Price as the weighted average LMP of the four Custom LAP FMM LMPs and the twelve (12) five-minute Custom LAP RTD LMPs. The CAISO calculates the weighted average LMP for each Custom LAP as the summation of the weighted average MEC, the weighted average MCC, and the weighted average MCL for that Custom LAP. The CAISO calculates the weighted average MEC, MCC, and MCL for each applicable Trading Hour based on the four applicable Custom LAP FMM MECs, MCCs, and MCLs, respectively, and the twelve (12) applicable Custom LAP RTD MECs, MCCs, and MCLs, respectively. In calculating the weighted average MEC, MCC, and MCL for each hour for either the Default LAPs or Custom LAPs, the CAISO determines the weights based on the difference between Day-Ahead Schedules at the applicable LAP and the CAISO Forecast of BAA Demand for the CAISO used in the FMM multiplied by the relevant FMM LMP at the applicable LAP plus the difference between the CAISO Forecast of BAA Demand for the CAISO used in the FMM and the CAISO Forecast of BAA Demand for the CAISO used in the RTD multiplied by the relevant RTD LMP at the applicable LAP divided by the sum of the difference between Day-Ahead Schedules at the applicable LAP and the CAISO Forecast of BAA Demand for the CAISO used in the FMM plus the difference between the CAISO Forecast of BAA Demand for the CAISO used in the FMM and the CAISO Forecast of BAA Demand for the CAISO used in the RTD. Furthermore, the Default LAP Hourly Real-Time Prices and the Custom LAP Hourly Real-Time Prices will be bounded by the maximum and the lowest LMP and its components, for the applicable Trading Hour from those relevant intervals at the relevant LAP. If the calculated price exceeds the upper boundary or is below the lower boundary, then the Default LAP Hourly Real-Time Price or the Custom LAP Hourly Real-Time Price, as appropriate, instead will be calculated based on a weighted average price with the weightings based on gross deviations (absolute value of each deviation).

The Hourly Real-Time LAP Prices are determined by the requirements in Section 27.2.2.2.

#### 11.5.2.3 Revenue Neutrality Resulting from Changes in LAP Load Distribution Factors

Any resulting revenue from changes in the LAP Load Distribution Factors between the Day-Ahead Market and the Real-Time Dispatch shall be allocated to metered CAISO Demand in the corresponding LAP within the CAISO Balancing Authority Area and metered EDAM Demand in the corresponding LAP within an EDAM Entity Balancing Authority Area.

#### 11.5.2.4 [Not Used]

### 11.5.3 Unaccounted For Energy

For each Settlement Interval, the CAISO will calculate Unaccounted For Energy for each utility Service Area for which the IOU or Local Publicly Owned Electric Utility has requested separate Unaccounted For Energy calculation and has met the requirements applicable to a CAISO Metered Entity. The Unaccounted For Energy will be settled at the applicable LAP Hourly Real-Time Price calculated for each utility Service Area for which Unaccounted For Energy is calculated separately. Unaccounted For Energy will be allocated to each Scheduling Coordinator based on the ratio of its metered CAISO Demand within the relevant utility Service Area for which Unaccounted For Energy is calculated separately to total metered CAISO Demand within that utility Service Area.

### 11.5.4 Imbalance Energy Pricing; Non-Zero Offset Amount Allocation

#### 11.5.4.1 EIM Transfers and Offset Allocations

EIM Transfer revenue will be collected when one Balancing Authority Area in the EIM Area provides Energy to another Balancing Authority Area in the EIM Area and the associated EIM Transfer System Resource prices differ. Congestion revenue will be collected when a Transmission Constraint or intertie scheduling limit binds at different locations of the transmission system and the LMP varies across a Balancing Authority Area in the EIM Area and across FMM and RTD LMPs from source to sink within and across the EIM Area. The CAISO will collect neutrality amounts to recover differences between Real-Time Market payments made and Real-Time Market payments received within Balancing Authority Areas in the EIM Area. The CAISO will allocate EIM Transfer revenue, Real-Time Congestion revenue, and offsets to an EIM Entity Balancing Authority Area or the CAISO Balancing Authority Area as provided below.

**11.5.4.1.1 Real-Time Imbalance Energy Offset**

(a) **Financial Value of EIM Transfers.** For each Balancing Authority Area in the EIM Area, the CAISO will calculate the Real-Time Market financial value of EIM Transfers as the product of the EIM Transfer MWh, either positive or negative, and the Marginal Energy Cost.

(b) **Initial Calculation.** The CAISO will initially calculate the Real-Time Imbalance Energy Offset to be recovered on a 5-minute basis for each Balancing Authority Area in the EIM Area as the sum of the financial value of EIM Transfers and the Settlement amounts for FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Energy, and for the CAISO and EDAM Entity Balancing Authority Areas with Convergence Bidding, Real-Time Virtual Bid Settlement, plus the Real-Time Ancillary Services Congestion revenues for the CAISO, and Virtual Awards settlements in the Real-Time Market in accordance with Section 11.3, less the Real-Time Congestion Offset, and excluding the Marginal GHG Cost and less the Real-Time Marginal Cost of Losses Offset.

(c) **Allocation.** The CAISO will allocate the adjusted Real-Time Imbalance Energy Offset:

(1) for the CAISO Balancing Authority Area, to Scheduling Coordinators in the CAISO Balancing Authority Area according to Measured Demand; and

(2) for EIM Entity Balancing Authority Areas, to the applicable EIM Entity Scheduling Coordinator.

(d) **Residual Neutrality Amounts.** The CAISO will allocate any residual Real-Time Imbalance Energy Offset amount to Scheduling Coordinators in the EIM Area based upon EIM Measured Demand.

**11.5.4.1.2 Real-Time Congestion Offset.**

(a) **Contribution to Marginal Cost of Congestion.** For each Settlement Period of the RTM, the CAISO shall calculate the contribution of each Balancing Authority Area in the EIM Area to the Marginal Cost of Congestion at each resource location and intertie in the EIM Area for each Balancing Authority Area based on the location of the Transmission

Constraints in each Balancing Authority Area, EIM Interties, and constraints enforced outside of the EIM Area needed to manage that Balancing Authority Area's responsibilities.

(b) **Real-Time Congestion Offset.** For each Settlement Period of the RTM, the CAISO shall calculate the Real-Time Congestion Offset for each Balancing Authority Area in the EIM Area as –

(1) the sum of the product of the contribution of that Balancing Authority Area as determined in subsection (a) of this section, the Marginal Cost of Congestion component of the Locational Marginal Price at each resource location in the EIM Area, and the imbalance energy at that resource location, including Virtual Bids at that resource location;

(2) minus any Virtual Bid adjustment as determined in accordance with section 11.5.4.1.1(d); and

(3) including any marginal Congestion adjustment to account for schedules associated with EDAM Legacy Contracts, EDAM Transmission Ownership Rights under Section 33.16 and Section 33.17 and registered EDAM Transmission Service Provider transmission customer rights under Section 33.18.

(c) **Virtual Bid Adjustment.**

(1) **Individual Constraint Calculation.** For each Transmission Constraint in an EIM Entity Balancing Authority Area, the CAISO will calculate a Virtual Bid adjustment as the product of that Transmission Constraint's FMM Shadow Price and the lesser of –

(A) the Flow Impact of Virtual Bids and

(B) the Flow Impacts of all Day-Ahead Scheduled Energy and EIM Base Schedules less the Flow Impacts of FMM Schedules,

but not less than zero.

(2) **EIM Entity Balancing Authority Area Calculation.** Each EIM Entity Balancing

Authority Area's Virtual Bid adjustment shall be the sum of the individual Transmission Constraint calculation for all Transmission Constraints within that EIM Entity Balancing Authority Area.

(d) **Allocation.** The CAISO will allocate –

(1) the Real-Time Congestion Offset for each EIM Entity Balancing Authority Area to the applicable EIM Entity Scheduling Coordinator;

(2) the Real-time Congestion Offset for the CAISO Balancing Authority Area in accordance with Section 11.5.4.2; and

(3) the Virtual Bid adjustment from each individual constraint calculation to each Scheduling Coordinator who submitted Virtual Bids based on that Scheduling Coordinator's Virtual Award's pro rata share of the gross positive Congestion revenues received by all Virtual Awards from that Transmission Constraint.

**11.5.4.1.3 Real-Time Marginal Cost of Losses Offset**

(a) **Calculation.** The CAISO will calculate the Real-Time Marginal Cost of Losses Offset for each Balancing Authority Area as the sum of the product of the Marginal Cost of Losses component of the LMP and all positive or negative FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Energy in the Balancing Authority Area.

(b) **Allocation.** The CAISO will allocate the amounts determined according to Section 11.5.4.1.3(a) –

(1) for the CAISO Balancing Authority Area, according to Section 11.5.4.2; and

(2) for EIM Entity Balancing Authority Areas, to the applicable EIM Entity Scheduling Coordinator.

**11.5.4.1.4 Real-Time Marginal Greenhouse Gas Cost Offset.**

The CAISO will calculate a five-minute Real-Time Marginal GHG Cost Offset amount in relation to each GHG Regulation Area. The five-minute Real-Time Marginal GHG Cost Offset amount will equal the product of FMM IIE, RTD IIE, UIE and UFE within a GHG Regulation Area, including Schedules for Virtual Awards; GHG attributions associated with the GHG Regulation Area and the applicable Marginal GHG

Cost. The CAISO will allocate the Real-Time Marginal GHG Cost Offset amount to a GHG Regulation Area's metered Demand.

**11.5.4.1.5 EIM Transfer Revenue.**

(a) **Calculation.** The CAISO will calculate EIM Transfer revenue when the net EIM Transfer scheduling limit is reached in the Real-Time Market as the separation of the Marginal Energy Cost of the binding Balancing Authority Area in the EIM Area from the Marginal Energy Cost of an adjacent Balancing Authority Area in the EIM Area that is attributed to an EIM Transfer System Resource.

(b) **Allocation.** The CAISO will allocate EIM Transfer revenue by dividing the revenue equally to the Balancing Authorities on each side of the EIM Transfer as defined by the Balancing Authority Area boundary at that intertie, except when the CAISO has been notified during the implementation of the Real-Time Market within an EIM Entity Balancing Authority Area of an agreement between both EIM Entities on either side of a EIM Transfer that a different allocation for some portion of the transfer revenue is required to give effect to a pre-existing commercial arrangement, which will then be sub-allocated–

(1) for the CAISO Balancing Authority Area in accordance with the CAISO Tariff in the CAISO Balancing Authority Area, including allocation to Scheduling Coordinators for Existing Contract rights and Transmission Ownership Rights holders consistent with the terms of the agreements concerning use of the transmission facilities supporting the EIM Transfer;

(2) for an EIM Entity Balancing Authority Area that does not participate in the Day-Ahead Market in accordance with the associated EIM Transmission Service Provider tariff; and

(3) for an EIM Entity Balancing Authority Area that participates in the Day-Ahead Market depending on whether the transmission across an EIM Intertie is made available by: (a) an EDAM Entity pursuant to Section 33.18.2, 2.1 or Section 33.18.2.2.3, in which case the CAISO will allocate the EIM Transfer revenue to

the EIM Entity Scheduling Coordinator for further allocation by the EIM Transmission Service Provider in accordance with its tariff, (b) an EDAM Transmission Service Provider customer pursuant to Section 33.18.2.2, in which case the CAISO will allocate the EIM Transfer revenue directly to the Scheduling Coordinator for the EDAM Transmission Service Provider customer, or (c) an EDAM Legacy Contact or EDAM Transmission Ownership Right pursuant to Section 33.18.2.2.2, in which case the CAISO will allocate the EDAM Transfer revenue to the Scheduling Coordinator for the EDAM Legacy Contact or EDAM Transmission Ownership Right holder, respectively.

**11.5.4.2 Allocations of Non-Zero Amounts of the Sum of the FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed Imbalance Energy, Unaccounted For Energy, the Real-Time Ancillary Services Congestion Revenues and Real-Time Virtual Awards Settlements**

The CAISO will first compute (1) the Real-Time Congestion Offset and allocate it to all Scheduling Coordinators, based on Measured Demand, excluding Demand associated with ETC or TOR Self-Schedules for which a RTM Congestion Credit was provided as specified in Section 11.5.7, and excluding Demand associated with ETC, Converted Right, or TOR Self-Schedules for which an IFM Congestion Credit was provided as specified in Section 11.2.1.5; and (2) the Real-Time Marginal Cost of Losses Offset and allocate it to all Scheduling Coordinators based on Measured Demand, excluding Demand associated with TOR Self-Schedules for which a RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.5.7.2, and excluding Demand associated with TOR Self-Schedules for which an IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.2.1.7. For Scheduling Coordinators for MSS operators that have elected to Load follow or net settlement, or both, the Real-Time Marginal Cost of Losses Offset will be allocated based on their MSS Aggregation Net Measured Demand excluding Demand associated with TOR Self-Schedules for which a RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.5.7.2, and excluding Demand associated with TOR Self-Schedules for which an IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided

as specified in Section 11.2.1.7. For Scheduling Coordinators for MSS Operators regardless of whether the MSS Operator has elected gross or net Settlement, the CAISO will allocate the Real-Time Congestion Offset based on the MSS Aggregation Net Non-ETC/TOR Measured Demand. To the extent that the sum of the Settlement amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed Imbalance Energy, Unaccounted For Energy, the Real-Time Ancillary Services Congestion revenues and Virtual Awards settlements in the Real-Time Market in accordance with Section 11.3, less Real-Time Congestion Offset, and less the Real-Time Marginal Cost of Losses Offset, does not equal zero, the CAISO will assess charges or issue credits for the resulting differences to all Scheduling Coordinators, including Scheduling Coordinators for MSS Operators that are not Load following MSSs and have elected gross Settlement, based on a pro rata share of their Measured Demand for the relevant Settlement Interval. For Scheduling Coordinators for MSS Operators that have elected net Settlement, the CAISO will assess charges or issue credits for the resulting non-zero differences of the sum of the Settlement amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Energy, the Real-Time Ancillary Services Congestion Revenues and Virtual Awards settlements in the Real-Time Market in accordance with Section 11.3, less Real-Time Congestion Offset and less the Real-Time Marginal Cost of Losses Offset, based on their MSS Aggregation Net Measured Demand. For Scheduling Coordinators for MSS Operators that have elected Load following, the CAISO will not assess any charges or issue credits for the resulting non-zero differences of the sum of the Settlement amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Energy, the Real-Time Ancillary Services Congestion Revenues and Virtual Awards settlements in the Real-Time Market in accordance with Section 11.3, less Real-Time Congestion Offset and less the Real-Time Marginal Cost of Losses Offset.

### 11.5.5 Settlement Amount for Residual Imbalance Energy

#### 11.5.5.1 In General

For each Settlement Interval, Residual Imbalance Energy settlement amounts shall be the product of the MWh of Residual Imbalance Energy for that Settlement Interval and the Bid, as mitigated pursuant to Section 39.7 that led to the Residual Imbalance Energy from the relevant Dispatch Interval in which the

resource was dispatched, subject to additional rules specified in this section below and in Section 11.17. The relevant Dispatch Interval and Bid that led to the Residual Imbalance Energy may occur prior or subsequent to the interval in which the relevant Residual Imbalance Energy occurs and can be contiguous, or not, with the applicable Trading Hour in which the relevant Residual Imbalance Energy Settlement Interval occurs.

#### 11.5.5.2 Eligible Intermittent Resources

For Eligible Intermittent Resources, the Settlement Amount for any portion of the resource's Residual Imbalance Energy that is greater than its forecasted output for a particular Settlement Interval will be the product of the MWh of Residual Imbalance Energy above the resource's forecasted output for that Settlement Interval and the applicable RTD Locational Marginal Price or RTD MSS Price if the resource is MSS Net settled.

#### 11.5.5.3 Metered Sub-Systems

For MSS Operators the Settlement for Residual Imbalance Energy is conducted in the same manner, regardless of any MSS elections (net/gross Settlement, Load following or opt-in/opt-out of RUC), except in the case of Eligible Intermittent Resources which are settled as specified in Section 11.5.5.2.

#### 11.5.5.4 Rerated Minimum Load

When a Scheduling Coordinator increases the Minimum Load pursuant to Section 9.3.3, for the Settlement Interval(s) during which the affected resource is ramping up towards or ramping down from such a Minimum Load change, the Residual Imbalance Energy for the applicable Settlement Interval(s) will be re-classified as Derate Energy and will be credited at the applicable RTD Locational Marginal Price.

### 11.5.6 Settlement Amounts for RTD Instructed Imbalance Energy from Exceptional Dispatch

For each Settlement Interval, the RTD IIE Settlement Amount from each type of Exceptional Dispatch described in Section 34.11 is calculated as the sum of the products of the relevant FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy quantity for the Settlement Interval and the relevant FMM or RTD LMP Settlement price for each type of Exceptional Dispatch as further described in this Section 11.5.6. For MSS Operators the Settlement for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy from Exceptional Dispatches is conducted in the same manner, regardless

of any MSS elections (net/gross Settlement, Load following or opt-in/opt-out of RUC). Except for the Settlement price, Exceptional Dispatches to perform Ancillary Services testing, to perform PMax testing, and to perform pre-commercial operation testing for Generating Units are otherwise settled in the same manner as provided in Section 11.5.6.1. Notwithstanding any other provisions of this Section 11.5.6, the Exceptional Dispatch Settlement price that is applicable in circumstances in which the CAISO applies Mitigation Measures to Exceptional Dispatch of resources pursuant to Section 39.11 shall be calculated as set forth in Section 11.5.6.7.

**11.5.6.1 Settlement for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy from Exceptional Dispatches used for System Emergency Conditions, for a Market Disruption, to Mitigate Overgeneration or to Prevent or Relieve Imminent System Emergencies**

The Exceptional Dispatch Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered as a result of an Exceptional Dispatch for System Emergency conditions, for a Market Disruption, to mitigate Overgeneration conditions, or to prevent or relieve an imminent System Emergency, including forced Start-Ups and Shut-Downs, is the higher of the (a) applicable FMM or RTD LMP; (b) the Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered from an RMR Resource as a result of an Exceptional Dispatch for System Emergency conditions; for a Market Disruption; to mitigate Overgeneration conditions; or to prevent or relieve an imminent System Emergency, including forced Start-Ups and Shut-Downs, is the higher of (a) applicable FMM or RTD LMP; (b) the Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two steps: (1) incremental Energy is first settled at the applicable FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; and (2) the incremental Energy Bid Cost in excess of the applicable FMM or RTD LMP at the relevant Location is settled pursuant to Section 11.5.6.1.1. The

Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered as a result of an Exceptional Dispatch Instruction for a Market Disruption, or to prevent or relieve a System Emergency, is the minimum of (a) the FMM or RTD LMP; (b) the Energy Bid price subject to Section 39.6.1.4; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered from an RMR Resource as a result of an Exceptional Dispatch for Emergency System conditions; for a Market Disruption; to mitigate Overgeneration conditions; or to prevent or relieve an imminent System Emergency, is the minimum of the (a) applicable FMM or RTD LMP; (b) the Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. All Energy costs for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with this type of Exceptional Dispatch are included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2.

**11.5.6.1.1 Settlement of Excess Cost Payments for Exceptional Dispatches used for System Emergency Conditions, for a Market Disruption, and to Avoid an Imminent System Emergency**

The Excess Cost Payment for incremental Exceptional Dispatches used for emergency conditions, for a Market Disruption, or to avoid an imminent System Emergency is calculated for each resource for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.1 for the applicable Exceptional Dispatch at the FMM or RTD LMP and delivered Exceptional Dispatch quantity at one of the following three costs: (1) the resource's Energy Bid Cost; (2) the Default Energy Bid cost; or (3) the Energy cost at the negotiated price, as applicable for System Resources, for the relevant Exceptional Dispatch. The Excess Cost Payment for incremental Exceptional Dispatches used for System Emergency conditions; for a Market Disruption; or to avoid an imminent System Emergency for an RMR Resource is the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.1 and one of the following two costs: (1) the RMR Resource's Energy Bid price adjusted to remove Opportunity Costs; or (2) the Default Energy Bid price adjusted to remove Opportunity

Costs.

#### 11.5.6.1.2 Settlement for Instructed Imbalance Energy from Exceptional Dispatches to Storage Resources to Hold State of Charge

The CAISO will settle storage resources that receive an Exceptional Dispatch to hold a State of Charge pursuant to Sections 11.5.6 and 11.5.6.1 for any FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy to move to the targeted State of Charge plus the resource's opportunity cost for holding the State of Charge. The CAISO will calculate this opportunity cost starting from the first Operating Interval when the resource met and followed the Exceptional Dispatch through the end of the Operating Day. The CAISO will calculate the difference between the resource's maximum potential RTM Energy revenues without the Exceptional Dispatch to hold the State of Charge and the resource's maximum potential RTM Energy revenues with the Exceptional Dispatch to hold State of Charge. If the resource's maximum potential RTM Energy revenues without the Exceptional Dispatch to hold State of Charge are higher than the resource's maximum potential RTM Energy revenues with the Exceptional Dispatch to hold State of Charge, then the resource will receive the positive difference between these two values, which is its opportunity cost. The CAISO will calculate the resource's opportunity costs based on its Master File characteristics, Bids, State of Charge, Day-Ahead Schedules, and the applicable Locational Marginal Prices.

### 11.5.6.2 Settlement of Instructed Imbalance Energy from Exceptional Dispatches Caused by Modeling Limitations

The Exceptional Dispatch Settlement price for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion as a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 is the maximum of (a) the FMM or RTD LMP; (b) the Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch Price for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is consumed or delivered by an RMR Resource as a result of Exceptional Dispatch to mitigate or resolve Congestion as a result of a transmission-related modeling limitation in the

FNM as described in Section 34.11.3 is the maximum of: (a) the applicable FMM or RTD LMP; (b) the Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two steps: (1) incremental Energy is first settled at the FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; and (2) the incremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the minimum of (a) the FMM or RTD LMP; (b) the Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch from an RMR Resource is the minimum of: (a) the FMM or RTD LMP; (b) the Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. Costs for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with this type of Exceptional Dispatch are settled in two steps: (1) decremental Energy is first settled at the FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; and (2) the decremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3.

**11.5.6.2.1 [Not Used]**

**11.5.6.2.2 [Not Used]**

**11.5.6.2.3 Settlement of Excess Cost Payments for Exceptional Dispatches used for Transmission-Related Modeling Limitations**

The Excess Cost Payment for Exceptional Dispatches used for transmission-related modeling limitations as described in Section 34.11.3 is calculated for each resource for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.2 for the applicable delivered Exceptional Dispatch quantity at the FMM or RTD LMP and one of the following three costs: (1)

the resource's Energy Bid Cost; (2) the Default Energy Bid cost; or (3) the Energy cost at the negotiated price, as applicable for System Resources, for the relevant Exceptional Dispatch. The Excess Cost Payment for Exceptional Dispatches for transmission-related modeling limitations as described in Section 34.11.3 is calculated for each RMR Resource for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.2 for the applicable delivered Exceptional Dispatch quantity at the FMM or RTD LMP and one of the following two costs: (1) the resource's Energy Bid Cost adjusted to remove Opportunity Costs; or (2) the Default Energy Bid cost adjusted to remove Opportunity Costs, for the relevant Exceptional Dispatch.

**11.5.6.2.4 Exceptional Dispatches for Non-Transmission-Related Modeling Limitations**

The Exceptional Dispatch Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion that is not a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 is the maximum of the (a) FMM or RTD LMP; (b) Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. For RMR Resources, the Exceptional Dispatch Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy as a result of an Exceptional Dispatch to mitigate or resolve Congestion that is not a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 is the maximum of: (a) FMM or RTD LMP; (b) Energy Bid price adjusted to remove Opportunity Costs; or (c) the Default Energy Bid price adjusted to remove Opportunity Costs. For resources that receive an Exceptional Dispatch energy instruction prior to the Operating Day, the Exceptional Dispatch Settlement price is the maximum of the (a) applicable FMM or RTD LMP; (b) IFM Energy Bid price; or (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Day-Ahead Market and for the Energy that does not have a IFM Energy Bid price. All costs for incremental Energy for this type of Exceptional Dispatch will be included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the minimum of the (a) FMM or RTD

LMP; (b) Energy Bid Price; (c) Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) negotiated price as applicable to System Resources. For RMR Resources; the Exceptional Dispatch Settlement for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the minimum of the: (a) FMM or RTD LMP; (b) Energy Bid price adjusted to remove Opportunity Costs; or (c) Default Energy Bid price adjusted to remove Opportunity Costs. All costs for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with this type of Exceptional Dispatch are included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2.

#### 11.5.6.2.5 Allocation of Exceptional Dispatch Excess Cost Payments

##### 11.5.6.2.5.1 Allocation of Exceptional Dispatch Excess Cost Payments to PTOs

The total Excess Cost Payments calculated pursuant to Section 11.5.6.2.3 for the FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy from Exceptional Dispatches instructed as a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 in that Settlement Interval shall be charged to the Participating Transmission Owner in whose PTO Service Territory the transmission-related modeling limitation as described in Section 34.11.3 is located. If the modeling limitation affects more than one Participating TO, the Excess Cost Payments shall be allocated in proportion to the Transmission Revenue Requirements of the affected Participating TOs with PTO Service Territories. Costs allocated to Participating TOs under this section shall constitute Reliability Services Costs.

##### 11.5.6.2.5.2 Allocation of Exceptional Dispatch Costs to Scheduling Coordinators

Excess Cost Payments for the Exceptional Dispatches used for emergency conditions and to avoid Market Disruption and System Emergencies as determined pursuant to Section 11.5.6.1.1 shall be charged to Scheduling Coordinators as follows in a two-step process. First, each Scheduling Coordinator’s charge shall be the lesser of:

(i) the pro rata share of total Excess Cost Payment based upon the ratio of each Scheduling Coordinator's Net Negative Uninstructed Deviations to the total system Net Negative

Uninstructed Deviations; or

(ii) the amount obtained by multiplying the Scheduling Coordinator's Net Negative Uninstructed Deviation for each Settlement Interval and a weighted average price. The weighted average price is equal to the total Excess Cost Payments to be allocated divided by the MWh of FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy associated with the Excess Cost Payment.

Second, any remaining unallocated costs shall be allocated to all Scheduling Coordinators pro-rata based on their Measured Demand. For a Scheduling Coordinator of an MSS Operator that has elected to follow Load, allocation of this second category of Excess Cost Payments will be based on net metered MSS Demand. In addition, to the extent the Exceptional Dispatches are made to resolve congestion internal to the MSS, the Scheduling Coordinator for such an MSS will also be subject to these two categories of Excess Cost Payments.

A Scheduling Coordinator shall be exempt from the first category of the Excess Cost Payment allocation for a Settlement Interval if the Scheduling Coordinator has sufficient incremental Energy Bids that are from physically available resources in the Real-Time Market for Energy to cover its Net Negative Uninstructed Deviation in the given Settlement Interval and that have been approved by the CAISO consistent with Sections 30.7.12 and 30.11.

**11.5.6.3 Settlement for Instructed Imbalance Energy from Exceptional Dispatches for Condition 2 Legacy RMR Units**

**11.5.6.3.1 Pricing for Exceptional Dispatch of Legacy RMR Units**

If the CAISO dispatches a Legacy RMR Unit that has selected Condition 2 of its Legacy RMR Contract to Start-Up or provide Energy other than a Start-Up or Energy pursuant to the Legacy RMR Contract, the CAISO shall issue credits as follows:

(a) if the Owner has elected Option A of Schedule G, two times the Start-Up Cost specified in Schedule D to the applicable Legacy RMR Contract for any Start-Up incurred, and 1.5 times the rate specified in Equation 1a or 1b below times the amount of Energy delivered in response to the Dispatch Instructions;

(b) if the Owner has elected Option B of Schedule G, three times the Start-Up Cost specified

in Schedule D to the applicable Legacy RMR Contract for any Start-Up incurred, and the rate specified in Equation 1a or 1b below times the amount of Energy delivered in response to the Dispatch Instruction.

Equation 1a

$$\text{Energy Price (\$/MWh)} = \frac{(AX^3 + BX^2 + CX + D) * P * E}{X} + \text{Variable O\&M Rate}$$

Equation 1b

$$\text{Energy Price (\$/MWh)} = \frac{A * (B + CX + DeFX) * P * E}{X} + \text{Variable O\&M Rate}$$

Where:

- for Equation 1a, A, B, C, D and E are the coefficients given in Table C1-7a of the applicable Legacy RMR Contract;
- for Equation 1b, A, B, C, D, E and F are the coefficients given in Table C1-7b of the applicable Legacy RMR Contract;
- X is the Unit output level during the applicable settlement period, MWh;
- P is the Hourly Fuel Price as calculated by Equation C1-8 in Schedule C using the Commodity Prices in accordance with the applicable Legacy RMR Contract;

Variable O&M Rate ($/MWh): as shown on Table C1-18 of the applicable Legacy RMR Contract.

**11.5.6.3.2 Allocation of Costs from Exceptional Dispatch Calls to Condition 2 RMR Units**

(a) All costs associated with Energy provided by a Condition 2 RMR Unit operating other than according to a RMR Dispatch shall be allocated in accordance with Section 11.5.4.2.

(b) Start-Up Costs for Legacy Condition 2 RMR Units providing service outside the Legacy RMR Contract shall be treated similar to costs under Section 11.5.6.2.5.2.

**11.5.6.4 Settlement of Instructed Imbalance Energy from Exceptional Dispatches for Testing**

The Exceptional Dispatch Settlement price for incremental FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy that is consumed or delivered as a result of an Exceptional Dispatch for purposes of Ancillary Services testing, periodic testing, including PMax testing, or pre-commercial

operation testing for Generating Units is the maximum of the FMM or RTD LMP or the Default Energy Bid price. All Energy costs for these types of Exceptional Dispatch will be included in the FMM IIE Settlement Amount and RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2.

**11.5.6.5 Settlement of RTD Instructed Imbalance Energy from Black Start**

Unless otherwise specified in a Black Start Agreement, all FMM IIE Settlement Amounts or RTD IIE Settlement Amounts associated with Black Start receive the Exceptional Dispatch Settlement price as provided in Section 11.5.6.1, but the costs are allocated pursuant to Section 11.4.

**11.5.6.6 Settlement from Instructed Imbalance Energy from Exceptional Dispatches for Real-Time ETC and TOR Self-Schedules**

The Exceptional Dispatch Settlement price for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy from Real-Time ETC and TOR Self-Schedules shall be the FMM or RTD LMP. The FMM IIE Settlement Amount and RTD IIE Settlement Amount for this type of Exceptional Dispatch shall be calculated as the product of the sum of all of these types of Energy and the FMM or RTD LMP. All Energy costs for these types of Exceptional Dispatches will be included in the FMM IIE Settlement Amount and RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2.

**11.5.6.7 Settlement of FMM or RTD Exceptional Dispatch Energy**

**11.5.6.7.1 Settlement of FMM or RTD Exceptional Dispatch Energy from Exceptional Dispatches of Resources Eligible for Supplemental Revenues**

Except as specified in Section 11.5.6.7.3, the Exceptional Dispatch Settlement price for the FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy delivered by a resource that satisfies all of the criteria set forth in Section 39.10.1 shall be the higher of (a) the resource's Energy Bid price or (b) the FMM or RTD LMP.

**11.5.6.7.2 Settlement of FMM or RTD Exceptional Dispatch Energy from Exceptional Dispatches of Resources Not Eligible for Supplemental Revenues**

Except as specified in Section 11.5.6.7.3, the Exceptional Dispatch Settlement price for the FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy delivered by a resource that satisfies all of the criteria set forth in Section 39.10.2 shall be the higher of (a) the Default Energy Bid price or (b) the Resource-Specific Settlement Interval LMP.

#### 11.5.6.7.3 Exception to the Other Provisions of Section 11.5.6.7

If the Energy Bid price for a resource that satisfies all of the criteria set forth in Sections 39.10.1 or 39.10.2 is lower than the Default Energy Bid price for the resource, and the FMM or RTD LMP is lower than both the Energy Bid price for the resource and the Default Energy Bid price for the resource, the FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Settlement price for the Exceptional Dispatch Energy delivered by the resource shall be the Energy Bid price for the resource.

### 11.5.7 Congestion Credit and Marginal Credit of Losses Credit

#### 11.5.7.1 RTM Congestion Credit for ETCs and TORs

The CAISO shall not apply charges or issue credits to Scheduling Coordinators related to the MCC associated with all Points of Receipt and Points of Delivery pairs associated with valid and balanced ETC Self-Schedules or TOR Self-Schedules after the Day-Ahead Market. The balanced portion for each ETC or TOR contract for each Settlement Interval will be based on the difference between: (1) the minimum of (a) the total Demand, (b) the total ETC or TOR Supply Self-Schedule submitted in RTM, including changes after twenty (20) minutes before the applicable Trading Hour if such change is permitted by the Existing Contract, or (c) the Existing Contract maximum capacity as specified in the TRTC Instructions; and (2) the valid and balanced portion of the Day-Ahead Schedule. In determining the balanced portions, the CAISO evaluates the amounts based on the following variables: (a) for exports and imports, the CAISO shall use the schedule quantity specified in the Interchange schedule used for check out between CAISO and other Balancing Authority Areas; (b) for CAISO Demand, the CAISO shall use the Gross Load associated with the applicable ETC or TOR; and (c) for all Generation the CAISO shall use the quantity specified in the Dispatch Instructions. For each Scheduling Coordinator, the CAISO shall determine for each Settlement Interval the applicable RTM Congestion Credit for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy, which can be positive or negative, as the sum of the product of the relevant MWh quantity and the applicable weighted average MCC at each Point of Receipt and Point of Delivery associated with the valid and balanced portions of that Scheduling Coordinator's ETC or TOR Self-Schedules. The weights in the two markets will be based on the absolute values of the (a) deviation of the FMM Schedule or the CAISO Forecast of BAA Demand for the CAISO used in the FMM from Day-Ahead Schedules and (b) deviation of the RTD schedule or the CAISO Forecast of BAA Demand for the

CAISO used in the RTD from Day-Ahead Schedules.

**11.5.7.2 RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules**

For all Points of Receipt and Points of Delivery pairs associated with a valid and balanced TOR Self-Schedule submitted to the RTM pursuant to an existing agreement between the TOR holder and either the CAISO or a Participating TO as specified in Section 17.3.3, the CAISO shall not impose any charge or issue any credit to the Scheduling Coordinator related to the MCL associated with such TOR Self-Schedules and will instead impose any applicable charges for losses as specified in the existing agreement between the TOR holder and either the CAISO or a Participating TO applicable to the relevant TOR. In any case in which the TOR holder has an existing agreement regarding its TORs with either the CAISO or a Participating TO, the provisions of the agreement shall prevail over any conflicting provisions of this Section 11.5.7.2. Where the provisions of this Section 11.5.7.2 do not conflict with the provisions of the agreement, the provisions of this Section 11.5.7.2 shall apply to the subject TORs. The balanced portion of the TOR Self-Schedule after the Day-Ahead Market is the same balanced quantity mentioned in this Section 11.5.7.2 for the TOR Self-Schedule. For each Scheduling Coordinator, the CAISO shall determine for each Settlement Interval the applicable RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules for FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy, which can be positive or negative, as the sum of the product of the relevant MWh quantity and the weighted average MCL at each of the eligible Points of Receipt and Points of Delivery associated with the valid and balanced portions of that Scheduling Coordinator's TOR Self-Schedules. The weights in the two markets will be based on the absolute values of the: (a) deviation of the FMM Schedule or the CAISO Forecast of BAA Demand for the CAISO used in the FMM from Day-Ahead Schedules; and (b) deviation of the RTD schedule or the CAISO Forecast of BAA Demand for the CAISO used in the RTD from Day-Ahead Schedules. For losses that the CAISO shall charge pursuant to Section 17.3.3, the specific loss charge amount shall be the product of: (a) the specific loss percentage as may be specified in an applicable agreement between the TOR holder and the CAISO or an existing agreement between the TOR holder and a Participating TO; (b) the weighted average MEC price from the FMM and RTD markets with weights based on the absolute values of (1) deviation of FMM schedule or CAISO Forecast of BAA Demand for the CAISO used in the FMM from Day-Ahead Schedules and (2) deviation of RTD schedule

or CAISO Forecast of BAA Demand for the CAISO used in the RTD from Day-Ahead Schedules; and (c) the balanced contract quantity mentioned in Section 11.5.7.1.

### 11.5.8 Settlement for Emergency Assistance

This Section 11.5.8 shall apply to Settlement for emergency assistance provided to or by the CAISO, not EIM Assistance Energy Transfer Surcharges. In any case in which the CAISO has entered into an agreement regarding emergency assistance, which agreement has been accepted by FERC, the provisions of the agreement shall prevail over any conflicting provisions of this Section 11.5.8. Where the provisions of this Section 11.5.8 do not conflict with the provisions of the FERC-accepted agreement, the provisions of this Section 11.5.8 shall apply to the subject emergency assistance.

#### 11.5.8.1 Settlement for Energy Purchased by the CAISO for System Emergency Conditions, to Avoid Market Disruption, or to Prevent or Relieve Imminent System Emergencies, Other than Exceptional Dispatch Energy

The Settlement price for Energy that is delivered to the CAISO from a utility in another Balancing Authority Area as a result of a CAISO request pursuant to Section 42.1.5 or any other provision for assistance in System Emergency conditions, to avoid a Market Disruption, or to prevent or relieve an imminent System Emergency, other than Energy from an Exceptional Dispatch, shall be either (i) a negotiated price agreed upon by the CAISO and the seller or (ii) a price established by the seller for such emergency assistance in advance, as may be applicable. In the event no Settlement price is established prior to the delivery of the emergency Energy, the default Settlement price shall be the simple average of the relevant FMM and RTD LMPs at the applicable Scheduling Point, plus all other charges applicable to imports to the CAISO Balancing Authority Area, as specified in the CAISO Tariff. If the default Settlement price is determined by the seller not to compensate the seller for the value of the emergency Energy delivered to the CAISO, then the seller shall have the opportunity to provide the CAISO with cost support information demonstrating that a higher price is justified. The cost support information must be provided in writing to the CAISO within thirty (30) days following the date of the provision of emergency assistance. The CAISO shall have the discretion to credit that higher price based on the seller's justification of this higher price. The CAISO will provide notice of its determination whether to credit such a higher price

within thirty (30) days after receipt of the cost support information. Any dispute regarding the CAISO's determination whether to credit a higher price for emergency assistance based on cost support information shall be subject to the CAISO ADR Procedures. Credit by the CAISO for such emergency assistance will be made in accordance with the Settlement process, billing cycle, and billing and payment timeline set forth in the CAISO Tariff. The costs for such emergency assistance, including the credit of a price based on cost support information, will be settled in two steps: (1) the costs will first be settled at the simple average of the relevant Dispatch Interval LMPs and included in the total FMM IIE Settlement Amount and RTD IIE Settlement Amount as described in Sections 11.5.1.1 and 11.5.1.2; and (2) costs in excess of the simple average of the relevant Dispatch Interval LMPs plus other applicable charges will be settled in accordance with Section 11.5.8.1.1. The allocation of the FMM IIE Settlement Amount and RTD IIE Settlement Amount settled in accordance with Sections 11.5.1.1 and 11.5.1.2 will be settled according to Section 11.5.4.2.

#### 11.5.8.1.1 Settlement and Allocation of Excess Costs Payments for Emergency Energy Purchases, Other than Exceptional Dispatch Energy, to Scheduling Coordinators

The Excess Cost Payments for emergency Energy purchased in the circumstances specified in Section 11.5.8.1 is calculated for each purchase for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.8.1 for the delivered purchase quantity and the simple average of the relevant Dispatch Interval LMPs at the applicable Scheduling Point. The Excess Cost Payments for emergency Energy purchased in the circumstances specified in Section 11.5.8.1 shall be allocated in the same manner as specified in Section 11.5.6.2.5.2 for the allocation of the Excess Cost Payments portion of credits for Exceptional Dispatches for emergency conditions.

### 11.5.8.2 Settlement for Energy Supplied by the CAISO in Response to a Request for Emergency Assistance

The Settlement price for emergency Energy that is delivered by the CAISO to a utility in another Balancing Authority Area in response to a request for emergency assistance shall be the simple average of the relevant Dispatch Interval LMPs at the applicable Scheduling Point, which shall serve as the effective market price for that Energy, plus all other charges applicable to exports from the CAISO Balancing Authority Area, as specified in the CAISO Tariff and will be included in the total FMM IIE

Settlement Amount and RTD IIE Settlement Amount as described in Sections 11.5.1.1 and 11.5.1.2 and will be allocated according to Section 11.5.4.2. Such price may be estimated prior to delivery and finalized in the Settlement process. The CAISO will establish a Scheduling Coordinator account, if necessary, for the purchaser for the sole purpose of facilitating the Settlement of such emergency assistance. Payment to the CAISO for such emergency assistance shall be made in accordance with the Settlement process, billing cycle, and payment timeline set forth in the CAISO Tariff.

### 11.5.9 Flexible Ramping Product

The CAISO will settle the Flexible Ramping Product as set forth in Section 11.25.

### 11.5.10 Greenhouse Gas in the RTM

Resources that receive a FMM or RTD attribution to serve Demand in a GHG Regulation Area will receive a GHG settlement. The GHG settlement is the product of the FMM or RTD attribution to serve Demand in a specific GHG Regulation Area and the applicable FMM or RTD Marginal GHG Cost for that respective GHG Regulation Area. A resource's FMM GHG settlement for a specific GHG Regulation Area reflects any imbalance from the resource's IFM GHG attribution for that GHG Regulation Area. A resource's RTD GHG settlement for a specific GHG Regulation Area reflects any imbalance from the resource's FMM GHG attribution for that GHG Regulation Area. For a resource within a GHG Regulation Area that does not receive an attribution to served Demand in another GHG Regulation Area, the cost of GHG compliance is embedded in the resource's LMP.

### 11.5.11 EDAM Transfers in EIM

For Transfer System Resources associated with the CAISO Balancing Authority Area that support EIM Transfers, the CAISO will settle such resources through a financially binding settlement in accordance with Section 11.35.1 and the marginal price described in Appendix C.

## 11.6 PDRs, RDRRs, Distributed Energy Resource Aggregations, Non-Generator Resources

### 11.6.1 Settlement of Energy Transactions Involving PDRs or RDRRs Using Customer Load Baseline Methodology

Settlements for Energy provided by Demand Response Providers from Proxy Demand Resources or Reliability Demand Response Resources shall be based on the Demand Response Energy Measurement for the Proxy Demand Resources or Reliability Demand Response Resources. The Demand Response

Energy Measurement for a Proxy Demand Resource or Reliability Demand Response Resource shall be the quantity of Energy equal to the difference between the (i) Customer Load Baseline for the Proxy Demand Resource or Reliability Demand Response Resource and (ii) either the actual underlying consumption or the quantity of Energy calculated pursuant to Section 10.1.7 for the Proxy Demand Resource or Reliability Demand Response Resource for a Demand Response Event. Scheduling Coordinators will be responsible for calculating and submitting Demand Response Energy Measurements in 5-minute intervals. For such Proxy Demand Resources or Reliability Demand Response Resources, the Scheduling Coordinator will calculate the relevant Customer Load Baseline as set forth in Section 4.13.4. If the Proxy Demand Resource or Reliability Demand Response uses behind-the-meter generation to offset Demand, and has elected to always provide Meter Data consisting of its total gross consumption, the Demand Response Energy Measurement shall be the quantity of Energy equal to the difference between (i) the Customer Load Baseline, which derives from the gross consumption independent of offsetting Energy from behind-the-meter generation for the Proxy Demand Resource or Reliability Demand Response Resource, and (ii) the gross underlying consumption, independent of offsetting Energy from the behind-the-meter generation. Demand Response Energy Measurements for Proxy Demand Resources and Reliability Demand Response Resources will only be settled in intervals where their total Expected Energy is above zero. Scheduling Coordinators may not submit Demand Response Energy Measurements in Settlement Intervals where the total Expected Energy did not exceed zero.

**11.6.2 Settlement of Energy Transactions Using Metering Generator Output Methodology**

Settlements for Energy provided by Demand Response Providers from registered behind-the-meter generation in Proxy Demand Resources or Reliability Demand Response Resources shall be based on their Demand Response Energy Measurement. The Demand Response Energy Measurement for Proxy Demand Resources or Reliability Demand Response Resources consisting of registered behind-the-meter generation shall be the quantity of Energy equal to the difference between (i) the Energy output of the Proxy Demand Resources or Reliability Demand Response Resources, and (ii) the Generator Output Baseline for the behind-the-meter generation registered in the Proxy Demand Resource or Reliability Demand Response Resource, which derives from the Energy output of the behind-the-meter generation

only, independent of offsetting facility Demand. In calculating the Energy output of such generation, the Meter Data must represent the Energy output of the behind-the-meter generation up to the total facility Demand, but excluding output that would represent an export of Energy from that location in any Settlement Interval in which the behind-the-meter generation is exporting Energy (i.e., where the behind-the-meter generation Energy output exceeds its location Demand). For such behind-the-meter generation, the Generator Output Baseline will be calculated as set forth in Section 4.13.4.2. Demand Response Energy Measurements will be calculated and submitted in 5-minute intervals. In cases where the Demand Response Energy Measurements are less than zero within a 5-minute interval, that measurement will be submitted as zero. Demand Response Energy Measurements for Proxy Demand Resources and Reliability Demand Response Resources will only be settled in intervals where their total Expected Energy is above zero.

### 11.6.3 Settlement of Energy Transactions Involving PDRs or RDRRs Using Customer Load Baseline and Metering Generator Output Methodologies

Settlements for Energy provided by Demand Response Providers using Proxy Demand Resources or Reliability Demand Response Resources that include (i) separately metered, registered behind-the-meter generation Energy output Meter Data, exclusive of facility consumption data pursuant to Sections 4.13.4.2 and 11.6.2, and Proxy Demand Resources or Reliability Demand Response Resources that (ii) reduce consumption independent and separately metered from offsetting behind-the-meter generation pursuant to Sections 4.13.4 and 11.6.1, shall be the sum of the Demand Response Energy Measurements for the Proxy Demand Resources or Reliability Demand Response Resources as if they were settled separately and independently pursuant to Sections 11.6.1 and 11.6.2. Demand Response Energy Measurements will be calculated and submitted in 5-minute intervals. Demand Response Energy Measurements for Proxy Demand Resources and Reliability Demand Response Resources will only be settled in intervals where their total Expected Energy is above zero.

### 11.6.4 Settlements of Proxy Demand Resources and Reliability Demand Response Resources in the Real-Time Market

The CAISO will calculate RTM Schedules and Awards for Proxy Demand Resources and Reliability Demand Response Resources at the relevant RTM Locational Marginal Price at the relevant Scheduling Point consistent with Section 11.5. The portion of an Hourly Block
Schedule for Energy that becomes financially binding will constitute an FMM Schedule. A cleared Economic Hourly Block Bid is not eligible for Bid Cost Recovery. Ramping Energy Deviations, Residual Imbalance Energy, and Standard Ramping Energy do not apply to Proxy Demand Resources and Reliability Demand Response Resources with Hourly Block or FMM Schedules.

**11.6.5 Settlement of Distributed Energy Resource Aggregations**

Settlements for Energy provided by a Distributed Energy Resource Provider from a Distributed Energy Resource Aggregation shall be based on the applicable PNode or Aggregated PNode of the Distributed Energy Resource Aggregation. For Distributed Energy Resource Aggregations comprising a single PNode, settlement for Energy transactions would reflect the LMP at that PNode. For Distributed Energy Resource Aggregations comprising multiple PNodes settlement for Energy transactions would be the weighted average LMP of the PNode(s) based on the applicable Generation Distribution Factors submitted through the Distributed Energy Resource Aggregation's Bid or as registered in the Master File. Consistent with the provisions of Section 11.5.2, the CAISO will impose UIE on a Distributed Energy Resource Provider if the Distributed Energy Resource Provider's Distributed Energy Resource Aggregation does not follow a Dispatch Instruction.

**11.6.5.1 Settlement of Distributed Energy Resource Aggregations with Demand Curtailment**

Settlements for Energy and Demand curtailment provided by a Distributed Energy Resource Provider from a Distributed Energy Resource Aggregation that includes Distributed Curtailment Resources will be consistent with Section 11.6.5. The CAISO will settle such Distributed Energy Resource Aggregations based on the sum of (1) the net Energy provided by the Distributed Energy Resources, if any, accounting for any Load and any negative Energy from energy storage resources, and (2) the Demand curtailment provided by the Distributed Curtailment Resources, represented as positive Supply. The Scheduling Coordinator for such Distributed Energy Resource Aggregation must submit its Settlement Quality Meter Data in the Settlement Quality Meter Data Systems, which consists of data reflecting:

(1) the net injection or withdrawal of Energy from any Distributed Energy Resources that are

not Distributed Curtailment Resources; and

(2) the Demand curtailment provided by the Distributed Curtailment Resources, calculated consistent with the requirements of Section 11.6.1.

### 11.6.6 Settlements of Non-Generator Resources

Settlements for Energy generated or consumed by a Non-Generator Resource or a resource using Non-Generator Resource Generic Modeling functionality will reflect the applicable PNode or Aggregated PNode. For such resources comprising a single PNode, settlement for Energy transactions will reflect the LMP at that PNode. For such resources comprising multiple PNodes settlement for Energy transactions will reflect the weighted average LMP of the PNode(s) based on the applicable Generation Distribution Factors submitted through the resources' Bid or as registered in the Master File. Consistent with the provisions of Section 11.5.2, the CAISO will impose UIE on a resource's Scheduling Coordinator if the resource does not follow a Dispatch Instruction. When operating in a negative range between PMin and 0, the CAISO will not consider a Non-Generator Resource or a resource using Non-Generator Resource Generic Modeling functionality as Measured Demand so long as the resource can generate Energy. If a Non-Generator Resource operates solely as dispatchable demand response, the CAISO will treat the resource as Measured Demand.

Where Scheduling Coordinators elect to submit end-of-hour state-of-charge targets, storage resources participating as Non-Generator Resources will be ineligible for RTM Bid Cost Shortfalls in the two hours preceding the scheduled Operating Hour. Where Scheduling Coordinators elect to submit Self-Schedules in the CAISO Real-Time Markets, storage resources participating as Non-Generator Resources will be ineligible for RTM Bid Cost Shortfalls in the hour preceding the scheduled Operating Hour. Where the CAISO dispatches storage resources participating as Non-Generator Resources to charge or discharge pursuant to Sections 8.4.1.1(g) or 8.4.3 for the Real-Time Market, they will be ineligible for RTM Bid Cost Shortfalls.

### 11.6.7 Settlement of Proxy Demand Resources using the Load-Shift Methodology

The CAISO will settle separately the consumption Resource ID and curtailment Resource ID of a Proxy Demand Resource using the load-shift methodology. The Demand Response Energy Measurement for the consumption Resource ID will be the quantity of Energy equal to the difference between (i) its

Customer Load Baseline calculated pursuant to Section 4.13.4.7 and (ii) its actual underlying negative Energy for a Demand Response Event. The Demand Response Energy Measurement for the curtailment Resource ID will be the quantity of Energy from the behind-the-meter energy storage equal to the difference between (i) its Generator Output Baseline calculated pursuant to Section 4.13.4.7 and (ii) its actual underlying production for a Demand Response Event. If the Proxy Demand Resource elects to curtail local onsite Demand independent of the behind-the-meter energy storage, the Scheduling Coordinator will add the Demand Response Energy Measurement calculated for the onsite Load pursuant to this Section 11.6 to the Demand Response Energy Measurement of the curtailment Resource ID. Scheduling Coordinators will be responsible for calculating and submitting Demand Response Energy Measurements in 5-minute intervals. Demand Response Energy Measurements for Proxy Demand Resources will only be settled in intervals where their total Expected Energy is above zero. The CAISO will calculate the respective bid cost recoveries for each Resource ID consistent with Section 11.8. The consumption Resource ID will not recover Start-Up Costs, Minimum Load Costs, Pumping Costs, Pump Shut-Down Costs, or Transition Costs, but may recover Energy Bid Costs.

#### 11.6.8 Submission of Demand Response Monitoring Data

Scheduling Coordinators for Proxy Demand Resources, Reliability Demand Response Resources, and Distributed Curtailment Resources must submit a complete set of Demand Response Monitoring Data in the Settlement Quality Meter Data Systems by the SQMD submission deadline defined in section 10.3.6.3 for the Trading Day on which a Demand Response Event occurred. However, only Demand Response Energy Measurements will be considered Settlement Quality Meter Data. Failure to timely submit Demand Response Monitoring Data is subject to Sanction under Section 37.7.1. To the extent a Proxy Demand Resource, Reliability Demand Response Resource, or Distributed Curtailment Resource has elected a performance evaluation methodology under Section 4.13.4 that includes a baseline lookback window that can exceed forty-five days, upon CAISO request, the resource's Scheduling Coordinator must submit additional days' worth of underlying hourly consumption or Energy data, up to the maximum baseline lookback period. Such additional data does not constitute Demand Response Monitoring Data.

### 11.7 Additional MSS Settlements Requirements

#### 11.7.1 MSS Load Following Deviation Penalty

For MSS Operators that have elected to follow their Load as described in Section 4.9.13.2, the Scheduling Coordinator for a Load following MSS Operator shall be charged for: (i) excess MSS Generation supplied to the CAISO Markets and (ii) excess MSS Load relying on CAISO Markets and not served by MSS generating resources. The revenue received from these charges will be used as an off-set to the CAISO's Grid Management Charge. The charges due from a Scheduling Coordinator will be calculated as follows:

**11.7.1.1** If the metered Generation resources and imports into the MSS exceed: (i) the metered Demand and exports from the MSS; and (ii) Energy expected to be delivered by the Scheduling Coordinator for the MSS in response to the CAISO's Dispatch Instructions and/or Regulation Set Point signals issued by the CAISO's AGC by more than the MSS Deviation Band, then the credits for excess Energy outside of the MSS Deviation Band shall be rescinded and CAISO will charge the Scheduling Coordinator for the MSS Operator an amount equal to one hundred percent (100%) of the product of the highest LMP credited to the MSS Operator for its Generation in the Settlement Interval and the amount of the FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is supplied in excess of the MSS Deviation Band.

**11.7.1.2** If metered Generation resources and imports into the MSS are insufficient to meet: (i) the metered Demand and exports from the MSS; and (ii) Energy expected to be delivered by the Scheduling Coordinator for the MSS in response to the CAISO's Dispatch Instructions and/or Regulation Set Point signals issued by the CAISO's AGC by more than the MSS Deviation Band, then the CAISO will charge the Scheduling Coordinator for the MSS Operator an amount equal to the product of the Default LAP price for the Settlement Interval and two hundred percent (200%) of the shortfall that is outside of the MSS Deviation Band. The charge in the previous sentence is in addition to the charges for the FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy that serves the excess MSS Demand that may be applicable under Section 11.5.

**11.7.2 Neutrality Adjustments and Charges Assessed on MSS SC**

The CAISO will assess the Scheduling Coordinator for the MSS the neutrality adjustments and Existing Contracts cash neutrality charges pursuant to Section 11.14 (or collect refunds therefrom) based on the net Measured Demand of the MSS.

### 11.7.3 Available MSS Operator Exemption for Certain Program Charges

If the CAISO is charging Scheduling Coordinators for summer reliability or Demand reduction programs, the MSS Operator may petition the CAISO for an exemption of these charges. If the MSS Operator provides documentation to the CAISO by November 1 of any year demonstrating that the MSS Operator has secured capacity reserves for the following calendar year at least equal to one hundred and fifteen percent (115%), on an annual basis, of the peak Demand responsibility of the MSS Operator, the CAISO shall grant the exemption. Eligible capacity reserves for such a demonstration may include on-demand rights to Energy, peaking resources, and Demand reduction programs. The peak Demand responsibility of the MSS Operator shall be equal to the annual peak Demand Forecast of the MSS Load plus any firm power sales by the MSS Operator, less interruptible Loads, and less any firm power purchases. Firm power for the purposes of this Section 11.7.3 shall be Energy that is intended to be available to the purchaser without being subject to interruption or curtailment by the supplier except for Uncontrollable Forces or emergency. To the extent that the MSS Operator demonstrates that it has secured capacity reserves in accordance with this Section 11.7.3, the Scheduling Coordinator for the MSS Operator shall not be obligated to bear any share of the CAISO's costs for any summer Demand reduction program or for any summer reliability Generation procurement program pursuant to Section 42.1.8 for the calendar year for which the demonstration is made.

### 11.7.4 Emission Cost Responsibility of an SC for an MSS

Unless specified otherwise in the MSS agreement(s), if the CAISO is compensating Generating Units for Emissions Costs, and if an MSS Operator charges the CAISO for the Emissions Costs of the Generating Units serving the Load of the MSS, then the Scheduling Coordinator for the MSS shall bear its proportionate share of the total amount of those costs incurred by the CAISO based on the MSS gross Measured Demand excluding out of state exports and the Generating Units shall be made available to the CAISO through the submittal of Energy Bids. If the MSS Operator chooses not to charge the CAISO for the Emissions Costs of the Generating Units serving the Load of the MSS, then the Scheduling Coordinator for the MSS shall bear its proportionate share of the total amount of those costs incurred by the CAISO based on the MSS's net Measured Demand excluding out-of-state exports. For MSS Operators that have elected to follow their Load, and if an MSS Operator chooses not to charge the

CAISO for the Emissions Costs of the Generating Units serving that MSS Operator's Load, then that MSS's Scheduling Coordinator for that Load shall bear its proportionate share of the total amount of those costs incurred by the CAISO based on that MSS's Net Negative Uninstructed Deviations with Load Following Energy included in the netting. The MSS Operator shall make the election whether to charge the CAISO for these costs on an annual basis on November 1 for the following calendar year.

### 11.8 Bid Cost Recovery

For purposes of determining the Unrecovered Bid Cost Uplift Payments for each Bid Cost Recovery Eligible Resource as determined in Section 11.8.5 and the allocation of Unrecovered Bid Cost Uplift Payments for each Settlement Interval, the CAISO shall sequentially calculate the Bid Costs, which can be positive (IFM Bid Cost Shortfall, RUC Bid Cost Shortfall, or RTM Bid Cost Shortfall) or negative (IFM Bid Cost Surplus, RUC Bid Cost Surplus, or RTM Bid Cost Surplus) in the IFM, RUC, and the Real-Time Market, as the algebraic difference between the respective IFM Bid Cost, RUC Bid Cost or RTM Bid Cost and the IFM Market Revenues, RUC Market Revenues, or RTM Market Revenues as further described below in this Section 11.8. The RTM Energy Bid Costs and RTM Market Revenues include the FMM Energy Bid Costs. In any Settlement Interval a resource is eligible for Bid Cost Recovery credits pursuant to the rules described in the subsections of Section 11.8 and Section 11.17. Bid Cost Recovery Eligible Resources for different MSS Operators are supply resources listed in the applicable MSS Agreement. All Bid Costs shall be based on Bids as mitigated pursuant to the requirements specified in Section 39.7. Virtual Awards are not eligible for Bid Cost Recovery. Virtual Awards are eligible for make-whole credits due to price corrections pursuant to Section 11.21.2. In order to be eligible for Bid Cost Recovery, Non-Dynamic Resource-Specific System Resources must provide to the CAISO SCADA data by telemetry to the CAISO's EMS in accordance with Section 4.12.3 demonstrating that they have performed in accordance with their CAISO commitments. Scheduling Coordinators for Non-Generator Resources are not eligible to recover Start-Up Bid Costs, Minimum Load Bid Costs, Pumping Costs, Pump Shut-Down Costs, or Transition Bid Costs but are eligible to recover Energy Bid Costs, RUC Availability Payments and Ancillary Service Bid Costs.

#### 11.8.1 CAISO Determination of Self-Commitment Periods

For the purposes of identifying the periods during which a Bid Cost Recovery Eligible Resource is

deemed self-committed and thus ineligible for Start-Up Bid Costs, Transition Bid Costs, Minimum Load Bid Costs, IFM Pump Shut-Down Costs and IFM Pumping Costs, the CAISO derives the Self-Commitment Periods as described below. The CAISO will determine the Self-Commitment Periods for Multi-Stage Generating Resources based on the applicable MSG Configuration. MSS resources designated for Load following are considered to be self-committed if they have been scheduled with non-zero Load following capacity, or are otherwise used to follow Load in the Real-Time. The IFM Self-Commitment Period and RUC Self-Commitment Period will be available as part of the Day-Ahead Market results provided to the applicable Scheduling Coordinator. The interim RTM Self-Commitment Periods as reflected in the RTM will be available as part of the RTM results for the relevant Trading Hour as provided to the applicable Scheduling Coordinator. The final RTM Self-Commitment Period is determined ex-post for Settlements purposes. ELS Resources committed through the ELC Process described in Section 31.7 are considered to have been committed in the IFM Commitment Period for the applicable Trading Day for the purposes of determining BCR settlement in this Section 11.8.

#### 11.8.1.1 IFM Self-Commitment Period

An IFM Self-Commitment Period for a Bid Cost Recovery Eligible Resource shall consist of one or more sets of consecutive Trading Hours during which the relevant Bid Cost Recovery Eligible Resource has either a Self-Schedule or, except for Self-Provided Ancillary Services for Non-Spinning Reserve by a Short Start Unit, has a non-zero amount of Self-Provided Ancillary Services. An IFM Self-Commitment Period for a Bid Cost Recovery Eligible Resource may not be less than the relevant Minimum Run Time (MRT), rounded up to the next hour. Consequently, if a Bid Cost Recovery Eligible Resource first self-commits in hour h of the Trading Day, the self-commitment will be extended to hour h + MRT. Two IFM Self-Commitment Periods for a Bid Cost Recovery Eligible Resource may not be apart by less than the relevant Minimum Down Time (MDT) (rounded up to the next hour). Consequently, if a Bid Cost Recovery Eligible Resource has submitted a Self-Schedule or Submission to Self-Provide an Ancillary Service in hours h and h + n, and n is less than the MDT, the IFM Self-Commitment Period will be extended to the hours in between h and h + n inclusive. The number of IFM Self-Commitment Periods for a Bid Cost Recovery Eligible Resource within a Trading Day cannot exceed the relevant Maximum Daily Start-Ups (MDS), or MDS + 1 if the first IFM Self-Commitment Period is the continuation of an IFM or

RUC Commitment Period from the previous Trading Day. Consequently, if a Bid Cost Recovery Eligible Resource has submitted a Self-Schedule or Submission to Self-Provide an Ancillary Service, such that after applying the preceding two rules, the number of disjoint Self Commitment Periods for the Operating Day exceeds the Maximum Daily Start-Ups (MDS), or MDS + 1 if the first IFM Self-Commitment Period is the continuation of an IFM or RUC Commitment Period from the previous Trading Day, the disjoint Self Commitment Periods with smallest time gap in between will be joined together to bring down the number of disjoint Self Commitment Periods to MDS or MDS +1 as relevant. To determine whether an extension of the IFM Self-Commitment Period applies for Multi-Stage Generating Resources, the CAISO will ensure that the respective Minimum Run Time and Minimum Down Time for both the Generating Unit and MSG Configuration levels are simultaneously respected.

#### 11.8.1.2 Real-Time Self-Commitment Period

A Real-Time Market Self-Commitment Period for a Bid Cost Recovery Eligible Resource shall consist of all consecutive Dispatch Intervals not in an IFM Commitment Period or a RUC Commitment Period where the Bid Cost Recovery Eligible Resource has a Self-Schedule or, except for Self-Provided Ancillary Services for Non-Spinning Reserve by a Short Start Unit, has a non-zero amount of Self-Provided Ancillary Services. A Real-Time Market Self-Commitment Period for a Bid Cost Recovery Eligible Resource may not be less than the relevant MUT (rounded up to the next 15-minute Commitment Interval) when considered jointly with any adjacent IFM Self-Commitment Period. For example, if a Bid Cost Recovery Eligible Resource self-commits at time h, the self-commitment will be extended to Commitment Interval h + MUT, unless an IFM or RUC Commitment Period exists starting after hour h, in which case the self-commitment will be extended to Commitment Interval h + min (MUT, t), where t represents the time interval between the Real-Time Market Self-Commitment Period and the IFM or RUC Commitment Period. A Real-Time Market Self-Commitment Period for a Bid Cost Recovery Eligible Resource may not be apart from an IFM or RUC Commitment Period by less than the relevant MDT (rounded up to the next 15-minute Commitment Interval). To determine whether an extension of the RTM Self-Commitment Period applies for Multi-Stage Generating Resources, the CAISO will ensure that the respective Minimum Run Time and Minimum Down Time for both the Generating Unit and MSG Configuration levels are simultaneously respected.

**11.8.1.3 Multi-Stage Generating Resource Start-Up Bid Costs, Minimum Load Bid Costs, or Transition Bid Costs**

For the settlement of the Multi-Stage Generating Resource Start-Up Bid Costs, Minimum Load Bid Costs, and Transition Bid Costs in the IFM, RUC, and RTM, the CAISO will determine the applicable Commitment Period and select the applicable Start-Up Bid Costs, Minimum Load Bid Costs, and Transition Bid Costs based on the following rules.

(1) In any given Settlement Interval, the CAISO will first apply the following rules to determine the applicable Start-Up Bid Costs and Transition Bid Costs for the Multi-Stage Generating Resources. For a Commitment Period in which:

(a) the IFM Commitment Period and/or RUC Commitment Period MSG Configuration(s) are different from the RTM CAISO Commitment Period MSG Configuration, the Multi-Stage Generating Resource's Start-Up Bid Cost and Transition Bid Cost will be settled based on the RTM CAISO Commitment Period MSG Configuration Start-Up Bid Costs, and Transition Bid Costs, as described in Section 11.8.4.1.

(b) there is a CAISO IFM Commitment Period and/or CAISO RUC Commitment Period in any MSG Configuration and there is also a RTM Self-Commitment Period in any MSG Configuration, the Multi-Stage Generating Resource's Start-Up Bid Costs and Transition Bid Costs will be settled based on the CAISO IFM Commitment Period and/or CAISO RUC Commitment Period MSG Configuration(s) Start-Up Bid Costs and Transition Bid Costs, as described in Sections 11.8.2.1 and 11.8.3.1, and further determined pursuant to part (2) of this Section below.

(c) the CAISO IFM Commitment Period and/or CAISO RUC Commitment Period MSG Configuration is the same as the CAISO RTM Commitment Period MSG Configuration, the Multi-Stage Generating Resource's Start-Up Bid Costs and Transition Bid Costs will be settled based on the CAISO IFM Commitment Period and/or CAISO RUC Commitment Period MSG Configuration(s) Start-Up Bid

Costs and Transition Bid Costs described in Sections 11.8.2.1 and 11.8.3.1, and further determined pursuant to part (3) of this Section below.

(d) the IFM Self-Commitment Period and RUC Self-Commitment Period MSG Configuration(s) are the same as the CAISO RTM Commitment Period MSG Configuration, then the Multi-Stage Generating Resource's Start-Up Bid Costs and Transition Bid Costs will be settled based on the CAISO RTM Commitment Period MSG Configuration Start-Up Bid Costs and Transition Bid Costs as described in Section 11.8.4.1.

(2) For the purpose of determining which MSG Configuration Minimum Load Bid Costs will apply in any given Commitment Interval, the CAISO will apply the following rules.

(a) If there is a CAISO IFM Commitment Period and/or CAISO RUC Commitment Period, the CAISO will calculate the IFM Minimum Load Costs and/or RUC Minimum Load Costs, pursuant to Section 11.8.2.1 or 11.8.3.1, respectively, based on the MSG Configuration committed in the IFM or RUC.

(b) For purposes of determining the MSG Configuration Minimum Load Bid Costs included in the RTM Minimum Load Costs calculated pursuant to Section 11.8.4.1.2, the CAISO will use the difference between the amounts determined under (i) and (ii) below.

(i) The CAISO will calculate the RTM MSG Configuration Minimum Load Bid Costs as the RTM Minimum Load Cost attributed to the MSG Configuration committed in the RTM, whether that MSG Configuration is Self-Scheduled or CAISO-committed.

(ii) The CAISO will determine one of the two applicable amounts:

a. If there is a Real-Time Market Self-Schedule, the maximum of (A) the Minimum Load Bid Costs attributed to the MSG Configuration either self-Scheduled or CAISO-committed in the IFM or RUC; and (B) the Minimum Load Cost attributed to the MSG Configuration Self-Scheduled in the RTM.

b. If there is no Real-Time Market Self-Schedule, the Minimum Load Bid Costs attributed to the MSG Configuration either self-Scheduled or CAISO-committed in the IFM or RUC.

(3) In any given Settlement Interval, after the rules specified in part (1) and (2) above of this Section have been executed, the CAISO will apply the following rules to determine whether the IFM Start-Up Cost or RUC Start-Up Cost, IFM Minimum Load Cost or RUC Minimum Load Cost, and IFM Transition Cost or RUC Transition Cost apply for Multi-Stage Generating Resources. For a Commitment Period in which:

(a) the IFM Commitment Period MSG Configuration is different from the CAISO RUC Commitment Period MSG Configuration the Multi-Stage Generating Resource's Start-Up Bid Cost, Minimum Load Bid Cost, and Transition Bid Cost will be settled based on the CAISO RUC Commitment Period MSG Configuration Start-Up Bid Cost, Minimum Load Bid Cost, and Transition Bid Cost as described in Section 11.8.3.1.

(b) the CAISO IFM Commitment Period MSG Configuration is the same as the CAISO RUC Commitment Period MSG Configuration, the Multi-Stage Generating Resource's Start-Up Bid Cost, Minimum Load Bid Cost, and Transition Bid Cost will be based on the CAISO IFM Commitment Period MSG Configuration Start-Up Bid Cost, Minimum Load Bid Cost, and Transition Bid Cost as described in Section 11.8.2.1.

### 11.8.2 IFM Bid Cost Recovery Amount

For purposes of determining the IFM Unrecovered Bid Cost Uplift Payments as determined in Section 11.8.5, and the purposes of allocating Net IFM Bid Cost Uplift as described in Section 11.8.6.4, the CAISO shall calculate the IFM Bid Cost Shortfall or the IFM Bid Cost Surplus as the algebraic difference between the IFM Bid Cost and the IFM Market Revenues for each Settlement Interval, which are determined as described below and subject to the application of the Day-Ahead Metered Energy Adjustment Factor and the Real-Time Performance Metric rules specified in Section 11.8.2.5 and

11.8.4.4, respectively. The IFM Bid Costs shall be calculated pursuant to Section 11.8.2.1 and the IFM Market Revenues shall be calculated pursuant to Section 11.8.2.2.

**11.8.2.1 IFM Bid Cost Calculation**

For each Settlement Interval, the CAISO shall calculate IFM Bid Cost for each Bid Cost Recovery Eligible Resource as the algebraic sum of the IFM Start-Up Cost, IFM Transition Cost, IFM Minimum Load Cost, IFM Pump Shut-Down Cost, IFM Energy Bid Cost, IFM Pumping Cost, IFM AS Bid Cost, IFM GHG Bid Cost, and IFM Imbalance Reserves Bid Cost. For Multi-Stage Generating Resources, in addition to the specific IFM Bid Cost rules described in Section 11.8.2.1, the CAISO will apply the rules described in Section 11.8.1.3 to further determine the applicable MSG Configuration-based CAISO Market Start-Up Bid Cost, Transition Bid Cost, and Minimum Load Bid Cost in any given Settlement Interval. For Multi-Stage Generating Resources, the incremental IFM Start-Up Costs, IFM Minimum Load Costs, and IFM Transition Costs to provide Energy Scheduled in the Day-Ahead Schedule or awarded RUC or Ancillary Service capacity for an MSG Configuration other than the self-scheduled MSG Configuration are determined by the IFM rules specified in Section 31.3. For RMR Resources, the CAISO shall calculate the IFM Bid Cost as the algebraic sum of the IFM Start-Up Cost adjusted to remove Opportunity Costs, IFM Transition Cost adjusted to remove Opportunity Costs, IFM Minimum Load Costs adjusted to remove Opportunity Costs, IFM Energy Bid Cost adjusted to remove Opportunity Costs, and IFM AS Bid Cost. The CAISO will also adjust the IFM Bid Costs for RMR Resources, to remove any bid adder that includes costs that were recovered under the RMR Contract.

**11.8.2.1.1 IFM Start-Up Cost**

The IFM Start-Up Cost for any IFM Commitment Period shall be equal to the Start-Up Bid Costs applicable to the IFM divided by the number of Settlement Intervals within the applicable IFM Commitment Period. For each Settlement Interval, only the IFM Start-Up Cost in a CAISO IFM Commitment Period is eligible for Bid Cost Recovery. The CAISO will determine the IFM Start-Up Costs for Multi-Stage Generating Resources based on the CAISO-committed MSG Configuration. The following rules shall apply sequentially to qualify the IFM Start-Up Cost in an IFM Commitment Period:

(a) The IFM Start-Up Cost for an IFM Commitment Period shall be zero if there is an IFM Self-Commitment Period within or overlapping with that IFM Commitment Period.

(b) The IFM Start-Up Cost for an IFM Commitment Period shall be zero if the Bid Cost Recovery Eligible Resource is manually pre-dispatched under a Legacy RMR Contract prior to the Day-Ahead Market or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule in the Day-Ahead Market anywhere within the applicable IFM Commitment Period.

(c) The IFM Start-Up Cost for an IFM Commitment Period shall be zero if there is no actual Start-Up at the start of the applicable IFM Commitment Period because the IFM Commitment Period is the continuation of an IFM Commitment Period, RUC Commitment Period, or RTM Commitment Period from the previous Trading Day.

(d) If an IFM Start-Up is terminated in the Real-Time within the applicable IFM Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource was starting up, the IFM Start-Up Cost for that IFM Commitment Period shall be prorated by the ratio of the Start-Up Time before termination over the total IFM Start-Up Time.

(e) The IFM Start-Up Cost is qualified if an actual Start-Up occurs within the applicable IFM Commitment Period. An actual Start-Up is detected when the relevant metered Energy in the applicable Settlement Intervals indicates the unit is Off before the time the resource is instructed to be On as specified in its Start-Up Instruction and is On in the Settlement Intervals that fall within the CAISO IFM Commitment Period. The CAISO will determine whether the resource is On for this purpose based on whether the resource's metered Energy is at or above the resource's Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3.

(f) The IFM Start-Up Cost will be qualified if an actual Start-Up occurs earlier than the start of the IFM Commitment Period if the advance Start-Up is a result of a Start-Up instruction issued in a RUC or Real-Time Market process subsequent to the IFM, or the advance Start-Up is uninstructed but is still within the same Trading Day and the Bid Cost Recovery Eligible Resource actually stays on until the targeted IFM Start-Up.

(g) The Start- Up Bid Costs for a Bid Cost Recovery Eligible Resource that is a Short Start

Unit committed by the CAISO in the IFM and that further receives a Start-Up Instruction from the CAISO in the Real-Time Market to start within the same CAISO IFM Commitment Period, will be qualified for the CAISO IFM Commitment Period instead of being qualified for the CAISO RTM Commitment Period; and Start-Up Bid Costs for subsequent Start-Ups will be further qualified as specified in Section 11.8.4.1.1(h).

**11.8.2.1.2 IFM Minimum Load Cost**

The IFM Minimum Load Cost for the applicable Settlement Interval shall be the Minimum Load Bid Cost applicable to the Integrated Forward Market, divided by the number of Settlement Intervals in a Trading Hour subject to the rules described below.

(a) For each Settlement Interval, only the IFM Minimum Load Cost in a CAISO IFM Commitment Period is eligible for Bid Cost Recovery.

(b) The IFM Minimum Load Cost for any Settlement Interval is zero if: (1) the Settlement Interval is in an IFM Self Commitment Period for the Bid Cost Recovery Eligible Resource; or (2) the Bid Cost Recovery Eligible Resource is manually pre-dispatched under a Legacy RMR Contract prior to the Day-Ahead Market or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule for the applicable Settlement Interval.

(c) If the CAISO commits a Bid Cost Recovery Eligible Resource in the Day-Ahead and the resource receives a Day-Ahead Schedule and the CAISO subsequently de-commits the resource in the Real-Time Market, the IFM Minimum Load Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. If the CAISO commits an RMR Resource in the Day-Ahead and the resource receives a Day-Ahead Schedule and the CAISO subsequently de-commits the resource in the Real-Time Market, the sum of IFM Minimum Load Costs, adjusted to remove Minimum Load Opportunity Costs and Variable Minimum Load Operations and Maintenance Adders, are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4.

(d) If a Multi-Stage Generating Resource is committed by the CAISO and receives a Day-Ahead Schedule and subsequently is committed by the CAISO to a lower MSG Configuration where its Minimum Load capacity as registered in the Master File in the

Real-Time Market is lower than the CAISO IFM Commitment Period MSG Configuration's Minimum Load as registered in the Master File, the resource's IFM Minimum Load Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. If the CAISO commits an RMR Multi-Stage Generating Resource in the Day-Ahead and the resource receives a Day-Ahead Schedule and the CAISO subsequently de-commits the resource in the Real-Time Market, the sum of IFM Minimum Load Costs, adjusted to remove Minimum Load Opportunity Costs and Variable Minimum Load Operations and Maintenance Adders, are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4.

(e) If the conditions in Sections 11.8.2.1.2 (c) and (d) do not apply, then the IFM Minimum Load Cost for any Settlement Interval is zero if the Bid Cost Recovery Eligible Resource is determined to be Off during the applicable Settlement Interval. For the purposes of determining IFM Minimum Load Cost, a Bid Cost Recovery Eligible Resource is assumed to be On if its metered Energy in a Settlement Interval is equal to or greater than the difference between its (i) Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and (ii) the Tolerance Band, and the Metered Energy is greater than zero (0) MWh. Otherwise, such resource is determined to be Off.

(f) For Multi-Stage Generating Resources, the commitment period is determined based on application of section 11.8.1.3. If application of section 11.8.1.3 dictates that the IFM is the Commitment Period, then the calculation of the IFM Minimum Load Costs will depend on whether the IFM committed MSG Configuration is determined to be On. If it is determined to be On, then, the IFM Minimum Load Costs will be based on the Minimum Load Bid Costs of the IFM committed MSG Configuration. For the purposes of determining IFM Minimum Load Cost for a Multi-Stage Generating Resource, a Bid Cost Recovery Eligible Resource is determined to be On if its metered Energy in a Settlement Interval is equal to or greater than the difference between its IFM MSG Configuration Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and the Tolerance Band, and the Metered Energy is greater than zero (0)

MWh. Otherwise, such resource is determined to be Off.

(g) The IFM Minimum Load Costs calculation is subject to the Shut-Down State Variable and is disqualified as specified in Section 11.17.2.

**11.8.2.1.3 IFM Pump Shut-Down Cost**

For Pumped-Storage Hydro Units and Participating Load only, the IFM Pump Shut-Down Costs for each Settlement Interval shall be equal to the relevant Pump Shut-Down Cost submitted to CAISO in the IFM divided by the number of Settlement Intervals in a Trading Hour that is preceded by a previous commitment by the IFM to pump, in which actual shut down occurs if the unit is committed by the IFM not to pump and actually does not operate in pumping mode in that Settlement Interval (as detected through Meter Data). The IFM Pump Shut-Down Cost for an IFM Shut-Down period shall be zero if: (1) it is followed by an IFM Self-Commitment Period or RTM Self-Commitment Period in generation mode; (2) the Shut-Down is due to an Outage reported through the CAISO's outage management system as described in Section 9; or (3) the Shut-Down is delayed by the RTM past the IFM Shut-Down period in question or cancelled by the RTM before the Shut-Down process has started.

**11.8.2.1.4 IFM Pumping Bid Cost**

For Pumped-Storage Hydro Units and Participating Load only, the IFM Pumping Bid Cost for the applicable Settlement Interval shall be the Pumping Cost submitted to the CAISO in the IFM divided by the number of Settlement Intervals in a Trading Hour. The Pumping Cost is negative. The Pumping Cost is included in IFM Bid Cost computation for a Pumped-Storage Hydro Unit and Participating Load committed by the IFM to pump or serve Load if it actually operates in pumping mode or serves Load in that Settlement Interval. The IFM Energy Bid Cost for a Participating Load for any Settlement Interval is set to zero for actual Energy consumed in excess of the Day-Ahead Schedule for Demand. The IFM Pumping Cost for any Settlement Interval is zero if: (1) the Settlement Interval is in an IFM Self-Commitment Period for the Bid Cost Recovery Eligible Resource; or (2) the Bid Cost Recovery Eligible Resource is manually pre-dispatched under a Legacy RMR Contract prior to the Day-Ahead Market or the resource is flagged as a Legacy RMR Dispatch in the Day-Ahead Schedule for the applicable Settlement Interval.

**11.8.2.1.5 IFM Energy Bid Cost**

For any Settlement Interval, the IFM Energy Bid Cost for Bid Cost Recovery Eligible Resources, except Participating Loads, shall be the integral of the relevant Energy Bid used in the IFM, if any, from the higher of the Bid Cost Recovery Eligible Resource's Minimum Load as defined in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and the Day-Ahead Total Self-Schedule up to the relevant MWh scheduled in the Day-Ahead Schedule, divided by the number of Settlement Intervals in a Trading Hour. The IFM Energy Bid Cost calculations are subject to the application of the Day-Ahead Metered Energy Adjustment Factor, and the Persistent Deviation Metric pursuant to the rules specified in Section 11.8.2.5 and Section 11.17.2.3, respectively. In addition, if the CAISO commits a Bid Cost Recovery Eligible Resource in the Day-Ahead and receives a Day-Ahead Schedule and subsequently the CAISO de-commits the resource in the Real-Time Market, the IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. If the CAISO commits a Multi-Stage Generating Resource in the Day-Ahead Market and the resource receives a Day-Ahead Schedule and subsequently the CAISO de-commits the Multi-Stage Generating Resource to a lower MSG Configuration where its Minimum Load capacity as registered in the Master File in the Real-Time Market is lower than the CAISO IFM Commitment Period MSG Configuration's Minimum Load as registered in the Master File, the resource's IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. The CAISO will determine the IFM Energy Bid Cost for a Multi-Stage Generating Resource at the Generating Unit level. The IFM Energy Bid Cost for RMR Resources shall be the integral of the relevant Energy Bid used in the IFM adjusted to remove Opportunity Costs from the higher of the RMR Resource's Minimum Load as defined in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and the Day-Ahead Total Self-Schedule up to the relevant MWh scheduled in the Day-Ahead Schedule, divided by the number of Settlement Intervals in a Trading Hour.

**11.8.2.1.6 IFM AS Bid Cost**

For any Settlement Interval, the IFM AS Bid Cost shall be the product of the IFM AS Award from each accepted IFM AS Bid and the relevant AS Bid Price, divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine and calculate IFM AS Bid Cost for a Multi-Stage Generating Resource at the Generating Unit level. The IFM AS Bid Cost shall also include Mileage Bid Costs. For any Settlement Interval, the IFM Mileage Bid Cost shall be the product of Instructed Mileage associated

with a Day Ahead Regulation capacity award, as adjusted for accuracy consistent with Section 11.10.1.7, and the relevant Mileage Bid price, divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine and calculate IFM Mileage Bid Cost for a Multi-Stage Generating Resource at the Generating Unit level. For any Settlement Interval, the IFM AS Bid Cost for an RMR Resource shall be zero.

#### 11.8.2.1.7 IFM Transition Cost

For each Settlement Interval, the IFM Transition Costs shall be based on the MSG Configuration to which the Multi-Stage Generating Resource is transitioning and is allocated to the CAISO Commitment Period of that MSG Configuration.

##### 11.8.2.1.7.1 IFM Transition Cost Applicability

Within any eligible IFM CAISO Commitment Period determined pursuant to the rules specified in Section 11.8.1.3, the CAISO shall apply the IFM Transition Costs for the Settlement Intervals in which the Multi-Stage Generating Resource is actually transitioning from the "from" MSG Configuration and reaches the Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3, of the "to" MSG Configuration to which the Multi-Stage Generating Resource is transitioning, subject to the Tolerance Band.

#### 11.8.2.1.8 IFM Imbalance Reserves Bid Cost

For any Settlement Interval, the IFM Imbalance Reserves Bid Cost shall be the product of the IRU Bid price and IRU Bid quantity (as reduced by the unavailable IRU quantity calculated per Section 11.2.1.8.1) plus the product of the IRD Bid price and IRD Bid quantity (as reduced by the unavailable IRD quantity calculated per Section 11.2.1.8.2).

#### 11.8.2.1.9 IFM GHG Bid Cost

For each Settlement Interval, the IFM GHG Bid Cost shall be the product of the IFM GHG Award from each accepted IFM GHG Bid Adder for a relevant GHG Regulation Area and the applicable Marginal GHG Cost divided by the number of Settlement Intervals in a Trading Hour.

### 11.8.2.2 IFM Market Revenue

The CAISO will apply the following rules to calculate a Bid Cost Recovery Eligible Resource's IFM Market Revenue used for purposes of calculating its IFM Bid Cost Shortfalls and IFM Bid Cost Surpluses

calculated pursuant to Section 11.8.2, and for purposes of allocating the Bid Cost Uplift pursuant to Section 11.8.6. The IFM Market Revenue calculations for both CAISO IFM Commitment Periods and Self-Committed Periods will be subject to the Day-Ahead Metered Energy Adjustment Factor pursuant to the rules specified in Section 11.8.2.5.

**11.8.2.2.1 CAISO IFM Commitment**

For any Settlement Interval in a CAISO IFM Commitment Period the IFM Market Revenue for a Bid Cost Recovery Eligible Resource is the algebraic sum of the five products specified below. In the case of a Multi-Stage Generating Resource, the CAISO will calculate the market revenue at the Generating Unit or Dynamic Resource-Specific System Resource level.

(1) The product of the delivered MWh in the relevant Day-Ahead Schedule in that Trading Hour (where for Pumped-Storage Hydro Units and Participating Load operating in the pumping mode or serving Load the MWh is negative), and the relevant IFM LMP, divided by the number of Settlement Intervals in a Trading Hour.

(2) The product of the IFM AS Award from each accepted IFM AS Bid and the relevant Resource-Specific ASMP, divided by the number of Settlement Intervals in a Trading Hour.

(3) The product of IFM GHG Award and relevant Marginal GHG Cost, divided by the number of Settlement Intervals in a Trading Hour.

(4) The product of the IRU award (as reduced by the unavailable IRU quantity calculated per Section 11.2.1.8.1) and the Locational IRU Price.

(5) The product of the IRD award (as reduced by the unavailable IRD quantity calculated per Section 11.2.1.8.2) and the Locational IRD Price.

**11.8.2.2.2 Resource Self-Committed**

For any Settlement Interval in a IFM Self-Commitment Period the IFM Market Revenue for a Bid Cost Recovery Eligible Resource is the algebraic sum of: (1) the product of the MWh above the greater of Minimum Load and Self-Scheduled Energy, in the relevant Day-Ahead Schedule in that Trading Hour and the relevant IFM LMP, divided by the number of Settlement Intervals in a Trading Hour; and (2) the product of the IFM AS Award from each accepted IFM AS Bid and the relevant Resource-Specific ASMP,

divided by the number of Settlement Intervals in a Trading Hour.

#### 11.8.2.3 IFM Bid Cost Recovery Amounts for Metered Subsystems

The IFM Bid Cost Recovery for MSS Operators differs based on whether the MSS Operator has elected gross or net Settlement.

##### 11.8.2.3.1 MSS Elected Gross Settlement

For an MSS Operator that has elected gross Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the IFM Bid Cost and the IFM Market Revenue are calculated similarly to non-MSS resources on an individual resource basis as described in Sections 11.8.2.1 and 11.8.2.2, respectively.

##### 11.8.2.3.2 MSS Elected Net Settlement

For an MSS Operator that has elected net Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the Energy Bid Costs and revenues for IFM Bid Cost Recovery is settled at the MSS level. The IFM Bid Cost as described in Section 11.8.2.1 above and IFM Market Revenue as provided in Section 11.8.2.2 above, of each MSS will be, respectively, the total of the IFM Bid Costs and IFM Market Revenues over all BCR Eligible Resources within the MSS where each BCR Eligible Resource's IFM Market Revenues for its Energy shall be calculated as described in Section 11.2.3.2 at the relevant IFM MSS price. The IFM Bid Cost Shortfalls and IFM Bid Cost Surpluses for Energy and AS are first calculated separately for the MSS for each Trading Hour of the Trading Day with qualified Start-Up Bid Costs and qualified Minimum Load Bid Costs included in the IFM Bid Cost Shortfalls and IFM Bid Cost Surpluses for Energy calculation. The MSS's overall IFM Bid Cost Shortfall or IFM Bid Cost Surplus is then calculated as the algebraic sum of the IFM Bid Cost Shortfall or IFM Bid Cost Surplus for Energy and the IFM Bid Cost Shortfall or IFM Bid Cost Surplus for AS for each Trading Hour.

#### 11.8.2.4 Ramping for IFM Initial Conditions Self-Schedules

The CAISO shall determine the net IFM Bid Cost surplus or net IFM Bid Cost shortage across all full ramp down periods that start with an initial condition at the start of the IFM or a full ramp period within a 24 hour day-ahead market associated with a Self-Schedule any time within the full ramp period. For such full ramp periods associated with an initial condition or Self-Schedule with a net IFM Bid Cost shortfall, the net IFM Energy Bid Cost shortfall will not be included in IFM Bid Cost calculations. For the full ramp

periods with a net IFM Bid Cost surplus, the surplus will be included in IFM Bid Cost calculations. For full other ramp periods not associated with an initial condition or Self-Schedule with IFM Energy Bid Cost shortfall, the shortfall will be included in IFM Bid Cost calculations. The CAISO will identify the Trading Hours scheduled as full ramp up periods as of the first hour where the resource is ramping up at full ramp until the last hour where the resource is ramping up at full ramp. Likewise, a full ramp down period will be identified as of first hour where the resource is ramping down at full ramp until the last hour that the resource is ramping down at full ramp.

#### 11.8.2.5 Calculation and Application of the Day-Ahead Metered Energy Adjustment Factor to IFM Bid Costs and Market Revenues

The CAISO will adjust for each Bid Cost Recovery Eligible Resource the IFM Energy Bid Cost and IFM Market Revenue calculations by multiplying the Day-Ahead Metered Energy Adjustment Factor with the amounts derived as specified in Sections 11.8.2.1.5 and 11.8.2.2, respectively. In addition, the CAISO will apply the Real-Time Performance Metric to the IFM Energy Bid Costs, IFM Minimum Load Costs IFM Pumping Costs and IFM Market Revenues, as described in 11.8.4.4. The CAISO will not apply the Day-Ahead Metered Energy Adjustment Factor to Non-Generator Resources.

##### 11.8.2.5.1 Calculation of Day-Ahead Metered Energy Adjustment Factor

The CAISO will calculate the Day-Ahead Metered Energy Adjustment Factor for each BCR Eligible Resource through the following steps:

**a) For Generation Unit and Resource-Specific-System Resource scheduled by CAISO in the Day-Ahead Market**

Step 1: If the resource's Effective Day-Ahead Scheduled Energy is greater than or equal to its Day-Ahead Minimum Load Energy, and is greater than zero, then the calculation will proceed to step two. Otherwise, the calculation will proceed to step six.

Step 2: If (1) the resource's Metered Energy less Regulation Energy is less than its Day-Ahead Minimum Load Energy less the Tolerance Band; or (2) the resource's Metered Energy less Regulation Energy is less than or equal to zero, then the Day-Ahead Metered Energy Adjustment Factor will be set to zero (0). Otherwise, the calculation will proceed to step three.

Step 3: If the absolute value of the result of the resource's Metered Energy less its Regulation Energy less the Effective Day-Ahead Scheduled Energy, is less than or equal to the Performance Metric Tolerance Band, then the Day-Ahead Metered Energy Adjustment Factor will be set to one (1). Otherwise, the calculation will proceed to step four.

Step 4: If the resource's Effective Day-Ahead Scheduled Energy less its Day-Ahead Minimum Load Energy is equal to zero, then the Day-Ahead Metered Energy Adjustment Factor will be set to one (1). Otherwise, the calculation will proceed to step five.

Step 5: The resource's Day-Ahead Metered Energy Adjustment Factor will be the minimum of: (A) the number one (1); or (B) the maximum of (i) the number zero (0), and (ii) the ratio of the resource's (a) Metered Energy less the Day-Ahead Minimum Load Energy and less the Regulation Energy, and (b) the Effective Day-Ahead Scheduled Energy, less the Day-Ahead Minimum Load Energy.

Step 6: If the resource's Effective Day-Ahead Scheduled Energy is less than its Day-Ahead Minimum Load Energy and if the resource's Effective Day-Ahead Scheduled Energy is greater than zero (0), then its Day-Ahead Metered Energy Adjustment Factor will be set to one (1). Otherwise, the calculation will proceed to step seven.

Step 7: If the Day-Ahead Scheduled Energy is positive and the resource's Expected Energy is less than or equal to zero, and its Metered Energy is less than or equal to zero, then its Day-Ahead Metered Energy Adjustment Factor will be set to one (1). Otherwise, its Day-Ahead Metered Energy Adjustment Factor will be set to zero (0).

**b) Participating Load Pumped-Storage Hydro Units and Pumping Load scheduled by CAISO to pump in the Day-Ahead Market**

Step 1: If the Day-Ahead Pumping Energy is negative and its Expected Energy is negative, then its Day-Ahead Metered Energy Adjustment Factor will be the minimum of: (A) the number one (1); or (B) the maximum of (i) the number zero (0) and (ii) the ratio of the resource's Metered Energy and its Expected

Energy. Otherwise, proceed to step two.

Step 2: If the Day-Ahead Pumping Energy is negative and the resource's Expected Energy is greater than or equal to zero, and its Metered Energy is greater than or equal to zero, then its Day-Ahead Metered Energy Adjustment Factor will be (1). Otherwise, its Day-Ahead Metered Energy Adjustment Factor will be set to zero (0).

**11.8.2.5.2 Application of Day-Ahead Metered Energy Adjustment Factor**

The CAISO will apply the Day-Ahead Metered Energy Adjustment Factor to the IFM Pumping Bid Costs in the same manner in which the CAISO applies the Day-ahead Metered Energy Adjustment Factor to the IFM Energy Bid Costs as specified in this Section 11.8.2.5.2 and its subsections.

**11.8.2.5.2.1** If the IFM Energy Bid Costs and the IFM Market Revenues for the amounts of Day-Ahead Scheduled Energy above the Bid Cost Recovery Eligible Resource's Minimum Load are greater than or equal to zero (0), the CAISO will apply the Day-Ahead Metered Energy Adjustment Factor to the IFM Energy Bid Costs, but not the IFM Market Revenue.

**11.8.2.5.2.2** If the IFM Energy Bid Costs are greater than or equal to zero (0) and the IFM Market Revenues are negative, the CAISO will apply the Day-Ahead Metered Energy Adjustment Factor to both the IFM Energy Bid Costs and IFM Market Revenues.

**11.8.2.5.2.3** If the IFM Energy Bid Costs are negative and IFM Market Revenues are greater or equal to zero, the CAISO will not apply the Day-Ahead Metered Energy Adjustment Factor to IFM Energy Bid Costs or IFM Market Revenues.

**11.8.2.5.2.4** If the IFM Energy Bid Costs and the IFM Market Revenues are both negative, the CAISO will apply the Day-Ahead Metered Energy Adjustment Factor to the IFM Market Revenues, but it will not apply it to the IFM Energy Bid Costs.

**11.8.3 RUC Bid Cost Recovery Amount**

For purposes of determining the RUC Unrecovered Bid Cost Uplift Payments as determined in Section 11.8.5 and for the purposes of allocating Net RUC Bid Cost Uplift as described in Section 11.8.6.5, the CAISO shall calculate the RUC Bid Cost Shortfall or the RUC Bid Cost Surplus as the algebraic difference between the RUC Bid Cost and the RUC Market Revenues for each Bid Cost Recovery Eligible Resource

for each Settlement Interval. The RUC Bid Costs shall be calculated pursuant to Section 11.8.3.1 and the RUC Market Revenues shall be calculated pursuant to Section 11.8.3.2. The CAISO will include Bid Cost Recovery costs related to Short Start Units committed in Real-Time because of awarded RUC Capacity in RTM Compensation Costs. The CAISO excludes RUC Bid Costs and RUC Market Revenues from calculations under this Section 11.8.3 to the extent the costs or revenues relate to RA Capacity that overlaps with a RUC Award for RCU or RUC Award for RCD as calculated per the methodology identified in Section 11.2.6.2.2 or Section 11.2.6.2.4, respectively.

**11.8.3.1 RUC Bid Cost Calculation**

For each Settlement Interval, the CAISO shall determine the RUC Bid Cost for a Bid Cost Recovery Eligible Resource as the algebraic sum of the RUC Start-Up Cost, RUC Transition Cost, RUC Minimum Load Cost, and RUC Availability Bid Cost. For Multi-Stage Generating Resources, in addition to the specific RUC Bid Cost rules described in Section 11.8.3.1, the rules described in Section 11.8.1.3 will be applied to further determine the applicable MSG Configuration-based CAISO Market Start-Up Bid Costs, Transition Bid Costs, and Minimum Load Bid Costs. For Multi-Stage Generating Resources, the incremental RUC Start-Up Costs, RUC Minimum Load Costs, and RUC Transition Costs to provide RUC awarded capacity for an MSG Configuration other than the self-scheduled MSG Configuration are determined by the RUC optimization rules in specified in Section 31.5. For each Settlement Interval, the CAISO shall determine the RUC Bid Cost for an RMR Resource as the algebraic sum of the RUC Start-Up Cost adjusted to remove Opportunity Costs and Variable Start-Up Operations and Maintenance Adders, and RUC Transition Cost adjusted to remove Opportunity Costs and Variable Start-Up Operations and Maintenance Adders.

**11.8.3.1.1 RUC Start-Up Cost**

The RUC Start-Up Cost for any Settlement Interval in a RUC Commitment Period shall consist of Start-Up Bid Cost of the Bid Cost Recovery Eligible Resource for the applicable RUC Commitment Period divided by the number of Settlement Intervals in the applicable RUC Commitment Period. For each Settlement Interval, only the RUC Start-Up Cost in a CAISO RUC Commitment Period is eligible for Bid Cost Recovery. The CAISO will determine the RUC Start-Up Cost for a Multi-Stage Generating Resource based on the MSG Configuration committed by the CAISO in RUC.

The following rules shall be applied in sequence and shall qualify the RUC Start-Up Cost in a RUC Commitment Period:

(a) The RUC Start-Up Cost for a RUC Commitment Period is zero if there is an IFM Commitment Period within that RUC Commitment Period.

(b) The RUC Start-Up Cost for a RUC Commitment Period is zero if the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an RMR Contract prior to the Day-Ahead Market or is flagged as an RMR Dispatch in the Day-Ahead Schedule anywhere within that RUC Commitment Period.

(c) The RUC Start-Up Cost for a RUC Commitment Period is zero if there is no RUC Start-Up at the start of that RUC Commitment Period because the RUC Commitment Period is the continuation of an IFM Commitment Period, RUC Commitment Period, or RTM Commitment Period from the previous Trading Day.

(d) The RUC Start-Up Cost for a RUC Commitment Period is zero if the Start-Up is delayed beyond the RUC Commitment Period in question or cancelled by the Real-Time Market prior to the Bid Cost Recovery Eligible Resource starting its start-up process.

(e) If a RUC Start-Up is terminated in the Real-Time within the applicable RUC Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource is starting up, the RUC Start-Up Cost is prorated by the ratio of the Start-Up Time before termination over the RUC Start-Up Time.

(f) The RUC Start-Up Cost for a RUC Commitment Period is qualified if an actual Start-Up occurs within that RUC Commitment Period. An actual Start-Up is detected when the relevant metered Energy in the applicable Settlement Intervals indicates that the resource is Off before the time the resource is instructed to be On as specified in its Start-Up Instruction and is On in the Settlement Intervals that fall within the CAISO RUC Commitment Period. The CAISO will determine whether the resource is On for this purpose based on whether its metered Energy is at or above the resource's Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3.

(g) The RUC Start-Up Cost shall be qualified if an actual Start-Up occurs. An actual Start-Up is detected when the relevant metered Energy in the applicable Settlement Intervals indicates the unit is Off before the time the resource is instructed to be On as specified in its Start Up Instruction and is On in the Settlement Intervals that fall within the CAISO RUC Commitment Period.

#### 11.8.3.1.2 RUC Minimum Load Cost

The RUC Minimum Load Cost for the applicable Settlement Interval shall be the Minimum Load Bid Cost of the Bid Cost Recovery Eligible Resource, divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RUC Minimum Load Cost in a CAISO RUC Commitment Period is eligible for Bid Cost Recovery. The RUC Minimum Load Cost for any Settlement Interval is zero if: (1) the Bid Cost Recovery Eligible Resource is manually pre-dispatched under a Legacy RMR Contract or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule in that Settlement Interval; (2) the Bid Cost Recovery Eligible Resource is not committed or Dispatched in the Real-time Market in the applicable Settlement Interval; or (3) the applicable Settlement Interval is included in an IFM Commitment Period. For the purposes of determining RUC Minimum Load Cost for a Bid Cost Recovery Eligible Resource, recovery of the RUC Minimum Load Cost is subject to the Real-Time Performance Metric as specified in Section 11.8.4.4. For Multi-Stage Generating Resources, the commitment period is further determined based on application of section 11.8.1.3. The RUC Minimum Load Cost calculation will be subject to the Shut-Down State Variable and disqualified as specified in Section 11.17.2.

#### 11.8.3.1.3 RUC Availability Bid Cost

The RUC Availability Bid Cost is calculated as the product of the RUC Award with the relevant RUC Availability Bid price, divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine the RUC Availability Bid Cost based on the MSG Configuration. The RUC Availability Cost for a Bid Cost for an RMR Resource for a Settlement Interval is zero.

#### 11.8.3.1.4 RUC Transition Cost

For each Settlement Interval, the RUC Transition Costs shall be based on the MSG Configuration to which the Multi-Stage Generating Resource is transitioning and is allocated to the CAISO commitment period of that MSG Configuration.

#### 11.8.3.1.4.1 RUC Transition Costs Applicability

Within any eligible RUC CAISO Commitment Period determined pursuant to the rules specified in Section 11.8.1.3, the CAISO shall apply the RUC Transition Costs for the Settlement Intervals in which the Multi-Stage Generating Resource is actually transitioning from the "from" MSG Configuration and reaches the Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3, of the "to" MSG Configuration to which the Multi-Stage Generating Resource is transitioning, subject to the Tolerance Band.

### 11.8.3.2 RUC Market Revenues

For any Settlement Interval, the RUC Market Revenue for a Bid Cost Recovery Eligible Resource is the RUC Availability Payment as specified in Section 11.2.2.1 divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine the RUC Market Revenues for Multi-Stage Generating Resources based on the Generating Unit level.

### 11.8.3.3 RUC Bid Cost Recovery for Metered Subsystem

#### 11.8.3.3.1 MSS Elected Gross Settlement

For an MSS Operator that has elected gross Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the RUC Bid Cost and the RUC Market Revenue are calculated similarly to non-MSS resources on an individual resource basis as described in Sections 11.8.3.1 and 11.8.3.2, respectively.

#### 11.8.3.3.2 MSS Elected Net Settlement

For an MSS Operator that has elected net Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the RUC Bid Costs and RUC Market Revenue are combined with RTM Bid Cost and RTM Market Revenue on an MSS level, consistent with the Energy Settlement as calculated according to Section 11.8.4.3.2.

## 11.8.4 RTM Bid Cost Recovery Amount

For purposes of determining the RTM Unrecovered Bid Cost Uplift Payments as determined in Section 11.8.5, and for the purposes of allocation of Net RTM Bid Cost Uplift as described in Section 11.8.6.6 the CAISO shall calculate the RTM Bid Cost Shortfall or the RTM Bid Cost Surplus as the algebraic difference between the RTM Bid Cost and the RTM Market Revenues for each Settlement Interval. The RTM Bid

Costs shall be calculated pursuant to Section 11.8.4.1. The RTM Market Revenues shall be calculated pursuant to Section 11.8.4.2. The Energy subject to RTM Bid Cost Recovery is the FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy described in Section 11.5.1, excluding Standard Ramping Energy, Residual Imbalance Energy, FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy, FMM Derate Energy or RTD Derate Energy, Ramping Energy Deviation, Regulation Energy and MSS Load Following Energy regardless of whether the Energy is from the FMM or RTD, and is subject to the application of the Real-Time Performance Metric as described in Section 11.8.4.4 and the Persistent Deviation Metric described in Section 11.17.

#### 11.8.4.1 RTM Bid Cost Calculation

For each Settlement Interval, the CAISO shall calculate RTM Bid Cost for each Bid Cost Recovery Eligible Resource, as the algebraic sum of the RTM Start-Up Cost, RTM Minimum Load Cost, RTM Transition Cost, RTM Pump Shut-Down Cost, RTM Energy Bid Cost, RTM Pumping Cost, RTM AS Bid Cost, and RTM GHG Bid Cost. For each Settlement Interval, the CAISO shall calculate RTM Bid Cost for each RMR Resource as the algebraic sum of the RTM Start-Up Cost adjusted to remove Opportunity Costs and Variable Start-Up Operations and Maintenance Adders, RTM Transition Costs adjusted to remove Opportunity Costs and Variable Start-Up Operations and Maintenance Adders, RTM Energy Bid Cost adjusted to remove Opportunity Costs and Variable Energy Operations and Maintenance Adders, and RTM AS Bid Cost. For Multi-Stage Generating Resources, in addition to the specific RTM Bid Cost rules described in Section 11.8.4.1, the rules described in Section 11.8.1.3 will be applied to further determine the applicable MSG Configuration-based CAISO Market Start-Up Bid Cost, Transition Bid Cost, and Minimum Load Bid Cost, in a given Settlement Interval. For Multi-Stage Generating Resources, the incremental RTM Start-Up Cost, RTM Minimum Load Cost, and RTM Transition Cost to provide RTM committed Energy or awarded Ancillary Services capacity for an MSG Configuration other than the self-scheduled MSG Configuration are determined by the RTM optimization rules in specified in Section 34.

##### 11.8.4.1.1 RTM Start-Up Cost

For each Settlement Interval of the applicable RTM Commitment Period, the RTM Start-Up Cost shall consist of the Start-Up Bid Cost of the Bid Cost Recovery Eligible Resource applicable to the Real-Time Market divided by the number of Settlement Intervals in the applicable RTM Commitment Period. For

each Settlement Interval, only the RTM Start-Up Cost in a CAISO RTM Commitment Period is eligible for Bid Cost Recovery. The CAISO will determine the RTM Start-Up Cost for a Multi-Stage Generating Resource based on the MSG Configuration committed by the CAISO in the RTM. The following rules shall be applied in sequence and shall qualify the RTM Start-Up Cost in an RTM Commitment Period:

(a) The RTM Start-Up Cost is zero if there is an RTM Self-Commitment Period within the RTM Commitment Period.

(b) The RTM Start-Up Cost is zero if the Bid Cost Recovery Eligible Resource has been manually pre-dispatched under a Legacy RMR Contract or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule or Real-Time Market anywhere within that RTM Commitment Period.

(c) The RTM Start-Up Cost is zero if the Bid Cost Recovery Eligible Resource is started within the Real-Time Market Commitment Period pursuant to an Exceptional Dispatch issued in accordance with Section 34.11.2 to: (1) perform Ancillary Services testing; (2) perform pre-commercial operation testing for Generating Units; or (3) perform PMax testing.

(d) The RTM Start-Up Cost is zero if there is no RTM Start-Up at the start of that RTM Commitment Period because the RTM Commitment Period is the continuation of an IFM Commitment Period or RUC Commitment Period from the previous Trading Day.

(e) If an RTM Start-Up is terminated in the Real-Time within the applicable RTM Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource is starting up, the RTM Start-Up Cost is prorated by the ratio of the Start-Up Time before termination over the Real-Time Market Start-Up Time.

(f) The RTM Start-Up Cost shall be qualified if an actual Start-Up occurs within that RTM Commitment Period. An actual Start-Up is detected when the relevant metered Energy in the applicable Settlement Interval(s) indicates the unit is Off before the time the resource is instructed to be On as specified in its Start-Up Instruction and is On in the Settlement Interval that falls within the CAISO RTM Commitment Period. The CAISO will determine

whether the resource is On for this purpose based on whether its metered Energy is at or above the resource's Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3. The CAISO will determine that the Multi-Stage Generating Resource is On based on the MSG Configuration that the CAISO has committed in the Real-Time Market.

(g) The RTM Start-Up Cost for an RTM Commitment Period shall be qualified if an actual Start-Up occurs earlier than the start of the RTM Start-Up, if the relevant Start-Up is still within the same Trading Day and the Bid Cost Recovery Eligible Resource actually stays on until the RTM Start-Up, otherwise the Start-Up Bid Cost is zero for the RTM Commitment Period.

(h) For Short-Start Units, the first Start-Up Bid Costs within a CAISO IFM Commitment Period are qualified IFM Start-Up Costs as described above in Section 11.8.2.1.1(g). For subsequent Start-Ups of Short-Start Units after the CAISO Shuts Down a resource and then the CAISO issues a Start-Up Instruction pursuant to a CAISO RTM Commitment Period within the CAISO IFM Commitment Period, the Start-Up Bid Costs shall be qualified as RTM Start-Up Costs, provided that the resource actually Shut-Down and Started-Up based on CAISO Shut-Down and Start-Up Instructions.

**11.8.4.1.2 RTM Minimum Load Cost**

The RTM Minimum Load Cost is the Minimum Load Bid Cost of the Bid Cost Recovery Eligible Resource applicable for the Real-Time Market, divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RTM Minimum Load Cost in a CAISO RTM Commitment Period is eligible for Bid Cost Recovery. The RTM Minimum Load Cost for any Settlement Interval is zero if: (1) the Settlement Interval is included in a RTM Self-Commitment Period for the Bid Cost Recovery Eligible Resource; (2) the Bid Cost Recovery Eligible Resource has been manually dispatched under a Legacy RMR Contract or the resource has been flagged as an RMR Dispatch in the Day-Ahead Schedule or the Real-Time Market in that Settlement Interval; (3) for all resources that are not Multi-Stage Generating Resources, that Settlement Interval is included in an IFM Commitment Period or RUC Commitment Period; or (4) the Bid Cost Recovery Eligible Resource is committed pursuant to Section 34.11.2 for the

purpose of performing Ancillary Services testing, pre-commercial operation testing for Generating Units, or PMax testing. A resource's RTM Minimum Load Costs for Bid Cost Recovery purposes are subject to the application of the Real-Time Performance Metric as specified in Section 11.8.4.4. For Multi-Stage Generating Resources, the commitment period is further determined based on application of Section 11.8.1.3. For all Bid Cost Recovery Eligible Resources that the CAISO Shuts Down, either through an Exceptional Dispatch or an Economic Dispatch through the Real-Time Market, from its Day-Ahead Schedule that was also from a CAISO commitment, the RTM Minimum Load Costs will include negative Minimum Load Bid Costs for Energy between the Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and zero (0) MWhs.

#### 11.8.4.1.3 RTM Pump Shut-Down Cost

The RTM Pump Shut-Down Cost for each Settlement Interval is the relevant Pump Shut-Down Cost submitted by the Scheduling Coordinator only for Pumped-Storage Hydro Units and Participating Load, divided by the number of Settlement Intervals in which such resource was committed by the Real-Time Market in a Trading Hour with scheduled pumping operation and in which an actual Shut-Down occurs and the resource does not actually operate in pumping mode or serve Load in that Settlement Interval (as detected through Meter Data). The RTM Pump Shut-Down Cost for a Real-Time Market Shut-Down event shall be zero if: (1) it is followed by a RTM Self-Commitment Period in generation mode or offline mode; or (2) the Shut-Down is due to an Outage reported through the CAISO's outage management system as described in Section 9.

#### 11.8.4.1.4 RTM Pumping Bid Cost

For Pumped-Storage Hydro Units and Participating Load only, the RTM Pumping Bid Cost for the applicable Settlement Interval shall be the Pumping Cost submitted to the CAISO in the RTM divided by the number of Settlement Intervals in a Trading Hour. The Pumping Cost is negative since it represents the amount the entity is willing to pay to pump or serve Load. The Pumping Cost is included in RTM Bid Cost computation for a Pumped-Storage Hydro Unit and Participating Load committed by the Real-Time Market to pump or serve Load, if it actually operates in pumping mode or serves Load in that Settlement Interval. The RTM Energy Bid Cost for a Participating Load for any Settlement Interval is set to zero for any Energy consumed in excess of instructed Energy. The RTM Pumping Bid Cost for any Settlement

Interval is zero if: (1) the Settlement Interval is included in a RTM Self-Commitment Period for the Bid Cost Recovery Eligible Resource; (2) the Bid Cost Recovery Eligible Resource has been manually dispatched under an RMR Contract or the resource has been flagged as an RMR Dispatch in the Day-Ahead Schedule or the Real-Time Market in that Settlement Interval; (3) the Bid Cost Recovery Eligible Resource is not actually in pumping mode in that Settlement Interval; (4) that Settlement Interval is included in an IFM or RUC Commitment Period; or (5) the Bid Cost Recovery Eligible Resource is committed pursuant to Section 34.11.2 for the purpose of performing Ancillary Services testing or pre-commercial operation testing.

**11.8.4.1.5 RTM Energy Bid Cost**

For any Settlement Interval, the RTM Energy Bid Cost for the Bid Cost Recovery Eligible Resource except Participating Loads shall be computed as the sum of the products of each RTD Instructed Imbalance Energy portion, except Standard Ramping Energy, Residual Imbalance Energy, FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy, FMM Derate Energy or RTD Derate Energy, MSS Load Following Energy, Ramping Energy Deviation and Regulating Energy, with the relevant Energy Bid prices, the Default Energy Bid price, or the Locational Marginal Price, if any, as further described in Section 11.17, for each Dispatch Interval in the Settlement Interval. For Settlement Intervals for which the Bid Cost Recovery Eligible Resource is ramping up to or down from a rerated Minimum Load that was increased pursuant to Section 9.3.3 for the Real-Time Market, the RTM Energy incurred by the ramping will be classified as FMM Derate Energy or RTD Derate Energy and will not be included in Bid Cost Recovery. For a Bid Cost Recovery Eligible Resource that is ramping up to or down from an Exceptional Dispatch, the relevant Energy Bid Cost related to the Energy caused by ramping will be settled on the same basis as the Energy Bid used in the Settlement of the Exceptional Dispatch that led to the ramping. The RTM Energy Bid Cost for a Bid Cost Recovery Eligible Resource, including Participating Loads and Proxy Demand Response Resources, for a Settlement Interval is subject to the Real-Time Performance Metric as described in Section 11.8.4.4 and the Persistent Deviation Metric as described in Section 11.17. Any Uninstructed Imbalance Energy in excess of FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy is also not eligible for Bid Cost Recovery. For a Multi-Stage Generating Resource the CAISO will determine the RTM Energy Bid Cost based on the Generating

Unit level. For RMR Resources, the CAISO will determine the RTM Energy Bid Cost based on the relevant Energy Bid adjusted to remove Opportunity Costs.

**11.8.4.1.5.1 RTM Energy Bid Cost for Storage Resources**

When a storage resource participating as a Non-Generator Resource receives a Dispatch Instruction in the Fifteen-Minute Market that results in incremental Energy to its Day-Ahead Energy Schedule, or a Dispatch Instruction in the Real-Time Dispatch that results in incremental Energy to its Schedule from the Fifteen-Minute Market, the Energy Bid price used for purposes of calculating a Real-Time Market Energy Bid Cost in any Fifteen-Minute Market or Real-Time Dispatch interval will reflect the lower of the following two values: (1) the storage resource's Energy Bid in the Real-Time Market for that interval, or (2) the greater of its Day-Ahead Locational Marginal Price, its Real-Time Market Default Energy Bid, or its Real-Time Locational Marginal Price for that interval.

In intervals when a storage resource participating as a Non-Generator Resource does not have a Day-Ahead Energy Schedule or only participates in Energy Imbalance Market and receives a Dispatch Instruction in the Fifteen-Minute Market for incremental Energy or a Real-Time Dispatch that results in incremental Energy to its Schedule from the Fifteen-Minute Market, the Energy Bid price used for purposes of calculating a Real-Time Market Energy Bid Cost in any Fifteen-Minute Market or Real-Time Dispatch interval will reflect the lower of the following two values: (1) the storage resource's Energy Bid in the Real-Time Market for that interval, or (2) the greater of its Real-Time Market Default Energy Bid, or its Real-Time Locational Marginal Price for that interval.

When a storage resource participating as a Non-Generator Resource receives a Dispatch Instruction in the Fifteen-Minute Market that results in decremental Energy or no change to its Day-Ahead Energy Schedule, or a Dispatch Instruction in the Real-Time Dispatch that results in decremental Energy or no change to its Schedule from the Fifteen-Minute Market, the Energy Bid price used for purposes of calculating a Real-Time Market Energy Bid Cost in any Fifteen-Minute Market or Real-Time Dispatch interval will reflect the greater of the following two values: (1) the storage resource's Energy Bid in the Real-Time Market for that interval, or (2) the lower of its Day-Ahead Locational Marginal Price, its Real-Time Market Default Energy Bid, or its Real-Time Locational Marginal Price for that interval.

In intervals when a storage resource participating as a Non-Generator Resource does not have a Day-

Ahead Energy Schedule or only participates in the Energy Imbalance Market and receives a Dispatch Instruction in the Fifteen-Minute Market that results in decremental Energy or a Dispatch Instruction in the Real-Time Dispatch that results in decremental Energy or no change to its Schedule from the Fifteen-Minute Market, the Energy Bid price used for purposes of calculating a Real-Time Market Energy Bid Cost in any Fifteen-Minute Market or Real-Time Dispatch interval will reflect the greater of the following two values: (1) the storage resource's Energy Bid in the Real-Time Market for that interval, or (2) the lower of its Real-Time Market Default Energy Bid or its Real-Time Locational Marginal Price for that interval.

#### 11.8.4.1.6 RTM AS Bid Cost

For each Settlement Interval, the Real-Time Market AS Bid Cost shall be the product of the average Real-Time Market AS Award from each accepted AS Bid submitted in the Settlement Interval for the Real-Time Market, reduced by any relevant tier-1 No Pay capacity in that Settlement Interval (but not below zero), with the relevant AS Bid price. The average Real-Time Market AS Award for a given AS in a Settlement Interval is the sum of the 15-minute Real-Time Market AS Awards in that Settlement Interval, each divided by the number of 15-minute Commitment Intervals in a Trading Hour and prorated to the duration of the Settlement Interval (10/15 if the Real-Time Market AS Award spans the entire Settlement Interval, or 5/15 if the Real-Time Market AS Award spans half the Settlement Interval). For a Multi-Stage Generating Resource the CAISO will determine the RTM AS Bid Cost based on the Generating Unit level. The Real-Time Market AS Bid Cost shall also include Mileage Bid Costs. For each Settlement Interval, the Real-Time Mileage Bid Cost shall be the product of Instructed Mileage associated with a Real-Time Regulation capacity award, as adjusted for accuracy consistent with Section 11.10.1.7, and the relevant Mileage Bid price divided by the number of Settlement Intervals for the Real-Time Market in a Trading Hour. The CAISO will determine and calculate the Real Time Market Mileage Bid Cost for a Multi-Stage Generating Resource at the Generating Unit level. For an RMR Resource, the RTM AS Bid Cost shall be zero.

#### 11.8.4.1.7 RTM Transition Cost

For each Settlement Interval, the RTM Transition Costs shall be based on the MSG Configuration to which the Multi-Stage Generating Resource is transitioning and are allocated to the CAISO commitment

period of that MSG Configuration.

#### 11.8.4.1.7.1 RTM Transition Cost Applicability

Within any eligible RTM CAISO Commitment Period determined pursuant to the rules specified in Section 11.8.1.3, the CAISO shall apply the RTM Transition Costs for the Settlement Intervals in which the Multi-Stage Generating Resource is actually transitioning from the "from" MSG Configuration and reaches the Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3, of the "to" MSG Configuration to which the Multi-Stage Generating Resource is transitioning, subject to the Tolerance Band.

#### 11.8.4.1.8 RTM GHG Bid Cost

For each Settlement Interval, the RTM GHG Bid Cost shall be the product of the RTM GHG Award from each accepted RTM GHG Bid Adder for a relevant GHG Regulation Area and the applicable Marginal GHG Cost.

### 11.8.4.2 RTM Market Revenue Calculations

**11.8.4.2.1** For each Settlement Interval in a CAISO Real-Time Market Commitment Period, the RTM Market Revenue for a Bid Cost Recovery Eligible Resource is the algebraic sum of the elements listed below in this Section. For Multi-Stage Generating Resources the RTM Market Revenue calculations will be made at the Generating Unit level.

(a) The sum of the products of the FMM or RTD Instructed Imbalance Energy (including Minimum Load Energy of the Bid Cost Recovery Eligible Resource committed in RUC and where for Pumped-Storage Hydro Units and Participating Load operating in the pumping mode or serving Load, the MWh is negative), except Standard Ramping Energy, Residual Imbalance Energy, Exceptional Dispatch Energy, Derate Energy, MSS Load following Energy, Ramping Energy Deviation and Regulation Energy, with the relevant FMM and RTD LMP, for each Dispatch Interval in the Settlement Interval. These amounts are subject to the Real-Time Performance Metric and the Persistent Deviation Metric as described in Sections 11.8.4.4 and 11.17, respectively. For storage resources that receive an Exceptional Dispatch to hold a State of Charge, the RTM Market Revenue will include revenues from the opportunity cost to hold the State of Charge but not the

Exceptional Dispatch Energy to reach the State of Charge.

(b) The product of the Real-Time Market AS Award from each accepted Real-Time Market AS Bid in the Settlement Interval with the relevant ASMP, divided by the number of fifteen (15)-minute Commitment Intervals in a Trading Hour (4), and prorated to the duration of the Settlement Interval.

(c) The relevant tier-1 No Pay charges for that Bid Cost Recovery Eligible Resource in that Settlement Interval.

(d) The Forecasted Movement and Uncertainty Awards Settlement Amounts as calculated pursuant to Section 11.25 are included in the RTM Market Revenues calculation, not including:

(1) the amounts rescinded pursuant to Section 11.25.3;

(2) Forecasted Movement revenue when there are changes in Self-Schedules across consecutive Trading Hours; and

(3) Forecasted Movement revenue when there are changes in EIM Base Schedules across consecutive Trading Hours without Economic Bids.

(e) The product of RTM GHG Award from each accepted RTM GHG Bid Adder and relevant Marginal GHG Cost in that Settlement Interval.

**11.8.4.2.2** For each Settlement Interval in a non-CAISO Real-Time Market Commitment Period, the Real-Time Market Revenue for a Bid Cost Recovery Eligible Resource is the algebraic sum of the following:

(a) The sum of the products of the FMM or RTD Instructed Imbalance Energy (excluding the Minimum Load Energy of Bid Cost Recovery Eligible Resources committed in RUC), except, Standard Ramping Energy, Residual Imbalance Energy, Exceptional Dispatch Energy, Derate Energy, MSS Load Following Energy, Ramping Energy Deviation and Regulating Energy, with the relevant FMM or RTD Market LMP, for each Dispatch Interval in the Settlement Interval. These amounts are subject to the Real-Time Performance Metric and the Persistent Deviation Metric as described in Sections 11.8.4.4 and 11.17, respectively.

(b) The product of the Real-Time Market AS Award from each accepted Real-Time Market

AS Bid in the Settlement Interval with the relevant ASMP, divided by the number of fifteen (15)-minute Commitment Intervals in a Trading Hour (4), and prorated to the duration of the Settlement Interval.

(c) The relevant tier-1 No Pay charges for that Bid Cost Recovery Eligible Resource in that Settlement Interval.

(d) The Forecasted Movement and Uncertainty Awards Settlement Amounts as calculated pursuant to Section 11.25 are included in the RTM Market Revenues calculation, not including:

(1) the amounts rescinded pursuant to Section 11.25.3;

(2) Forecasted Movement revenue when there are changes in Self-Schedules across consecutive Trading Hours; and

(3) Forecasted Movement revenue when there are changes in EIM Base Schedules across consecutive Trading Hours without Economic Bids.

**11.8.4.3 RTM Bid Cost Recovery for Metered Subsystems**

In addition to the exclusions to actual Energy delivered as provided in Section 11.8.4, for MSS resources, the Energy subject to RTM Bid Cost Recovery also excludes Minimum Load Energy if the resource is not committed by the CAISO in the Real-Time. As provided below, the RTM Bid Cost Recovery for MSS Operators differs based on whether the MSS Operator has elected gross or net Settlement; except that the calculation of the RTM Bid Costs and RTM Market Revenues for Ancillary Services will be as provided in Sections 11.8.4.1.6 and 11.8.4.2 and does not vary on the basis of the MSS's election of gross or net Settlement.

**11.8.4.3.1 MSS Elected Gross Settlement**

For an MSS Operator that has elected gross Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the RTM Bid Cost and RTM Market Revenue of the RTD Instructed Imbalance Energy subject to Bid Cost Recovery is determined for each resource in the same way these amounts are determined for a non-MSS resource pursuant to the rules specified in Section 11.8.4. The RTM Bid Cost Shortfall or Surplus for Energy and Ancillary Services in total is determined for each Trading Hour of the RTM over the Trading Day by taking the algebraic difference between the RTM Bid

Cost and RTM Market Revenue.

#### 11.8.4.3.2 MSS Elected Net Settlement

For MSS entities that have elected net Settlement regardless of other MSS optional elections (i.e., Load following or not, or RUC opt-in or out), unlike non-MSS resources, the RUC Bid Cost Shortfall or RUC Bid Cost Surplus and RTM Bid Cost Shortfall or RTM Bid Cost Surplus is treated at the MSS level and not at the resource specific level, and is calculated as the RUC Bid Cost Shortfall or RUC Bid Cost Surplus and RTM Bid Cost Shortfall or RTM Bid Cost Surplus of all BCR Eligible Resources within the MSS. In calculating the Energy RTM Market Revenue for all the resources within the MSS as provided in Section 11.8.4.2, the CAISO will use the FMM MSS Price or the RTD MSS Price, as applicable. The RUC Bid Cost Shortfall, RUC Bid Cost Surplus, RTM Bid Cost Shortfall, and RTM Bid Cost Surplus for Energy, RUC Availability and Ancillary Services are first calculated separately for the MSS for each Settlement Interval of the Trading Day, with qualified Start-Up Bid Costs, qualified Minimum Load Bid Costs and qualified Multi-Stage Generator Transition Bid Costs included into the RUC Bid Cost Shortfalls, RUC Bid Cost Surpluses, RTM Bid Cost Shortfalls, and RTM Bid Cost Surpluses of Energy calculation. The MSS's overall RUC Bid Cost Shortfall or RUC Bid Cost Surplus, and RTM Bid Cost Shortfall or RTM Bid Cost Surplus is then calculated as the algebraic sum of the RUC Bid Cost Shortfall or RUC Bid Cost Surplus and RTM Bid Cost Shortfall or RTM Bid Cost Surplus for Energy and the RUC Bid Cost Shortfall or RUC Bid Cost Surplus and RTM Bid Cost Shortfall or RTM Bid Cost Surplus for Ancillary Services for each Settlement Interval.

### 11.8.4.4 Application of the Real-Time Performance Metric

The CAISO will adjust the RTM Energy Bid Cost, the RTM Market Revenues, and RTM Minimum Load Costs, the IFM Minimum Load Cost and IFM Energy Bid Cost calculations, and the IFM Market Revenues determined pursuant to Sections 11.8.4.1.5, 11.8.4.2, 11.8.4.1.2, 11.8.2.1.2, 11.8.2.1.5 and 11.8.2.2, respectively, by multiplying the Real-Time Performance Metric with those amounts for the applicable Settlement Interval, pursuant to the rules specified in this Section 11.8.4.4 and its subsections. The CAISO will apply the Real-time Performance Metric to the IFM Pumping Bid Costs and RTM Pumping Bid Costs in the same manner in which the CAISO applies the Real-time Performance Metric to the RTM Energy Bid Costs as specified in this Section 11.8.4.4, and its subsections.

**11.8.4.4.1** If the RTM Energy Bid Costs plus the RUC Minimum Load Costs and RTM Minimum Load Costs and the RTM Market Revenues are greater than or equal to zero (0), the CAISO will apply the Real-Time Performance Metric to RTM Energy Bid Costs, RUC Minimum Load Costs and RTM Minimum Load Costs, and not the RTM Market Revenues. In addition, for the cases described in Sections 11.8.2.1.2(c) and (d), if the IFM Energy Bid Costs plus the IFM Minimum Load Costs and the IFM Market Revenues are greater than or equal to zero (0), the CAISO will apply the Real-Time Performance Metric instead of Day-Ahead Metered Energy Adjustment Factor to the IFM Minimum Load Costs and IFM Energy Bid Costs, and not the IFM Market Revenues.

**11.8.4.4.2** If the RTM Energy Bid Costs plus the RUC Minimum Load Costs and RTM Minimum Load Costs are greater than or equal to zero (0) and the RTM Market Revenues are negative, the CAISO will apply the Real-Time Performance Metric to the RTM Energy Bid Costs, RUC Minimum Load Costs and RTM Minimum Load Costs and the RTM Market Revenues. In addition, for the cases described in Sections 11.8.2.1.2(c) and (d), if the IFM Energy Bid Costs plus the IFM Minimum Load Costs are greater than or equal to zero (0) and the IFM Market Revenues are negative the CAISO will apply the Real-Time Performance Metric instead of the Day-ahead Metered Energy Adjustment Factor to the IFM Minimum Load Costs and IFM Energy Bid Costs, and IFM Market Revenues.

**11.8.4.4.3** If the RTM Energy Bid Costs plus the RUC Minimum Load Costs and RTM Minimum Load Costs are negative and the RTM Market Revenues are greater than or equal to zero (0), the CAISO will not apply Real-Time Performance Metric to the RTM Energy Bid Costs, RUC Minimum Load Costs and RTM Minimum Load Costs or the RTM Market Revenues. In addition, for the cases described in Sections 11.8.2.1.2(c) and (d), if the sum of IFM Energy Bid Costs and the IFM Minimum Load Costs is negative and the IFM Market Revenue is greater than or equal to zero (0), the CAISO will not apply the Real-Time Performance Metric to the IFM Minimum Load Costs, IFM Energy Bid Costs or the IFM Market Revenues.

**11.8.4.4.4** If the RTM Energy Bid Costs plus the RUC Minimum Load Costs and RTM Minimum Load Costs, and the RTM Market Revenues are negative, the CAISO will apply the Real-Time Performance Metric to the RTM Market Revenues but not the RTM Energy Bid Costs or the RUC Minimum Load Costs and RTM Minimum Load Costs. In addition, for the cases described in Sections

11.8.2.1.2(c) and (d), if the IFM Energy Bid Costs plus the IFM Minimum Load Costs and the IFM Market Revenues are negative, the CAISO will apply the Real-Time Performance Metric instead of the Day-Ahead Metered Energy Adjustment Factor to the IFM Market Revenues but not the IFM Minimum Load Costs and IFM Energy Bid Costs.

**11.8.4.4.5** If for a given Settlement Interval the absolute value of the resource's Metered Energy, less Regulation Energy and less Expected Energy, is less than or equal to the Performance Metric Tolerance Band, then the CAISO will not apply the Real-Time Performance Metric to the calculation of the RTM Energy Bid Cost, RUC Minimum Load Cost and RTM Minimum Load Cost, or RTM Market Revenue.

### 11.8.5 Unrecovered Bid Cost Uplift Payment

Bid Cost Recovery Eligible Resources will receive an Unrecovered Bid Cost Uplift Payment as described in this Section below. For Multi-Stage Generating Resources, Unrecovered Bid Cost Uplift Payments will be calculated and made at the Generating Unit level and not the MSG Configuration level. MSS Bid Cost Recovery Eligible Resources by MSS Operators that have elected net settlement will receive Unrecovered Bid Cost Uplift Payment for MSS Bid Cost Recovery Eligible Resources at the MSS level and not by individual resource. MSS Bid Cost Recovery Eligible Resources by MSS Operators that have elected gross settlement will receive Unrecovered Bid Cost Uplift Payments at the MSS Bid Cost Recovery Eligible Resource level like all other resources.

#### 11.8.5.1 IFM Unrecovered Bid Cost Uplift Payment

Scheduling Coordinators shall receive an IFM Unrecovered Bid Cost Uplift Payment for a Bid Cost Recovery Eligible Resource, if the net of all IFM Bid Cost Shortfalls and IFM Bid Cost Surpluses calculated pursuant to Section 11.8.2 over a Trading Day is positive.

#### 11.8.5.2 RUC and RTM Unrecovered Bid Cost Uplift Payment

Scheduling Coordinators shall receive RUC and RTM Unrecovered Bid Cost Uplift Payments for a Bid Cost Recovery Eligible Resource, if the net of all RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses calculated pursuant to Section 11.8.3, and the RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses calculated pursuant to Section 11.8.4, for that Bid Cost Recovery Eligible Resource over a Trading Day is positive. For Metered Subsystems that have elected net settlement, the Unrecovered Bid Cost Uplift

Payment will be the sum, if positive, of the RUC, and RTM Bid Cost Shortfall or RUC, and RTM Bid Cost Surplus for each Trading Hour over the Trading Day for all Bid Cost Recovery Eligible Resources in the MSS.

### 11.8.6 System-Wide IFM, RUC and RTM Bid Cost Uplift Allocation

#### 11.8.6.1 Determination of IFM, RUC and RTM Bid Cost Uplift

For each Settlement Interval, the CAISO shall determine the IFM, RUC and RTM Bid Cost Uplift for purposes of allocating the IFM, RUC and RTM Bid Cost Uplift as described below. In determining the IFM, RUC and RTM Bid Cost Uplifts below, the Unrecovered Bid Cost Uplift Payments for MSS BCR Eligible Resources in Metered Subsystems where the MSS Operator has elected net Settlement will be included on an MSS basis and not on an individual resource basis.

(i) The IFM Bid Cost Uplift shall be the net of the IFM Bid Cost Shortfalls and IFM Bid Cost Surpluses for a Settlement Interval of all Bid Cost Recovery Eligible Resources with Unrecovered Bid Cost Uplift Payments.

(ii) The RUC Bid Cost Uplift shall be the net of the RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses for a Settlement Interval of all Bid Cost Recovery Eligible Resources in the CAISO Balancing Authority Area with Unrecovered Bid Cost Uplift Payments.

(iii) The RTM Bid Cost Uplift shall be the net of the RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses for a Settlement Interval of all Bid Cost Recovery Eligible Resources with Unrecovered Bid Cost Uplift Payments.

#### 11.8.6.2 Sequential Netting of RUC and RTM Bid Cost Uplift

For each Settlement Interval, the Net RUC or Real-Time Market Bid Cost Uplift is determined for the purposes of allocating Net RUC or Real-Time Market Bid Cost Uplift by the following netting rules applied:

(i) The Net RUC Bid Cost Uplift is equal to the greater of zero or any positive RUC Bid Cost Uplift offset by negative Real-Time Market Bid Cost Uplift.

(ii) The Net Real-Time Market Bid Cost Uplift is equal to the greater of zero or any positive Real-Time Market Bid Cost Uplift offset by any negative RUC Bid Cost Uplift.

#### 11.8.6.3 Determination of Total Positive CAISO Markets Uplifts

##### 11.8.6.3.1 Total Positive IFM Uplifts

Any positive Net IFM Bid Cost Uplifts are reduced by scaling them with the uplift ratio in Section 11.8.6.3.1(iii) to determine the Total IFM Uplift (for a Settlement Interval) as follows:

(i) The Total IFM Uplift is the Net IFM Bid Cost Uplift for all Settlement Intervals in the IFM Market.

(ii) The Total Positive IFM Uplift is determined as the sum of the positive IFM Bid Cost Uplift for all Settlement Intervals in the IFM Market.

(iii) The uplift ratio is equal to the Total IFM Uplift divided by the Total Positive IFM Uplift.

**11.8.6.3.2 Net RUC Bid Cost Uplift and RTM Bid Cost Uplift**

The CAISO will determine the Net RUC Bid Cost Uplift and the Net RTM Bid Cost Uplift to be allocated to each Balancing Authority Area in the EIM Area as follows:

(i) For each Balancing Authority Area separately, the CAISO will calculate a combined RUC Bid Cost Uplift and RTM Bid Cost Uplift amount based on the RUC Bid Cost Shortfall, RUC Bid Cost Surplus, RTM Bid Cost Shortfall, and RTM Bid Cost Surplus of each supply resource located within the Balancing Authority Area for each Settlement Interval.

(ii) For each Balancing Authority Area separately, for each Trading Day, the CAISO will calculate a daily combined total RUC Bid Cost Uplift and RTM Bid Cost Uplift amount as the sum of all the Settlement Interval values calculated according to Section 11.8.6.3.2(i).

(iii) For each Balancing Authority Area separately, for each Trading Day, the CAISO will calculate a combined total positive RUC Bid Cost Uplift and RTM Bid Cost Uplift amount as the sum of the positive Settlement Interval values calculated according to Section 11.8.6.3.2(i).

(iv) The CAISO will calculate the daily uplift ratio for the RUC and RTM, for each Balancing Authority Area in the EIM Area, as the daily combined total RUC Bid Cost Uplift and RTM Bid Cost Uplift amount, calculated according to Section 11.8.6.2(ii), divided by the daily combined total positive RUC Bid Cost Uplift and RTM Bid Cost Uplift, calculated according to Section 11.8.6.2(iii).

(v) For each Settlement Interval and each Balancing Authority Area in the EIM Area, the CAISO will multiply the applicable daily uplift ratio with each combined total positive RUC

Bid Cost Uplift and each combined total RTM Bid Cost Uplift to determine the Net RUC Bid Cost Uplift and the preliminary Net RTM Bid Cost Uplift, respectively, for each Balancing Authority Area.

(vi) The CAISO shall adjust the preliminary Net RTM Bid Cost Uplift amounts calculated in Section 11.8.6.3.2(v) by –

(a) dividing the sum of net EIM Transfers out of a Balancing Authority Area by that Balancing Authority Area's EIM Measured Demand, and the net EIM Transfer out of the Balancing Authority Area;

(b) multiplying the preliminary Net RTM Bid Cost Uplift amounts by the ratio calculated in Section 11.8.6.3.2(vi)(a); and

(c) reducing the preliminary Net RTM Bid Cost Uplift amounts of the EIM Entity Balancing Authority Area with the net transfer out by the amount calculated in Section 11.8.6.3.2(vi)(b) and adding that amount to the EIM Entity Balancing Authority Area with the net transfer in to determine the final preliminary Net RTM Bid Cost Uplift amounts.

(vii) For each Settlement Interval, the Net RUC Bid Cost Uplift and final Net RTM Bid Cost Uplift apportionment by Settlement Interval for each Balancing Authority Area in the EIM Area will be the sum of the amounts calculated in Sections 11.8.6.3.2(v) and, for Net RTM Bid Cost Uplift only, 11.8.6.3.2(vi) for each Balancing Authority Area in the EIM Area.

**11.8.6.4 Allocation of IFM Bid Cost Uplift**

For each Trading Hour of the IFM the hourly IFM Bid Cost Uplift is allocated as follows:

**11.8.6.4.1 Allocation in the First Tier**

The hourly IFM Bid Cost Uplift is allocated in the first tier as follows:

(i) The hourly amount of IFM Bid Cost Uplift allocated to each Scheduling Coordinator is equal to the product of the IFM Bid Cost Uplift rate and the IFM uplift obligation for the Scheduling Coordinator.

(ii) The IFM Bid Cost Uplift rate is equal to the IFM Bid Cost Uplift divided by the sum of the

positive IFM Load Uplift Obligations for all Scheduling Coordinators and the IFM system-wide Virtual Demand Award uplift obligation, subject to the condition that the IFM Bid Cost Uplift rate cannot exceed the ratio of the hourly IFM Bid Cost Uplift for the Trading Hour divided by the maximum of (a) the sum of all hourly IFM Load Uplift Obligations for all Scheduling Coordinators in that Trading Hour or (b) the sum of all hourly Generation scheduled in the Day-Ahead Schedule and IFM upward AS Awards for all Scheduling Coordinators from CAISO-committed Bid Cost Recovery Eligible Resources in that Trading Hour.

(iii) The IFM uplift obligation for each Scheduling Coordinator is equal to the sum of the IFM Load Uplift Obligation for the Scheduling Coordinator and any IFM Virtual Demand Award uplift obligation for the Scheduling Coordinator.

(iv) The IFM Load Uplift Obligation for each Scheduling Coordinator, including Scheduling Coordinators for Metered Subsystems regardless of their MSS optional elections (net/gross Settlement, Load following, RUC opt-in/out), is equal to the positive difference between the total Demand scheduled in the Day-Ahead Schedule of that Scheduling Coordinator and the sum of scheduled Generation and scheduled imports from the Self-Schedules in the Day-Ahead Schedule of that Scheduling Coordinator, adjusted by any applicable Inter-SC Trades of IFM Load Uplift Obligations.

(v) The IFM system-wide Virtual Demand Award uplift obligation is calculated for each hour in the IFM and is equal to maximum of zero (0) or the following quantity: the total system-wide Virtual Demand Awards from the IFM minus the total system-wide Virtual Supply Awards from the IFM, plus the minimum of zero (0) or the following quantity: the total amount of Scheduled Demand (which excludes Virtual Demand Awards), minus Measured Demand.

(vi) For each Scheduling Coordinator with positive net Virtual Demand Awards, the IFM Virtual Demand Award uplift obligation is equal to the product of (a) the positive net Virtual Demand Awards for the Scheduling Coordinator divided by the sum of each Scheduling Coordinator's positive net Virtual Demand Award and (b) the IFM system-

wide Virtual Demand Award uplift obligation. For each Scheduling Coordinator with negative net Virtual Demand Awards, the IFM Virtual Demand Award uplift obligation is zero (0).

#### 11.8.6.4.2 Allocation in the Second Tier

In the second tier, Scheduling Coordinators, including Scheduling Coordinators for MSS Operators that have elected both to not follow their Load and gross Settlement, will be charged for an amount equal to any remaining hourly IFM Bid Cost Uplift for the Trading Hour in proportion to the Scheduling Coordinator's Measured Demand. Scheduling Coordinators for MSS Operators that have elected to either follow their Load or net Settlement, or both, will be charged for an amount equal to any remaining hourly IFM Bid Cost Uplift for the Trading Hour in proportion to their MSS Aggregation Net Measured Demand.

### 11.8.6.5 Allocation of RUC Compensation Costs

#### 11.8.6.5.1 Calculation of RUC Compensation Costs

For each Trading Hour of the RUC, the CAISO shall calculate the RUC Compensation Costs separately for RCU and RCD as the sum of the RUC Availability Payments for either RCU or RCD. The RUC Compensation Costs for RCU additionally include the hourly Net RUC Bid Cost Uplift.

#### 11.8.6.5.2 Calculation of the Hourly Net RUC Bid Cost Uplift

For each Trading Hour of the RUC, the hourly Net RUC Bid Cost Uplift is determined as the sum over the Settlement Intervals in that Trading Hour of the product of any positive Net RUC Bid Cost Uplift remaining in the Settlement Interval after the sequential netting in Section 11.8.6.2 and the application of the uplift ratio as determined in Section 11.8.6.3. Scheduling Coordinators for MSS Operators that are non-Load following and under gross Settlement receive the allocation of hourly Net RUC Bid Cost Uplift like all other Scheduling Coordinators.

#### 11.8.6.5.3 Allocation of the RUC Compensation Costs

The CAISO allocates the sum of the RUC Compensation Costs as specified below. A Scheduling Coordinator's allocation of RCU costs in tier 1 is the product of the RCU tier 1 cost allocation quantity, as specified in Section 11.8.6.5.3.1, and the RCU tier 1 cost allocation price, as specified in Section 11.8.6.5.3.3.

A Scheduling Coordinator's allocation of RCD costs in tier 1 is the product of the RCD tier 1 cost allocation quantity, as specified in Section 11.8.6.5.3.2, and the RCD tier 1 cost allocation price, as specified in 11.8.6.5.3.4.

The CAISO allocates the costs of Reliability Capacity procurement not recovered through the RCU or RCD tier 1 cost allocations to Scheduling Coordinators in proportion to their metered Demand in the Trading Hour for which the CAISO procured the Reliability Capacity.

#### 11.8.6.5.3.1 RCU Tier 1 Cost Allocation Quantity

A Scheduling Coordinator's total RCU tier 1 cost allocation quantity is the sum of the tier 1 quantities, specified as follows.

For a Scheduling Coordinator with net Virtual Supply Awards in a Trading Hour, the RCU tier 1 cost allocation quantity associated with its Virtual Supply is the higher of: (a) zero; or (b) the Scheduling Coordinator's net Virtual Awards, if the Balancing Authority Area in which that Scheduling Coordinator is located has net Virtual Supply.

For a Scheduling Coordinator with under-scheduled Load in a Trading Hour, the RCU tier 1 cost allocation quantity associated with its under-scheduled Load is the net negative metered Demand, excluding net negative Demand associated with balanced ETC/TOR rights and negative deviation for Participating Load resulting from a market dispatch.

#### 11.8.6.5.3.2 RCD Tier 1 Cost Allocation Quantity

A Scheduling Coordinator's total RCD tier 1 cost allocation quantity is the sum of the tier 1 quantities, specified as follows.

For a Scheduling Coordinator with net Virtual Demand Awards in a Trading Hour, the RCD tier 1 cost allocation quantity associated with its Virtual Demand is the lower of: (a) zero; or (b) the Scheduling Coordinator's net Virtual Awards, if the Balancing Authority Area in which that Scheduling Coordinator is located has net Virtual Demand.

For a Scheduling Coordinator with over-scheduled Load in a Trading Hour, the RCD tier 1 cost allocation associated with its over-scheduled Load is the net positive metered Demand, excluding net positive demand associated with balanced ETC/TOR rights and positive deviation for Participating Load resulting from a market dispatch.

#### 11.8.6.5.3.3 RCU Tier 1 Cost Allocation Price

The RCU tier 1 cost allocation price for a Trading Hour is the lower of: (a) the RUC Compensation Costs for RCU, as adjusted by payment rescissions applied per Section 11.2.2.2, divided by the total MWs of RCU awards; and (b) the RUC Compensation Costs for RCU to meet Measured Demand divided by the sum of each Scheduling Coordinator's RCU tier 1 cost allocation quantity in that Trading Hour.

#### 11.8.6.5.3.4 RCD Tier 1 Cost Allocation Price

The RCD tier 1 cost allocation price for a Trading Hour is the lower of: (a) the RUC Compensation Costs for RCD, as adjusted by payment rescissions applied per Section 11.2.2.2, divided by the total MWs of RCD awards; and (b) the RUC Compensation Costs for RCD to meet Measured Demand divided by the sum of each Scheduling Coordinator's RCD tier 1 cost allocation quantity in that Trading Hour.

#### 11.8.6.5.3.5 Reliability Capacity Cost Allocation to MSSs

The CAISO allocates costs of Reliability Capacity to a MSS the same as any other Scheduling Coordinator irrespective of the MSS's election, per Section 4.9.13, of net Settlements or gross Settlements.

The CAISO does not allocate costs of Reliability Capacity from either tier 1 or tier 2 to a MSS that has elected, per Section 4.9.13, to Load follow with its generating resources.

#### 11.8.6.5.3.6 Reliability Capacity Cost Allocation to Holders of ETCs or TORs

The CAISO excludes from tier 1 and tier 2 allocations for both RCU and RCD the valid and balanced portion of ETC and TOR self-schedules based on the market (IFM or RTM) in which the Scheduling Coordinator reflected the ETC or TOR self-schedules. The CAISO does not exclude from the Reliability Capacity cost allocations any quantities above the valid and balanced portion of ETC or TOR self-schedules.

### 11.8.6.6 Allocation of Net RTM Bid Cost Uplift

(i) For the CAISO Balancing Authority Area, the CAISO will determine the hourly Net RTM Bid Cost Uplift as the sum over all of the Settlement Intervals of the Trading Hour of any positive Net RTM Bid Cost Uplift determined in Section 11.8.6.3.2. The hourly RTM Bid Cost Uplift in the CAISO Balancing Authority Area is allocated to Scheduling Coordinators, including Scheduling Coordinators for MSS Operators that have elected (a)

not to follow their Load, and (b) gross Settlement, in proportion to their Measured Demand plus any FMM reductions not associated with valid and balanced ETCs, TORs or Converted Rights Self-Schedules in the Day-Ahead Market for the Trading Hour. For Scheduling Coordinators for MSS Operators that have elected (a) not to follow their Load, and (b) net Settlement, the hourly RTM Bid Cost Uplift is allocated in proportion to their MSS Aggregation Net Measured Demand plus any FMM reductions not associated with valid and balanced ETCs, TORs or Converted Rights Self-Schedules in the Day-Ahead Market. For Scheduling Coordinators of MSS Operators that have elected to follow their Load, the RTM Bid Cost Uplift shall be allocated in proportion to their MSS Net Negative Uninstructed Deviation plus any FMM reductions not associated with valid and balanced ETCs, TORs or Converted Rights Self-Schedules in the Day-Ahead Market. Accordingly, each Scheduling Coordinator shall be charged an amount equal to its Measured Demand plus any FMM reductions not associated with valid and balanced ETCs, TORs or Converted Rights Self-Schedules in the Day-Ahead Market times the RTM Bid Cost Uplift rate, where the RTM Bid Cost Uplift rate is computed as the Net RTM Bid Cost Uplift amount divided by the sum of Measured Demand plus any FMM reductions not associated with valid and balanced ETCs, TORs or Converted Rights Self- Schedules in the Day-Ahead Market across all Scheduling Coordinators for the Trading Hour. Any real-time reductions after HASP results are published to HASP Block Intertie Schedules in response to Dispatch Instructions or real-time scheduling curtailments are not allocated any Net RTM Bid Cost Uplift.

(ii) For EIM Entity Balancing Authority Areas, the CAISO will allocate the amounts determined according to Section 11.8.6.3.2 to the applicable EIM Entity Scheduling Coordinator.

## 11.9 Inter-SC Trades

### 11.9.1 Physical Trades

Inter-SC Trades of Energy in the Day-Ahead Market will be settled separately from Inter-SC Trades of Energy in the RTM. Both the Day-Ahead and RTM Inter-SC Trades of Energy will be settled on an hourly

basis and the two respective Settlement amounts between the two parties for each market shall net to zero. All MWh quantities of Physical Trades submitted to the CAISO for Settlement in the Day-Ahead Market that are confirmed through the Physical Trade post market confirmation as provided in Section 28.1.6.3 shall be settled at the Day-Ahead LMP at the relevant PNode. All MWh quantities of Physical Trades that are reduced during the Physical Trade post market confirmation shall be settled at the relevant Existing Zone (EZ) Generation Trading Hub price. All MWh quantities of Physical Trades submitted to the CAISO for Settlement in the RTM that are confirmed through the Physical Trade post market confirmation pursuant to Section 28.1.6.3 shall be settled at the simple average of the four FMM LMPs at the relevant Pricing Node. All MWh quantities of Physical Trades submitted for Settlement in RTM that are reduced during the Physical Trade post market confirmation shall be settled at the FMM price for the EZ Generation Trading Hub.

### 11.9.2 Inter-SC Trades at Aggregated Pricing Nodes

Inter-SC Trades of Energy at Aggregated Pricing Nodes in the Day-Ahead Market will be settled separately from Inter-SC Trades at Aggregated Pricing Nodes in the RTM. Both the Day-Ahead and RTM Inter-SC Trades at Aggregated Pricing Nodes will be settled on an hourly basis and the two respective Settlement amounts between the two parties for each market shall net to zero. All MWh quantities of Inter-SC Trades at Aggregated Pricing Nodes submitted to the CAISO for Settlement in the Day-Ahead Market shall be settled at the relevant Day-Ahead Aggregated Pricing Node price such as the Existing Zone (EZ) Generation Trading Hub price or LAP price. All MWh quantities of Inter-SC Trades at Aggregated Pricing Nodes submitted to the CAISO for Settlement in the RTM shall be settled at the relevant Real-Time Aggregated Pricing Node price.

## 11.10 Settlements for Ancillary Services

### 11.10.1 Settlements for Contracted Ancillary Services

The CAISO shall operate a daily Settlement function for Ancillary Services it contracts for with Scheduling Coordinators. The Scheduling Coordinators supplying Ancillary Services will be credited based on the prices and quantities determined in accordance with this Section 11.10.

#### 11.10.1.1 Ancillary Services in DAM

Payments to Scheduling Coordinators with AS Awards shall be equal to the ASMP calculated as provided

in Section 27.1.2 for each Ancillary Service for the applicable trading hour in which the capacity is procured multiplied by the quantity of the capacity awarded for the Ancillary Service in each of the Ancillary Service Regions for the applicable trading hour in which the capacity is procured. Suppliers with Self-Provided Ancillary Services are not eligible to receive credit for Ancillary Service Awards based on ASMPs; Self-Provided Ancillary Services are compensated at the user rate for the service being self-provided as described in Sections 11.10.2, 11.10.3 and 11.10.4.

#### 11.10.1.1.1 Congestion Charges for Day-Ahead Intertie Ancillary Service Awards

Suppliers of Day-Ahead Ancillary Services Awards and qualified Self-Provided Ancillary Services over the Interties, including Pseudo-Ties of Generating Units to the CAISO Balancing Authority Area, also are charged for Congestion if the Ancillary Service Award or the qualified Self-Provided Ancillary Service is at a congested Scheduling Point. The charge shall be equal to the Shadow Price of the applicable congested Scheduling Point multiplied by the quantity of the Ancillary Service Award or the capacity of the qualified Self-Provided Ancillary Service for the Settlement Period; provided, however, that no such charge for Congestion will apply to any qualified Self-Provided Ancillary Service that is within the entitlement of an Existing Right, Converted Right or Transmission Ownership Right.

### 11.10.1.2 Ancillary Services Provided in HASP

The HASP optimization establishes Ancillary Services Awards and prices for Ancillary Services provided from HASP Block Intertie Schedules. The CAISO pays Scheduling Coordinators that supply Ancillary Services from HASP Block Intertie Schedules an amount equal to the product of the simple average of the ASMPs computed for the four FMM intervals for each Ancillary Service as described in Section 27.1.2, and the quantity of the capacity awarded for the Ancillary Service in the Settlement Period. The CAISO charges Scheduling Coordinators that receive an Ancillary Service Award or have qualified Self-Provided Ancillary Services at a Scheduling Point in the FMM the simple average of the fifteen (15) minute Marginal Cost of Congestion over the applicable Trading Hour as described in Section 11.10.1.2.1.

#### 11.10.1.2.1 Congestion Charges

If a Scheduling Coordinator, including a Scheduling Coordinator for a Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area, receives an Ancillary Services Award or provides a qualified Self-

Provided Ancillary Service at a congested Scheduling Point, the CAISO will charge or credit the Scheduling Coordinator for Congestion. The charge or credit for Congestion at such locations is equal to the simple average of the fifteen (15) minute applicable intertie constraint Shadow Price over the applicable Trading Hour at the location of the Ancillary Service Award, multiplied by the quantity of Ancillary Services Award or the capacity of the qualified Self-Provided Ancillary Service for the Settlement Period. No such charge or credit for Congestion will apply when the Scheduling Coordinator provides Ancillary Services from HASP Block Intertie Schedules at Scheduling Points pursuant to the CAISO Tariff rules that apply to Existing Rights and Transmission Ownership Rights.

#### 11.10.1.3 Ancillary Services Provided in the FMM

Suppliers of Ancillary Services from resources awarded in FMM are credited at a price equal to one-quarter of the fifteen (15) minute ASMP (in $/MW/h) in each fifteen (15) minute interval of the applicable Trading Hour in which the capacity is procured for each Ancillary Service times the amount of the capacity awarded (MW) for the Ancillary Service in the relevant Ancillary Services Region for the applicable trading hour in which the capacity is procured. For each Ancillary Service, the ASMP is calculated as set forth in Section 27.1.2. Suppliers of Self-Provided Ancillary Services in the Real-Time Market are not eligible to receive credit using the ASMP; rather to the extent the self-provision is qualified it will be valued at the user rate for the relevant service (i.e., will either reduce the Ancillary Services Obligation or receive the user rate if it exceeds the Scheduling Coordinator's Ancillary Service Obligation) as described in Sections 11.10.2, 11.10.3 and 11.10.4.

##### 11.10.1.3.1 Congestion Charges for Real-Time Intertie Ancillary Service Awards from Dynamic System Resources and Pseudo-Ties

For each Settlement Period, the suppliers of Real-Time Ancillary Services Awards, Ancillary Services from Pseudo-Ties of Generating Units to the CAISO Balancing Authority Area, or qualified Self-Provided Ancillary Services at Scheduling Points for Dynamic System Resources shall be charged for Congestion and such charge shall be equal to the simple average of the fifteen (15) minute Shadow Prices at the applicable Scheduling Point for the applicable Trading Hour for the awarded or Self-Provided Ancillary Service multiplied by the quantity of the Ancillary Service Award for the capacity of the qualified Self-

Provided Ancillary Service for the Settlement Period; provided, however, that no such charge for Congestion will apply to any qualified Self-Provided Ancillary Service that is within the entitlements of an Existing Right or Transmission Ownership Right.

**11.10.1.4 Voltage Support**

The total credits for each Scheduling Coordinator for Voltage Support in any Settlement Period shall be the sum of commitment costs, FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy Settlement as a result of Exceptional Dispatch pursuant to CAISO Tariff Section 11.5.6 and any opportunity costs, if any, due to an Exceptional Dispatch that limits Energy output to enable reactive energy production. The opportunity cost shall be calculated based on the product of the Energy amount that would have cleared the market at the price of the FMM or RTD LMP minus the higher of the Energy Bid price or the Default Energy Bid price. The Opportunity Cost for an RMR Resource shall be calculated based on the product of the Energy amount that would have cleared the market and the price of the FMM or RTD LMP minus the higher of the Energy Bid price adjusted to remove Opportunity Costs or the Default Energy Bid price adjusted to remove Opportunity Costs.

If applicable, Scheduling Coordinators shall also receive any credits under any long-term contracts due for the Settlement Period. FMM Exceptional Dispatches or RTD Exceptional Dispatches for incremental or decremental Energy needed for Voltage Support procured through Exceptional Dispatch pursuant to Section 34.11.2 will be credited and settled in accordance with Section 11.5.6. RMR Resources and Condition 2 Legacy RMR Units providing Voltage Support are not eligible for an Opportunity Cost pursuant to this Section 11.10.1.4.

**11.10.1.5 [Not Used]**

**11.10.1.6 Inadvertent Interchange between Balancing Authority Areas**

The CAISO shall calculate imbalances between scheduled, instructed and actual quantities of Energy provided based upon Meter Data obtained pursuant to Section 10. Schedules between Balancing Authority Areas shall be deemed as being delivered in accordance with Good Utility Practice. Dynamic Schedules shall be integrated over time through the Operating Hour and the MWh quantity obtained by such integration shall be deemed to be the associated scheduled Interchange for that Operating Hour. The difference between actual and scheduled Interchange shall then be addressed in accordance with

the WECC and NERC inadvertent Interchange practices and procedures. Following this practice, all Dynamic Schedules for Ancillary Services provided to the CAISO from Dynamic System Resources in other Balancing Authority Areas shall be deemed delivered to the CAISO. The difference between the Energy requested by the CAISO and that actually delivered by the other Balancing Authority Area shall then be accounted for and addressed through the WECC and NERC inadvertent Interchange practices and procedures.

#### 11.10.1.7 Regulation Performance Credits and Accuracy Adjustments

Resources supplying Mileage from contracted or self-provided Regulation in the Day-Ahead Market are credited a Mileage clearing price for each MW of Instructed Mileage during the Settlement Period. If a resource is awarded incremental Regulation in the Real-Time Market, the Instructed Mileage shall be divided between the Day Ahead Market and Real Time Market, in proportion to the Day-Ahead and Real-Time Regulation Capacity awards. Instructed Mileage associated with a Day-Ahead Market award will be credited the Day-Ahead Mileage clearing price. Instructed Mileage associated with a Real-Time Market award will be credited the Real-Time Mileage clearing price. The CAISO will adjust a resource's Mileage credits based on the accuracy of the resource's response to CAISO EMS signals. To determine this accuracy adjustment, the CAISO will sum a resource's Automatic Generation Control set points for each four (4) second Regulation interval every fifteen (15) minutes and then sum the absolute value of the deviations from the Automatic Generation Control set point for each four (4) second regulation interval during that fifteen (15) minute period. The CAISO will divide the sum of the resource's Automatic Generation Control set points less the sum of the resource's total deviations by the sum of the resource's Automatic Generation Control set points. The CAISO will apply the resulting accuracy percentage to the resource's Regulation performance credits. In the event of lost accuracy data, the CAISO will use the simple average of the resource's previous ten (10) accuracy percentages for the periods of missing data for settlement purposes.

### 11.10.2 Settlement for User Charges for Ancillary Services

The CAISO shall determine a separate hourly user rate for Regulation Down Reserve, Regulation Up Reserve, Spinning Reserve, and Non-Spinning Reserve purchased for each Settlement Period. The hourly user rates for Regulation Down, Regulation Up, Spinning Reserve, and Non-Spinning Reserve

include the cost incurred by the CAISO across the Day-Ahead Market and the Real-Time Market to procure this service. In computing the user rate for each service the quantity (MW) and costs of any substituting Ancillary Service will be treated as if they are costs and MW associated with the Ancillary Service need they are being used to fulfill. Each rate will be charged to Scheduling Coordinators on a volumetric basis applied to each Scheduling Coordinator's obligation for the specific Ancillary Service concerned which it has not self-provided, as adjusted by any Inter-SC Trades of Ancillary Services. Each Scheduling Coordinator's obligation for Regulation Down Reserve, Regulation Up Reserve, Spinning Reserve, and Non-Spinning Reserve shall be calculated in accordance with this Section 11.10.2, notwithstanding any adjustment to the quantities of each Ancillary Service purchased by the CAISO in accordance with Section 8.2.3.5.

Ancillary Services Obligations for an individual Scheduling Coordinator (before taking into account Self-Provided Ancillary Services) or Inter-SC Trades of Ancillary Services may be negative. Credits for such negative obligations will be in accordance with the rates calculated in this Section 11.10.2, except that a Scheduling Coordinator's credit shall be reduced pro rata to the extent the sum of the negative obligations of all Scheduling Coordinators with the negative Ancillary Services Obligation (before self-provision or Inter-SC Trade) exceeds the obligation of all Scheduling Coordinators with positive obligation net of Self-Provided Ancillary Services, as specified in Section 11.10.5 in any Settlement Period, the net procurement quantity of Regulation Up, Regulation Down, Spinning Reserve, or Non-Spinning Reserve purchased by the CAISO in the Day-Ahead Market and the Real-Time Market due to the operation of Section 8.2.3.5 is zero (0), then the user rate for that Ancillary Service type will be zero (0). With respect to each Settlement Period, in addition to the user rates determined in accordance with this Section 11.10.2, each Scheduling Coordinator shall be charged an additional amount equal to its proportionate share, based on total purchases by Scheduling Coordinators of Regulation Down, Regulation Up, Spinning Reserve, and Non-Spinning Reserve of the amount, if any, by which (i) the total credits to Scheduling Coordinators pursuant to this Section 11.10.2 for the Day-Ahead Market and the Real-Time Market, exceed (ii) the total amounts charged to Scheduling Coordinators pursuant to this Section 11.10.2, for the Day-Ahead Market and the Real-Time Market. If total amounts charged to Scheduling Coordinators exceed the total credits to Scheduling Coordinators, each Scheduling Coordinator will be

refunded its proportionate share, based on total purchases by Scheduling Coordinators of Regulation Down, Regulation Up, Spinning Reserve, and Non-Spinning Reserve.

With respect to each Settlement Period, in addition to Ancillary Service charges at the applicable user rates determined in accordance with this Section 11.10.2, each Scheduling Coordinator shall be charged additional neutrality adjustment amounts for each Ancillary Service type pursuant to Sections 11.10.2.1.4, 11.10.2.2.3, 11.10.3.4, and 11.10.4.4 and a neutrality adjustment amount for upward Ancillary Service types pursuant to Section 11.14.

**11.10.2.1 Regulation Service**

Regulation Up Reserve and Regulation Down Reserve charges shall be calculated separately.

**11.10.2.1.1 Regulation Down Reserve**

The charges to a Scheduling Coordinator for Regulation Down Reserve for each Settlement Period of the Trading Day are based upon the product of Scheduling Coordinator's hourly obligation for Regulation Down Reserve (MW) and the hourly user rate for Regulation Down Reserve ($/MW).

**11.10.2.1.2 Hourly User Rate for Regulation Down Reserve**

The hourly user rate for Regulation Down is the total Regulation Down Reserve Cost ($) for each Settlement Period divided by the total Net Procurement of Regulation Down by the CAISO (MW) for each Settlement Period. The CAISO's Regulation Down Reserve Cost is equal to: (i) the revenues credited to the suppliers of the total awarded Regulation Down Reserve capacity in the Day-Ahead Market and Real-Time Market for the Settlement Period, minus, (ii) the credits rescinded in the Settlement Period due to the unavailability of the Regulation Down under any of the provisions of Section 8.10.8. The Net Procurement of Regulation Down Reserves is equal to: (i) the amount (MW) of total awarded Regulation Down Reserve capacity in the Day-Ahead Market and Real-Time Market for the Settlement Period, minus, (ii) the Regulation Down Reserve capacity associated with credits rescinded for the Settlement Period pursuant to any of the provisions of Section 8.10.8.

**11.10.2.1.3 Hourly Net Obligation for Regulation Down Reserve**

Each Scheduling Coordinator's hourly net obligation for Regulation Down is determined as follows: (a) the Scheduling Coordinator's metered CAISO Demand multiplied by the Scheduling Coordinator's Ancillary Services Obligation percentage for Regulation Down, reduced by accepted Self-Provided Ancillary

Services specified as Regulation Down, plus or minus any Regulation Down Reserve obligations for the hour acquired or sold through Inter-SC Trades of Ancillary Services. Each Scheduling Coordinator's Ancillary Services Obligation percentage for Regulation Down in that hour is equal to the total requirement for Regulation Down in that hour divided by the hourly metered CAISO Demand for that hour.

**11.10.2.1.4 Regulation Down Neutrality Adjustment**

For each Settlement Period, the difference between the Regulation Down Reserve Cost determined in Section 11.10.2.1.2 and the total revenue from all Scheduling Coordinators in the Regulation Down charge pursuant to Section 11.10.2.1.3 shall be allocated to all Scheduling Coordinators in proportion to their Regulation Down obligation quantity.

**11.10.2.1.5 Regulation Down Mileage Costs**

The charges to a Scheduling Coordinator for Regulation Down Mileage in any Settlement Period of the Trading Day are the product of the Scheduling Coordinator's Ancillary Services Obligation percentage in that Settlement Period and the user rate for Regulation Down Mileage ($/MW) for that Settlement Period. The user rate for Regulation Down Mileage is the total cost for Regulation Down Mileage ($) for each Settlement Period divided by the total Regulation Down Ancillary Service Obligation (MW) for each Settlement Period.

**11.10.2.2 Regulation Up**

The charges to a Scheduling Coordinator for Regulation Up for each Settlement Period of the Trading Day are based upon the product of the Scheduling Coordinator's hourly obligation for Regulation Up (MW) and the hourly user rate for Regulation Up ($/MW).

**11.10.2.2.1 Hourly User Rate for Regulation Up**

The hourly user rate for Regulation Up is the total Regulation Up cost ($) for each Settlement Period divided by the total Net Procurement of Regulation Up by the CAISO (MW) for each Settlement Period. The CAISO's Regulation Up cost is equal to: (i) the revenues credited to the suppliers of the total awarded Regulation Up capacity in the Day-Ahead Market and Real-Time Market for the Settlement Period, minus, (ii) the credits rescinded in the Settlement Period due to the unavailability of the Regulation Up under any of the provisions of Section 8.10.8. The Net Procurement of Regulation Up is equal to: (i) the amount (MWs) of total awarded Regulation Up capacity in the Day-Ahead Market and

Real-Time Market for the Settlement Period, minus, (ii) the Regulation Up capacity associated with credits rescinded for the Settlement Period, pursuant to any of the provisions of Section 8.10.8.

#### 11.10.2.2.2 Hourly Net Obligation for Regulation Up

Each Scheduling Coordinator's hourly net obligation for Regulation Up is determined as follows: (a) the Scheduling Coordinator's metered CAISO Demand multiplied by the Scheduling Coordinator's Ancillary Services Obligation percentage for Regulation Up, reduced by accepted Self-Provided Ancillary Services specified as Regulation Up, plus or minus any Regulation Up Reserve obligations for the hour acquired or sold through Inter-SC Trades of Ancillary Services. The Scheduling Coordinator's total Regulation Up Reserve obligation for the applicable Trading Hour may only be less than zero if that credit supports an Inter-SC Trade of Ancillary Services. Each Scheduling Coordinator's Ancillary Services Obligation percentage for Regulation Up in that hour is equal to the total requirement for Regulation Down in that hour divided by the hourly metered CAISO Demand for that hour.

#### 11.10.2.2.3 Regulation Up Neutrality Adjustment

For each Settlement Period, the difference between the Regulation Up net requirement at the hourly Regulation Up user rate determined in Section 11.10.2.2.2 and the total revenue collected from all Scheduling Coordinators in the Regulation Up charge pursuant to Section 11.10.2.2.1 shall be allocated to all Scheduling Coordinators in proportion to their Regulation Up Reserve Obligation quantity. The Regulation Up net requirement is the Real-Time Regulation Up requirement net of the sum of effective qualified Regulation Up self-provision over all resources.

#### 11.10.2.2.4 Regulation Up Mileage Costs

The charges to a Scheduling Coordinator for Regulation Up Mileage in any Settlement Period of the Trading Day are the product of the Scheduling Coordinator's Ancillary Services Obligation percentage in that Settlement Period and the user rate for Regulation Up Mileage ($/MW) in that Settlement Period. The user rate for Regulation Up Mileage is the total cost for Regulation Up Mileage ($) for each Settlement Period divided by the total Regulation Up Ancillary Service Obligation (MW) for each Settlement Period.

### 11.10.3 Spinning Reserves

#### 11.10.3.1 Spinning Reserves Obligation

The charges to a Scheduling Coordinator for Spinning Reserves for each Settlement Period of the Trading Day are based upon the product of the Scheduling Coordinator's hourly obligation for Spinning Reserves (MW) and the hourly user rate for Spinning Reserves ($/MW).

If the Scheduling Coordinator's Operating Reserve Obligation (before self-provision or Inter-SC Trade of Spinning Reserve or Non-Spinning Reserve) is negative, the SC may be entitled to a credit rather than a charge. In that case, the quantity of the SC's negative Operating Reserve Obligation (before self-provision and Inter-SC Trade) shall be multiplied by the Negative Operating Reserve Obligation Credit Adjustment Factor (NOROCAF) computed for the Trading Hour as specified in Section 11.10.5.

#### 11.10.3.2 Hourly User Rate for Spinning Reserves

The hourly user rate for Spinning Reserves is the ratio of: (1) the sum of the portion of Spinning Reserve Cost used to meet the spin requirement and the portion of Regulation Up cost that can substitute for Spinning Reserve and (2) the Net Procurement quantity of Spinning Reserves by the CAISO ($/MW). The cost of Regulation Up substituting for Spinning Reserve is the user rate for Regulation Up multiplied by the quantity of Regulation Up used to satisfy the Spinning Reserve requirement.

The CAISO's Spinning Reserve Cost is equal to: (i) the revenues credited to the suppliers of the total awarded Spinning Reserve capacity in the Day-Ahead Market, HASP, and Real-Time Market, minus, (ii) the credits rescinded due to either the failure to conform to Dispatch Instructions or the unavailability of the Spinning Reserves under Section 8.10.8. The Net Procurement of Spinning Reserves is equal to: (i) the amount (MWs) of total awarded Spinning Reserve capacity in the Day-Ahead Market, HASP, and Real-Time Market, minus, (ii) the Spinning Reserve capacity associated with credits rescinded pursuant to any of the provisions of Section 8.10.8. The amount (MW) of awarded Spinning Reserve capacity includes the amounts (MW) associated with any Regulation Up Reserve capacity used as Spinning Reserve under Section 8.2.3.5.

#### 11.10.3.3 Hourly Net Obligation for Spinning Reserves

Each Scheduling Coordinator's hourly net obligation for Spinning Reserves is determined as follows: the Scheduling Coordinator's total Ancillary Services Obligation for Operating Reserve for the hour multiplied by the ratio of the CAISO's total Ancillary Services Obligation for Spinning Reserves in the hour to the

CAISO's total Operating Reserve Obligations in the hour (and if negative, multiplied by NOROCAF), reduced by the accepted Self-Provided Ancillary Services for Spinning Reserves, plus or minus any Spinning Reserve Obligations for the hour acquired or sold through Inter-SC Trades of Ancillary Services. The Scheduling Coordinator's total Operating Reserve Obligation for the hour is the sum of six (6) percent of its CAISO Demand and three (3) percent of its Energy for exports from the CAISO Balancing Authority Area (excluding export Dynamic Schedules); less three (3) percent of its Energy from imports into the CAISO Balancing Authority Area (excluding import Dynamic Schedules). The Scheduling Coordinator's total Operating Reserve Obligation for the applicable Trading Hour may be less than zero (0) only if the resulting credit supports an Inter-SC Trade of Ancillary Services or the credit results from the portion of Operating Reserve Obligation associated with Energy from imports. The CAISO does not apply Self-Provided Ancillary Services to reduce a Scheduling Coordinator's total Operating Reserve Obligation for the applicable Trading Hour below zero (0).

#### 11.10.3.4 Spinning Reserve Neutrality Adjustment

For each Settlement Period, the difference between the Spinning Reserve net requirement at the hourly Spinning Reserve user rate determined in Section 11.10.3.2 and the total revenue from all Scheduling Coordinators in the Spinning Reserve charge pursuant to Section 11.10.3.3 shall be allocated to all Scheduling Coordinators in proportion to their Spinning Reserve obligation quantity. The Spinning Reserve net requirement is the Real-Time Spinning Reserve requirement net of the sum of effective qualified Spinning Reserve self-provision over all resources.

### 11.10.4 Non-Spinning Reserves

#### 11.10.4.1 Non-Spinning Reserves Obligation

The charges to an SC for Non-Spinning Reserves for each Settlement Period of the Trading Day are based upon the product of SC's hourly obligation for Non-Spinning Reserves (MWs) and the hourly user rate for Non-Spinning Reserves ($/MW).

If the Scheduling Coordinator's Operating Reserve Obligation (before self-provision or Inter-SC Trade of Spinning Reserve or Non-Spinning Reserve) is negative, the Scheduling Coordinator may be entitled to a credit rather than a charge. In that case, the quantity of the Scheduling Coordinator's negative Non-Spinning Reserve Obligation (before self-provision and Inter-SC Trade) shall be multiplied by the

Negative Operating Reserve Obligation Credit Adjustment Factor (NOROCAF) computed for the Trading Hour as specified in Section 11.10.5.

**11.10.4.2 Hourly User Rate Non-Spinning Reserves**

The hourly user rate for Non-Spinning Reserves is calculated as the ratio of: i) the sum of the portion of the Non-Spinning Reserve Cost used to meet the Non-Spinning requirement and a portion of the Regulation Up and Spinning Reserve costs that can substitute for Non-Spinning Reserve and ii) the Net Procurement quantity of Non-Spinning Reserves by the CAISO ($/MW). The CAISO's Non-Spinning Reserve Cost includes the costs associated with any Regulation Up Reserve or Spinning Reserve capacity used as Non-Spinning Reserve under Section 8.2.3.5.

The CAISO's Non-Spinning Reserve Cost is equal to: (i) the revenues credited to the suppliers of the total awarded Non-Spinning Reserve capacity in the Day-Ahead Market and Real-Time Market, minus, (ii) the credits rescinded due to either the failure to conform to CAISO Dispatch Instructions or the unavailability of the Non-Spinning Reserves under Section 8.10.8. The Net Procurement of Non-Spinning Reserves is equal to: (i) the amount (MWs) of total awarded Non-Spinning Reserve capacity in the Day- Ahead Market and Real-Time Market, minus, (ii) the Non-Spinning Reserve capacity associated with credits rescinded pursuant to any of the provisions of Section 8.10.8. The amount (MW) of awarded Non-Spinning Reserve capacity includes the amounts (MW) associated with any Regulation Up Reserve or Spinning Reserve capacity used as Non-Spinning Reserve under Section 8.2.3.5.

**11.10.4.3 Hourly Net Obligation for Non-Spinning Reserves**

Each Scheduling Coordinator's hourly net obligation for Non-Spinning Reserves is determined as follows: the product of the Scheduling Coordinator's total Ancillary Services Obligation for Operating Reserve for the hour (and if negative, multiplied by NOROCAF) multiplied by the ratio of the CAISO's total Ancillary Services Obligation for Non-Spinning Reserves in the hour to the CAISO's total Operating Reserve obligations in the hour, reduced by the accepted Self-Provided Ancillary Services for Non-Spinning Reserves, plus or minus any Non-Spinning Reserve Obligations for the hour acquired or sold through Inter-SC Trades of Ancillary Services. The Scheduling Coordinator's total Operating Reserve Obligation for the hour is the sum of six (6) percent of its CAISO Demand and three (3) percent of its Energy for exports from the CAISO Balancing Authority Area (excluding export Dynamic Schedules); less three (3)

percent of its Energy from imports into the CAISO Balancing Authority Area (excluding import Dynamic Schedules). The Scheduling Coordinator's total Operating Reserve Obligation for the applicable Trading Hour may be less than zero (0) only if the resulting credit supports an Inter-SC Trade of Ancillary Services or the credit results from the portion of Operating Reserve Obligation associated with Energy from imports. The CAISO does not apply Self-Provided Ancillary Services to reduce a Scheduling Coordinator's total Operating Reserve Obligation for the applicable Trading Hour below zero (0).

#### 11.10.4.4 Non-Spinning Reserve Neutrality Adjustment

For each Settlement Period, the difference between the Non-Spinning Reserve net requirement at the hourly Non-Spinning Reserve user rate determined in Section 11.10.4.2 and the total revenue from all Scheduling Coordinators in the Non-Spinning Reserve charge pursuant to Section 11.10.4.3 shall be allocated to all Scheduling Coordinators in proportion to their Non-Spinning Reserve Obligation quantity. The Non-Spinning Reserve net requirement is the Real-Time Non-Spinning Reserve requirement net of the sum of effective qualified Non-Spinning Reserve self-provision over all resources.

### 11.10.5 Negative Operating Reserve Obligation Adjustment

In exceptional cases, it may happen that the net total quantity of Operating Reserve Obligations of all Scheduling Coordinators in a Trading Hour after accounting for qualified self provision is negative. In this case the net negative Operating Reserve Obligation is not usable by the CAISO, since Self-Provided Ancillary Service is qualified before IFM based on CAISO's estimate of firm imports. In such a case, the negative Operating Reserve Obligations of all Scheduling Coordinators with negative Operating Reserve Obligation is reduced pro rata. This is done by computing the Negative Operating Reserve Obligation Credit Adjustment Factor (NOROCAF) as the lower of one (1) or the ratio of (a) net total quantity of Operating Reserve Obligations of all Scheduling Coordinators with positive Operating Reserve Obligation net of qualified self provision of Operating Reserves, but before any Inter-SC Trades of Ancillary Services, and (b) the sum of negative Operating Reserve Obligations of all Scheduling Coordinators with negative Operating Reserve Obligation before considering any Self-Provided Ancillary Services or Inter-SC Trade of AS.

### 11.10.6 Upward Ancillary Services Neutrality Adjustment

For each Settlement Period the difference between the upwards Ancillary Service cost and the sum of the

total Ancillary Services obligation and neutrality adjustments will be allocated to all Scheduling Coordinators in proportion to their upward Ancillary Service Obligation (before taking into consideration the Inter-SC Trades of Ancillary Services). The CAISO shall exclude EDAM Transfers and EIM Transfers between the CAISO and an EDAM Entity, or an EIM Entity, from the calculation of the upwards Ancillary Service Obligation for this neutrality adjustment. The upwards Ancillary Service cost is the sum of the upward Ancillary Services credits issued pursuant to Sections 11.10.1.1, 11.10.1.2, and 11.10.3.1. The total upward Ancillary Services obligation and neutrality adjustments is the sum of the requirements in Sections 11.10.2.2.2, 11.10.2.2.3, 11.10.3.1, 11.10.3.4, 11.10.4.1, and 11.10.4.4.

**11.10.7 Voltage Support**

The Voltage Support user rate for any Settlement Period shall be calculated based on the sum of Voltage Support credits issued to Scheduling Coordinators in accordance with Section 11.10.1.4, divided by Gross Load, excluding metered Demand inside an MSS except as provided by Section 4.9.4.4. The Voltage Support charge for any Settlement Period payable by a Scheduling Coordinator is the Voltage Support user rate multiplied by the quantity of Gross Load, excluding Demand within an MSS except as provided by Section 4.9.4.4, for which that Scheduling Coordinator is responsible in that Settlement Period.

**11.10.8 [Not Used]**

**11.10.9 Settlements of Rescission of Credits for AS Capacity**

The rescission of credits for Ancillary Services for Undispatchable, Unavailable, and Undelivered Capacity applies to Ancillary Services that are awarded in the Day-Ahead Market or Real-Time Market and the rescission will be the weighted average of the Ancillary Service Marginal Prices (ASMPs) and Ancillary Services Award amounts for a resource across the Day-Ahead Market and Real-Time Market. For Self-Provided Ancillary Service capacity that becomes Undispatchable Capacity, Unavailable Capacity, or Undelivered Capacity, the rescission of Ancillary Services self-provision in the Day-Ahead Market and Real-Time Market reduces the relevant Scheduling Coordinator's effective Ancillary Services self-provision in the Ancillary Services cost allocation, effectively resulting in a charge back at the relevant Ancillary Services rate. The rescission of credits in this Section 11.10.9 shall not apply to a capacity

credit for any particular Ancillary Service if the weighted average Ancillary Service Marginal Price (ASMP) is less than or equal to zero (0).

#### 11.10.9.1 Rescission Undispatchable AS

If a Scheduling Coordinator has Undispatchable Capacity that it is obligated to supply to the CAISO during a Settlement Interval, the Ancillary Service capacity credit for the amount of Energy that cannot be delivered from the Generating Unit, Participating Load, Proxy Demand Resource, System Unit or System Resource for the Settlement Interval shall be rescinded; provided, however, that to the extent an Ancillary Service procured in the IFM from a Non-Dynamic System Resource to the CAISO Balancing Authority Area becomes Undispatchable Capacity due to an Intertie transmission derate before the Operating Hour for which it was procured, in rescinding the Ancillary Service capacity credit, the CAISO shall credit back to the Scheduling Coordinator any charge for Congestion assessed pursuant to Section 11.10.1.1.1, but at the lower of the Day-Ahead and simple average of the fifteen (15) minute Real-Time Shadow Price over the applicable Trading Hour on the corresponding Intertie.

#### 11.10.9.2 Rescission of Credits for Unavailable Ancillary Service Capacity

Credits to the Scheduling Coordinator representing the Generating Unit, Participating Load, Proxy Demand Resource, System Unit or System Resource for the Ancillary Service capacity used to supply Uninstructed Imbalance Energy shall not be eliminated to the extent of the deficiency if: (i) the deficiency in the availability of Ancillary Service capacity from the Generating Unit, Participating Load, Proxy Demand Resource, System Unit or System Resource is attributable to control exercised by the CAISO in that Settlement Interval through AGC operation, an RMR Dispatch Notice, or an Exceptional Dispatch; or (ii) a penalty is imposed under Section 8.10.7 with respect to the deficiency.

In calculating the amount of the credit to be rescinded under Section 8.10.8.2, the CAISO shall reduce the credit for Ancillary Service capacity otherwise payable for the Settlement Interval by the product of the applicable prices and the amount of Ancillary Service capacity from which the Generating Unit, Participating Load, Proxy Demand Resource, System Unit or System Resource has supplied Uninstructed Imbalance Energy in that Settlement Interval.

#### 11.10.9.3 Rescission of Credits for Undelivered Ancillary Service Capacity

If the total metered output of a Generating Unit, Participating Load, System Unit or System Resource is

insufficient to supply the amount of FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with a Dispatch Instruction issued in accordance with awarded or self-provided Spinning Reserves or awarded or self-provided Non-Spinning Reserves in any Settlement Interval, then the capacity credit associated with the difference between the scheduled amount of each Ancillary Service for which insufficient Energy was delivered and the actual output attributed to the response to the Dispatch Instruction shall be rescinded. If, after the issuance of a Dispatch Instruction associated with Non-Spinning Reserves, the actual response of a Proxy Demand Resource is insufficient to supply the amount of FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with a Dispatch Instruction issued in accordance with awarded or self-provided Non-Spinning Reserves, then the capacity credit associated with the difference between the scheduled amount and the actual amount attributed to the response to the Dispatch Instruction (as established pursuant to the applicable Business Practice Manual) shall be rescinded. However, no capacity credit shall be rescinded if the shortfall in the metered output of the Generating Unit, Participating Load, Proxy Demand Resource, System Unit, or System Resource is less than a deadband amount published by the CAISO on the CAISO Website at least twenty-four hours prior to the Settlement Interval. For any Settlement Interval with respect to which no deadband amount has been published by the CAISO, the deadband amount shall be zero MWh. For purposes of these calculations, total metered output will not include Energy provided or reduced as a result of AGC signals.

#### 11.10.9.4 Allocation of Rescinded Ancillary Services Capacity Credits

Credits rescinded pursuant to Sections 8.10.8 and 11.10.9 shall be allocated to Scheduling Coordinators in proportion to their Ancillary Services Obligation for the same Trading Day.

## 11.11 RACs and Wheeling Transactions

### 11.11.1 Regional Access Charge

Regional Access Charges will be levied in accordance with Section 26.1 and Appendix F, Schedule 3.

### 11.11.2 Wheeling Through and Wheeling Out Transactions

The CAISO shall calculate, account for and settle charges and credits for Wheeling Through and Wheeling Out transactions in accordance with Section 26.1.4 and Appendix F, Schedule 3, Section 14.

### 11.11.3 Reporting Gross Load and Excess Behind the Meter Production

In reporting Gross Load to the CAISO, each Scheduling Coordinator also will report the extent to which Excess Behind the Meter Production served that Gross Load. The value for Excess Behind the Meter Production will be reported as a separate value, and Scheduling Coordinators must include Load served by Excess Behind the Meter Production in reporting Gross Load. The CAISO will use Excess Behind the Meter Production values for informational purposes and to ensure Scheduling Coordinators report Gross Load accurately. The CAISO will publish Excess Behind the Meter Production values on OASIS.

**11.12 Participating Intermittent Resources**

**11.12.1 [Not Used]**

**11.12.2 [Not Used]**

**11.12.3 Participating Intermittent Resource Fees**

**11.12.3.1 Forecasting Fee**

A fee to defray the costs of the implementation of the forecasting service for Eligible Intermittent Resources shall be assessed to Scheduling Coordinators for Eligible Intermittent Resources as specified in Schedule 4 of Appendix F.

**11.12.3.2 [Not Used]**

**11.12.3.3 [Not Used]**

**11.12.4 [Not Used]**

**11.13 Settlements of RMR Charges and Credits**

This section applies to RMR Resources, which are resources subject to an RMR Contract entered into after September 1, 2018. For Legacy RMR Units, refer to Appendix H.

**11.13.1 Daily RMR Settlement**

The Daily RMR Settlement for each RMR Resource will include the Daily RMR Capacity Payment plus the Daily Variable Cost Payment plus the Daily Additional Cost Settlement minus the Daily RMR Excess Revenues minus the Daily RMR Exceptional Dispatch Revenues.

**11.13.2 Daily RMR Capacity Payment**

The Daily RMR Capacity Payment consists of the Daily Availability Payment plus the Daily Surcharge Payment from Schedule B of the applicable RMR Contract.

**11.13.3 Daily Variable Cost Payment**

For each Trading Day, the CAISO shall calculate IFM Bid Cost Recovery Amount described in Section 11.8.2 and RTM Bid Cost Recovery Amount described in Section 11.8.4 for each RMR Resource while adjusting to remove Major Maintenance Cost and Opportunity Cost adders, calculated pursuant to Section 30.4.6, including any if the limits used to calculate the Opportunity Cost are established pursuant to Article 6 of the RMR Contract. The RMR Resource shall receive any Unrecovered Bid Cost Uplift Payment(s) as described in Section 11.8.5. The Daily Variable Cost Uplift Settlement is the sum of the IFM Unrecovered Bid Cost Uplift Payment as described in Section 11.8.5.1 and the RUC and RTM Unrecovered Bid Cost Uplift Payment as described in Section 11.8.5.2.

**11.13.4 Daily Additional Cost Settlement**

For each Trading Day, the CAISO will calculate any additional Costs associated with an RMR Resource responding to a CAISO-issued Exceptional Dispatch pursuant to Section 34.11 to calculate the Daily Additional Cost Settlement.

**11.13.5 Daily RMR Excess Revenues**

For each Trading Day, the CAISO will calculate the Daily RMR Excess Revenues as the total CAISO daily sum of IFM excess credit, RC excess credit, and RTM excess credit. The RMR Resource will have its RMR Capacity Payment reduced by the IFM excess credit, if the net of all IFM Bid Cost Shortfalls and IFM Bid Cost Surpluses calculated pursuant to Section 11.8.2 over a Trading Day is negative. The RMR Resource will have its RMR Capacity Payment reduced by the RUC excess credit, if the net of all RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses calculated pursuant to Section 11.8.3 over a Trading Day is negative. The RMR Resource will have its RMR Capacity Payment reduced by the RTM excess credit, if the net of all RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses calculated pursuant to Section 11.8.4 over a Trading Day is negative.

**11.13.6 Daily RMR Exceptional Dispatch Excess Revenues**

Daily Exceptional Dispatch excess credit is the total CAISO daily sum of Settlement Interval Exceptional Dispatch surplus credits. For each Settlement Interval, the Exceptional Dispatch surplus credit is the net of Settlement Bid Cost Amounts for FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy from Exceptional Dispatch and FMM IIE Settlement Amounts and RTD Instructed Imbalance Energy from Exceptional Dispatch pursuant to Section 11.5.6, where Exceptional Dispatch Settlement

amounts for exceeds Exceptional Dispatch Bid Cost Settlement amounts. Bid Cost Settlement amounts for FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy from Exceptional Dispatch is calculated as the products of the relevant FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy quantity for the Settlement Interval and the relevant Bid Cost Settlement price. The Exceptional Dispatch Bid Cost Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the maximum of: (a) the Energy Bid price adjusted to remove Opportunity Costs; and (b) the Default Energy Bid price adjusted to remove Opportunity Costs. The Exceptional Dispatch Bid Cost Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the maximum of: (a) the Energy Bid price adjusted to remove Opportunity Costs; and (b) the Default Energy Bid price adjusted to remove Opportunity Costs.

**11.13.7 Daily RMR Cost Allocation**

The CAISO shall allocate amounts credited to RMR Resources through the Daily RMR Settlement to Scheduling Coordinators representing Load-Serving Entities that serve load in the TAC Area(s) in which the need for the RMR Contract arose. These amounts will be allocated to each such Scheduling Coordinator based on the pro-rated share of each Load-Serving Entity's TAC Area Metered Demand to the total TAC Area metered Demand recorded in the CAISO settlement system for actual days of any settlement month period for which the RMR Contract was in effect.

**11.13.8 [Not Used]**

**11.13.9 [Not Used]**

**11.13.10 [Not Used]**

**11.14 Neutrality**

The CAISO shall be authorized to issue charges or credits as special adjustments in regard to:

(a) amounts required to reach an accounting trial balance of zero in the course of the Settlement process in the event that the charges calculated as due from CAISO Debtors are lower than credits calculated as due to the CAISO Creditors for the same Trading Day, which includes any amounts required to round up any invoice amount expressed in dollars and cents to the nearest whole dollar amount. These charges will be allocated

amongst the Scheduling Coordinators who traded on that Trading Day pro rata to their Measured Demand in MWh of Energy for that Trading Day. In the event that the charges due from CAISO Debtors are higher than the credits due to CAISO Creditors, the CAISO shall allocate a credit to the Scheduling Coordinators who traded on that Trading Day pro rata to their Measured Demand in MWh of Energy for that Trading Day; and

(b) awards payable by or to the CAISO pursuant to good faith negotiations or CAISO ADR Procedures that the CAISO is not able to allocate to or to collect from a Market Participant or Market Participants in accordance with Section 13.5.3. These charges will be allocated among Scheduling Coordinators over an interval determined by the CAISO and pro rata based on EDAM Measured Demand during that interval, if the dispute concerned the IFM, EIM Measured Demand during that interval, if the dispute concerned the Real-Time Market or RUC, or otherwise Measured Demand during that interval.

### 11.15 Section 42.1 Contracts

The CAISO shall calculate and levy charges for the recovery of costs incurred under contracts entered into by the CAISO under the authority granted in Section 42.1 in accordance with Section 42.1.8 or any other contract approved by FERC.

### 11.16 Additional AS and RUC Credit Rescission Requirements

The following provisions apply to the Settlement of rescission of credits for Ancillary Services and RUC Capacity in addition to the provisions of Sections 8.10.8 and 11.10.9 for Ancillary Services and Sections 31.5.7 and 11.2.2.2 for RUC Capacity.

#### 11.16.1 Resources with More Than One Capacity Obligation

If the Generating Unit, Participating Load, Proxy Demand Resource, System Unit or System Resource is scheduled to provide more than one capacity obligation in a Settlement Interval, the order in which the non-compliant Ancillary Service and RUC Capacity will be apportioned to the various services under Section 8.10.8 is as follows. For Undispatchable Capacity the non-compliant capacity is first apportioned to RUC Capacity and then to any Non-Spinning Reserves. If the amount of Undispatchable Capacity exceeds the amount of Non-Spinning Reserves, then the credit shall be eliminated for Spinning Reserves. For Unavailable Capacity or Undelivered Capacity the non-compliant capacity is first

apportioned to any Non-Spinning Reserves. If the amount of non-compliant Ancillary Service capacity exceeds the amount of Non-Spinning Reserves, then the credit shall be eliminated for Spinning Reserves. If the same Ancillary Service is scheduled in the Day-Ahead Market or Real-Time Market, then the credits shall be rescinded in proportion to the amount of each Ancillary Service scheduled in each market. If the same Ancillary Service is self-provided and Bid, the order of rescission will be first the amount of Ancillary Service amounts submitted in Bids and then the Self-Provided Ancillary Service.

**11.16.2 Load-Following MSSs with an AS or RUC Capacity Obligation**

If a Load following MSS Operator is scheduled to provide Ancillary Service capacity, RUC Capacity, or some combination thereof in a Settlement Interval and if the scheduled capacity or a portion thereof is unavailable for some reason during the Settlement Interval, the non-compliant Ancillary Services and RUC Capacity (i.e., Undispatchable, Unavailable, or Undelivered Capacity) will be not be apportioned to the capacity designated by the MSS Operator as Load following up capacity and Load following down capacity. In determining which of the MSS Operator's capacity obligations were not available in Real-Time, the capacity designated by the MSS Operator as Load following up capacity and Load following down capacity shall be preserved or take precedence over the other capacity obligations.

## 11.17 Application of the Persistent Deviation Metric

The CAISO will modify the Bid Cost Recovery calculations described in Section 11.8 and Residual Imbalance Energy credits in Section 11.5.5 as described below to address persistent deviations that expand Bid Cost Recovery credits beyond what is necessary for purposes of ensuring Bid Cost Recovery.

**11.17.1 Persistent Deviation Threshold and Mitigation**

The CAISO will calculate the Persistent Deviation Metric and evaluate each resource's response to a CAISO Dispatch in each Settlement Interval relative to the Persistence Deviation Metric Threshold as described below. The Persistent Deviation Metric Threshold evaluation will be based on the number of Settlement Intervals flagged within a rolling two-Trading Hour window. The CAISO will flag each Settlement Interval pursuant to the threshold conditions specified in Section 11.17.1.1, and apply the Persistent Deviation Metric pursuant to the rules specified in Section 11.17.1.2.

**11.17.1.1 Persistent Deviation Threshold Conditions**

**11.17.1.1.1 Case 1**

The CAISO will flag a Settlement Interval (t): (1) if Expected Energy is greater than Day-Ahead Scheduled Energy in that Settlement Interval (t), the Metered Energy is greater than the Expected Energy in that Settlement Interval (t), and the Metered Energy in the prior Settlement Interval (t-1) is less than the Expected Energy in the given Settlement Interval (t); and (2) if the Metered Energy, less Regulation Energy, less the Expected Energy in that Settlement Interval (t) is greater than ten (10) percent of the amount the resource can be Dispatched at full ramp over the Settlement Interval (t) and the Persistent Deviation Metric is greater than one hundred and ten (110) percent.

**11.17.1.1.2 Case 2**

The CAISO will flag a Settlement Interval (t): (1) if the Expected Energy exceeds the Day-Ahead Scheduled Energy in that Settlement Interval (t), and Metered Energy in the prior Settlement Interval (t-1) exceeds the Expected Energy in that Settlement Interval (t); and (2) if the Metered Energy less the Regulation Energy and less Expected Energy in that Settlement Interval (t) is greater than ten (10) percent of the amount the resource can be Dispatched at full ramp over the Settlement Interval (t) and the Persistent Deviation Metric is less than ninety (90) percent.

**11.17.1.1.3 Case 3**

The CAISO will flag a Settlement Interval (t): (1) if the Expected Energy is less than the Day-Ahead Scheduled Energy, and Metered Energy is less than the Expected Energy in that Settlement Interval (t), and Metered Energy in the prior Settlement Interval (t-1) is less than the Expected Energy in the given Settlement Interval (t); and (2) if the Metered Energy less Regulation Energy less Expected Energy in that Settlement Interval (t) is greater than ten percent (10) of the amount the unit could be Dispatched at full ramp over the Settlement Interval (t) and the Persistent Deviation Metric is less than ninety (90) percent.

**11.17.1.1.4 Case 4**

The CAISO will flag a Settlement Interval (t): (1) if the Expected Energy is less than the Day-Ahead Scheduled Energy, and Metered Energy is less than the Expected Energy in that Settlement Interval (t), and Metered Energy in the prior Settlement Interval (t-1) is greater than the Expected Energy in the given Settlement Interval (t); and (2) if the Metered Energy less Regulation Energy less Expected Energy is greater than (10) percent of the amount the resource can be Dispatched at full ramp over the Settlement

Interval (t) and the Persistent Deviation Metric is greater than one hundred and ten (110) percent.

#### 11.17.1.2 Persistent Deviation Adjustments

The CAISO will apply the following rules to evaluate the resource's performance relative to the Persistent Deviation Metric Threshold and will apply the Persistent Deviation Metric as specified below.

##### 11.17.1.2.1 Rule 1

If six (6) or fewer Settlement Intervals out of the previous twenty-four (24) Settlement Intervals are flagged pursuant to the rules in Section 11.17.1.1, then: (a) the RTM Energy Bid Costs will be based on the applicable Energy Bid price as specified in Section 11.8.4.1.5, and (b) Residual Imbalance Energy will be settled based on the reference hour Energy Bid as specified in Section 11.5.5.

##### 11.17.1.2.2 Rule 2

If seven (7) or more Settlement Intervals of the previous twenty-four (24) Settlement Intervals are flagged as exceeding the Persistent Deviation Metric Threshold, then for all the previous twenty-four (24) Settlement Intervals in the two-hour window: (a) the RTM Energy Bid Costs specified in Section 11.8.4.1.5 (i) for FMM Optimal Energy or RTD Optimal Energy above the Day-Ahead Scheduled Energy will be based on the lesser of the applicable Default Energy Bid price, the applicable Energy Bid price, as mitigated, or the applicable FMM or RTD LMP; and (ii) for FMM Optimal Energy or RTD Optimal Energy below the Day-Ahead Scheduled Energy will be based on the greater of the applicable Default Energy Bid price, the applicable Energy Bid price, as mitigated, or the applicable FMM or RTD LMP; and (b) Residual Imbalance Energy as specified in Section 11.5.5 (i) for Residual Imbalance Energy above the Day-Ahead Scheduled Energy will be based on the lesser of the applicable Default Energy Bid price, the relevant Energy Bid Price, as mitigated, or the applicable RTD LMP; and (ii) Residual Imbalance Energy below the Day-Ahead Scheduled Energy will be based on the greater of the applicable Default Energy Bid price, the relevant Energy Bid Price, or the applicable RTD LMP.

##### 11.17.1.2.3 Rule 3

Once a Settlement Interval is flagged as exceeding the Persistent Deviation Metric Threshold, it remains flagged when it is considered in the subsequent rolling two-Trading Hour evaluation window and its bid basis qualification for that Settlement Interval will not change.

##### 11.17.1.2.4 Rule 4

If a Settlement Interval's bid basis is determined by the Rule 1 above in a previous evaluation and it has not been flagged, it can be re-determined and flagged pursuant to the additional rules in a subsequent rolling two-Trading Hour evaluation window based on the Persistent Deviation Metric Threshold.

**11.17.2 Shut-Down Adjustment**

**11.17.2.1 Disqualification Based on Advisory Schedules**

From the Dispatch Interval in which the CAISO has determined that the Dispatch Operating Point minus the Shut-Down State Variable is less than or equal to the Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and until the Shut-Down State Variable is reset, the IFM Minimum Load Costs, RUC Minimum Load Costs, or RTM Minimum Load Costs, as applicable, will be disqualified from the Bid Cost Recovery calculation.

**11.17.2.2 Disqualification Based on ADS Shut-Down Instruction**

In the event that the CAISO issues a binding Shut-Down Instruction through ADS, a resource will not be eligible for recovery of RTM Minimum Load Costs or RUC Minimum Load Costs from the point of the Shut-Down Instruction forward for the duration of the resource's registered Minimum Down Time. If a resource ignores the binding Shut-Down Instruction and it has a Day-Ahead Schedule, the resource is not eligible for IFM Minimum Load Cost recovery as specified in Section 11.8.1.2 for the minimum of: 1) the resource's Minimum Down Time; and 2) the IFM Commitment Period.

**11.17.2.3 Bid Basis for Settlement Bid Cost Recovery**

For any resource that receives a Shut-Down Instruction in the Real-Time Market, any Integrated Forward Market Energy Bid Cost Recovery or Real-Time Market Energy Bid Cost Recovery that may otherwise apply pursuant to the rules in Section 11.8 will be based on the relevant Energy Bid price, as mitigated, that was considered by the Real-Time Market in making the decision to shut down the resource for the length of time defined by the greater of (a) the resource's Minimum Down Time or (b) the period in which it is Off after the Shut-Down time, which is not to exceed the time until the end of the Trading Day.

**11.17.3 Application of Persistent Deviation Metric to Eligible Intermittent Resources' Residual Imbalance Energy**

For a Settlement Interval, the Persistent Deviation Metric does not apply to the Settlement amounts defined in Section 11.5.5.2.

## 11.18 Emissions Costs

### 11.18.1 Emissions Costs Charges

The CAISO shall charge each Scheduling Coordinator in accordance with this Section 11.18, which will be used to fund the verified Emissions Costs incurred by an Emissions Eligible Generator during a CAISO Commitment Period. The CAISO shall levy this administrative charge (the Emissions Cost charge) each month, against all Scheduling Coordinators based upon each Scheduling Coordinator's (1) Balancing Authority Area Gross Load, and (2) Demand within California outside of the CAISO Balancing Authority Area that is served by exports from the CAISO Balancing Authority Area. .

### 11.18.2 CAISO Emissions Costs Trust Account

All sums representing Emissions Cost charges received by the CAISO shall be deposited in the CAISO Emissions Cost Trust Account. The CAISO Emissions Cost Trust Account shall be an interest-bearing account separate from all other accounts maintained by the CAISO, and no other funds shall be commingled in it at any time.

### 11.18.3 Rate for the Emission Cost Trust Account

The rate at which the CAISO will assess the Emissions Cost charge shall be at the projected annual total of all Emissions Costs incurred by Emissions Eligible Generators during CAISO Commitment Period, adjusted for interest projected to be earned on the monies in the CAISO Emissions Cost Trust Account, divided by the sum of the Balancing Authority Area Gross Load and the projected Demand within California outside of the CAISO Balancing Authority Area that is served by exports from the CAISO Balancing Authority Area of all Scheduling Coordinators for the applicable year ("Emissions Cost Demand"). The initial rate for the Emissions Cost charge, and all subsequent rates for the Emissions Cost charge, shall be posted on the CAISO Website.

### 11.18.4 Adjustment of the Rate for the Emissions Cost Charge

The CAISO may adjust the rate at which the CAISO will assess the Emissions Cost charge on a monthly basis, as necessary, to reflect the net effect of the following:

(a) the difference, if any, between actual Emissions Cost Demand and projected Emissions Cost Demand;

(b) the difference, if any, between the projections of the Emissions Costs incurred by Emissions Eligible Generators during a CAISO Commitment Period and the actual Emissions Costs incurred by Emissions Eligible Generators during a CAISO Commitment Period as invoiced to the CAISO and verified in accordance with this Section 11.18; and

(c) the difference, if any, between actual and projected interest earned on funds in the CAISO Emissions Cost Trust Account.

The adjusted rate at which the CAISO will assess the Emissions Cost charge shall take effect on a prospective basis on the first day of the next calendar month. The CAISO shall publish all data and calculations used by the CAISO as a basis for such an adjustment on the CAISO Website at least five (5) days in advance of the date on which the new rate shall go into effect.

**11.18.5 Credits and Debits of Emissions Cost Charges from SCs**

In addition to the surcharges or credits permitted under Section 11.29.7.3, the CAISO may credit or debit, as appropriate, the account of a Scheduling Coordinator for any over- or under-assessment of Emissions Cost charges that the CAISO determines occurred due to the error, omission, or miscalculation by the CAISO or the Scheduling Coordinator

**11.18.6 Submission of Cost Invoices by RMR Owner**

Scheduling Coordinators on behalf of RMR Resources that incur costs during a CAISO Commitment Period that are not recoverable pursuant to the CAISO Daily RMR Settlement but are recoverable under the applicable RMR Contract may submit to the CAISO an invoice pursuant to Schedule C of the RMR Contract in the form specified on the CAISO Website with appropriate documentation. The CAISO will review and any amounts accepted will be paid by the CAISO on the next practicable Invoice and allocated pursuant to Section 11.13.5.

**11.18.7 Emissions Cost Invoices**

The CAISO shall credit Scheduling Coordinators for all Emissions Costs submitted in an Emissions Cost Invoice and demonstrated to be during a CAISO Commitment Period. If the Emissions Costs indicated in the applicable air quality districts' final invoice statements include emissions produced by operation not during a CAISO Commitment Period, the CAISO shall credit an amount equal to Emissions Costs multiplied by the ratio of the MWh associated with the CAISO Commitment Period to the total MWh

associated with such Emissions Costs. The CAISO shall credit Emissions Cost Invoices each month in accordance with the CAISO Payments Calendar from the funds available in the CAISO Emissions Cost Trust Account. To the extent there are insufficient funds available in the CAISO Emissions Cost Trust Account in any month to credit all Emissions Costs submitted in an Emissions Cost Invoice and demonstrated to be during a CAISO Commitment Period, the CAISO shall make pro rata credit of such Emissions Costs and shall adjust the rate at which the CAISO will assess the Emissions Cost charge in accordance with Section 11.18.4. Any outstanding Emissions Costs owed from previous months will be paid in the order of the month in which such costs were invoiced to the CAISO. The CAISO's obligation to credit Emissions Costs is limited to the obligation to credit Emissions Cost charges received. All disputes concerning credit of Emissions Cost Invoices shall be subject to CAISO ADR Procedures, in accordance with Section 13.

## 11.19 FERC Annual Charges

### 11.19.1 FERC Annual Charge Recovery Rate

#### 11.19.1.1 Obligation for FERC Annual Charges

Each Scheduling Coordinator shall be obligated to pay for the FERC Annual Charges for its use of the CAISO Controlled Grid to transmit electricity, including any use of the CAISO Controlled Grid through Existing Contracts scheduled by the Scheduling Coordinator. Any FERC Annual Charges to be assessed by FERC against the CAISO for such use of the CAISO Controlled Grid shall be assessed against Scheduling Coordinators at the FERC Annual Charge Recovery Rate. Such assessment shall be levied monthly against all Scheduling Coordinators based upon each Scheduling Coordinator's metered Demand and exports.

#### 11.19.1.2 Annual Charges Assessment

Scheduling Coordinators shall pay FERC Annual Charges assessed against them by the CAISO on a monthly or annual basis. Scheduling Coordinators that pay FERC Annual Charges on a monthly basis shall make the payment for such charges on the Payment Date for any market Invoice or Payment Advice containing the charges. Scheduling Coordinators that must pay FERC Annual Charges on an annual basis shall make the payment for such charges no later than the Payment Date stated on the Invoice for FERC Annual Charges. For Scheduling Coordinators electing monthly settlement of the FERC Annual

Charges, these charges are assessed for a given Trading Month in the same semi-monthly Invoice and Payment Advice containing the market Settlement and Grid Management Charge issued in accordance with the CAISO Payments Calendar. For Scheduling Coordinators electing yearly assessment of the FERC Annual Charges, the charges for a given Trading Month that are due annually are issued in accordance with the CAISO Payments Calendar on the same day as the market Invoice or Payment Advice but in a separate Invoice as indicated in Section 11.29.10. Further, the FERC Annual Charges amounts are provided to Scheduling Coordinators at least twice a month in their Settlement Statements. Once the final FERC Annual Charge Recovery Rate is received from FERC in the spring or summer of the following year, revised FERC Annual Charges will be calculated and included on a supplemental Invoice or Payment Advice. All Scheduling Coordinators shall make payment for such charges within five (5) Business Days after the CAISO issues such supplemental Invoice.

**11.19.2 FERC Annual Charge Trust Account**

All funds collected by the CAISO for FERC Annual Charges shall be deposited in the FERC Annual Charge Trust Account. The FERC Annual Charge Trust Account shall be an interest-bearing account separate from all other accounts maintained by the CAISO, and no other funds shall be commingled in it at any time. The CAISO shall disburse funds from the FERC Annual Charge Trust Account in order to pay the FERC any and all FERC Annual Charges assessed against the CAISO.

**11.19.3 Determination of the FERC Annual Charge Recovery Rate**

**11.19.3.1 Annual Charge Obligation**

The FERC Annual Charge Recovery Rate shall be set at the projected total FERC Annual Charge Obligation with regard to transactions on the CAISO Controlled Grid during the year in which the FERC Annual Charge Recovery Rate is collected, adjusted for interest projected to be earned on the monies in the FERC Annual Charge Trust Account ("Annual Charge Obligation"), divided by the projected Demand and exports during that year for all entities subject to assessment of FERC Annual Charges by the CAISO ("Annual Charge Demand"). The FERC Annual Charge Recovery Rate for the period from January 1, 2001 until the first adjustment of the FERC Annual Charge Recovery Rate goes into effect shall be posted on the CAISO Website at least fifteen (15) days in advance of the date on which the initial rate will go into effect.

**11.19.3.2 Adjustments to FERC Annual Charge Recovery Rate**

The CAISO may adjust the FERC Annual Charge Recovery Rate on a quarterly basis, as necessary, to reflect the net effect of the following:

(a) the difference, if any, between actual Annual Charge Demand and projected Annual Charge Demand during the year-to-date;

(b) the difference, if any, between the projections of the Annual Charge Obligation and the Annual Charge Demand upon which the charge for the year is based and the CAISO's most current projections of those values, provided that the projection of the Annual Charge Obligation may only be adjusted on an annual basis for changes in the Federal Energy Regulatory Commission's budget for its electric regulatory program or changes in the projected total transmission volumes subject to assessment of FERC Annual Charges;

(c) the difference, if any, between actual and projected interest earned on funds in the FERC Annual Charge Trust Account; and

(d) any positive or negative balances of funds collected for FERC Annual Charges in a previous year after all Invoices for FERC Annual Charges for that year have been paid by the CAISO, other than those that are addressed through the mechanism described in Section 11.19.3.4.

**11.19.3.3 Effectiveness of FERC Annual Charge Recovery Rate**

The adjusted FERC Annual Charge Recovery Rate shall take effect on the first day of the calendar quarter. The CAISO shall publish all data and calculations used by the CAISO as a basis for such an adjustment on the CAISO Website at least fifteen (15) days in advance of the date on which the new rate shall go into effect.

**11.19.3.4 Under- Or Over-Recovery of FERC Annual Charge Recovery Rate**

If the FERC Annual Charges assessed by FERC against the CAISO for transactions on the CAISO Controlled Grid during any year exceed or fall short of funds collected by the CAISO for FERC Annual Charges with respect to that year by a range of ten (10) percent or less, the CAISO shall take such under- or over-recovery into account through an adjustment to the FERC Annual Charge Recovery Rate in

accordance with this Section. Any deficiency of available funds necessary to pay for any assessment of FERC Annual Charges payable by the CAISO may be covered by an advance of funds from the CAISO's Grid Management Charge, provided any such advanced funds will be repaid. If the CAISO's collection of funds for FERC Annual Charges with respect to any year results in an under- or over-recovery of greater than ten (10) percent, the CAISO shall either assess a surcharge against all active Scheduling Coordinators for the amount under-recovered or shall issue a credit to all active Scheduling Coordinators for the amount over-recovered. The surcharge or credit shall be allocated among all active Scheduling Coordinators based on the percentage of the surcharge or credit that reflects the active Scheduling Coordinators' metered Demand and exports during the relevant year. For purposes of this section, an "active Scheduling Coordinator" shall be a Scheduling Coordinator certified by the CAISO in accordance with this CAISO Tariff at the time the CAISO issues a surcharge or credit under this section. The CAISO will issue any surcharges or credits under this section within sixty (60) days of receiving a FERC Annual Charge assessment from the FERC.

#### 11.19.4 Credits and Debits of FERC Annual Charges from SCs

In addition to the surcharges or credits permitted under this CAISO Tariff, the CAISO shall credit or debit the appropriate Scheduling Coordinator for any over- or under-assessment of FERC Annual Charges that the CAISO determines occurred due to the error, omission, or miscalculation by the CAISO or the Scheduling Coordinator.

### 11.20 NERC/WECC Charges

#### 11.20.1 Responsibility for NERC/WECC Charges

(a) The CAISO shall invoice Scheduling Coordinators for all of the NERC/WECC Charges that are invoiced to the CAISO by the WECC on behalf of itself, NERC, and/or regional advisory bodies. Each Scheduling Coordinator shall be obligated to pay the CAISO all of the NERC/WECC Charges it is invoiced by the CAISO in accordance with this Section 11.20. Each Scheduling Coordinator's responsibility for NERC/WECC Charges is based on the Scheduling Coordinator's NERC/WECC Metered Demand.

(b) The CAISO's calculation of collateral requirements and other credit requirements under

the CAISO Tariff will not include any adjustment for a Scheduling Coordinator's NERC/WECC Charges.

**11.20.2 [Not Used]**

**11.20.3 [Not Used]**

**11.20.4 Process for Invoicing NERC/WECC Charges**

With regard to the NERC/WECC Charges to be assessed by the WECC for each NERC/WECC Charge Assessment Year, the following processes shall apply:

(a) The CAISO will issue a Market Notice that will include the total of all Scheduling Coordinators' NERC/WECC Metered Demand for the calendar year two years prior to the NERC/WECC Charge Assessment Year. On or after the date on which the CAISO issues this Market Notice, the CAISO will notify each Scheduling Coordinator in writing of the Scheduling Coordinator's NERC/WECC Metered Demand for the calendar year two years prior to the NERC/WECC Charge Assessment Year. Each Scheduling Coordinator shall have sixty (60) calendar days from the date the CAISO provides it with this notification in writing to raise any disputes concerning the CAISO's calculation of the Scheduling Coordinator's NERC/WECC Metered Demand for the calendar year two years prior to the NERC/WECC Charge Assessment Year.

(b) The CAISO will report to the WECC the total of all Scheduling Coordinators' NERC/WECC Metered Demand for the calendar year two years prior to the NERC/WECC Charge Assessment Year, including any adjustments to the calculation of NERC/WECC Metered Demand for that year made by the CAISO in response to disputes raised by Scheduling Coordinators pursuant to Section 11.20.4(a). The report will also include any adjustments to the calculation of NERC/WECC Metered Demand, based on decisions by the WECC to permit such adjustments, that the CAISO has time to reflect in the report and that the WECC provides to the CAISO in a written statement in accordance with the CAISO-WECC Billing Services Agreement. This report shall facilitate the WECC's calculation of actual NERC/WECC Charges to be invoiced to the CAISO for the NERC/WECC Charge Assessment Year.

(c) The CAISO will issue a Market Notice setting forth the Preliminary NERC/WECC Charge Rate for the NERC/WECC Charge Assessment Year.

(d) By August 31 of the year preceding the NERC/WECC Charge Assessment Year, the CAISO will issue Preliminary NERC/WECC Charge Invoices for the NERC/WECC Charge Assessment Year.

(e) Within five (5) Business Days after receipt of the WECC's invoice to the CAISO setting forth the assessment of NERC/WECC Charges for the NERC/WECC Charge Assessment Year, the CAISO shall issue a Market Notice setting forth the Final NERC/WECC Charge Rate for the NERC/WECC Charge Assessment Year. The Final NERC/WECC Charge Rate for the NERC/WECC Charge Assessment Year shall be based on (i) the total NERC/WECC Charges for the NERC/WECC Charge Assessment Year that were invoiced to the CAISO by the WECC, divided by (ii) the total of all Scheduling Coordinators' NERC/WECC Metered Demand including any adjustments to the calculation of NERC/WECC Metered Demand as reported to the WECC pursuant to Section 11.20.4(b), and including any additional adjustments to the calculation of NERC/WECC Metered Demand, based on decisions by the WECC to permit such adjustments, that the WECC provides to the CAISO in a written statement in accordance with the CAISO-WECC Billing Services Agreement.

(f) Within fifteen (15) Business Days after receipt of the WECC invoice to the CAISO setting forth the assessment for NERC/WECC Charges for the NERC/WECC Charge Assessment Year, the CAISO will issue Final NERC/WECC Charge Invoices that allocate NERC/WECC Charges for the NERC/WECC Charge Assessment Year to Scheduling Coordinators based on (i) each Scheduling Coordinator's NERC/WECC Metered Demand as adjusted pursuant to Sections 11.20.4(b) and 11.20.4(e) and pursuant to any additional adjustments that the WECC provides to the CAISO in a written statement in accordance with the CAISO-WECC Billing Services Agreement, multiplied by (ii) the Final NERC/WECC Charge Rate for the NERC/WECC Charge Assessment Year. If and to the extent that a Scheduling Coordinator has not already paid all of the NERC/WECC

Charges for the NERC/WECC Charge Assessment Year that it is required to pay, the Scheduling Coordinator's Final NERC/WECC Charge Invoice will show the amount the Scheduling Coordinator is still required to pay. If and to the extent that a Scheduling Coordinator has already paid in excess of the NERC/WECC Charges for the NERC/WECC Charge Assessment Year that the Scheduling Coordinator is required to pay, the Scheduling Coordinator's Final NERC/WECC Charge Invoice will show the amount the Scheduling Coordinator will be credited.

**11.20.5 Timely Payments**

Scheduling Coordinators shall make timely payments to the CAISO pursuant to Preliminary NERC/WECC Charge Invoices within thirty (30) calendar days of issuance of such invoices. Scheduling Coordinators shall make timely payments to the CAISO pursuant to Final NERC/WECC Charge Invoices within fifteen (15) Business Days of issuance of such invoices.

**11.20.6 NERC/WECC Charge Trust Account**

The CAISO shall deposit all payments received pursuant to Preliminary NERC/WECC Charge Invoices and Final NERC/WECC Charge Invoices in the NERC/WECC Charge Trust Account. The NERC/WECC Charge Trust Account shall be separate from all other accounts maintained by the CAISO, and no other funds shall be commingled in it at any time. The CAISO shall disburse funds from the NERC/WECC Charge Trust Account in order to pay the WECC any and all NERC/WECC Charges invoiced to the CAISO.

**11.20.7 Preliminary and Final NERC/WECC Charge Invoices**

The CAISO shall invoice NERC/WECC Charges to Scheduling Coordinators by issuing Preliminary NERC/WECC Charge Invoices and Final NERC/WECC Charge Invoices. The Preliminary NERC/WECC Charge Invoices and Final NERC/WECC Charge Invoices shall be issued in accordance with the schedules set forth in this Section 11.20, provided that the CAISO may issue a Market Notice informing Scheduling Coordinators that the CAISO will implement a temporary modification to that schedule and setting forth the reasons for such modification, in which case the modified schedule described in that Market Notice shall govern.

**11.20.7.1 Confirmation**

It is the responsibility of each Scheduling Coordinator to notify the CAISO if the Scheduling Coordinator fails to receive a Preliminary NERC/WECC Charge Invoice or a Final NERC/WECC Charge Invoice in accordance with the applicable schedule. Each Scheduling Coordinator shall be deemed to have received its Preliminary NERC/WECC Charge Invoice or a Final NERC/WECC Charge Invoice on the date specified in the applicable schedule, unless the Scheduling Coordinator notifies the CAISO to the contrary.

**11.20.7.2 Validation**

Each Scheduling Coordinator shall have the opportunity to review the terms of the Preliminary NERC/WECC Charges Invoices and the Final NERC/WECC Charge Invoices that it receives. The Scheduling Coordinator shall be deemed to have validated each Preliminary NERC/WECC Charge Invoice or Final NERC/WECC Charge Invoice unless it has raised a dispute within ten (10) calendar days from the date of issuance. Once validated, a Preliminary NERC/WECC Charge Invoice or Final NERC/WECC Charge Invoice shall be binding on the Scheduling Coordinator to which it relates.

**11.20.7.3 Disputes and Dispute-Related Corrections**

Scheduling Coordinators shall be prohibited from disputing any Preliminary NERC/WECC Charge Invoice or Final NERC/WECC Charge Invoice, except on grounds that an error in a Preliminary NERC/WECC Charge Invoice or Final NERC/WECC Charge Invoice is due to a mere typographical or other ministerial error by the CAISO. A Scheduling Coordinator that wishes to dispute a NERC/WECC Charge Invoice on such grounds shall give the CAISO notice of dispute in writing within ten (10) calendar days of issuance. The notice of dispute shall state clearly the issue date of the Preliminary NERC/WECC Charge Invoice or Final NERC/WECC Charge Invoice, the item or calculation disputed, and the reasons for the dispute, and shall be accompanied by all available evidence reasonably required to support the claim. If the Scheduling Coordinator is correct that the Preliminary NERC/WECC Charge Invoice or Final NERC/WECC Charge Invoice contains a typographical or other ministerial error and the resolution of the dispute makes correction necessary, the CAISO shall issue a corrected Preliminary NERC/WECC Charge Invoice or a corrected Final NERC/WECC Charge Invoice within fifteen (15) calendar days of issuance of the invoice that is being corrected.

Each Scheduling Coordinator that receives a Preliminary NERC/WECC Charge Invoice or a Final NERC/WECC Charge Invoice shall pay any net debit and shall be entitled to receive any net credit in a Preliminary NERC/WECC Charge Invoice or a Final NERC/WECC Charge Invoice on the Payment Date, regardless of whether there is any dispute regarding the amount of the debit or credit. The CAISO will issue corrected Preliminary NERC/WECC Charge Invoices or corrected Final NERC/WECC Charge Invoices if the resolution of a dispute concerning a Preliminary NERC/WECC Charge Invoice or a Final NERC/WECC Charge Invoice, brought pursuant to this Section 11.20, makes such a correction necessary.

**11.20.8 Provision of Payments and Information to the WECC**

(a) The CAISO will forward to the WECC, at least three (3) Business Days prior to January 2 of each NERC/WECC Charge Assessment Year, (i) the amounts collected pursuant to Final NERC/WECC Charge Invoices for the NERC/WECC Charge Assessment Year and (ii) a list of all Scheduling Coordinators that have failed to make full payment pursuant to their NERC/WECC Charge Invoices and the amounts that are unpaid.

(b) Under no circumstances shall the CAISO be obligated to pay to the WECC, NERC or any regional advisory body, or to their successors or assignees, any NERC/WECC Charges or any interest charges related to NERC/WECC Charges except for those NERC/WECC Charges actually paid to the CAISO by Scheduling Coordinators. The CAISO shall have no obligations whatsoever to pursue collections of NERC/WECC Charges other than the obligation to invoice Scheduling Coordinators and to provide information to the WECC or NERC as provided for in the CAISO Tariff. Notwithstanding the foregoing, the CAISO shall have the right, at its sole discretion, to recoup, set off and apply any amount to which a Scheduling Coordinator is or will be entitled, in or towards the satisfaction of any of that Scheduling Coordinator's past-due NERC/WECC Charges in accordance with Section 11.29.13.7.

(c) The CAISO shall, on request, certify in writing the NERC/WECC Charges owed by a Scheduling Coordinator that remain unpaid and shall provide certified copies of the relevant Preliminary NERC/WECC Charge Invoices, Final NERC/WECC Charge

Invoices, and other documentation on which the CAISO's certificate was based to the WECC, NERC, and the applicable Scheduling Coordinators. A CAISO certificate given under this Section 11.20.7(d) may be used as prima facie evidence of the amount due in any legal proceedings.

**11.20.9 Reliability Coordinator Services Charge**

**11.20.9.1 Responsibility for the Reliability Coordinator Service Charge**

(a) Each Scheduling Coordinator, including Scheduling Coordinators that are also RC Customers, shall be obligated to pay the CAISO all of the RC Services Charges it is invoiced by the CAISO in accordance with Section 11.20.9.

(b) The responsibility of each Scheduling Coordinator in the CAISO Balancing Authority Area for the RC Services Charge shall be allocated based on the Scheduling Coordinator's share of the total NERC/WECC Metered Demand for the CAISO'S Balancing Authority Area. A Scheduling Coordinator without any NERC/WECC Metered Demand during an allocation period shall be assessed the minimum RC Services Charge set forth in Appendix F, Schedule 7.

(c) The CAISO's calculation of collateral requirements and other credit requirements under the CAISO Tariff shall include an adjustment for the Scheduling Coordinator's allocable share of the RC Services Charge, if applicable, except that the Estimated Aggregated Liability calculated for the Scheduling Coordinator shall not include extrapolated amounts for the RC Services Charge under Section 12.1.3.1.1(d).

**11.20.9.2 Calculation and Assessment**

(a) The CAISO will provide Scheduling Coordinators with an RC Services Invoice by the first Business Day of each calendar year for RC Services to be provided during that calendar year, except for the initial period for RC Services. The initial period of RC Services will be invoiced from the RC Services Date, as determined in accordance with Section 19.2(b)(6) through the end of that calendar year, and will be invoiced at the same time the CAISO invoices RC Customers from the year following the initial period. The initial period will be prorated based on the portion of time during the initial calendar year that

RC Service are provided.

(b) The CAISO shall calculate the RC Services Charge allocable to each Scheduling Coordinator by using the RC Services Charge rate for the assessment year determined under Appendix F, Schedule 7, multiplied by the most recent NERC/WECC Metered Demand for that Scheduling Coordinator determined under Section 11.20.4. A Scheduling Coordinator without any such NERC/WECC Metered Demand shall be assessed the minimum RC Services Charge set forth in Appendix F, Schedule 7.

(c) Scheduling Coordinators shall make timely payment to the CAISO within 21 Business Days of the date the invoices were issued pursuant to Section 11.20.9.2(a).

**11.20.9.3 Confirmation**

(a) It is the responsibility of each Scheduling Coordinator to notify the CAISO if the Scheduling Coordinator fails to receive its invoice for the RC Services Charge in accordance with the schedule in Section 11.20.9.2(a).

(b) Each Scheduling Coordinator shall be deemed to have received its invoice for the RC Services Charge on the date specified in Section 11.20.9.2(a) unless the Scheduling Coordinator notifies the CAISO to the contrary.

**11.20.9.4 Validation**

(a) Each Scheduling Coordinator shall have the opportunity to review the terms of the invoice for the RC Services Charge and shall be deemed to have validated that invoice unless it raises a dispute within 21 Business Days of the date of issuance.

(b) Once validated, an invoice for the RC Services Charge shall be binding on the Scheduling Coordinator to which it relates.

**11.20.9.5 Disputes and Corrections**

(a) Scheduling Coordinators shall be prohibited from disputing any RC Services Charge, except on grounds that an error causes the invoiced amount to differ from the amount that would result from the application of the rate set forth in the CAISO Tariff.

(b) Any dispute of an invoice on the grounds specified in Section 11.20.9.5(a) shall be submitted and processed in accordance with the dispute resolution procedures for the

RC Services Charge set forth in Sections 19.7 and 19.10.

(c) If the CAISO determines that an invoice contains an error that causes the invoiced amount to differ from the amount that would result from the application of the rate set forth in the CAISO Tariff, and the resolution of the dispute makes correction necessary, the CAISO will issue a corrected invoice within 21 Business Days of the date the initial invoice was issued.

(d) Each Scheduling Coordinator that receives an invoice for the RC Services Charge shall pay any net debit and shall be entitled to receive any net credit specified on a corrected invoice. Payment of any net debit shall be due within 21 Business Days of the date the corrected invoice was issued.

**11.20.9.6 Payment Default.**

(a) In the event a Scheduling Coordinator defaults on the payment of all or any portion of the RC Services Charge invoiced under Section 11.20.9.2(c) or 11.20.9.5(d), the CAISO shall have the right under Section 11.29.13.3 to enforce the financial security provided by the defaulting Scheduling Coordinator, and to take any such other action under Sections 11.29.12 or 11.29.13, as necessary, to obtain payment for the default amount.

(b) To the extent all or any portion of the default amount remains unpaid, the CAISO:

(1) may at its discretion issue an invoice for the unpaid RC Services Charge; and

(2) if such invoice is issued for a payment default, shall allocate responsibility for the unpaid amount to Scheduling Coordinators with NERC/WECC Metered Demand, excluding the CAISO Debtor that has not paid the payment default amount, based on the most recent NERC/WECC Metered Demand for each Scheduling Coordinator determined under Section 11.20.

(c) Scheduling Coordinators shall make timely payment to the CAISO within 21 Business Days of the date the default invoices were issued pursuant to Section 11.20.9.6(b).

**11.20.9.7 Modification to Schedule**

Notwithstanding the provisions in Section 11.20.9, the CAISO may issue a Market Notice informing Scheduling Coordinators that the CAISO will implement a temporary modification to the billing and

payment schedule for the RC Services Charge and setting forth the reasons for such modification, in which case the modified schedule described in that Market Notice shall govern.

### 11.21 Make Whole Payments

#### 11.21.1 Price Corrections for CAISO Demand and Exports

If the CAISO corrects an LMP in the upward direction pursuant to Section 35 that impacts Demand in the Day-Ahead Market and the FMM such that either a portion of or the entire cleared CAISO Demand or export Economic Bid curve becomes uneconomic, then the CAISO will calculate and apply the Price Correction Derived LMP for settlement of day-ahead CAISO Demand and exports in Sections 11.2.1.2, 11.2.1.3, and 11.2.1.4, and FMM exports in Section 11.5.1.1. The CAISO shall not calculate and apply a Price Correction Derived LMP for settlement of exports that are part of a Schedule that results from Bids submitted in violation of Section 30.5.5. The CAISO will calculate a Price Correction Derived LMP for each affected CAISO Demand and exports as follows: the total cleared MWhs of CAISO Demand or exports in the Day-Ahead Schedule or FMM Schedule, as applicable, multiplied by the corrected LMP, minus the make-whole payment amount, all of which is divided by the total cleared MWhs of CAISO Demand or export in the Day-Ahead Schedule or FMM Schedule, as applicable. The make-whole payment amount will be calculated on an hourly basis determined by the area between the Scheduling Coordinator's CAISO Demand or Export Bid curve and the corrected LMP, which is calculated as the MWhs for each of the cleared bid segments in the Day-Ahead Schedule or FMM Schedule for the affected resource, multiplied by the maximum of zero or the corrected LMP minus the bid segment price. For the purpose of this calculation, the CAISO will not factor in a make-whole payment amount for Self-Scheduled CAISO Demand or exports. Any non-zero amounts in revenue collected as a result of the application of the Price Correction Derived LMP will be captured through the calculation of the IFM Congestion Charge reflected in Section 11.2.4.1 and the allocation of non-zero amounts of the sum of FMM Instructed Imbalance Energy and RTD Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted for Energy in accordance with Section 11.5.4.

#### 11.21.2 Price Correction for Settlement of Virtual Awards

If the CAISO corrects an LMP pursuant to Section 35 that affects a Virtual Award such that either a portion or the entirety of the Virtual Bid Curve associated with the Virtual Award becomes uneconomic,

then the CAISO will calculate and apply the price correction for settlement of Virtual Awards as follows: the total cleared MWhs of Virtual Awards multiplied by the corrected LMP, plus the make-whole amount. The make-whole amount for Virtual Demand Awards will be calculated on an hourly basis determined by the area between the Virtual Bid Curve and the corrected LMP, which is calculated as the MWhs in each of the cleared Virtual Bid segments of the Virtual Demand Bid multiplied by the maximum of zero or the corrected LMP minus the Virtual Bid segment price. For Virtual Supply Awards, the make-whole amount will be calculated on an hourly basis determined by the area between the Virtual Bid Curve and the corrected LMP, which is calculated as the MWhs in each of the cleared Virtual Bid segments of the Virtual Supply Bid multiplied by the maximum of zero or the Virtual Bid segment price minus the corrected LMP.

**11.21.3 Make Whole Payments for HASP Block Intertie Schedules**

**11.21.3.1 Eligibility for Make Whole Payments**

The CAISO may issue a notice of anticipated or actual Operating Reserve deficiencies either the day before an applicable Trading Day or during an applicable Trading Day. During any Trading Hours in which such a notice is in effect, Scheduling Coordinators with HASP Block Intertie Schedules that bid into the Real-Time Market in accordance with Section 30.5.7.3 or Section 30.5.7.4 and receive an FMM Schedule above their import Day-Ahead Scheduled Energy, if any, or an FMM Schedule below their export Day-Ahead Scheduled Energy will be eligible for an hourly make whole payment for FMM Optimal Energy as described in this Section. If, however, during the intervals in which the CAISO's notice is in effect a Scheduling Coordinator's Intertie resource has either an Under/Over Delivery Quantity in any FMM interval and is subject to the provisions of Section 11.31 or has an Intertie Day-Ahead Schedule that is wholly or partially reversed through an FMM Schedule and is subject to the provisions of Section 11.32, then the Scheduling Coordinator's Intertie resource will not be eligible for the make whole payment described in this Section. HASP Block Intertie Schedules that are part of Wheeling Through transactions are not eligible for the make whole payment described in this Section.

The CAISO may suspend the effectiveness of this Section if the CAISO determines that make whole payments have not resulted in incremental supply. The CAISO may discontinue any suspension or limitation at any time it determines such suspension or limitation is no longer appropriate.

**11.21.3.2 Calculation of Make Whole Payments**

The CAISO will calculate an hourly make whole payment for each HASP Block Intertie Schedule based upon the FMM Optimal Energy above a Scheduling Coordinator's import Day-Ahead Scheduled Energy or as FMM Optimal Energy below a Scheduling Coordinator's export Day-Ahead Scheduled Energy. The make-whole payment will equal the positive difference between the Scheduling Coordinator's HASP Block Intertie Schedule Bid price and the relevant hourly average FMM Locational Marginal Prices for the applicable Trading Hour multiplied by the FMM Optimal Energy delivered by the HASP Block Intertie Schedule during that Trading Hour.

**11.21.3.3 Allocation of Make Whole Payments Costs**

The CAISO will calculate the cost of make whole payments for HASP Block Intertie Schedules in each Settlement Interval of the Trading Hour.

(a) The CAISO will allocate the cost of make whole payments attributed to the CAISO Balancing Authority Area as follows:

(1) Scheduling Coordinators in proportion to their Measured Demand in the same Trading Hour in which the CAISO calculates the make whole payment;

(2) Scheduling Coordinators for Metered Subsystem Operators that have elected (i) not to follow their Load, and (ii) gross Settlement, in proportion to their Measured Demand plus any FMM reductions not associated with valid and balanced Existing Transmission Contracts, Transmission Ownership Rights or Converted Rights Self-Schedules in the Day-Ahead Market in the same Trading Hour in which the CAISO calculates the make whole payment;

(3) Scheduling Coordinators for Metered Subsystem Operators that have elected (i) not to follow their Load and (ii) net Settlement, in proportion to their Metered Subsystem Aggregation Net Measured Demand plus any FMM reductions not associated with valid and balanced Existing Transmission Contracts, Transmission Ownership Rights, or Converted Rights Self-Schedules in the Day-Ahead Market in the same Trading Hour in which the CAISO calculates the make whole payment.

(4) Scheduling Coordinators of Metered Subsystem Operators that have elected to follow their Load, in proportion to their Metered Subsystem Net Negative Uninstructed Deviation plus any FMM reductions not associated with valid and balanced Existing Transmission Contracts,

Transmission Ownership Rights, or Converted Rights Self-Schedules in the Day-Ahead Market in the same Trading Hour in which the CAISO calculates the make whole payment.

## 11.22 Grid Management Charge

### 11.22.1 CAISO's Obligation

#### 11.22.1.1 FERC's Uniform System of Accounts

The CAISO shall maintain a set of financial statements and records in accordance with the FERC's Uniform System of Accounts.

#### 11.22.1.2 [Not Used]

### 11.22.2 Costs Recovered Through the Grid Management Charge

The Grid Management Charge shall recover the following costs incurred by the CAISO, as described in more detail in Appendix F, Schedule 1:

(1) CAISO Operating Costs;

(2) CAISO Other Costs and Revenues;

(3) CAISO Financing Costs; and

(4) CAISO Operating Cost Reserve adjustment; and

(5) CAISO Cash-Funded Capital and Project Costs.

#### 11.22.2.1 [Not Used]

#### 11.22.2.2 [Not Used]

#### 11.22.2.3 [Not Used]

#### 11.22.2.4 [Not Used]

#### 11.22.2.5 Allocation of the GMC Among Scheduling Coordinators

The costs will be allocated to the service charges that comprise the Grid Management Charge according to the formula in Appendix F, Schedule 1, Part A. The costs recovered through the Grid Management Charge shall not exceed $250 million for 2026, $305 million in 2027, and $320.3 million in 2028 and thereafter unless the CAISO submits a tariff amendment increasing this amount pursuant to Section 205 of the FPA and FERC accepts such amendment. The service charges, as described in more detail in Appendix F, Schedule 1, Part A, are as follows:

(a) Market Services Charge;

(b) System Operations Charge (for 2024 and 2025);

(c) System Operations Real-Time Dispatch Charge (for 2026 and thereafter);

(d) System Operations Balancing Authority Area Services Charge (for 2026 and thereafter); and

(e) CRR Services Charge.

As described in the Business Practice Manual, the CAISO assesses these charges separately on all Scheduling Coordinators based on their demand, energy, or ancillary services, as applicable, consistent with the formulae set out in Appendix F, Schedule 1, Part A.

**11.22.2.5.1 Market Services Charge**

Subject to Section 11.22.4, the Market Services Charge for each Scheduling Coordinator is calculated according to the formula in Appendix F, Schedule 1, Part A.

**11.22.2.5.2 System Operations Charge**

Subject to Section 11.22.4, the System Operations Charge for each Scheduling Coordinator is calculated according to the formula in Appendix F, Schedule 1, Part A. This charge will expire December 31, 2025, and the charges described in 11.22.2.5.3 and 11.22.2.5.4 will apply thereafter.

**11.22.2.5.3 System Operations Real-Time Dispatch Charge**

Beginning in 2026, the CAISO will calculate the System Operations Real-Time Dispatch Charge for each Scheduling Coordinator according to the formula in Appendix F, Schedule 1, Part A, subject to Section 11.22.4.

**11.22.2.5.4 System Operations Balancing Authority Area Services Charge**

Beginning in 2026, the CAISO will calculate the System Operations Balancing Authority Area Services Charge for each Scheduling Coordinator according to the formula in Appendix F, Schedule 1, Part A, subject to Section 11.22.4.

**11.22.2.5.5 CRR Services Charge**

The CRR Services Charge for each Scheduling Coordinator is calculated according to the formula in Appendix F, Schedule 1, Part A.

**11.22.2.6 Calculation and Adjustment of the Grid Management Charge**

The charges set forth in Section 11.22.2.5 that comprise the Grid Management Charge shall be calculated annually through the formula set forth in Appendix F, Schedule 1, Part A. The CAISO shall post on the CAISO Website each year, before the rates go into effect, as described in Appendix F, Schedule 1, Part D, data showing the adjustment to the rates to reflect any change in the annual revenue requirement, variance between forecast and actual costs for the previous year or period, or any surplus revenues from the previous year or period, or the inability to recover from a Scheduling Coordinator its share of the Grid Management Charge, or any under-achievement of a forecast of the billing determinant volumes used to establish the rates. Appendix F, Schedule 1, Part B sets forth the conditions under which a quarterly adjustment to the Grid Management Charge will be made.

#### 11.22.2.6.1 Credits and Debits of the Grid Management Charge

In addition to the adjustments permitted under Section 11.29.7.3.3, the CAISO shall credit or debit, as appropriate, the account of a Scheduling Coordinator for any overpayment or underpayment of the Grid Management Charge that the CAISO determines occurred due to error, omission, or miscalculation by the CAISO or the Scheduling Coordinator.

### 11.22.3 [Not Used]

### 11.22.4 TOR Charges

The CAISO will exempt TORs from the Market Services Charge and the system operations charges that are calculated through the formula set forth in Appendix F, Schedule 1, Part A. The TOR Charge will be $0.325/MWh, assessed on the minimum of a Scheduling Coordinator's TOR supply or TOR demand per Settlement Interval. The TOR Charge is subject to adjustment as described in Appendix F, Schedule 1, Part A. The CAISO will credit amounts recovered through the TOR Charge against the revenue requirement for the system operations' real-time dispatch charges.

### 11.22.5 Bid Segment Fee

Each Scheduling Coordinator submitting a Bid will be subject to a Bid Segment Fee of $0.005 per segment of the Bid. The Bid Segment Fee is subject to adjustment as described in Appendix F, Schedule 1, Part A. The CAISO will credit amounts recovered through the Bid Segment Fee against the revenue requirement for Market Services Charge as described in Appendix F, Schedule 1, Part A.

### 11.22.6 CRR Transaction Fee

Each Scheduling Coordinator submitting a CRR Allocation nomination or CRR Auction bid will be subject to a CRR Transaction Fee of $1.00 per submitted nomination or bid. The CRR Transaction Fee is subject to adjustment as described in Appendix F, Schedule 1, Part A. The CAISO will credit amounts recovered through the CRR Transaction Fee against the revenue requirement for CRR Services Charge as described in Appendix F, Schedule 1, Part A.

**11.22.7 Inter-Scheduling Coordinator Trade Transaction Fee**

Each Scheduling Coordinator submitting an Inter-Scheduling Coordinator Trade will be subject to a Inter-Scheduling Coordinator Trade Transaction Fee of $1.00 per party per Inter-Scheduling Coordinator Trade. The Inter-Scheduling Coordinator Trade Transaction Fee is subject to adjustment as described in Appendix F, Schedule 1, Part A. The CAISO will credit amounts recovered through the Inter-Scheduling Coordinator Trade Transaction Fee against the revenue requirement for Market Services Charge as described in Appendix F, Schedule 1, Part A.

**11.22.8 Scheduling Coordinator ID Charge**

The Scheduling Coordinator ID Charge for each Scheduling Coordinator is $1,500.00 per month, per Scheduling Coordinator ID Code for any Trading Month in which the Scheduling Coordinator has market activity. The Scheduling Coordinator ID Charge is subject to adjustment as described in Appendix F, Schedule 1, Part A. The CAISO will credit amounts recovered through the Scheduling Coordinator ID Charges against the revenue requirement for Market Services Charges as described in Appendix F, Schedule 1, Part A. This Scheduling Coordinator ID Charge will not be assessed to a Scheduling Coordinator ID Code issued for the sole purpose of representing an EDAM Resource or a wheeling through transaction located in an EDAM Balancing Authority Area that sources from or sinks to the EIM Balancing Authority Area where the EIM Entity Scheduling Coordinator is affiliated with the EDAM Resource or wheeling through transaction.

**11.23 Penalties for Uninstructed Imbalance Energy**

Effective December 1, 2004, the CAISO shall not charge any Uninstructed Deviation Penalties pursuant to this Section 11.23 until FERC issues an order authorizing the CAISO to charge Uninstructed Deviation Penalties pursuant to this section. Beginning with Settlement Statements for the first Trading Day for which FERC authorizes the CAISO to charge Uninstructed Deviation Penalties pursuant to this section,

the CAISO shall charge Scheduling Coordinators Uninstructed Deviation Penalties for Uninstructed Imbalance Energy resulting from resource deviations outside a Tolerance Band from their Dispatch Operating Point, for dispatched resources, or their Day-Ahead Schedule otherwise. The Uninstructed Deviation Penalty will be applied as follows:

(a) The Uninstructed Deviation Penalty for negative Uninstructed Imbalance Energy will be calculated and assessed in each Settlement Interval. The Uninstructed Deviation Penalty for positive Uninstructed Imbalance Energy will be calculated and assessed in each Settlement Interval in which the CAISO has not declared a staged System Emergency;

(b) The Uninstructed Deviation Penalty will apply to pre-Dispatched Bids from Non-Dynamic System Resources identified, when such a pre-Dispatch Instruction is issued more than forty (40) minutes prior to the relevant Operating Hour, subject to the following conditions: (i) the Uninstructed Deviation Penalty will only apply to the pre-Dispatched amount of the Bid that is declined or not delivered, (ii) the Uninstructed Deviation Penalty will not apply to a portion of a pre-Dispatched Bid that is subsequently not delivered at the direction of a Balancing Authority, including the CAISO, due to a curtailment of transmission capability or to prevent curtailment of native firm load occurring subsequent to issuing the pre-Dispatch Instruction, (iii) the Uninstructed Deviation Penalty will not apply to Uninstructed Imbalance Energy resulting from declining subsequent intra-hour Dispatch Instructions. Dynamically scheduled Dynamic System Resources, to the extent they deviate from their Day-Ahead Schedule plus any Dispatch Instructions, will be subject to the Uninstructed Deviation Penalty.

(c) The Uninstructed Deviation Penalty will not apply to Load, Curtailable Demand, or Demand Response Services.

(d) [Not Used]

(e) The Uninstructed Deviation Penalty will not apply to Regulatory Must-Run Generation or Participating Intermittent Resources that meet the scheduling obligations established in the Eligible Intermittent Resources Protocol in Appendix Q. No other applicable charges will be affected by this exemption. The Uninstructed Deviation Penalty also will not apply

to Qualifying Facilities (QFs), including those that are dynamically scheduled, that have not executed and are not required pursuant to this CAISO Tariff to execute a Participating Generator Agreement (PGA) or Qualifying Facility Participating Generator Agreement.

(f) All MSS resources designated as Load-following resources pursuant to Section 4.9.13.2 (regardless of gross or net settlement election) are exempt from Uninstructed Deviation Penalties in this Section 11.23. All MSS resources not designated as Load-following resources pursuant to Section 4.9.13.2 (regardless of gross or net Settlement election) are subject to Uninstructed Deviation Penalties in this Section 11.23.

(g) The Uninstructed Deviation Penalty will apply to Generating Units providing Regulation and dynamically scheduled Dynamic System Resources providing Regulation to the extent that Uninstructed Deviations from such resources exceed each resource's actual Regulation range plus the applicable Tolerance Band. Resources providing Regulation and generating within their relevant Regulating range (or outside their relevant Regulating range as a direct result of CAISO control or instruction) will be deemed to have zero (0) deviations for purposes of the Uninstructed Deviation Penalty.

(h) The Uninstructed Deviation Penalty will be calculated and assessed for each resource individually.

(i) The Uninstructed Deviation Penalty shall not apply to any Uninstructed Imbalance Energy resulting from compliance with a directive by the CAISO or the Reliability Coordinator.

(j) [Not Used]

(k) The Uninstructed Deviation Penalty will not apply when the applicable LMP is negative or zero.

(l) The Uninstructed Deviation Penalty for positive Uninstructed Imbalance Energy will be the amount of the Uninstructed Imbalance Energy in excess of the Tolerance Band multiplied by a price equal to one hundred (100) percent of the corresponding LMP. The relevant LMP will be calculated for each UDP Location as the ten-minute weighted average price of two five-minute Dispatch Interval LMPs and the two five-minute optimal Instructed Imbalance Energy quantities. The net effect of the Uninstructed Deviation

Penalty and the Settlement for positive Uninstructed Imbalance Energy beyond the Tolerance Band will be that the CAISO will not issue a credit for such Energy.

(m) The Uninstructed Deviation Penalty for negative Uninstructed Imbalance Energy will be the amount of the Uninstructed Imbalance Energy in excess of the Tolerance Band multiplied by a price equal to fifty (50) percent of the corresponding Resource-Specific Settlement Interval LMP or, in the case of aggregated resources, the Settlement Interval Penalty Location Real-Time LMP.

(n) The Uninstructed Deviation Penalty will not apply to deviations from Energy delivered as part of a scheduled test so long as the test has been scheduled by the Scheduling Coordinator with the CAISO or the CAISO has initiated the test for the purposes of validating unit performance.

(o) The Uninstructed Deviation Penalty shall not apply to any excess Energy delivered from or any shortfall of Energy not delivered from an Exceptional Dispatch involving a Generating Unit or a System Unit unless the CAISO and the supplier have agreed upon the time of, duration of, and amount of Energy to be delivered in the out-of-market transaction and the CAISO reflects the out-of-market transaction in its Real-Time Expected Energy calculations. The Uninstructed Deviation Penalty shall apply to Energy outside the Tolerance Band from out-of-market transactions with dynamically scheduled Dynamic System Resources to the extent the agreed-to Energy is not delivered or over-delivered, and to any Energy from Non-Dynamic System Resources to the extent the agreed-to Energy is not delivered if that over- or under-delivery was due to action taken by or not taken by the System Resource and not the result of action taken by a Balancing Authority due to a curtailment of firm transmission capability or to prevent curtailment of native firm load occurring subsequent to the out-of-market transaction.

(p) The Uninstructed Deviation Penalty shall not apply to Generating Units and dynamically scheduled Dynamic System Resources with Uninstructed Imbalance Energy if the Generating Unit or dynamically scheduled Dynamic System Resource was physically incapable of delivering the expected Energy or if systems malfunctions prevent receipt of

Dispatch Instructions, provided that the Generating Unit or dynamically scheduled Dynamic System Resource had notified the CAISO within thirty (30) minutes of the onset of an event that prevents the resource from performing its obligations. A Generating Unit or dynamically scheduled Dynamic System Resource must notify CAISO operations staff of its reasons for failing to deliver the Expected Energy in accordance with Section 9.3.10.6 and must provide information to the CAISO that verifies the reason the resource failed to comply with the Dispatch Instruction within forty-eight (48) hours of the Operating Hour in which the instruction is issued.

(q) Adjustments to any Generating Unit, Curtailable Demand and System Resource Day-Ahead Schedules or HASP Intertie Schedules made in accordance with the terms of TRTC Instructions for Existing Contracts or TORs shall not be subject to Uninstructed Deviation Penalties. Valid changes to ETC Self-Schedules or TOR Self-Schedules submitted after the close of the HASP or the RTM shall not be subject to Uninstructed Deviation Penalties.

(r) Any changes made to Schedules prior to the CAISO issuing HASP Intertie Schedules shall not be subject to Uninstructed Deviation Penalties.

(s) Uninstructed Deviation Penalties shall not be charged to any deviation from a Dispatch Instruction that does not comply with the requirements set forth in this CAISO Tariff.

(t) Amounts collected as Uninstructed Deviation Penalties shall first be assigned to reduce the portion of above-LMP costs that would otherwise be assigned pro rata to all Scheduling Coordinators in that Settlement Interval. Any remaining portion of amounts collected as Uninstructed Deviation Penalties after satisfying these sequential commitments shall be treated in accordance with Section 11.29.9.6.3.

(u) Condition 2 RMR Units shall be exempt from Uninstructed Deviation Penalties.

(v) The Uninstructed Deviation Penalty shall not apply to positive Uninstructed Imbalance Energy attributable to operation below the Generating Unit's Minimum Operating Limit from the time the Generating Unit synchronizes to the grid to the earlier of (1) the Settlement Interval in which the Generating Unit produces a quantity of Energy that

represents an average rate of delivery over such Settlement Interval in excess of the Generating Unit's Minimum Operating Limit plus the applicable Tolerance Band, or (2) the first Settlement Interval after the expiration of a period of time that begins at the end of the Settlement Interval in which the Generating Unit synchronizes to the grid and ends after the Generating Unit's maximum Start-Up Time as specified in the Master File. The Uninstructed Deviation Penalty shall not apply to any positive Uninstructed Imbalance Energy attributable to operation below the Generating Unit's Minimum Operating Limit for a duration equal to the minimum of two Settlement Intervals or the time specified in the Master File for the Generating Unit to disconnect from the grid after reaching its Minimum Operating Limit following either (1) the last Settlement Interval of an hour in which the Generating Unit had a non-zero Day-Ahead Schedule or (2) the Settlement Interval in which the Generating Unit is expected to reach its Minimum Operating Limit based on the applicable Ramp Rate when the CAISO instructed the Generating Unit to Shut-Down. The amount of Uninstructed Imbalance Energy exempted from the Uninstructed Deviation Penalty shall not exceed the amount of the Generating Unit's Minimum Operating Limit plus the applicable Tolerance Band. This exception from the application of the Uninstructed Deviation Penalty does not apply to Dynamic System Resources.

(w) UDP shall not apply to deviations by a Generating Unit that are attributable to any automatic response to a system disturbance, including a response to correct frequency decay, in accordance with Applicable Reliability Criteria for the duration of the system disturbance, and for an additional five (5) minutes when a Generating Unit's deviation is in the same direction as the mitigating frequency response.

(x) The Uninstructed Deviation Penalty shall not apply in the event that a malfunction in a CAISO system application causes an infeasible Dispatch Instruction to be communicated or prevents timely communication of a Dispatch Instruction or a SLIC malfunction prevents a resource from reporting an event that affects the resource's ability to deliver Energy.

(y) The Uninstructed Deviation Penalty shall not apply to a failure to comply with a manual

Dispatch Instruction that is not confirmed by a Dispatch Instruction transmitted through the CAISO's Automated Dispatch System.

(z) The Uninstructed Deviation Penalty shall not apply if a Dispatch Instruction is validated after the start time of the instruction from the Settlement Interval in which the Dispatch Instruction was first effective to the earliest Settlement Interval, inclusive, in which the resource is able to respond to the Dispatch Instruction.

**11.24 [Not Used]**

**11.24.1 [Not Used]**

**11.24.2 [Not Used]**

**11.24.3 [Not Used]**

**11.24.4 [Not Used]**

**11.25 Settlement of Flexible Ramping Product**

**11.25.1 Settlement of Forecasted Movement**

**11.25.1.1 Generally**

The CAISO will settle Forecasted Movement for a direction as specified in this Section 11.25.1 by Balancing Authority Area for each Balancing Authority Area that has a distinct Uncertainty Requirement for that direction, as specified in Section 44.2.4.1, and separately will settle Forecasted Movement for a direction as specified in this Section 11.25.1 for the group of Balancing Authority Areas that shares a common Uncertainty Requirement for that direction, as specified in Section 44.2.4.1.

**11.25.1.2 FMM.**

The CAISO settles FMM Forecasted Movement with Scheduling Coordinators as the product of: (a) the difference between the FMM Forecasted Movement quantity and the DAM Forecasted Movement Quantity or Base Schedule Forecasted Movement quantity; and (b) the difference between the FMM Flexible Ramp Up Price and the FMM Flexible Ramp Down Price.

**11.25.1.3 RTD.**

The CAISO settles RTD Forecasted Movement with Scheduling Coordinators as the product of: (a) the difference between the RTD Forecasted Movement quantity and the FMM Forecasted Movement Quantity; and (b) the difference between the RTD Flexible Ramp Up Price and the RTD Flexible Ramp

Down Price.

**11.25.1.4 Allocation of Residual Forecasted Movement Settlements.**

For Balancing Authority Areas that share a common Uncertainty Requirement for a direction, as specified in Section 44.2.4.1, the CAISO allocates the algebraic sum of the funds remaining after it settles Forecasted Movement for a direction pursuant to Sections 11.3.1, 11.3.2, and 11.25.1 to each Scheduling Coordinator's metered CAISO Demand, metered EDAM Demand, or metered EIM Demand in proportion to its share of the sum of metered CAISO Demand, metered EDAM Demand, and metered EIM Demand within that group of Balancing Authority Areas sharing a common Uncertainty Requirement.

For a Balancing Authority Area that has a distinct Uncertainty Requirement for a direction, as specified in Section 44.2.4.1, the CAISO allocates the algebraic sum of the funds remaining after it settles Forecasted Movement for a direction pursuant to Sections 11.3.1, 11.3.2, and 11.25.1 to each Scheduling Coordinator's metered Demand in proportion to its share of the sum of metered Demand within that single Balancing Authority Area. The allocation to Scheduling Coordinators is a charge if the algebraic sum of funds remaining is negative and a payment if the algebraic sum is positive.

**11.25.2 Settlement of Uncertainty Requirement**

**11.25.2.1 Credit to Resources.**

**11.25.2.1.1 FMM Uncertainty Awards**

For a resource with an IRU Award, the CAISO applies a deviation settlement as the product of the Flexible Ramp Up Price and the difference between the upward Five-minute Imbalance Reserve Quantity and the upward FMM Uncertainty Award.

For a resource with an IRD Award, the CAISO applies a deviation settlement as the product of the Flexible Ramp Down Price and the difference between the downward Five-minute Imbalance Reserve Quantity and downward FMM Uncertainty Award.

If a resource has no Imbalance Reserves Award, then the CAISO settles upward and downward Uncertainty Awards as the product of the Uncertainty Award and the Flexible Ramp Up Price, in the case of an upward Uncertainty Award, or the Flexible Ramp Down Price, in the case of a downward Uncertainty Award.

**11.25.2.1.2 RTD Uncertainty Awards**

The CAISO settles RTD Uncertainty Awards with Scheduling Coordinators as the algebraic sum of the upward uncertainty awards defined in part (a) of this Section 11.25.2.1.2 and the downward uncertainty awards defined in part (b) of this Section 11.25.2.1.2.

(a) Upward Uncertainty Awards – the product of the RTD Flexible Ramp Up Price and the difference between the upward RTD Uncertainty Award quantity and the upward FMM Uncertainty Award quantity for the relevant Settlement Interval, both calculated for each resource pursuant to Section 44.2 in MWhs, less any rescission amounts pursuant to section 11.25.3.

(b) Downward Uncertainty Awards – the product of the RTD Flexible Ramp Down Price and the difference between the downward RTD Uncertainty Award quantity and the downward FMM Uncertainty Award quantity for the relevant Settlement Interval, both calculated for each resource pursuant to Section 44.2 in MWhs, less any rescission amounts pursuant to section 11.25.3.

**11.25.2.2 Allocation of Costs of Uncertainty Movement Procured.**

**11.25.2.2.1 Settlement Process.**

(a) **Generally.** The CAISO will settle Uncertainty Awards for a direction as specified in this Section 11.25.2.2 by Balancing Authority Area for each Balancing Authority Area that has a distinct Uncertainty Requirement for that direction, as specified in Section 44.2.4.1, or separately will settle Uncertainty Awards for a direction as specified in this Section 11.25.2.2 for the group of Balancing Authority Areas that shares a common Uncertainty Requirement for that direction, as specified in Section 44.2.4.1.

(b) **Daily.** The CAISO will initially –

(1) allocate the cost of the Uncertainty Awards for a direction on a daily basis according to the categories as set forth in Sections 11.25.2.2.2 and 11.25.2.2.3 within the group of Balancing Authority Areas that shares a common Uncertainty Requirement for that direction or within a Balancing Authority Area that has a distinct Uncertainty Requirement for that direction, as applicable; and

(2) allocate the daily amounts to Scheduling Coordinators as set forth in Section

11.25.2.2.4.

(c) **Monthly.** The CAISO will resettle the costs of the Uncertainty Awards by –

(1) reversing the daily allocation;

(2) assigning the monthly costs of the Uncertainty Awards to Peak Flexible Ramp Hours and Off-Peak Flexible Ramp Hours;

(3) separately allocating the monthly Peak Flexible Ramp Hours amounts and Off-Peak Flexible Ramp Hours amounts to the categories as set forth in Sections 11.25.2.2.2 and 11.25.2.2.3 within the group of Balancing Authority Areas that shares a common Uncertainty Requirement for that direction or within a Balancing Authority Area that has a distinct Uncertainty Requirement for that direction, as applicable; and

(4) allocating the monthly amounts in each category to Scheduling Coordinators as set forth in Section 11.25.2.2.4.

**11.25.2.2.2 Allocation of Charges to Categories.**

(a) **Determination of Uncertainty Movement for Resources.** For each interval, the CAISO will calculate the net Uncertainty Movement of each resource according to the following categories:

(1) for Supply resources other than non-Dynamic System Resources as the difference between the Dispatch Instruction of the binding interval in the next RTD run and the first advisory RTD interval in the current run.

(2) for non-Dynamic System Resources and export schedules as the difference between the schedule used in the RTD (accounting for ramp) for the binding interval in the next RTD run and the schedule used for the first advisory interval in the current RTD run.

(b) **RTD Uncertainty Movement.** The CAISO will determine the total net RTD Uncertainty Movement for each category separately for the group of Balancing Authority Areas that shares a common Uncertainty Requirement for that direction or a Balancing Authority Area that has a distinct Uncertainty Requirement for that direction, as applicable–

(1) for the category of Supply resources, which shall not include non-Dynamic System Resources, as the net sum of the five-minute Uncertainty Movement determined pursuant to Section 11.25.2.2.2 of all the Supply resources in the category.

(2) for the category of Intertie resources, which shall comprise non-Dynamic System Resources and exports, as the net sum of the five-minute Uncertainty Movement determined pursuant to Section 11.25.2.2 of all the non-Dynamic System resources and export schedules.

(3) for the non-Participating Load category, as the difference between –

(A) the CAISO Forecast of BAA Demand of the binding interval in the next RTD run; and

(B) CAISO Forecast of BAA Demand for the first advisory interval in the current RTD run.

**11.25.2.2.3 Assignment of Uncertainty Costs to Categories.**

The CAISO will allocate the total Uncertainty Award cost calculated pursuant to this section 11.25.2.2 to each category described in Section 11.25.2.2.2(b) based on –

(a) for upward Uncertainty Award cost, the ratio of such category's positive Uncertainty Movement to the sum of the positive Uncertainty Movements of all categories with positive Uncertainty Movement for each Balancing Authority Area within the group of Balancing Authority Areas that shares a common Uncertainty Requirement for that direction or within a Balancing Authority Area that has a distinct Uncertainty Requirement for that direction, as applicable; and

(b) for downward Uncertainty Award costs, the ratio of such category's negative Uncertainty Movement to the sum of the negative Uncertainty Movements of all categories with negative Uncertainty Movement for each Balancing Authority Area within the group of Balancing Authority Areas that shares a common Uncertainty Requirement for that direction or within a Balancing Authority Area that has a distinct Uncertainty Requirement for that direction, as applicable.

**11.25.2.2.4 Allocation to Scheduling Coordinators.**

(a) **Non-Participating Load Category.** The CAISO will allocate the Uncertainty Awards costs of the non-Participating Load category to Scheduling Coordinators –

(1) for upward Uncertainty Award cost in proportion to the Scheduling Coordinator's negative non-Participating Load UIE, excluding the non-Participating Load of an MSS that has elected to load-follow according to an MSS Agreement, without netting that UIE across Settlement Intervals, to the total of such negative non-Participating Load UIE, without netting that UIE across Settlement Intervals, within the group of Balancing Authority Areas that shares a common Uncertainty Requirement for that direction or within a Balancing Authority Area that has a distinct Uncertainty Requirement for that direction, as applicable, and

(2) for downward Uncertainty Award cost calculated pursuant to Section 11.25, in proportion to the Scheduling Coordinator's daily positive non-Participating Load UIE, excluding the non-Participating Load of an MSS that has elected to load-follow according to an MSS Agreement, without netting that UIE across Settlement Intervals, to the total of such positive non-Participating Load UIE, without netting that UIE across Settlement Intervals, within the group of Balancing Authority Areas that shares a common Uncertainty Requirement for that direction or within a Balancing Authority Area that has a distinct Uncertainty Requirement for that direction, as applicable.

(b) **Supply Category.** The CAISO will allocate the Uncertainty Awards costs of the Supply category to Scheduling Coordinators for each resource in the Supply category based on the sum of the resource's Uncertainty Movement and UIE –

(1) for upward Uncertainty Award cost in proportion to the Scheduling Coordinator's positive sum of the resource's Uncertainty Movement and UIE, without netting that sum across Settlement Intervals, to the total positive sum of all resources' Uncertainty Movement and UIE, without netting that sum across Settlement Intervals, within the group of Balancing Authority Areas that shares a common

Uncertainty Requirement for that direction or within a Balancing Authority Area that has a distinct Uncertainty Requirement for that direction, as applicable; and

(2) for downward Uncertainty Award cost in proportion to the Scheduling Coordinator's negative sum of the resource's Uncertainty Movement and UIE, without netting that sum across Settlement Intervals, to the total negative sum of all resources' Uncertainty Movement and UIE, without netting that sum across Settlement Intervals, within the group of Balancing Authority Areas that shares a common Uncertainty Requirement for that direction or within a Balancing Authority Area that has a distinct Uncertainty Requirement for that direction, as applicable; except that

(3) for the MSS that have elected to load follow pursuant to an MSS Agreement, the CAISO will calculate the positive and negative sums specified above for each Settlement Interval as the sum of MSS non-Participating Load UIE, Supply resources within the MSS UIE, MSS Load Following Energy, MSS Load Following Operational Adjustments, and Uncertainty Movement of resources within the MSS Aggregation.

(c) **Intertie Category.** The CAISO will allocate the Uncertainty Awards costs of the Intertie category to Scheduling Coordinators for each non-Dynamic System Resource and export based on the sum of the resource's Uncertainty Movement and Operational Adjustment –

(1) for upward Uncertainty Award cost in proportion to the magnitude of the Scheduling Coordinator's negative Operational Adjustment for non-Dynamic System Resources, or positive Operational Adjustment for export resources, to the sum of the magnitudes of such Operational Adjustments within the group of Balancing Authority Areas that shares a common Uncertainty Requirement for that direction or within a Balancing Authority Area that has a distinct Uncertainty Requirement for that direction, as applicable, without netting that sum across Settlement Intervals; and

(2) for downward Uncertainty Award cost in proportion to the magnitude of the

Scheduling Coordinator's positive Operational Adjustment for non-Dynamic System Resources, or negative Operational Adjustment for export resources, to the sum of the magnitudes of such Operational Adjustments within the group of Balancing Authority Areas that shares a common Uncertainty Requirement for that direction or within a Balancing Authority Area that has a distinct Uncertainty Requirement for that direction, as applicable, without netting that sum across Settlement Intervals; and

(3) for the purposes of the allocations specified above, the MSS Load Following Operational Adjustment is excluded.

(d) **Uncertainty Award Cost Offset.** If the sum of the settlement of Uncertainty Awards and the charges to Scheduling Coordinators for Uncertainty Award costs is nonzero, either within the group of Balancing Authority Areas that shares a common Uncertainty Requirement for that direction or within a Balancing Authority Area that has a distinct Uncertainty Requirement for that direction, then the CAISO will allocate such amounts to Scheduling Coordinators based on their metered EIM Demand or metered CAISO Demand in proportion to the total metered EIM Demand and metered CAISO Demand within that group of Balancing Authority Areas sharing a common Uncertainty Requirement for that direction or based on their metered CAISO Demand or metered EIM Demand in proportion to the total metered demand within a Balancing Authority Area that has a distinct Uncertainty Requirement for that direction, respectively.

**11.25.3 Rescission**

**11.25.3.1 Amount of Rescission.**

For each Settlement Interval in which a resource has either a UIE deviation or Operational Adjustment and a Flexible Ramping Product settlement, separately for upward and downward, the CAISO will rescind Settlement Amount for the overlap of the UIE or Operational Adjustment and the sum of RTD Forecasted Movement and Uncertainty Award, at the RTD Flexible Ramp Up Price or Flexible Ramp Down Price.

**11.25.3.2 Order of Rescission.**

The CAISO will apply any rescission amount first to any Uncertainty Award, in the applicable direction,

and then apply any remaining rescission amount to Forecasted Movement, in the applicable direction.

**11.25.4 [Not Used]**

**11.25.5 [Not Used]**

**11.26 [Not Used]**

**11.27 Voltage Support Charges**

The CAISO shall calculate, account for and settle charges and credits for Voltage Support as set out in Sections 11.10.1.4, 11.10.7, and the applicable Business Practice Manual.

**11.28 Calculating, Charging and Disbursing Default Interest**

The CAISO shall calculate, charge and disburse all collected default Interest in accordance with the CAISO Tariff.

**11.29 Accounting, Billing, and Payment**

**11.29.1 Billing and Payment Process Based on Settlement Statements**

The Initial Settlement Statement T+9B and any Recalculation Settlement Statement will constitute the basis for billing in accordance with the CAISO Tariff. The Initial Settlement Statement T+9B will constitute the basis for billing in the first instance. The Recalculation Settlement Statements will constitute the basis for billing for adjustments to the Initial Settlement Statement T+9B.

**11.29.2 One Agreement Will Govern All Settlement, Billing, and Payment**

This Section applies to every Business Associate that is a party to more than one agreement with the CAISO that governs settlement, billing and payment. These agreements are: Scheduling Coordinator Agreements, EIM Entity Scheduling Coordinator Agreements (regardless whether the addendum for EDAM is effective), EIM Participating Resource Scheduling Coordinator Agreements, CRR Entity Agreements, the Transmission Control Agreement (for Participating Transmission Owners) and Black Start Agreements. Collectively, these agreements, including any successors to these agreements, are referred to in this Section as "Billing and Payment Agreements." One of the Billing and Payment Agreements between the Business Associate and the CAISO will be designated to govern all CAISO settlements, whether those settlements are under this Section 11, Section 29.11 or Section 33.11, and all billing and payment arising from those settlements, including but not limited to payment and collection of all amounts due from the Business Associate to the CAISO and all amounts due from the CAISO to the

Business Associate under all Billing and Payment Agreements between the Business Associate and the CAISO. For avoidance of doubt, Scheduling Coordinators, Candidate CRR Holders, CRR Holders, CRR Entities, Participating Transmission Owners and Black Start Generators that are party to Black Start Agreements are obligated to pay all Invoices and entitled to receive payment on Payment Advices issued to the Business Associate pursuant to Section 11, Section 29.11 or Section 33.11. The designated agreement will be the agreement that appears first on this list:

a) Transmission Control Agreement;

b) Scheduling Coordinator Agreement;

c) EIM Scheduling Coordinator Agreement;

d) EIM Participating Resource Scheduling Coordinator Agreements;

e) CRR Entity Agreement;

f) Black Start Agreement.

If the Business Associate is party to more than one agreement of the same type, such as two or more Scheduling Coordinator Agreements, then the first-executed agreement of that type is designated. Nothing in this Section shall limit or otherwise affect the obligation of the Business Associate to comply with the terms of every Billing and Payment Agreement to which it is a party.

**11.29.3 [Not Used]**

**11.29.4 [Not Used]**

**11.29.5 General Principles for Production of Settlement Statements**

**11.29.5.1 Basis of Settlement**

The basis of each Settlement Statement will be the debiting or crediting of an account in the name of the relevant Business Associate.

**11.29.5.2 Settlement Statements**

(a) For each Settlement Period of the Trading Day, the CAISO will calculate for each charge the amounts debited and the amounts credited and shall arrive at a net amount debited or credited. Each of these net amounts will appear in the Settlement Statements that the CAISO will provide to the relevant Business Associate.

(b) The components of the Grid Management Charge will be included in an Initial Settlement

Statement T+9B, and any Recalculation Settlement Statement with the other types of charges referred to in Section 11.

**11.29.5.3 Data Files**

Settlement Statements will be accompanied by data files of supporting information for the relevant Business Associate that includes the following for each Settlement Period of the Trading Day:

(a) the aggregate quantity (in MWh) of Energy supplied or withdrawn by the Scheduling Coordinator Metered Entities represented by the Scheduling Coordinator;

(b) the aggregate quantity (in MW) and type of Ancillary Services capacity provided or purchased;

(c) the relevant prices that the CAISO has applied in its calculations;

(d) details of the scheduled quantities of Energy, Imbalance Reserves, Reliability Capacity, and Ancillary Services accepted by the CAISO in the Day-Ahead Market and the RTM;

(e) details of FMM Instructed Imbalance Energy or RTD Imbalance Energy and penalties;

(f) details of any credits or charges associated with the CRR Auctions; and

(g) detailed calculations of all fees, charges and credits allocated among Scheduling Coordinators and each Scheduling Coordinator's share.

**11.29.5.4 Settlement Software**

The CAISO Settlement software will be audited by an independent firm of auditors competent to carry out audits of such software to determine its consistency with the CAISO Tariff. In any dispute regarding Settlement calculations, a certificate from the firm of auditors that the CAISO software is consistent with the CAISO Tariff will be prima facie proof that the charges shown in a Settlement Statement have been calculated in a method consistent with the CAISO Tariff. Nothing in this section will be deemed to establish the burden of proof with respect to Settlement calculations in any proceeding.

**11.29.6 [Not Used]**

**11.29.7 Settlements Cycle**

For Section 11.29.7, the use of the uncapitalized term "business day" refers to a day that the CAISO is open for business. This deviates from the formal definition in Appendix A of the capitalized term "Business Day" because it includes certain holidays that are federally recognized but remain regular

operation days for the CAISO. Please see the Business Practice Manual for the most current list of affected holidays.

#### 11.29.7.1 Timing of Settlements Process

The CAISO will issue: (i) Initial Settlement Statements T+9B on the ninth (9) business day from the relevant Trading Day (T+9B); (ii) Recalculation Settlement Statements T+70B on the seventieth (70) business day from the relevant Trading Day (T+70B); (iii) Recalculation Settlement Statements T+11M on the two hundred thirty-fourth (234) business day after the Trading Day, which is approximately eleven (11) months after the Trading Day (T+11M), if necessary; (iv) Recalculation Settlement Statements T+21M on the four hundred forty-sixth (446) business day after the Trading Day, which is approximately twenty-one (21) calendar months from the relevant Trading Day (T+21M), if necessary; (v) Recalculation Settlement Statements T+24M on the five hundred twelfth (512) business day after the Trading Day, which is approximately twenty-four (24) calendar months from the relevant Trading Day (T+24M), if necessary and (vi) any Unscheduled Recalculation Settlement Statement issued pursuant to Section 11.29.7.3. The CAISO will issue a Market Notice if any Unscheduled Recalculation Settlement Statement pursuant to Section 11.29.7.3 is issued for a Trading Day. The CAISO will notify affected Market Participants regarding failed or late issuance of any settlement statements specified above and will rectify such failed or late issuance pursuant to its procedure posted on the CAISO Website.

##### 11.29.7.1.1 Initial Settlement Statement T+9B

The CAISO will provide to each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO for validation an Initial Settlement Statement T+9B for each Trading Day within nine (9) business days of the relevant Trading Day, covering all Settlement Periods in that Trading Day. The Initial Settlement Statement T+9B shall be based on the Settlement Quality Meter Data (actual or Scheduling Coordinator estimated) received in SQMDS. In the event Actual Settlement Quality Meter Data or Scheduling Coordinator Estimated Settlement Quality Meter Data is not received from a Scheduling Coordinator or CAISO Metered Entity, the CAISO will estimate Settlement Quality Meter Data for that outstanding metered Demand or Generation, including Demand Response Resources, for the Initial Settlement Statement T+9B calculation as follows:

(a) CAISO Estimated Settlement Quality Meter Data for metered Generation will be based on

total Expected Energy.

(b) CAISO Estimated Settlement Quality Meter Data for metered Demand, including Non-Participating TO demand will be based on Scheduled Demand by the appropriate LAP. This value will be increased by fifteen (15) percent if the total actual system Demand in Real Time, as determined by the CAISO each hour, is greater than the total Scheduled Demand by more than fifteen (15) percent. CAISO Estimated Settlement Quality Meter Demand for Participating Load will not be increased by fifteen (15) percent.

(c) CAISO Estimated Settlement Quality Meter Data for Demand Response will be calculated using the same method as set forth in Section 11.1.4(a) for metered Generation.

(d) To estimate net load for a Metered Subsystem, the CAISO will apply a monthly historical based net/gross ratio to the MSS's estimated gross load. The historical monthly ratio shall be specific to each MSS Operator and shall be calculated as the sum of each entity's monthly actual net load divided by the sum of each entity's monthly actual gross load of the previous year.

**11.29.7.1.2 Recalculation Settlement Statements**

The CAISO will provide to each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO Recalculation Settlement Statements in accordance with the CAISO Tariff and the CAISO Payments Calendar. Recalculation Settlement Statements will be in a format similar to that of the Initial Settlement Statement T+9B and will include the same granularity of information provided in the Initial Settlement Statement T+9B as amended following the validation procedure.

**11.29.7.1.3 [Not Used]**

**11.29.7.1.4 [Not Used]**

**11.29.7.1.5 [Not Used]**

**11.29.7.2 Interest**

Interest will be applied to any incremental changes between Initial Settlement Statement T+9B and Recalculation Settlement Statement T+70B, and thereafter to any incremental changes between each subsequent Recalculation Settlement Statement through Recalculation Settlement Statement T+24M.

Interest will be calculated on a daily basis and will apply from the Payment Date for the Invoice of Payment Advice to the Payment Date for the next Recalculation Settlement Statement. The rate of interest will be the interest rate calculated in accordance with 18 C.F.R. Section 35.19a.

**11.29.7.2.1 [Not Used]**

**11.29.7.3 Unscheduled Recalculation Settlement Statements**

**11.29.7.3.1 Unscheduled Reissue Recalculation Settlement Statement**

The CAISO will issue an Unscheduled Reissue Recalculation Settlement Statement to correct a miscalculation that occurred on a Recalculation Settlement Statement T+11M if the following criteria are met:

- The miscalculation occurred as a result of a CAISO data transfer error or other similar data processing error;
- The miscalculation was identified by the CAISO, Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO on a timely basis within the dispute timeline applicable to the Recalculation Settlement Statement; and
- The financial impact of the miscalculation on the market as a whole was greater than $1,000,000 for the Trading Day. For purposes of determining whether the $1,000,000 threshold for issuing the unscheduled recalculation settlement statement has been met, the CAISO will calculate the financial impact resulting from an error based on the dollar value of the charges that were mistakenly assessed due to the error.

The CAISO will issue a Market Notice to advise the Market Participants that a miscalculation occurred and that it will be corrected in an Unscheduled Reissue Recalculation Settlement Statement. The CAISO will issue the Unscheduled Reissue Recalculation Settlement Statement no less than thirty (30) days after the date that the Market Notice was issued and will include the net adjustment amounts in the next available regularly scheduled invoice. Any miscalculation due to a CAISO data transfer error or other similar data processing error that does not meet the criteria set forth in this section will be corrected on the next Recalculation Settlement Statement T+21M or Recalculation Settlement Statement T+24M as appropriate.

**11.29.7.3.2 Unscheduled Directed Recalculation Settlement Statement**

Except as provided in 11.29.7.4, the CAISO will not issue Recalculation Settlement Statements other than Recalculation Settlement Statements T+70B; Recalculation Settlement Statements T+11M, Recalculation Settlement Statements T+21M, Recalculation Settlement Statements T+24M, and Unscheduled Reissue Recalculation Settlement Statements unless directed by the CAISO Governing Board or pursuant to a FERC order.

**11.29.7.3.3** If an Unscheduled Directed Recalculation Settlement Statement is ordered by the CAISO Governing Board, the CAISO will arrange to have the Recalculation Settlement Statement carried out as soon as is reasonably practicable following the CAISO Governing Board's order, subject to the availability of staff and computer time, compatible software, appropriate data, and other resources.

**11.29.7.3.4** The cost of an Unscheduled Directed Recalculation Settlement Statement will be borne by the Business Associate requesting it, unless an additional Recalculation Settlement Statement was needed due to a clerical oversight or error on the part of the CAISO staff.

**11.29.7.3.5** Where an Unscheduled Directed Recalculation Settlement Statement indicates that the accounts of Business Associates should be debited or credited to reflect alterations to Settlements previously made under the CAISO Tariff, for those Business Associates affected by the additional Recalculation Settlement Statement, the CAISO will reflect the amounts to be debited or credited in the next scheduled weekly Invoice or Payment Advice.

**11.29.7.3.6** Unscheduled Directed Recalculation Settlement Statements may be invoiced separately from market activities in accordance with Section 11.29.10.3.

### 11.29.7.4 Settlement Cycle for Trading Days before January 1, 2021

For Trading Days January 1, 2018 through December 31, 2020 only, the following additional rules apply:

#### 11.29.7.4.1 Timing of Settlements Process

Instead of the Settlement Statements identified in Section 11.29.7.1, the CAISO will publish Settlement Statements as follows:

(a) Initial Settlement Statements T+3B on the third (3) business day from the relevant Trading Day (T+3B);

(b) Recalculation Settlement Statements T+12B on the twelfth (12) business day from the relevant Trading Day (T+12B);

(c) Recalculation Settlement Statements T+55B on the fifty-fifth (55) business day from the relevant Trading Day (T+55B);

(d) Recalculation Settlement Statements T+9M on the one-hundred and ninety-fourth (194) business day after the Trading Day, which is approximately nine (9) months after the Trading Day (T+9M), if necessary;

(e) Recalculation Settlement Statements T+18M on the three hundred and eighty third (383) business day after the Trading Day, which is approximately eighteen (18) calendar months from the relevant Trading Day (T+18M), if necessary;

(f) Recalculation Settlement Statements T+33M on the six hundred and ninety-third (693) business day after the Trading Day, which is approximately thirty-three (33) calendar months from the relevant Trading Day (T+33M), if necessary; and

(g) Recalculation Settlement Statements T+36M on the seven hundred and fifty-ninth (759) business day after the Trading Day, which is approximately thirty-six (36) calendar months from the relevant Trading Day (T+36M), if necessary.

**11.29.7.4.2 Initial Settlement Statement T+3B**

The CAISO will provide to each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO for validation an Initial Settlement Statement T+3B for each Trading Day within three (3) business days of the relevant Trading Day, covering all Settlement Periods in that Trading Day. Each Initial Settlement Statement T+3B will be solely based on CAISO Estimated Settlement Quality Meter Data in accordance with Section 11.29.7.4.3. The Initial Settlement Statement T+3B will include the following:

(a) the amount payable or receivable by the Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO for each charge referred to in Section 11 for each Settlement Period in the relevant Trading Day;

(b) the total amount payable or receivable by that Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO for each charge in that Trading Day after the amounts payable and the amounts receivable under (a) have been netted off pursuant to Section 11.29; and

(c) the components of each charge.

**11.29.7.4.3 CAISO Estimates for Initial Settlement Statement T+3B**

Notwithstanding any other provisions of the CAISO Tariff, Initial Settlement Statement T+3B shall be solely based on CAISO Estimated Settlement Quality Meter Data for metered Demand, metered Generation, and Demand Response. CAISO Estimated Settlement Quality Meter Data shall be calculated as follows:

(a) CAISO Estimated Settlement Quality Meter Data for metered Generation will be based on total Expected Energy.

(b) CAISO Estimated Settlement Quality Meter Data for metered Demand, including Non-Participating TO demand, will be based on Scheduled Demand by the appropriate LAP. This value will be increased by fifteen (15) percent if the total actual system Demand in Real Time, as determined by the CAISO each hour, is greater than the total Scheduled Demand by more than fifteen (15) percent. CAISO Estimated Settlement Quality Meter Demand for Participating Load will not be increased by fifteen (15) percent.

(c) CAISO Estimated Settlement Quality Meter Data for Demand Response will be calculated using the same method as set forth in Section 11.1.4(a) for metered Generation. The Proxy Demand Response Default Load Adjustment will not be estimated or applied for purposes of calculating Initial Settlement Statement T+3B.

(d) To estimate net load for a Metered Subsystem, the CAISO will apply a monthly historical based net/gross ratio to the MSS's estimated gross load. The historical monthly ratio shall be specific to each MSS Operator and shall be calculated as the sum of each entity's monthly actual net load divided by the sum of each entity's monthly actual gross load of the previous year.

(e) The CAISO will estimate E-Tag for Interchange Schedules for System Resources based on total Expected Energy, and for EIM Transfer system resources based on Dispatch Instructions.

(f) The CAISO will not estimate Unaccounted For Energy under Section 11.5.3, Real-Time Imbalance Energy Offset adjustment under Section 11.5.4.1(c), allocation of RTM Bid

Cost Up-lift adjustment under Section 11.8.6.3.2(iv), or MSS deviation charges under 11.7.1 for purposes of calculating Initial Settlement Statement T+3B.

**11.29.7.4.4 Meter Data and SQMD for Recalculation Settlement State T+12B**

(a) The CAISO's Recalculation Settlement Statement T+12B shall be based on the Settlement Quality Meter Data (actual or Scheduling Coordinator estimated) received in SQMDS. In the event Actual Settlement Quality Meter Data or Scheduling Coordinator Estimated Settlement Quality Meter Data is not received from a Scheduling Coordinator or CAISO Metered Entity, the CAISO will estimate Settlement Quality Meter Data for that outstanding metered Demand or Generation, including Demand Response Resources, for the Recalculation Settlement Statement T+12B calculation. CAISO Estimated Settlement Quality Meter Data for metered Generation, metered Demand, and Demand Response will be calculated using the same method as set forth in Section 11.29.7.4.3.

(b) Scheduling Coordinators must submit Actual Settlement Quality Meter Data for the Scheduling Coordinator Metered Entities they represent to the CAISO no later than midnight on the forty-eighth (48) business day after the Trading Day (T+48B) for the Recalculation Settlement Statement T+55B calculation. A Scheduling Coordinator that timely submits Actual Settlement Quality Meter Data for the Initial Settlement Statement T+12B may submit revised Actual Settlement Quality Meter Data for the Recalculation Settlement Statement T+55B no later than the forty-eighth (48) business day after the Trading Day pursuant to this Section.

(1) When Actual Settlement Quality Meter Data is not received by the CAISO for a Scheduling Coordinator Metered Entity by forty-eight (48) business days after the Trading Day (T+48B), the Scheduling Coordinator has failed to submit complete and accurate meter data as required by Section 37.5.2.1 and will be subject to monetary penalty pursuant to Section 37.5.2.2.

(2) Any Scheduling Coordinator Estimated Settlement Quality Meter Data submitted by a Scheduling Coordinator on behalf of the Scheduling Coordinator Metered Entities it represents that is not replaced with Actual Settlement Quality Meter Data by forty-eight (48) business days after the Trading Day (T+48B) has failed to submit complete and accurate meter data as required by Section 37.5.2.1 and

will be subject to monetary penalty pursuant to Section 37.5.2.2. In the absence of Actual Settlement Quality Meter Data, Scheduling Coordinator Estimated Settlement Quality Meter Data will be used in the Recalculation Settlement Statements.

(3) The CAISO will not estimate a Scheduling Coordinator Metered Entity's Settlement Quality Meter Data for any outstanding metered Demand and/or Generation for use in a Recalculation Settlement Statement T+55B calculation. Any previous CAISO Estimated Settlement Quality Meter Data that the Scheduling Coordinator does not replace with Actual Settlement Quality Meter Data by forty-eight (48) business days after the Trading Day (T+48B) will be set to zero. A Scheduling Coordinator that fails to replace CAISO Estimated Settlement Quality Meter Data with Actual Settlement Quality Meter Data by forty-eight (48) business days after the Trading Day (T+48B) has failed to provide complete and accurate Settlement Quality Meter Data as required by Section 37.5.2.1 and will be subject to monetary penalty pursuant to Section 37.5.2.2.

(c) Scheduling Coordinators may submit Actual Settlement Quality Meter Data for the Scheduling Coordinator Metered Entities they represent to the CAISO for use in Recalculation Settlement Statement T+9M up to one hundred seventy two business days after the Trading Day (T+172B). Scheduling Coordinators submitting Actual Settlement Quality Meter Data after forty-eight business days after the Trading Day (T+48B) have failed to provide complete and accurate Settlement Quality Meter Data as required by Section 37.5.2.1 and will be subject to monetary penalty pursuant to Section 37.5.2.2. Any Actual Settlement Quality Meter Data that is submitted by a Scheduling Coordinator after T+172B, will be rejected by the CAISO and not used in settlement calculations.

**11.29.7.4.5 Basis for Billing and Payment**

Instead of Section 11.29.10.2, the following will apply: The Initial Settlement Statement T+3B and any Recalculation Settlement Statement will constitute the basis for billing in accordance with the CAISO Tariff. The Initial Settlement Statement T+3B will constitute the basis for billing for all charges in the first instance. The Recalculation Settlement Statements will constitute the basis for billing for adjustments to

charges set forth in the Initial Settlement Statement T+3B.

#### 11.29.7.4.6 Unscheduled Reissue Recalculation Settlement Statement

The CAISO will issue an Unscheduled Reissue Recalculation Settlement Statement to correct a miscalculation that occurred on a Recalculation Settlement Statement T+9M or Recalculation Settlement Statement T+18M if the criteria stated in Section 11.29.7.3.1 are met. Any miscalculation due to a CAISO data transfer error or other similar data processing error that does not meet these criteria will be corrected on the next Recalculation Settlement Statement T+18M or Recalculation Settlement Statement T+33M as appropriate. If the criteria stated in Section 11.29.7.3.1 are met, the CAISO will follow the process described in that section.

#### 11.29.7.4.7 Review of Initial Settlement Statement T+3B

Each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO will have the opportunity to review the terms of the Initial Settlement Statement T+3B that it receives. Because this settlement statement is solely based on CAISO Estimated Settlement Quality Meter Data, which will be reconciled to actual data on subsequent Recalculation Settlement Statements, it is not subject to dispute or exception. The Initial Settlement Statement T+3B will be binding on the Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO that it relates to.

#### 11.29.7.4.8 Validation of Recalculation Settlement Statements and Right of Dispute

(a) Each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO will have the opportunity to review the terms of any Recalculation Settlement Statement that it receives, and the right to dispute items in Recalculation Settlement Statements as described in subsection (b)(ii). The Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO will be deemed to have validated each Recalculation Settlement Statement unless it has raised a dispute or reported an exception that satisfies the requirements of subsection (b). Once validated, a Recalculation Settlement Statement will be binding, meaning that the Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO that it relates to waives any and all right to bring any form of legal or equitable challenge in any forum to any of the charges or credits on the Recalculation Settlement Statement.

(b) A dispute or exception must satisfy requirements (i) through (v) below.

(i) Contents of Notice. The notice of the dispute, if any, must clearly state: the Trading Day; the

issue date of the Recalculation Settlement Statement; which Recalculation Settlement Statement contains the disputed item (*i.e.,* T+12B, T+9M, etc.); the item disputed; the reasons for the dispute; and the amount claimed (if appropriate). In addition, the notice of dispute must be accompanied with all available evidence reasonably required to support the claim;

(ii) Items subject to dispute. With respect to a Recalculation Settlement Statement T+12B or a Recalculation Settlement Statement T+55B, any item is subject to dispute except for CAISO or Scheduling Coordinator Estimated Settlement Quality Meter Data. With respect to a Recalculation Settlement Statement T+9M, Recalculation Settlement Statement T+18M, Recalculation Settlement Statement T+33M, the only items subject to dispute are incremental changes that appear on that Recalculation Settlement Statement, meaning a change in dollar value of a specific Charge Code or any new Charge Codes or Trading Day charges appearing for the first time. An incremental change may include the manner in which the CAISO implemented adjustments in response to a dispute that it accepted;

(iii) T+36M not subject to dispute. Recalculation Settlement Statement T+36M will not be subject to either a dispute by a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO, or adjustment by the CAISO, except as directed by the CAISO Governing Board or by an order issued by FERC. Nothing herein shall be construed to restrict the right of the CAISO or any Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO to seek redress from FERC in accordance with the Federal Power Act;

(iv) Means of submittal. The notice of dispute must be submitted through the means specified in the Business Practice Manual;

(v) Deadline: A dispute of a Recalculation Settlement Statement T+12B must be submitted no later than fourteen (14) business days from the date of issuance. A dispute of a Recalculation Settlement Statement T+55B, a Recalculation Settlement Statement T+9M, a Recalculation Settlement Statement T+18M, a Recalculation Settlement Statement T+33M, or an Unscheduled Recalculation Settlement Statement issued pursuant to either Section 11.29.7.3 or Section 11.29.7.4.6 must be submitted no later than twenty-two (22) business

days from the date of issuance.

#### 11.29.7.4.9 Complex Disputes

The CAISO will make reasonable efforts to reach a determination to approve or deny a complex dispute resulting from: (i) a Recalculation Settlement Statement T+12B, a Recalculation Settlement Statement T+55B, or a Recalculation Settlement Statement T+9M no later than fifteen (15) months after the Trading Day so that any resultant adjustment will be included on the Recalculation Settlement Statement T+18M; and (ii) a Recalculation Settlement Statement T+18M and an Unscheduled Recalculation Settlement Statement, no later than thirty-one (31) months after the Trading Day so that any resultant adjustment will be included on the Recalculation Settlement Statement T+33M.

### 11.29.8 Confirmation and Validation

For Section 11.29.8, the use of the uncapitalized term “business day” refers to a day that the CAISO is open for business. This deviates from the formal definition in Appendix A of the capitalized term “Business Day” because it includes certain holidays that are federally recognized but remain regular operation days for the CAISO. Please see the Business Practice Manual for the most current list of affected holidays.

#### 11.29.8.1 Confirmation

It is the responsibility of each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO to notify the CAISO if it fails to receive a Settlement Statement on the date specified for the publication of such Settlement Statement in the CAISO Payments Calendar. Each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO will be deemed to have received its Settlement Statement on the dates specified, unless it notifies the CAISO to the contrary.

#### 11.29.8.2 Validation of Recalculation Settlement Statements and Right of Dispute

(a) Each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO will have the opportunity to review the terms of any Settlement Statement that it receives, and the right to dispute items in Settlement Statements described in subsection (b)(ii). The Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO will be deemed to have validated each Settlement Statement unless it has raised a dispute or reported an exception that satisfies the requirements of subsection (b). Once validated, a Settlement Statement will be

binding, meaning that the Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO that it relates to waives any and all right to bring any form of legal or equitable challenge in any forum to any of the charges or credits on the Settlement Statement.

(b) A dispute or exception must satisfy requirements (i) through (v) below.

(i) Contents of Notice. The notice of the dispute, if any, must clearly state: the Trading Day; the issue date of the Settlement Statement; which Recalculation Settlement Statement contains the disputed item (*i.e.,* T+9B, T+11M, etc.); the item disputed; the reasons for the dispute; and the amount claimed (if appropriate). In addition, the notice of dispute must be accompanied with all available evidence reasonably required to support the claim;

(ii) Items subject to dispute. With respect to an Initial Settlement Statement T+9B, and Recalculation Settlement Statement T+70B any item is subject to dispute except for CAISO or Scheduling Coordinator Estimated Settlement Quality Meter Data. With respect to a Recalculation Settlement Statement T+11M, Recalculation Settlement Statement T+21M, the only items subject to dispute are incremental changes that appear on that Recalculation Settlement Statement, meaning a change in dollar value of a specific Charge Code or any new Charge Codes or Trading Day charges appearing for the first time. An incremental change may include the manner in which the CAISO implemented adjustments in response to a dispute that it accepted;

(iii) T+24M not subject to dispute. Recalculation Settlement Statement T+24M will not be subject to either a dispute by a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO, or adjustment by the CAISO, except as directed by the CAISO Governing Board or by an order issued by FERC. Nothing herein shall be construed to restrict the right of the CAISO or any Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TOs to seek redress from FERC in accordance with the Federal Power Act.

(iv) Means of submittal. The notice of dispute must be submitted through the means specified in the Business Practice Manual;

(v) Deadline: A dispute of a Settlement Statement must be submitted no later than twenty-two (22) business days from the date of issuance.

**11.29.8.3 [Not Used]**

**11.29.8.4 Recurring Disputes or Exceptions**

A Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO may request the CAISO to treat as recurring a dispute or exception raised in accordance with Sections 11.29.8.2 above. A request for recurring treatment may be made for any valid reason provided that Settlement Statements for subsequent Trading Days would be affected, including, but not limited to, that the disputed calculation will recur, or that a disagreement as to policy will affect calculations in subsequent Settlement Statements. If a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO wishes to request that the CAISO treat a dispute as recurring, it must, in the notice, clearly indicate that it requests such treatment and set forth in detail the reasons that support such treatment. To the extent possible, the Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO must state the types of charges and dates to which the dispute will apply, and provide estimates of the amounts that will likely be claimed on each date.

The CAISO will make a determination on such a request within five (5) business days of receipt. To preserve its right to dispute an item, a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO must continue to raise a dispute or report an exception until it is notified by the CAISO that the CAISO agrees to treat the dispute or exception as recurring. If the CAISO grants a request to treat a dispute or exception as recurring, the dispute raised or exception reported by the Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO will be deemed to apply to every subsequent Settlement Statement provided to the Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO from the date that the CAISO grants the request for recurrent treatment until: a) ninety (90) days have elapsed, unless the CAISO indicates a different expiration date on its response to the request, in which case the expiration date shall be as stated by the CAISO in its response; or b) the dispute or exception is resolved, whichever is shorter. The CAISO may deny a request that the CAISO treat a dispute as recurring for any valid reason, including because the request is not adequately specific as to the basis for recurring treatment or the subsequent calculations that will be

affected.

**11.29.8.4.1 [Not Used]**

**11.29.8.4.2 [Not Used]**

**11.29.8.4.3 [Not Used]**

**11.29.8.4.4 [Not Used]**

**11.29.8.4.5 [Not Used]**

**11.29.8.4.6 [Not Used]**

**11.29.8.4.7 [Not Used]**

**11.29.8.4.8 [Not Used]**

**11.29.8.4.9 [Not Used]**

**11.29.8.5 CAISO Timeline for Determining Settlement Statement Disputes**

The timeline for the CAISO to reach a determination on a settlement statement dispute will be as follows:

(a) The CAISO will reach a determination to approve or deny a dispute, and provide electronic notice of the outcome to the Scheduling Coordinator that submitted the dispute, no later than thirty-one (31) business days after the end of the dispute period for that settlement statement; with the exception of complex disputes or unless otherwise agreed to by the disputing Scheduling Coordinator. In the event that the CAISO's determination results in an adjustment to credits and/or charges, the CAISO in its notice to the disputing Scheduling Coordinator will identify the subsequent recalculation settlement statement expected to include the adjustment.

(b) Complex settlement statement disputes involve policy considerations, entail extensive research, require granular review of previous market runs, include complicated data or calculations, or depend on additional information to be provided by the disputing Scheduling Coordinator or a third party. The CAISO in its sole discretion may designate a settlement statement dispute to be a complex dispute. The CAISO will advise the disputing Scheduling Coordinator within thirty-one (31) business days after the end of the dispute period for that settlement statement if a dispute is a complex dispute. The CAISO will make reasonable efforts to reach a determination to approve or deny a

complex dispute resulting from: (i) an Initial Settlement Statement T+9B no later than nine (9) months after the Trading Day so that any resultant adjustment will be included on the Recalculation Settlement Statement T+11M; and (ii) Recalculation Settlement Statement T+70B or a Recalculation Settlement Statement T+11M and an Unscheduled Recalculation Settlement Statement, no later than nineteen (19) months after the Trading Day so that any resultant adjustment will be included on the Recalculation Settlement Statement T+21M.

**11.29.8.6 Payment Pending Dispute**

Each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO that receives an Invoice or Payment Advice must pay any net debit and, subject to the limitations in Section 11.29.17.1, will be entitled to receive any net credit shown in the Invoice or Payment Advice on the Payment Date, whether or not there is any dispute regarding the amount of the debit or credit. The settlement dispute process in Section 11.29.8.2 (or 11.29.7.4.8) will apply to the disputed amount, and any claims related to the outcome of the settlement dispute process will be governed by Section 13.

**11.29.8.7 CAISO Determination of Disputes and Further Dispute Resolution**

Valid disputes regarding data appearing on a Settlement Statement will be reflected in a later Recalculation Settlement Statement for that Trading Day. If a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO disagrees with the CAISO's resolution of a dispute, it may initiate dispute resolution under Section 13 of the CAISO Tariff pursuant to the deadlines set forth in Section 13. If a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO does not initiate dispute resolution under Section 13 of the CAISO Tariff within the time period set forth in Section 13, the Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO will be deemed to have validated the Settlement Statement. Once validated, a Settlement Statement will be binding, meaning that the Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO that it relates to waives any and all right to bring any form of legal or equitable challenge in any forum to any of the charges or credits on the Settlement Statement.

**11.29.9 Payment Procedures**

**11.29.9.1 Payments by and to the CAISO**

(a) All Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs shall discharge their obligations to pay the amounts owed by them and shall receive payments of all amounts owed to them solely in accordance with this CAISO Tariff.

(b) All financial transactions are denominated in United States dollars and cents.

(c) All payments by the CAISO to Business Associates or to the CAISO by Business Associates shall be made by electronic means authorized in the Business Practice Manual.

**11.29.9.2 CAISO Accounts to be Established**

The CAISO is authorized to establish and maintain bank accounts and obtain lines of credit and other banking facilities (not exceeding an aggregate amount set by the CAISO Governing Board) necessary for the operation of its Settlement and billing procedures. Each such account shall be maintained at a bank or other financial institution in California. Unless otherwise specified in this CAISO Tariff the CAISO will recover all costs incurred in connection with these CAISO banking facilities through the appropriate component of the Grid Management Charge. The CAISO shall establish and operate the following accounts:

**11.29.9.2.1** A CAISO Clearing Account to and from which all payments under this Section 11.29 are made;

**11.29.9.2.2** A CAISO Reserve Account from which any debit balances on the CAISO Clearing Account at the close of banking business on each Business Day shall be settled or reduced in accordance with this CAISO Tariff. The CAISO shall use the Financial Security provided by a Scheduling Coordinator, CRR Holder, or Candidate CRR Holder pursuant to Section 12, if necessary, to clear any debit balances on the CAISO Reserve Account that may arise as a result of that Scheduling Coordinator's or CRR Holder's failure to pay an amount due under this CAISO Tariff;

**11.29.9.2.3** A CAISO Surplus Account;

**11.29.9.2.4** A CAISO Penalty Reserve Account; and

**11.29.9.2.5** Such other accounts as the CAISO deems necessary or convenient for the purpose of efficiently implementing the funds transfer system under this CAISO Tariff. The CAISO shall notify Market Participants of the establishment of such accounts through the CAISO Website and by issuance of a

Market Notice.

**11.29.9.3 Accounts for Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs**

Each Scheduling Coordinator, CRR Holder, Black Start Generator, and Participating TO shall establish and maintain at all times a Settlement Account at a commercial bank located in the United States and reasonably acceptable to the CAISO which can effect money transfers via electronic means as specified in the Business Practice Manual where payments to and from the CAISO Clearing Account shall be made in accordance with this CAISO Tariff. Scheduling Coordinators, CRR Holders, and Black Start Generators may, but will not be required to, maintain separate accounts for receipts and payments. Each Scheduling Coordinator, CRR Holder, and Black Start Generator shall notify the CAISO of its account details and of any changes to those details in accordance with the provisions of its Scheduling Coordinator Agreement, CRR Entity Agreement, or Black Start Agreement. Participating TOs will notify the CAISO of their Settlement Account details in accordance with Section 2.2.1 of their Transmission Control Agreement and may notify the CAISO from time to time of any changes by giving at least seven (7) days written notice before the new account becomes operational.

**11.29.9.4 [Not Used]**

**11.29.9.5 No Co-Mingling**

The CAISO shall not co-mingle any funds standing to the credit of a CAISO Account with its other funds and shall promptly withdraw any amounts paid into a CAISO Account representing amounts paid for the account of the CAISO.

**11.29.9.6 Use of Accounts**

**11.29.9.6.1 Clearing Account**

(a) Subject to Section 11.29.11.2, and unless the CAISO instructs otherwise pursuant to Section 11.29.11, each CAISO Debtor shall ensure that the amount shown on the Invoice as payable by that CAISO Debtor shall be received into the CAISO Clearing Account for value not later than 10:00 a.m. on the Payment Date.

(b) On the Payment Date, the CAISO shall be entitled to cause the transfer of such amounts held in a Scheduling Coordinator's or CRR Holder's CAISO prepayment account to the

CAISO Clearing Account as provided in Section 11.29.11.2.

The CAISO shall calculate the amounts available for distribution to CAISO Creditors on the Payment Date and shall give irrevocable instructions to the CAISO Bank to remit from the CAISO Clearing Account to the relevant Settlement Accounts maintained by the CAISO Creditors, the aggregate amounts determined by the CAISO to be available for payment to CAISO Creditors for value by close of business on the Payment Date if no CAISO Debtors are in default. If a CAISO Debtor is in default and until all defaulting amounts have been collected, the CAISO shall remit payments as soon as practical within five (5) Business Days of the collection date posted in the CAISO Payments Calendar. If required, the CAISO shall instruct the CAISO Bank to transfer amounts from the CAISO Reserve Account to enable the CAISO Clearing Account to clear.

The CAISO is authorized to instruct the CAISO Bank to debit the CAISO Clearing Account and transfer to the relevant CAISO Account sufficient funds to pay in full the Grid Management Charge and FERC Annual Charges falling due on any Payment Date with priority over any other payments to be remitted on that or on subsequent days out of the CAISO Clearing Account.

**11.29.9.6.2 Reserve Account**

The CAISO Reserve Account shall be available to the CAISO for the purpose of providing funds to clear the CAISO Clearing Account in the event that there are insufficient funds in the CAISO Clearing Account to pay CAISO Creditors. If there are insufficient funds in the CAISO Clearing Account to pay CAISO Creditors and clear the account on any Payment Date due to either payment default by one or more CAISO Debtors or to application of Section 11.29.10.2, the CAISO shall transfer funds from the CAISO Reserve Account to the CAISO Clearing Account to clear it by close of banking business on that Payment Date pursuant to Section 11.29.13.4. If there are excess funds in the CAISO Clearing Account on any Payment Date due to application of Section 11.29.10.2, the CAISO shall transfer the excess funds from the CAISO Clearing Account to the CAISO Reserve Account.

If the CAISO Reserve Account is drawn upon, the CAISO shall as soon as possible begin collection efforts consistent with Section 11.29.20 against the defaulting Scheduling Coordinator or CRR Holder, including making any calculations or taking any other appropriate action in order to replenish the CAISO Reserve Account including drawing on any credit support or other Financial Security provided by the

defaulting Scheduling Coordinator or CRR Holder pursuant to Section 12 or serving demands on any defaulting Scheduling Coordinator or CRR Holder if Financial Security has been exhausted or if no Financial Security is available due to establishment of an Unsecured Credit Limit.

**11.29.9.6.2.1 Replenishing the CAISO Reserve Account Following Payment Default**

If the CAISO has debited the CAISO Reserve Account then:

(a) If, after the CAISO has debited the CAISO Reserve Account on a Payment Date, the CAISO Bank receives a payment from a CAISO Debtor which has not been (but should have been, if it had been received on a timely basis) credited to the CAISO Clearing Account by 10:00 am on the Payment Date and which required the debiting of the CAISO Reserve Account, such payment shall be credited to the CAISO Reserve Account.

(b) The proceeds of any enforcement of Financial Security and/or amounts recovered under proceedings shall be credited to the CAISO Reserve Account in accordance with the priorities specified in Section 11.29.17.3.

(c) If, after taking reasonable action, the CAISO determines that the default amount (or any part) and/or Interest cannot be recovered, the CAISO shall notify Market Participants of the identity of the defaulting Business Associate together with the unrecoverable amounts and such amounts shall be allocated in accordance with Section 11.29.17 of the CAISO Tariff with corresponding credits to the CAISO Reserve Account. Provided, however, that if the default amount is for an invoice or invoices that were issued after the invoices containing the T+24M Recalculation Settlement Statements for the relevant Trading Days, then CAISO has the option of not allocating in accordance with Section 11.29.17 up to $2,000 of the default amount, and instead using the funds from the CAISO Reserve Account to cover the default amount on a permanent basis.

**11.29.9.6.3 Surplus Account**

The CAISO shall establish and maintain a bank account denominated the CAISO Surplus Account. The CAISO Surplus Account shall include the following:

(a) Any amounts paid to the CAISO in respect of penalties or Sanctions referred to in Section 11.14 shall be credited to the CAISO Surplus Account, subject, however, to Section

11.29.9.6.1(b).

(b) The funds referred to in Section 11.29.9.6.1(a) pertaining to penalties or Sanctions as provided in Section 11.14 shall first be applied towards any expenses, loss or costs incurred by the CAISO except for that portion of those amounts collected pursuant to 37.9.4. Any excess after such application will be credited to the CAISO Surplus Account pursuant to 11.29.9.6.1(a).

(c) The funds referred to in Section 11.29.9.6.1(a) pertaining to default Interest referred to in Section 11.29.13.1 shall first be applied towards any unpaid CAISO Creditor balances for the Trading Month in which the default Interest was assessed and second to any other unpaid CAISO Creditor balances. Only after all unpaid CAISO Creditor balances are satisfied in full will any excess funds pertaining to default Interest be credited to the CAISO Surplus Account pursuant to Section 11.29.9.6.1(a).

In the event that there are funds in the CAISO Surplus Account in excess of an amount to be determined by the CAISO Governing Board and identified in a Market Notice by the CAISO to Market Participants, the amount of such excess will be distributed to Scheduling Coordinators using the same method of apportioning the refund as the method employed in apportioning the liability for the Grid Management Charge.

**11.29.9.6.4 CAISO Penalty Reserve Account**

(a) The CAISO Penalty Reserve Account will be available to the CAISO for the purpose of using funds collected for late payments of amounts set forth in Invoices pursuant to Section 11.29.14(c) and for late postings of Financial Security pursuant to Section 12.5.2(c) to clear the CAISO Clearing Account in the event that there are insufficient funds in the CAISO Clearing Account to pay CAISO Creditors according to the rules in Section 11.29.13.4.. The CAISO Penalty Reserve Account will be an interest-bearing account separate from all other accounts maintained by the CAISO, and no other funds will be commingled in it at any time.

(b) On December 31 of each year, the CAISO will draw any funds then available in the CAISO Penalty Reserve Account in excess of five (5) million dollars and will apply that

excess to offset the following year's Grid Management Charge revenue requirement pursuant to Schedule 1 of Appendix F.

(c) If the CAISO Penalty Reserve Account is drawn upon, the CAISO will as soon as possible thereafter begin collection efforts consistent with Section 11.29.20 against the defaulting Scheduling Coordinator or CRR Holder, including making any calculations or taking any other appropriate action in order to replenish the CAISO Penalty Reserve Account, including drawing on any credit support or other Financial Security provided by the defaulting Scheduling Coordinator or CRR Holder pursuant to Section 12 or serving demands on any defaulting Scheduling Coordinator if Financial Security has been exhausted or if no Financial Security is available due to establishment of an Unsecured Credit Limit.

**11.29.9.6.4.1 Replenishment Following Payment Default**

If the CAISO has debited the CAISO Penalty Reserve Account, then:

(a) If, after the CAISO has debited the CAISO Penalty Reserve Account on a Payment Date, the CAISO Bank receives a payment from a CAISO Debtor which has not been (but should have been, if it had been received on a timely basis) credited to the CAISO Clearing Account by 10:00 am on the Payment Date and which required the debiting of the CAISO Penalty Reserve Account, such payment shall be credited to the CAISO Penalty Reserve Account, less any amounts due to Market Participants.

(b) The proceeds of any enforcement of Financial Security and/or amounts recovered under proceedings shall be credited to the CAISO Penalty Reserve Account in accordance with the priorities specified in Section 11.29.17.3.

**11.29.10 Billing and Payment**

The CAISO shall prepare and issue to each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO an Invoice or Payment Advice on Wednesday of each week, which will be deemed to have been issued on Wednesday if it is issued by 5:00 a.m. the next calendar day. If Wednesday falls on a federal holiday, the CAISO will issue the Invoice or Payment Advice on the next business day. Each Invoice or Payment Advice shall show the amount that is payable by or to each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO, which amount shall equal the positive or negative

total of all net charges reflected on the relevant Settlement Statements, the Payment Date, being the date on which such amounts is to be paid or received, and details of the CAISO Clearing Account to which any amounts owed by or to Scheduling Coordinators, CRR Holder, Black Start Generator, or Participating TO is to be paid. Amounts owed from a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO that is a CAISO Debtor are expressed as a positive amount on an Invoice. Amounts owed to a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO that is a CAISO Creditor are expressed as a negative amount on a Payment Advice. Payments for the items referred to in an Invoice shall be made four (4) business days after the date on which the weekly Invoice or Payment Advice is issued. If the fourth (4) business day after an Invoice or Payment Advice is issued falls on a federal holiday, then the Payment Date for the Invoice or Payment Advice shall be the next business day. For Section 11.29.10, the use of the uncapitalized term "business day" refers to a day that the CAISO is open for business. This deviates from the formal definition in Appendix A of the capitalized term "Business Day" because it includes certain holidays that are federally recognized but remain regular operation days for the CAISO. Please see the Business Practice Manual for the most current list of affected holidays.

**11.29.10.1 Billing Periods**

Each Invoice or Payment Advice will include Settlement Statements as provided in the CAISO Payments Calendar. Each billing period will be shown and totaled separately on the Invoice or Payment Advice but the net Invoice or Payment Advice will reflect the entity's net financial obligations in all billing periods included on the Invoice or Payment Advice.

**11.29.10.2 Elimination of Invoices and Payment Advices Under $10.00**

Invoices and Payment Advices due to or from any Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO for amounts less than $10.00 will be adjusted to $0.00 and no amount will be due to or from that Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO for that Invoice or Payment Advice.

**11.29.10.3 Other Invoicing Provisions**

The Invoices or Payment Advices will also include any disbursements associated with a shortfall receipt distribution.

A separate Invoice for the FERC Annual Charges due annually will be issued by the CAISO to the Scheduling Coordinator in accordance with Section 11.19.1.2. The CAISO will issue separate Invoices for NERC/WECC Charges as described in Section 11.20.

A shortfall invoice showing the adjustments to payments resulting from any shortfall allocation will be issued by the CAISO to Scheduling Coordinators in the event of a payment default in accordance with Section 11.29.17.1.

In the event of an allocation of a payment default in accordance with Section 11.29.17.2, the CAISO may issue a shortfall invoice to Default-Invoiced SCIDs pursuant to Section 11.29.17.2.1.

Unscheduled Directed Recalculation Settlement Statements, the financial outcomes of CAISO ADR Procedures and any other dispute resolution, amounts due under Black Start Agreements and penalties for paying Invoices or posting Financial Security late may be invoiced separately from market activities. The CAISO shall provide a Market Notice at least five (5) business days prior to such invoicing identifying the components of such Invoice or Payment Advice.

**11.29.10.4 Balancing of Market Accounts in Absence of Meter Data**

Settlements shall not be cleared for final processing until the accounting trial balance is zero. In order to publish a Settlement Statement, the CAISO may use estimated, disputed, or calculated Meter Data. When actual verified Meter Data is available and all of the disputes raised by Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs during the validation process described in Section 11.29.8 have been determined, the CAISO shall recalculate the amounts payable and receivable by the affected Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs or by all Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs, if applicable, as soon as reasonably practical and shall show any required adjustments as a debit or credit in the next Settlement Statement.

**11.29.10.5 Use of Estimated Data**

In the event of an emergency or a failure of any of the CAISO software or business systems, the CAISO may use estimated Settlement Statements and Invoices and Payment Advices and may implement any temporary variation of the timing requirements relating to the Settlement Statements and Invoices and Payment Advices. Details of the variation and the method chosen to produce estimated data, Settlement

Statements and Invoices and Payment Advices will be published on the CAISO Website.

**11.29.10.6 Payment of Estimated Statements and Invoices**

When estimated Settlement Statements and Invoices or Payment Advices are issued by the CAISO, payments between the CAISO and Market Participants shall be made on an estimated basis and the necessary corrections shall be made by the CAISO as soon as practicable. The corrections will be reflected as soon as practicable in later Settlement Statements and Invoices and Payment Advices issued by the CAISO unless the CAISO has authorized the adjustment pursuant to Section 11.29.11. Failure to make such estimated payments shall result in the same consequences as a failure to make actual payments.

**11.29.10.7 Validation of Estimated Statements and Invoices**

The CAISO shall use its best efforts to verify the estimated data and to make the necessary corrections as soon as practicable. The corrections will be reflected as soon as practicable in later Settlement Statements and Invoices and Payment Advices issued by the CAISO.

**11.29.10.8 Estimated Statements to be Final**

In the event that the CAISO is of the opinion that, despite its best efforts, it is not possible for it to verify the estimated data because actual data is not reasonably expected to become available to the CAISO in the foreseeable future, the CAISO shall consult with the Market Participants in order to develop the most appropriate substitute data including using data provided by Market Participants. Following such determination of substitute data, the CAISO shall send to the relevant Market Participants revised Settlement Statements and Invoices and Payment Advices. The provisions of Section 11.29.8.6 shall apply to payment of revised Invoices issued in accordance with these emergency procedures. Failure to make payments of such revised Invoices shall result in the same consequences as a failure to make actual payments.

**11.29.11 Instructions for Payment**

Unless the CAISO instructs otherwise, each Scheduling Coordinator or CRR Holder shall ensure that the amount shown on the Invoice as payable by that Scheduling Coordinator or CRR Holder is received into the CAISO Clearing Account for value no later than 10:00 a.m. on the Payment Date.

**11.29.11.1 Payment in Event of Verifiable Error**

In the event of a verifiable error that would be reversed on a future Invoice or Payment Advice, the CAISO may instruct a CAISO Debtor to reduce its payment in the amount of a specific charge reflected on an Invoice. Any such occurrence will not constitute a payment default under the CAISO Tariff. If the CAISO directs such a reduction in payment, it shall make offsetting adjustments on future Invoices or Payment Advices of the Business Associates that received settlement credits corresponding to the verifiably erroneous charge. The CAISO will inform those entities of the adjustments to their Invoices or Payment Advices.

**11.29.11.2 Prepayments**

(a) A Scheduling Coordinator or CRR Holder may choose to pay at an earlier date than the Payment Date specified in the CAISO Payments Calendar by way of prepayment, provided it notifies the CAISO by electronic means before submitting its prepayment.

(b) Prepayment notifications must specify the dollar amount prepaid.

(c) Prepayments must be made by Scheduling Coordinators or CRR Holders via electronic means authorized in the Business Practice Manual into their CAISO prepayment accounts designated by the CAISO. The relevant Scheduling Coordinator or CRR Holder shall grant the CAISO a security interest on all funds in its CAISO prepayment account.

(d) On any Payment Date the CAISO shall be entitled to cause funds from the relevant Scheduling Coordinator's or CRR Holder's CAISO prepayment account to be transferred to the CAISO Clearing Account in such amounts as may be necessary to discharge in full that Scheduling Coordinator's or CRR Holder's payment obligation arising in relation to that Payment Date by way of set-off or recoupment.

(e) Any funds held in the relevant Scheduling Coordinator's or CRR Holder's CAISO prepayment account shall be treated as part of that Scheduling Coordinator's or CRR Holder's Financial Security.

(f) Interest (or other income) accruing on the relevant Scheduling Coordinator's or CRR Holder's CAISO prepayment account shall inure to the benefit of that Scheduling Coordinator or CRR Holder and shall be added to the balance of its CAISO prepayment account on a monthly basis.

(g) Funds held in a CAISO prepayment account by a Scheduling Coordinator or CRR Holder may be recouped, offset or applied by the CAISO to any outstanding financial obligations of that Scheduling Coordinator or CRR Holder to the CAISO.

**11.29.11.3 System Failure**

**11.29.11.3.1 At CAISO Debtor's Bank**

If any CAISO Debtor becomes aware that a payment will not, or is unlikely to be, received by the CAISO Bank by 10:00 am on the relevant Payment Date for any reason (including failure of the Fedwire or any computer system), it shall immediately notify the CAISO, giving full details of the payment delay (including the reasons for the payment delay). The CAISO Debtor shall make all reasonable efforts to remit payment as soon as possible, by an alternative method if necessary, to ensure that funds are received for value no later than 10:00 am on the Payment Date, or as soon as possible thereafter.

**11.29.11.3.2 At the CAISO's Bank**

In the event of failure of any electronic transfer system affecting the CAISO Bank, the CAISO shall use reasonable efforts to establish alternative methods of remitting funds to the CAISO Creditors' Settlement Accounts by close of banking business on that Payment Date, or as soon as possible thereafter. The CAISO shall notify the CAISO Debtors and the CAISO Creditors of occurrence of the system failure and the alternative methods and anticipated time of payment. In the event that a payment is received late by the CAISO Bank due to either a system failure affecting the CAISO Bank or untimely performance of an ACH draft debit for which the CAISO is responsible, the enforcement actions set forth in Section 11.29.14 shall not apply to such late payment.

**11.29.12 CAISO's Responsibilities**

On the due date for payment of amounts shown in an Invoice, the CAISO shall ascertain whether all amounts required to be received into the CAISO Clearing Account have been credited to it. If any such amount has not been so credited, it shall ascertain which CAISO Debtors have failed to pay the amount owed by them and it may, subject to any notice or cure provisions in this Section 11.29, exercise any rights available under the CAISO Tariff or under applicable law to recover any overdue amount. The obligation of the CAISO to pay CAISO Creditors monies owed for a given billing period shall be limited so that the aggregate liability of the CAISO for such payments does not exceed the sum of

a) the amounts paid to the CAISO Clearing Account for that billing period,

b) additional amounts recovered by the CAISO by enforcing any Financial Security provided by a defaulting CAISO Creditor to cover any shortfall for that billing period, and

c) amounts transferred to the CAISO Clearing Account from the CAISO Reserve Account and the CAISO Penalty Reserve Account pursuant to Section 11.29.9.6.1 to cover any shortfall for that billing period

less GMC due to the CAISO and FERC Annual Charges for the same billing period and amounts shown as due to other internal accounts, such as the balancing accounts for CRRs, RAAIM or penalties issues under Section 37, and adjusted to account for the application of Section 11.29.10.2 to Payment Advices.

**11.29.13 Non-Payment by a Scheduling Coordinator or CRR Holder**

**11.29.13.1 Notification and Interest**

If a CAISO Debtor becomes aware that a payment for which it is responsible will not be received into the CAISO Clearing Account on time, it shall immediately notify the CAISO of the fact and the reason for the non-payment. If the CAISO Debtor fails to pay any sum to the CAISO when due and after the CAISO draws upon any available Financial Security provided by the defaulting Scheduling Coordinator or CRR Holder, the CAISO Debtor shall owe Interest on the overdue amount for the period from the Payment Date to the date on which the payment is received into the CAISO Clearing Account, together with any related transaction costs incurred by the CAISO. The CAISO shall apply all Interest revenue on the default amount according to the accounts or Market Participants that were affected by the default, whether that was CAISO Reserve Account, the Penalty Reserve Account, any other internal accounts, losses allocated on a *pro rata* basis to CAISO Creditors in relation to amounts past due, or, if the default amount was allocated pursuant to Section 11.29.17.2, to Default-Invoiced SCIDs. Interest revenue shall be distributed to accounts in the same order as payment of defaulted receivables set forth in Section 11.29.17.3, in relation to amounts past due in the order of the creation of such debts.

**11.29.13.2 Payment Default**

Subject to Section 11.29.13.6, if by 10:00 am on a Payment Date the CAISO, in its reasonable opinion, believes that all or any part of any amount due to be received into the CAISO Clearing Account from any CAISO Debtor has not been received and there are insufficient funds in the relevant CAISO Debtor's

CAISO prepayment account (the amount of insufficiency being referred to as the "default amount"), the CAISO shall take the following actions to enable the CAISO Clearing Account to clear not later than the close of banking business on the relevant Payment Date.

**11.29.13.3 Enforcing the Financial Security of a Defaulting Scheduling Coordinator or CRR Holder**

Subject to Section 11.29.13.6, the CAISO shall make reasonable endeavors to enforce the defaulting CAISO Debtor's Financial Security (if any) to the extent necessary to pay the default amount. If it is not practicable to obtain clear funds in time to effect payment to CAISO Creditors on the same day the CAISO shall proceed in accordance with Sections 11.29.13.4 or 11.29.17.1 as applicable.

**11.29.13.4 Use of CAISO Reserve Account and CAISO Penalty Reserve Account**

If there are funds standing to the credit of the CAISO Reserve Account or the CAISO Penalty Reserve Account (including the proceeds of drawings under banking facilities described in Sections 11.29.9.6.2 and 11.29.9.6.4), the CAISO shall, assuming sufficient funds are available from the one or both accounts to clear the CAISO Market, debit the CAISO Reserve Account, the CAISO Penalty Reserve Account or a combination of the two with the default amount to clear the CAISO Clearing Account and effect payment to the CAISO Creditors. Provided, however, that the CAISO shall not draw funds from the CAISO Reserve Account for the purpose of covering a payment default that would leave a balance in the CAISO Reserve Account below $1,000.

If funds available from the two accounts combined are not sufficient to clear the market, the CAISO may in its discretion use the funds nevertheless to mitigate the default. In exercising discretion under this rule, the CAISO shall use reasonable diligence to determine what use or expected use of the funds in the reserve accounts would provide the greatest expected benefit to Market Participants overall.

**11.29.13.5 Action against a Defaulting CAISO Debtor**

The CAISO shall as soon as possible after taking action under 11.29.13.4 take any steps it deems appropriate against the defaulting CAISO Debtor to recover the default amount (and any Interest as set out in Section 11.29.13.3 including enforcing any Financial Security, exercising its rights of recoupment or set-off and/or bringing proceedings against the defaulting CAISO Debtor pursuant to Section 11.29.21.1.

**11.29.13.6 Default to be Remedied Promptly**

In the event that the CAISO reasonably believes that an outstanding amount which has not been paid by 10:00 am on the relevant Payment Date, is likely to be paid no later than close of banking business on the next Business Day then the CAISO may, but shall not be obliged to, delay enforcing that CAISO Debtor's Financial Security or taking other measures to recover payment until after the close of banking business on the next Business Day but Interest shall nonetheless accrue pursuant to Section 11.29.13.1.

**11.29.13.7 Set-Off and Recoupment**

The CAISO is authorized to recoup, set off and apply any amount owed on any Payment Advice to which any defaulting CAISO Debtor is or will be entitled, in or towards the satisfaction of any of that CAISO Debtor's debts on any Invoice arising under the CAISO Settlement and billing process.

**11.29.13.8 Application of Funds Received**

The CAISO shall apply payments received or other amounts collected in connection with default amounts in accordance with Section 11.29.17.3 and, for Interest amounts, Section 11.29.13.1.

**11.29.13.9 Interest Accruing while Enforcing the Financial Security**

If the CAISO has debited the CAISO Reserve Account or the Penalty Reserve Account and it subsequently succeeds in enforcing the Financial Security provided by the defaulting CAISO Debtor, the CAISO shall be entitled to withdraw from such Financial Security in addition to the default amount, all costs incurred and Interest accrued to the CAISO as a result of debiting the CAISO Reserve Account or the Penalty Reserve Account from the date of such debit to the date of enforcement of the said Financial Security.

**11.29.13.10 [Not Used]**

**11.29.14 Enforcement Actions for Late Payments**

Each Market Participant that is late in paying the amount set forth in an Invoice from the CAISO is subject to the following enforcement actions:

(a) After each of the first four (4) times during a rolling twelve (12) month period that a Market Participant is late in paying the amount set forth in an Invoice from the CAISO, the CAISO will send the delinquent Market Participant a warning notice.

(b) After the fifth time during a rolling twelve (12) month period that a Market Participant is late in paying the amount set forth in an Invoice, the CAISO may revoke the Market

Participant's Unsecured Credit Limit and require the Market Participant to post cash or another form of Financial Security reasonably acceptable to the CAISO in lieu of unsecured credit or any other form of Financial Security to secure the Market Participant's financial obligations. The CAISO will require such a cash posting or other form of Financial Security for no fewer than twelve (12) months following the month in which the Market Participant's third delinquency occurs, and the CAISO may then return to the Market Participant all or a portion of the posted cash or other form of Financial Security, reinstate the Market Participant's ability to use an Unsecured Credit Limit, and reinstate the Market Participant's ability to use unsecured credit or other form of Financial Security to secure the Market Participant's financial obligations if, during the intervening time, the Market Participant has timely paid all of the amounts set forth in its Invoices from the CAISO, and timely met any requests for Financial Security pursuant to Section 12.4.

(c) After the fifth time and each subsequent time during a rolling twelve (12) month period that a Market Participant is late in paying the amount set forth in an Invoice, the CAISO will assess a penalty to the Market Participant equal to the greater of $1,000 or two percent (2%) of the amount set forth in the Invoice that the Market Participant has been late in paying, up to a maximum amount of $20,000 per each late payment for which the CAISO assesses a penalty pursuant to this Section 11.29.14(c). This penalty will be included in the next Invoice to the Market Participant. Penalty amounts collected by the CAISO pursuant to this Section 11.29.14(c) will be treated as set forth in Section 11.29.9.6.4.

(d) After the sixth and any subsequent times during a rolling twelve (12) month period that a Market Participant is late in paying the amount set forth in an Invoice, the CAISO may extend the time period that it imposes the measures described in Section 11.29.14 (b) for the Market Participant's fifth delinquency during a rolling twelve (12) month period.

(e) After the seventh time during a rolling twelve-month period that a Market Participant is late in paying the amount set forth in an Invoice, the CAISO may, notwithstanding any

other provision of the CAISO Tariff, (i) suspend any and all rights of the Market Participant under the CAISO Tariff, effective immediately after the CAISO sends written notice of the suspension to the Market Participant, and (ii) terminate any agreement entered into between the CAISO and the Market Participant that allows the Market Participant to participate in the CAISO Markets, effective upon the date the CAISO sends written notice of the termination to the Market Participant or upon the date established in accordance with FERC rules if FERC rules require the CAISO to file the notice of termination with FERC. If the CAISO sends a notice of suspension or termination to a Market Participant pursuant to this Section 11.29.14(e), the Market Participant will not have the right to prevent such suspension or termination by curing its late payment of an amount set forth in an Invoice. The CAISO will, following termination of an agreement pursuant to this Section 11.29.14(e) and within thirty (30) days of being satisfied that no sums remain owing by the Market Participant under the CAISO Tariff, return or release to the Market Participant, as appropriate, any money or credit support provided by such Market Participant to the CAISO under Section 12.

(f) Any time that a Market Participant is late in paying the amount set forth in an Invoice, the CAISO will assess Interest to the Market Participant and will apply Interest payments as set forth in Section 11.29.13.1. Any time that a Market Participant is late in paying the amount set forth in an Invoice, the CAISO may also take other applicable enforcement actions in the CAISO Tariff and in the applicable Business Practice Manual, if deemed necessary by the CAISO to protect the financial integrity of the CAISO Markets.

**11.29.15 [Not Used]**

**11.29.16 Prohibition on Transfers**

The CAISO shall at no time instruct the CAISO Bank to transfer any sum from a CAISO Account to another account except as permitted under this CAISO Tariff.

**11.29.17 Alternative Payment Procedures**

**11.29.17.1 Pro Rata Reduction to Payments**

If it is not possible to clear the CAISO Clearing Account on a Payment Date because of nonpayment by a

CAISO Debtor, which cannot be covered using funds available in the CAISO Reserve Account or the CAISO Penalty Reserve Account, or by enforcing any Financial Security provided by a defaulting CAISO Debtor, the CAISO shall, after deducting Grid Management Charge and FERC Annual Charges in accordance with Section 11.29.9.6.1 and paying amounts shown as due to internal accounts rather than to CAISO Creditors, such as the balancing accounts for CRRs, RAAIM or penalties issued under Section 37, (1) first pay in full every CAISO Creditor whose net amounts receivable on the relevant Payment Date is less than $5,000; and (2) second, reduce payments to all remaining CAISO Creditors proportionately to the net amounts payable to them on the relevant Payment Date to the extent necessary to clear the CAISO Clearing Account through a shortfall allocation. Except to the extent a payment default is on an Invoice that was separate from other market activity under Section 11.29.10.3, each payment default amount allocated to CAISO Creditors through a shortfall allocation under this Section 11.29.17.1 that remains unpaid by the defaulting CAISO Debtor will be allocated as set forth in Section 11.29.17.2. The provisions of this Section 11.29.17.1 shall not apply to the extent the CAISO invokes Section 11.29.11 to direct a CAISO Debtor to not pay charges that are verifiably erroneous, or to non-payment of any penalty amount that a Scheduling Coordinator or CRR Holder has disputed and FERC has specifically authorized the Scheduling Coordinator or CRR Holder to net its payment to the CAISO by the amount of the penalty in question in accordance with Section 37.9.3.

**11.29.17.2 Payment Default Allocation**

**11.29.17.2.1 Methodology for Allocating Payment Default Amounts**

Each payment default amount allocated to CAISO Creditors through a shortfall allocation pursuant to Section 11.29.17.1 and that remains unpaid by the defaulting CAISO Debtor will be allocated on the next practicable Invoices to the Default-Invoiced SCIDs identified in the percentage shares calculated pursuant to Section 11.29.17.2.7 for the relevant calendar quarter, excluding the CAISO Debtor that has not paid the payment default amount. The relevant calendar quarter will be the calendar quarter that included the last full Trading Day before the bankruptcy filing, if the defaulting Market Participant filed for bankruptcy or, if the defaulting Market Participant did not file for bankruptcy, the date of its initial payment default.

Percentage shares for a calendar quarter will be calculated pursuant to the following methodology:

(a) Twenty (20) percent of the payment default amount will be allocated to the Default-Invoiced SCIDs in proportion to the net amounts that were payable in each applicable calendar quarter (and averaged within such calendar quarter) to the Default-Invoiced SCIDs over the applicable Default Look-Back Periods. For Market Participants subject to Default Election option 1, these net amounts will be calculated on an SCID-by-SCID basis. For Market Participants that are eligible for and have chosen Default Election option 2, these net amounts will be calculated by consolidating all of the data for the applicable SCIDs, recognizing any offsetting effect of an individual SCID's positive or negative dollar amount in the consolidated total.

(b) Thirty (30) percent of the payment default amount will be allocated to the Default-Invoiced SCIDs in proportion to the sum of the absolute values of the dollar amounts shown on their Invoices payable or receivable in each applicable calendar quarter (and averaged within such calendar quarter) over the applicable Default Look-Back Periods, after excluding dollar amounts shown on the Invoices for payments and charges for GMC, RMR, and Wheeling Access Charge costs, and after excluding the billing of Access Charges and the payment of Transmission Revenue Requirements to Participating Transmission Owners. For Market Participants subject to Default Election option 1, the sum of the absolute values of the dollar amounts shown on their Invoices payable or receivable in each applicable calendar quarter will be calculated on an SCID-by-SCID basis. For Market Participants that are eligible for and have chosen Default Election option 2, the absolute values of the net sum of the dollar amounts shown on their Invoices payable or receivable in each applicable calendar quarter will be calculated by consolidating all of the data for the applicable SCIDs, recognizing any offsetting effect of an individual SCID's positive or negative dollar amount in the consolidated total.

(c) Fifty (50) percent of the payment default amount will be allocated to the Default-Invoiced SCIDs in proportion to the largest of the following five (5) amounts calculated in MWh for every month in each applicable calendar quarter (and averaged within such

calendar quarter) for each Default-Invoiced SCID over the applicable Default Look-Back Periods using data from T+70B Recalculation Settlement Statements or, when it is not yet available, data from T+9B Recalculation Settlement Statements:

(1) Cleared Day-Ahead Schedules to supply Energy, plus Day-Ahead Ancillary Services Awards and qualified Self-Provided Ancillary Services, plus scheduled supply obligation for Ancillary Services (including imports but excluding RUC Awards), plus Virtual Supply Awards;

(2) Metered Generation, plus Real-Time Interchange Import Schedules, plus Real-Time Ancillary Services Awards and qualified Self-Provided Ancillary Services, plus FMM Ancillary Services Awards and qualified Self-Provided Ancillary Services, plus Real-Time supply obligation for Ancillary Services;

(3) Cleared Day-Ahead Schedules for Demand (including Demand served by Pumped-Storage Hydro Units and exports) multiplied by one-hundred three (103) percent to reflect Transmission Losses, plus scheduled demand obligation for Ancillary Services, plus Virtual Demand Awards;

(4) Metered Load multiplied by one-hundred three (103) percent to reflect Transmission Losses, plus Real-Time Interchange Export Schedules, plus Real- Time demand obligation for Ancillary Services; or

(5) The greater of (A) the quantity of CRRs acquired in CRR Auctions or transferred through the Secondary Registration System (excluding CRRs acquired in CRR Allocations) or (B) Inter-SC Trades of Energy.

For Market Participants subject to Default Election option 1, each of the five (5) amounts calculated in MWh for every month in each applicable calendar quarter (and averaged within such calendar quarter) will be calculated on an SCID-by-SCID basis. For Market Participants that are eligible for and have chosen Default Election option 2, each of the five (5) amounts calculated in MWh for every month in each applicable calendar quarter (and averaged within such calendar quarter) will be calculated by consolidating all of the data for the applicable SCIDs.

**11.29.17.2.2 [Not Used]**

**11.29.17.2.3 Interest on Allocated Payment Default Amounts**

In accordance with Section 11.29.7.2, Interest will be charged to Default-Invoiced SCIDs pursuant to Section 11.29.17.2.1 or to SCIDs pursuant to Section 11.29.17.2.2 to the extent the payment default amounts allocated to those Default-Invoiced SCIDs or SCIDs exceed the payment default amounts allocated to them through a shortfall allocation pursuant to Section 11.29.17.1, and Interest will be paid to Default-Invoiced SCIDs pursuant to Section 11.29.17.2.1 or to SCIDs pursuant to Section 11.29.17.2.2 to the extent the payment default amounts allocated to those Default-Invoiced SCIDs or SCIDs are exceeded by the payment default amounts allocated to them through a shortfall allocation pursuant to Section 11.29.17.1, for the period between the date of the shortfall allocation and the date payments are due for the Invoices on which the allocation of the payment default amounts appear. The Interest payable pursuant to this Section 11.29.17.2.3 will be included on the Invoices on which the allocation of the payment default amounts appear.

**11.29.17.2.4 Default Election**

(a) Each Market Participant that is a Scheduling Coordinator, a CRR Holder, a Candidate CRR Holder, or a PTO will make an election of either option 1 or option 2 under this Section 11.29.17.2.4, which will be the Market Participant's Default Election until such time as a subsequent change by the Market Participant of its Default Election from option 1 to option 2 (or vice versa) goes into effect. Each Market Participant that is a Scheduling Coordinator, a CRR Holder, a Candidate CRR Holder, or a PTO shall make only a single Default Election regardless of whether that Market Participant has multiple effective contracts with the CAISO that cause the entity to be a Market Participant. For example, an entity that has signed a Scheduling Coordinator Agreement and a CRR Entity Agreement shall only make a single Default Election.

(i) Option 1: For such Market Participants that choose Default Election option 1, the methodology for allocating payment default amounts set forth in Section 11.29.17.2.1 will apply to each SCID of such Market Participant on an SCID-by-SCID basis, and each SCID of such Market Participant will be a Default-Invoiced SCID.

(ii) Option 2: In order to qualify for Default Election option 2, all of the SCIDs of a Market Participant with one or more effective contracts with the CAISO must certify that they meet one of the following criteria, and the entity must agree that the methodology for allocating payment default amounts set forth in Section 11.29.17.2.1 will apply to all SCIDs created for use under all of the effective contracts with the CAISO based on a consolidation of data for all such SCIDs:

(1) All of the SCIDs are associated with Affiliates or business units under common control where one or more of the Affiliates or business units or a related business entity has more than fifty (50) percent control of the Affiliates or business units, either directly or through one or more intermediaries;

(2) All of the SCIDs are associated with a Joint Powers Authority; or

(3) All of the SCIDs are associated with a municipal utility or state or federal agency.

Each Market Participant that chooses Default Election option 2 will at the same time select a single SCID to be the sole Default-Invoiced SCID under option 2. This Default-Invoiced SCID will receive Invoices containing payment default amounts allocated on behalf of all of the SCIDs under all contracts between the entity and the CAISO. Allocation of payment default amounts for entities choosing Default Election option 2 will be based on consolidated data from all of the entity's SCIDs. The selection of a single SCID as the sole Default-Invoiced SCID will not in any way relieve any Market Participant subject to Default Election option 2 of any obligation to pay Invoices, including in the event of a default by the Default-Invoiced SCID on a default payment obligation, in which case the CAISO will be entitled to utilize all available Financial Security provided by any defaulting Market Participant subject to Default Election option 2.

(b) [Not Used]

(c) Market Participants may change their Default Elections by October 1 of each calendar

year by notifying the CAISO, to become effective on January 1 of the next calendar year. Market Participants that do not change their Default Elections by that date will be deemed to have chosen to continue their current Default Elections.

(d) Each entity that becomes a Scheduling Coordinator, a CRR Holder, a Candidate CRR Holder, or a PTO after one of the dates set forth in Section 11.29.17.2.4(a), -(b), or -(c) will make its Default Election prior to engaging in any transactions in the CAISO Markets. The Default Election of each such entity will remain in effect until the entity makes another Default Election pursuant to this Section 11.29.17.2.4. However, any Market Participant that has already made a Default Election will not be eligible to change its Default Election as a result of its subsequently also becoming a Scheduling Coordinator, a CRR Holder, a Candidate CRR Holder, or a PTO.

(e) Market Participants that do not timely inform the CAISO of their initial Default Elections will be deemed to have chosen Default Election option 1.

**11.29.17.2.5 Effect of Change in Default Election**

Each time that a Market Participant changes its Default Election pursuant to Section 11.29.17.2.4 from option 1 to option 2 (or vice versa), the following provisions will apply:

(a) For the first quarter of the calendar year after the change in Default Election goes into effect, the Default-Invoiced SCID(s) will be allocated shares of payment default amounts calculated pursuant to Section 11.29.17.2.1 based on application of the prior election to the first three (3) full calendar quarters of data within the Default Look-Back Period and application of the new election to the most recent full calendar quarter of data within the Default Look-Back Period.

(b) For the second quarter of the calendar year after the change in Default Election goes into effect, the Default-Invoiced SCID(s) will be allocated shares of payment default amounts calculated pursuant to Section 11.29.17.2.1 based on application of the prior election to the first two (2) full calendar quarters of data within the Default Look-Back Period and application of the new election to the most recent two (2) full calendar quarters of data within the Default Look-Back Period.

(c) For the third quarter of the calendar year after the change in Default Election goes into effect, the new Default-Invoiced SCID(s) will be allocated shares of payment default amounts calculated pursuant to Section 11.29.17.2.1 based on application of the prior election to the first full calendar quarter of data within the Default Look-Back Period and application of the new election to the most recent three (3) full calendar quarters of data within the Default Look-Back Period.

(d) For the fourth quarter of the calendar year after the change in Default Election goes into effect, the Default-Invoiced SCID(s) will be allocated shares of payment default amounts calculated pursuant to Section 11.29.17.2.1 based on application of the new election to the entire Default Look-Back Period.

**11.29.17.2.6 Default Look-Back Period**

(a) The following provisions will apply to each Default-Invoiced SCID for an entity that is a new Market Participant that begins to participate in the CAISO Markets following the effective date of this Section 11.29.17.2.6:

(i) The Default-Invoiced SCID for that Market Participant will first be subject to allocation of payment default amounts under Section 11.29.17.2.1 in the second calendar quarter following the calendar quarter in which the Market Participant begins to participate in the CAISO Markets and the applicable Default Look-Back Period will be the calendar quarter in which the Market Participant began to participate in the CAISO Markets.

(ii) For the third calendar quarter following the calendar quarter in which the Market Participant begins to participate in the CAISO Markets, the applicable Default Look-Back Period will be the Market Participant's first two (2) calendar quarters of participation in the CAISO Markets.

(iii) For the fourth calendar quarter following the calendar quarter in which the Market Participant begins to participate in the CAISO Markets, the applicable Default Look-Back Period will be the Market Participant's first three (3) calendar quarters of participation in the CAISO Markets.

(iv) For any subsequent calendar quarter in which Section 11.29.17.2.1 is in effect, the applicable Default Look-Back Period will be a total of four (4) full calendar quarters.

**11.29.17.2.7 Provision of Information on Percentage Shares**

Beginning with the second calendar quarter of 2011, the CAISO will provide to each Default-Invoiced SCID on or about the first Business Day of the applicable calendar quarter its own percentage share of any payment default amount for the calendar quarter that is beginning, subject to adjustment to account for any non-paying CAISO Debtor, based on application of the methodology for allocating payment default amounts set forth in Section 11.29.17.2.1 to the applicable Default Look-Back Period. In calculating the percentage share for each Default-Invoiced SCID pursuant to this Section 11.29.17.2.7, the CAISO will determine the percentage share for each full calendar quarter and will average those quarterly percentage shares.

**11.29.17.2.8 Scope of Payment Default Allocation Provisions**

The provisions of Section 11.29.17.2 will not apply to the allocation of payment default amounts and interest accrued thereon that are associated with Trading Days that occurred prior to April 1, 2009.

**11.29.17.3 Payment of Defaulted Receivables**

Collections or any other receipt of defaulted receivables (other than Interest) will be distributed according to the following priorities: First, to any GMC that the CAISO did not receive as a result of any debtor's defaults. Second, to any FERC Annual Charges that were not received as a result of any debtor's defaults. Third, to any internal accounts, for example balancing accounts for CRRs or RAAIM, that were not paid in full as a result of the debtor's defaults. Fourth, to the CAISO Reserve Account to the extent funds were used to cover the debtor's payment default.

Fifth, either *pro rata* to CAISO Creditors for the Payment Advices that were subject to default or, if the defaulted receivables we allocated pursuant to Section 11.29.17.2, to Default-Invoiced SCIDs in proportion to their allocated shares of the defaulted receivables as calculated pursuant to Section 11.29.17.2.1 for the Payment Advice on which the payment default occurred. In either case, distributions will begin with the oldest Payment Advice that has unpaid amounts as a result of the debtor's default.

These distributions to unpaid market creditors may be timed in order to reduce the associated administrative burden according to the following rules:

(1) If the total available for payment is less than $5,000, then the funds shall accumulate in an interest-bearing account until either: (a) the account exceeds $5,000, (b) there have been no distributions from the account for six months, or (c) all defaults for a given Payment Advice are available for payment.

(2) If all CAISO Creditors for that Payment Advice have been paid, then the proceeds will either be paid *pro rata* to the CAISO Creditors in the oldest unpaid Payment Advice, or, if the defaulted receivables are allocated pursuant to Section 11.29.17.2, the proceeds will be paid to the Default-Invoiced SCIDs in proportion to their allocated shares of the default amount, as calculated pursuant to Section 11.29.17.2.1 in the oldest unpaid Payment Advice.

(3) All defaulted receivables disbursed under this Section shall be disbursed in accordance with the timeframes set forth in Section 11.29.9.6.1.

Sixth, to the Penalty Reserve Account to the extent funds were used to cover the debtor's payment default. Seventh, any remaining balance to the CAISO Reserve Account.

**11.29.18 [Not Used]**

**11.29.19 Payment Errors**

**11.29.19.1 Overpayments**

If for any reason, including the negligence of the CAISO Bank or the CAISO, a CAISO Creditor receives an overpayment on any Payment Date, the CAISO Creditor shall within two (2) Business Days from the date of receipt of the funds into its Scheduling Coordinator or CRR Holder Settlement Account, notify the CAISO of the amount of the overpayment and shall forthwith pay the overpayment into a CAISO Account specified by the CAISO.

**11.29.19.2 Repayment of Overpayment**

If prior to a CAISO Creditor notifying the CAISO of the overpayment, the CAISO receives notice (from the CAISO Bank or otherwise) of the overpayment, the CAISO shall within two (2) Business Days notify the recipient of the overpayment. The CAISO shall be responsible for payment to those entitled to the sum

which has been overpaid.

**11.29.19.3 Overpayment Held in Trust**

Until a CAISO Creditor refunds the overpayment to the CAISO, the CAISO Creditor shall be deemed to hold the amount of such overpayment on trust for CAISO.

**11.29.19.4 Interest on Overpayment**

(a) If an overpayment is repaid by a CAISO Creditor in accordance with Section 11.29.19.1, the CAISO shall be entitled to interest on the amount of the overpayment at the prime rate of the bank where the Settlement Account of the overpaid CAISO Creditor is located from the date the overpayment was received to the time that the repayment is credited to the relevant CAISO Account.

(b) If the overpayment (or any part of it) is not repaid by a CAISO Creditor in accordance with Section 11.29.19.1, the CAISO shall be entitled to Interest on the amount of the overpayment from the end of the two day period referred to in that section until the repayment is credited to the relevant CAISO Account and the CAISO will be entitled to treat the overpayment (and any Interest accruing thereon) as a default amount to which Section 11.29.13.2 will apply.

**11.29.19.5 Treatment of Amounts Outstanding as a Result of Overpayment**

The CAISO shall apply the amount of any overpayment repaid (including interest received) to credit any underpaid CAISO Creditors pro rata to the amounts of their underpayments on the same day of receipt, or if not practicable, on the following Business Day.

**11.29.19.6 Underpayments**

If for any reason, including the negligence of the CAISO Bank or the CAISO, a CAISO Creditor receives on the relevant Payment Date an underpayment, the CAISO Creditor shall within two (2) Business Days from receipt into its Settlement Account, notify the CAISO of the amount of the underpayment, and the CAISO after consultation with the CAISO Bank, shall use all reasonable endeavors to identify such entity as shall have received any corresponding overpayment and promptly correct the underpayment. If, by reason of negligence, the CAISO holds or has under its control after five (5) Business Days from receipt in the CAISO Clearing Account amounts which it ought properly to have paid to CAISO Creditors, such

CAISO Creditors shall be entitled to interest on such amounts, for such period as the CAISO improperly holds or has such amounts under its control.

**11.29.20 Defaults**

In addition to and not in lieu of any other events specified in this CAISO Tariff as constituting a default, the occurrence of any of the following events shall constitute a default under this CAISO Tariff:

(a) If a Scheduling Coordinator or CRR Holder files a petition or otherwise commences, authorizes, or acquiesces in the commencement of a case, petition, proceeding, or cause of action under any bankruptcy or insolvency law or similar law for the protection of debtors or creditors; or

(b) If a Scheduling Coordinator or CRR Holder has a petition, case, proceeding or cause of action filed or commenced against it and such case, petition, proceeding or cause of action is not withdrawn or dismissed within (30) days after such filing or commencement;

In the event of any default under the CAISO Tariff, the CAISO shall, in addition to any other remedies available at law in equity or under the CAISO Tariff, have the sole and exclusive right to take debt collection action against a Scheduling Coordinator or CRR Holder on account of a default under the terms of the CAISO Tariff. The CAISO shall make commercially reasonable endeavors to prevent any payment default or recover any default amount. The CAISO shall be entitled to recover from the defaulting Scheduling Coordinator or CRR Holder all costs and expenses associated with its collection efforts, including Interest, attorney's fees, and any related transaction costs as provided in Section 11.29.13.1. In the event of a default by a Participating TO, Black Start Generator, or other Business Associate, the provisions of this CAISO Tariff that apply to defaults by a Scheduling Coordinator or CRR Holder shall apply equally.

**11.29.21 [Not Used]**

**11.29.22 Data Gathering and Storage**

**11.29.22.1 Required Capabilities**

The CAISO shall ensure that the Settlement process shall contain, at a minimum, the following data gathering and storage capabilities:

(a) the accurate, time-sequenced, end-to-end traceability of the Settlements process so that

Scheduling Coordinators, CRR Holders and Participating TOs can fully verify their Settlement Statements;

(b) the ability to specify and accept data that is specifically needed for audit trail requirements; and

(c) the archiving of Meter Data, Settlement runs and other information used to prepare Settlement Statements to be consistent with the time frame required to re-run the Settlement process by state laws and the rules of the Local Regulatory Authority.

**11.29.22.2 Data Dissemination**

Data shall not be disseminated by the CAISO except as permitted in this CAISO Tariff.

**11.29.23 Communications**

The Initial Settlement Statement T+9B, any Recalculation Settlement Statement, and Invoices, and Payment Advices will be considered issued to CAISO Creditors or CAISO Debtors when released by the CAISO's secure communication system. Communications on a Payment Date relating to payment shall be made by the fastest practical means including by telephone. If there is a failure of a communication system and it is not possible to communicate by electronic means, then the CAISO or CAISO Creditor or CAISO Debtor, as the case may be, shall communicate by facsimile but only if the recipient is first advised by telephone to expect the facsimile. Methods of communication between the CAISO and Market Participants may be varied by the CAISO giving not less than ten (10) days notice to Market Participants on the CAISO's secure communication system.

**11.29.24 CAISO Payments Calendar**

**11.29.24.1 Preparation**

In September of each year, the CAISO will prepare a draft CAISO Payments Calendar for the following calendar year showing for each Trading Day:

(a) The date by which Scheduling Coordinators are required to provide Actual Settlement Quality Meter Data or Scheduling Coordinator Estimated Settlement Quality Meter Data for all their Scheduling Coordinator Metered Entities for each Settlement Period in the Trading Day;

(b) The date on which the CAISO will issue Initial Settlement Statements T+9B and Invoices

and Payment Advices for that Trading Day;

(c) The date on which the CAISO will issue the Recalculation Settlement Statements T+70B; T+11M, T+21M, and T+24M, and Invoices and Payment Advices for that Trading Day;

(d) The dates by which Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs are required to notify the CAISO of any disputes in relation to their Initial Settlement Statements T+9B, Recalculation Settlement Statements T+70B, T+11M, and T+21M;

(e) The date and time by which CAISO Debtors are required to have made payments into the CAISO Clearing Account in payment of Invoices for that Trading Day;

(f) The dates and times on which the CAISO Clearing Account will remit payments to the CAISO Creditors of amounts owing to them for that Trading Day; and

(g) In relation to RMR Charges and RMR compensation, the details are set out in Sections 11.13 and 41 and Appendix H for Legacy RMR Units.

The CAISO will make a draft of the CAISO Payments Calendar available on the CAISO Website to Scheduling Coordinators, CRR Holders, Black Start Generators, Participating TOs, and RMR Owners that may submit comments and objections to the CAISO within two weeks of the date of posting of the draft on the CAISO Website. No later than October 31 in each year, the CAISO will publish the final CAISO Payments Calendar for the following calendar year, after considering the comments and objections received from Scheduling Coordinators, CRR Holders, Black Start Generators, Participating TOs, and RMR Owners. The final CAISO Payments Calendar will be posted on the CAISO Website, and will show for the period from January 1 to December 31 in the next succeeding year (both dates inclusive), the dates that Settlement Statements will be published by the CAISO and the Payment Dates that the CAISO will pay the Participating TOs the Wheeling revenues allocated to them pursuant to Section 26.1.4.3.

**11.29.24.2 Distribution**

Any CAISO Payments Calendar prepared pursuant to this Section 11.29.24 will be distributed promptly to each Scheduling Coordinator, each Participating TO, the CAISO Bank, the CAISO Audit Committee, and the CAISO Governing Board and will be published on the CAISO Website.

**11.29.24.3 Final Calendar Binding**

The final CAISO Payments Calendar shall be binding on the CAISO and on Scheduling Coordinators, CRR Holders, Black Start Generators, Participating TOs and RMR Owners.

#### 11.29.24.4 Calendar Content and Format

The CAISO may change the content or format of the CAISO Payments Calendar. The CAISO may also produce a summary outline of the Settlement and billing cycles.

#### 11.29.24.5 Update the Final Payments Calendar

If, as a result of an amendment to the CAISO Tariff approved by FERC, the final CAISO Payments Calendar developed in accordance with Section 11.29.24 is rendered inconsistent with the timing set forth in this CAISO Tariff, the CAISO will update the final CAISO Payments Calendar to make it consistent with the CAISO Tariff as approved by FERC on the date that the CAISO Tariff amendment goes into effect. The CAISO will simultaneously send out a Market Notice to Market Participants that the final CAISO Payments Calendar has been revised.

## 11.30 Auditing

All of the data, information, and estimates the CAISO uses to calculate Settlement amounts shall be subject to the auditing requirements of Section 22.1. The CAISO shall calculate these amounts using the software referred to in Section 11.29.5.4 except in cases of system breakdown when it shall apply the procedures set out in 11.29.10.1 (Emergency Procedures).

## 11.31 Under/Over Delivery Charge for Deviations from Intertie Awards

For each FMM interval, the CAISO assesses an Under/Over Delivery Charge to a Scheduling Coordinator with an Intertie transaction if the Intertie resource supporting that transaction has a positive Under/Over Delivery Quantity. The Under/Over Delivery Charge is the product of the Intertie resource's Under/Over Delivery Quantity in that FMM interval and the Under/Over Delivery Price for the resource's corresponding intertie in that FMM interval.

### 11.31.1 Determining the Under/Over Delivery Quantity

#### 11.31.1.1 Under/Over Delivery Quantity for Hourly Block Schedules

For Self-Schedule Hourly Blocks for Energy and Ancillary Services and Economic Hourly Block Bids for Energy and Ancillary Services, and Economic Hourly Block Bids with Intra-Hour Option for Energy, the Under/Over Delivery Quantity is the absolute value of the difference between the: (1) HASP Block Intertie

Schedule or HASP Advisory Schedule, as appropriate; and (2) final quantity of the Energy profile on the Intertie transaction's E-Tag. In the case of an Exceptional Dispatch or other manual Dispatch Instruction, the Under/Over Delivery Quantity is the absolute value of the difference between the: (1) Exceptional Dispatch or manual Dispatch Instruction quantity; and (2) final quantity of the Energy profile on the Intertie transaction's E-Tag.

**11.31.1.2 Under/Over Delivery Quantity for Fifteen-Minute Dispatchable Resources**

For Intertie transactions not addressed in Section 11.31.1.1, the Under/Over Delivery Quantity is the amount by which the HASP Advisory Schedule exceeds the quantity of the transmission profile of the E-Tag as of forty minutes prior to the Operating Hour. If the transmission profile of the E-Tag as of forty minutes prior to the Operating Hour is greater than or equal to the HASP Advisory Schedule, then there is no Under/Over Delivery Quantity for that Intertie transaction for that FMM interval.

In the case of an Exceptional Dispatch or other manual Dispatch Instruction, the Under/Over Delivery Quantity is the absolute value of the difference between the: (1) Exceptional Dispatch or manual Dispatch Instruction quantity; and (2) final quantity of the Energy profile on the Intertie transaction's E-Tag.

**11.31.1.3 Exclusions from the Under/Over Delivery Quantity**

The CAISO excludes from the Under/Over Delivery Quantity as calculated under either 11.31.1.1 or 11.31.1.2 any Energy that meets at least one of the following conditions:

(a) Energy that is not delivered because a Balancing Authority or EIM Transmission Service Provider curtailed the delivery for reliability reasons. The reliability-based curtailment must be reflected on the transaction's final E-Tag.

(b) Energy that is either delivered or not delivered as part of a valid ETC Self-Schedule or TOR Self-Schedule.

(c) Energy that is either delivered or not delivered from a Dynamic System Resource.

**11.31.2 Determining the Under/Over Delivery Price**

If ADS recognizes a Scheduling Coordinator as accepting an award at an Intertie (either because the Scheduling Coordinator actively accepts the award or because the Scheduling Coordinator fails to decline it) and the final quantity of the Energy profile on the Intertie transaction's E-Tag is not equal to the quantity accepted in ADS for any reason other than a reliability-based curtailment covered by Section

11.31.1.3, then the Under/Over Delivery Price is the greater of: (a) 75% of the LMP in the corresponding FMM interval at the intertie where the resource was scheduled; (b) 75% of the highest LMP among the three RTD intervals corresponding to the FMM interval at the intertie where the resource was scheduled; or (c) $15.00.

In all other cases, the Under/Over Delivery Price is the greater of: (a) 50% of the LMP in the corresponding FMM interval at the Intertie where the resource was scheduled; (b) 50% of the highest LMP among the three RTD intervals corresponding to the FMM interval at the Intertie where the resource was scheduled; or (c) $10.00.

**11.31.3 Allocation of Under/Over Delivery Charges**

For any Trading Day on which the CAISO assesses an Under/Over Delivery Charge, each Scheduling Coordinator receives a credit on its Settlement Statement for its share of the total Under/Over Delivery Charges collected for that day. The CAISO distributes the total revenue pro rata based on a Scheduling Coordinator's Measured CAISO Demand on that day as a percent of total Measured CAISO Demand for the CAISO Balancing Authority Area on that day. Both the numerator and denominator of the pro rata calculation exclude demand served by ETCs and TORs.

**11.32 Measures to Address Intertie Scheduling Practices**

The CAISO will take the following actions regarding Schedules that clear the Day-Ahead Market at the Interties and that are wholly or partially reversed through a FMM Schedule:

(i) The CAISO will charge the Scheduling Coordinator the positive difference between the Day-Ahead Market price and the FMM LMP applicable to any imports that clear the Day-Ahead Market and are reduced through a Bid to the RTM if the Scheduling Coordinator either: (a) fails to submit an E-Tag or E-Tags consistent with the Scheduling Coordinator's Day-Ahead Schedule and WECC scheduling criteria; or (b) withdraws the E-Tag or E-Tags prior to the CAISO's publication of HASP results on the CAISO's secure communication system.

(ii) The CAISO will charge the Scheduling Coordinator the positive difference between the FMM LMP and the Day-Ahead Market LMP applicable to any exports that clear the Day-Ahead Market and are reduced through a Bid to the RTM if the Scheduling Coordinator

either: (a) fails to submit an E-Tag or E-Tags consistent with the Scheduling Coordinator's Day-Ahead Schedule and WECC scheduling criteria; or (b) withdraws the E-Tag or E-Tags prior to forty-five (45) minutes before the Trading Hour.

(iii) If a Scheduling Coordinator reduces a Day-Ahead import or export Schedule through a Bid to the RTM and submits Schedules on behalf of, or is, a CRR Holder, then the reduction to the import or export may be treated as a Virtual Award for purposes of adjusting CRR Revenue as further set forth in Section 11.2.4.6.

(iv) For any import Schedule that clears the Day-Ahead Market which a Scheduling Coordinator reduces through a Bid to the RTM, such reduced quantities will be subject to the allocation of Net RTM Bid Cost Uplift as set forth in Section 11.8.6.6.

(v) The provisions of this Section 11.32 will not apply to Schedules that clear the Day-Ahead Market at the Scheduling Points and that a Scheduling Coordinator wholly or partially reverses through a Bid to the RTM to the extent such Schedules are valid and balanced ETC, TOR, or Converted Rights Self-Schedules in the Day-Ahead Market.

### 11.33 Setting Revenue

The import portion of any Schedule resulting from Bids submitted in violation of Section 30.5.5 will be settled at the lower of the: (a) LMP of the Scheduling Point for the import portion of the Schedule in the market in which the import portion of the Schedule was awarded; or (b) LMP of the Scheduling Point for the export portion of the Schedule in the market in which the export portion of the Schedule was awarded. Such settlement will occur irrespective of whether the import and export were scheduled in the same market or are split between the Day-Ahead Market and the Real-Time Market.

### 11.34 Invoice Charges for Transferred Frequency Response

The CAISO will invoice charges as specified in this Section 11.34 for all legitimate costs invoiced to the CAISO by a Balancing Authority under a contract for Transferred Frequency Response.

#### 11.34.1 Charge Allocation Basis

Each Scheduling Coordinator's responsibility for the Transferred Frequency Response charges shall be allocated based on the most recent Scheduling Coordinator's NERC/WECC Metered Demand determined under Section 11.20.4.

**11.34.2 Calculation and Assessment**

(a) Within five (5) Business Days after receiving an invoice for legitimate Transferred Frequency Response costs, the CAISO shall issue a market notice setting forth the Transferred Frequency Response rate, which shall be calculated using the total charges invoiced to the CAISO divided by the most recent total NERC/WECC Metered Demand determined under Section 11.20.4.

(b) The CAISO shall calculate the Transferred Frequency Response charges allocable to each Scheduling Coordinator by using the Transferred Frequency Response rate determined under Section 11.34.2(a), multiplied by the most recent NERC/WECC Metered Demand for that Scheduling Coordinator determined under Section 11.20.4.

(c) Within 10 Business Days after receiving the invoice for legitimate Transferred Frequency Response costs, the CAISO shall issue an invoice to each Scheduling Coordinator for its allocable share of the costs determined under Section 11.34.2(b).

(d) Scheduling Coordinators shall make timely payment to the CAISO within fifteen (15) Business Days of the date the invoices were issued pursuant to Section 11.34.2(c).

**11.34.3 Responsibility to Pay Charges**

(a) Each Scheduling Coordinator shall be obligated to pay the CAISO the charges the Scheduling Coordinator is invoiced by the CAISO for Transferred Frequency Response.

(b) The CAISO's calculation of collateral requirements and other credit requirements under the CAISO Tariff shall include an adjustment for the Scheduling Coordinator's allocable share of the charge for transferred Frequency Response, if applicable, except that the Estimated Aggregated Liability calculated for the Scheduling Coordinator shall not include extrapolated amounts for the charge under Section 12.1.3.1.1(d).

**11.34.4 Validation**

(a) Each Scheduling Coordinator shall have the opportunity to review the terms of the invoice for the charge for Transferred Frequency Response and shall be deemed to have validated that invoice unless it raises a dispute within five (5) Business Days of the date of issuance.

(b) Once validated, an invoice for the charge under this Section shall be binding on the Scheduling Coordinator to which it relates.

**11.34.5 Disputes and Corrections**

(a) Scheduling Coordinators shall be prohibited from disputing any charge invoiced under this Section, except on grounds that an error in the invoice is due to a mere typographical or other ministerial error by the CAISO.

(b) Any dispute of an invoice on the grounds specified in Section 11.34.5 (a) shall be submitted and processed in accordance with the dispute procedure related to the charges for Transferred Frequency Response set forth in the Business Practice Manual,

(c) If the CAISO determines that an invoice contains a typographical or other ministerial error, and the resolution of the dispute makes correction necessary, the CAISO will issue a corrected invoice within 15 Business Days of the date the initial invoice was issued.

(d) Each Scheduling Coordinator that receives an invoice for a charge under this Section shall pay any net debit and shall be entitled to receive any net credit specified on a corrected invoice. Payment of any net debit shall be due within 10 business days of the date the corrected invoice was issued.

**11.34.6 Payment Default**

(a) In the event a Scheduling Coordinator defaults on the payment of all or any portion of the charge invoiced under this Section, the CAISO shall have the right under Section 11.29.13.3 to enforce the financial security provided by the defaulting Scheduling Coordinator, and to take any such other action under Sections 11.29.12 or 11.29.13, as necessary, to obtain payment for the default amount.

(b) To the extent all or any portion of the default amount remains unpaid, the CAISO:

(1) may at its discretion issue an invoice for the unpaid portion of the charge invoiced under this Section; and

(2) if such invoice is issued for a payment default, shall allocate responsibility for the unpaid amount to Scheduling Coordinators using the same allocation basis for the charge as identified in section 11.34.1, but excluding the CAISO Debtor that has not paid the

payment default amount, based on the most recent data of the allocation basis for the charge.

(c) Scheduling Coordinators shall make timely payment to the CAISO within 15 Business Days of the date the default invoices were issued pursuant to Section 11.34.6.

**11.34.7 Modification to Schedule**

Notwithstanding the provisions in Section 11.34, the CAISO may issue a Market Notice informing Scheduling Coordinators that the CAISO will implement a temporary modification to the billing and payment schedule for the charge and setting forth the reasons for such modification, in which case the modified schedule described in that Market Notice shall govern.

**11.35 EDAM Related Settlements**

Any surcharge or revenue distributed to the CAISO Balancing Authority Area in accordance with Section 33.11 will be allocated to the applicable Scheduling Coordinator pursuant to this Section 11.35, unless allocated directly to a Scheduling Coordinator for a Transmission Ownership Rights holder or Existing Contract rights holder as provided in Section 33.11.1.1.

**11.35.1 Allocation of Revenue and Surcharge associated with EDAM Transfer System Resources for the CAISO Balancing Authority Area**

**11.35.1.1 Day-Ahead Settlement**

**11.35.1.1.1 Settlement of Transfer System Resources Associated with Existing Contract Rights and Transmission Ownership Rights Holders**

For each hour in which the CAISO Balancing Authority Area is distributed revenue or surcharge associated with the settlement of EDAM Transfer System Resources supporting EDAM Transfers in the day-ahead time horizon as provided in Section 33.11.3, and also associated with Existing Contract rights or Transmission Ownership Rights holders that have been scheduled by such parties in accordance with Section 33.18.2.2.1, the CAISO will directly allocate such revenue or surcharge to the applicable Existing Contract rights or Transmission Ownership Rights holder, subtracting the EDAM Transfer revenue associated with these transactions.

#### 11.35.1.1.2 Settlement of Transfer System Resources associated with the CAISO Balancing Authority Area

For each hour in which the CAISO Balancing Authority Area is distributed revenue or surcharge associated with the settlement of EDAM Transfer System Resources in the CAISO Balancing Authority that support EDAM Transfers in the day-ahead time horizon as provided in Section 33.11.3, and not associated with Existing Contract rights and Transmission Ownership Rights holders that scheduled their rights in accordance with Section 33.18.2.2.1, the CAISO will net all CAISO EDAM Transfer System Resource settlement on an hourly basis to exclude EDAM Transfer System Resources associated with Existing Contract rights or Transmission Ownership Rights holders that self-schedule subtracting the applicable EDAM Transfer revenue, and will allocate all such revenue, or surcharge, to Scheduling Coordinators with the allocation ratio determined as the individual Scheduling Coordinator's metered Demand for that hour divided by the total CAISO metered Demand for that hour excluding balanced ETC/TOR metered demand.

### 11.35.1.2 Real-Time Settlement

#### 11.35.1.2.1 Settlement of Transfer System Resources Associated with Existing Contract Rights and Transmission Ownership Rights Holders

For each Settlement Interval in which the CAISO Balancing Authority Area is distributed revenue or surcharge associated with the imbalance energy settlement of EIM Transfer System Resources supporting EIM transfers in the real-time time horizon as provided in Section 29.11(r), and also associated with Existing Contract rights or Transmission Ownership Rights holders that have been scheduled by such parties in accordance with Section 33.18.2.2.1, the CAISO will directly allocate such revenue or surcharge to the applicable Existing Contract rights or Transmission Ownership Rights holder, subtracting the EIM Transfer revenue associated with these transactions.

#### 11.35.1.2.2 Settlement of CAISO Transfer System Resources

For each Settlement Interval in which the CAISO Balancing Authority Area is distributed revenue or surcharge associated with imbalance energy settlement of EIM Transfer System Resources supporting EIM transfers in the real-time time horizon as provided in Section 29.11(r), and not associated with Existing Contract rights or Transmission Ownership Rights holders that scheduled their rights in

accordance with Section 33.18.2.2.1, the CAISO will net all CAISO EIM Transfer System Resources on an hourly basis, subtracting the applicable EIM Transfer revenue, and then allocate all such revenue, or surcharge, to Scheduling Coordinators with the allocation ratio determined as the individual Scheduling Coordinator's metered Demand for that hour divided by the total CAISO metered Demand for that hour excluding balanced ETC/TOR metered demand.

**11.35.2 Allocation of Revenue and Surcharge associated with EDAM Transfer Revenue and EDAM Congestion Revenue for the CAISO Balancing Authority Area**

**11.35.2.1 EDAM Transfer Revenue Settlement**

For each interval in which the CAISO Balancing Authority Area is distributed EDAM Transfer revenue or surcharge for Energy in accordance with Section 33.11.1.1.1, Imbalance Reserves in accordance with Section 33.11.1.1.2, or Reliability Capacity in accordance with Section 33.11.1.1.3, the CAISO will sum all such revenue, or surcharge, in each hour and allocate such revenue, or surcharge, as follows:

**11.35.2.1.1 Existing Rights Released in Support of EDAM Transfers**

To Scheduling Coordinators for Existing Contract rights and Transmission Ownership Rights holders in direct proportion to their released rights where transmission associated with such rights was released in advance as provided for in Section 33.18.2.2.2.

**11.35.2.1.2 Remaining Rights in Support of EDAM Transfers**

To Scheduling Coordinators for Existing Contract rights and Transmission Ownership Rights holders that exercised their rights based on the individual proportion of scheduled transmission rights supporting the EDAM Transfer, with the remainder, allocated pro rata to Scheduling Coordinators based on Measured Demand excluding Demand associated with balanced ETC/TOR Self-Schedules.

**11.35.2.2 EIM Transfer Revenue Settlement**

For each interval in which the CAISO Balancing Authority Area is allocated EIM Transfer revenue or surcharge in accordance with Section 11.5.4.1.5, the CAISO will allocate such revenue, or surcharge, as follows:

**11.35.2.2.1 Existing Rights Released in Support of EIM Transfers**

To Scheduling Coordinators for Existing Contract rights and Transmission Ownership Rights holders in direct proportion to their released rights where transmission associated with such rights was released in

advance as provided for in Section 33.18.2.2.2.

#### 11.35.2.2.2 Remainder Rights in Support of EIM Transfers

To Scheduling Coordinators for Existing Contract rights and Transmission Ownership Rights holders that exercised their rights based on the individual proportion of scheduled transmission rights supporting the EIM transfer, with the remainder, allocated pro rata to Scheduling Coordinators based on Measured Demand excluding Demand associated with balanced ETC/TOR Self-Schedules.

### 11.35.2.3 EDAM Congestion Revenue

For each interval in which the CAISO Balancing Authority Area is distributed EDAM Congestion revenue or surcharge in accordance with Section 33.11.1.2, the CAISO will allocate such revenue, or surcharge as provided in Section 11.2.4.

### 11.35.3 Allocation of EDAM RSE Failure Revenue and Surcharge for the CAISO Balancing Authority Area

For each hour in which the CAISO Balancing Authority Area is distributed revenue or surcharge arising from the EDAM RSE On-Peak Upward Failure Insufficiency Surcharge, the EDAM RSE Off-Peak Upward Failure Insufficiency Surcharge, or the EDAM RSE Downward Failure Insufficiency Surcharge pursuant to Section 33.11.2.2, the CAISO will sum all such revenue, or surcharge, in each hour and allocate such revenue, or surcharge, to each Scheduling Coordinator with the allocation ratio determined as the individual Scheduling Coordinator's metered Demand for that hour divided by the total CAISO metered Demand for that hour.

## 12. Creditworthiness

### 12.1 Credit and Minimum Participation Requirements

(a) The creditworthiness and minimum participation requirements in this section apply to the CAISO's acceptance of any transaction in a CAISO Market, to the payment of charges pursuant to the CAISO Tariff (including the Grid Management Charge), and to establish credit limits for participation in any CAISO auction of CRRs and to CRR Holders for the holding of CRRs. Each Market Participant that has a direct financial relationship with the CAISO (including each Scheduling Coordinator, UDC, MSS, CRR Holder, or Candidate CRR Holder) shall secure its financial transactions with the CAISO (including its participation in any auction of CRRs and for the holding of CRRs) by maintaining an Unsecured Credit Limit and/or by posting Financial Security, the level of which constitutes the Market Participant's Financial Security Amount. For each Market Participant, the sum of its Unsecured Credit Limit and its Financial Security Amount shall represent its Aggregate Credit Limit. Each Market Participant shall have the responsibility to maintain an Aggregate Credit Limit that is at least equal to its Estimated Aggregate Liability.

(b) In order to participate in the CAISO Markets, each prospective Market Participant or existing Market Participant with a direct financial relationship with the CAISO must satisfy all of the following minimum participation requirements:

(i) Provide the CAISO annually, as detailed in the Business Practice Manual, a certified statement executed by an officer of the prospective or existing Market Participant certifying that the prospective or existing Market Participant has met the following criteria and relevant requirements consistent with these criteria set forth in the Business Practice Manual:

(1) Has undergone training commensurate and proportional in sophistication, scope, and frequency to the volume of transactions and the nature and extent of the risk taken by the prospective or existing Market Participant, including but not limited to any applicable CAISO training requirements as specified in Sections 4.5.1.1.10.1 and 36.5.2;

(2) Has and maintains written policies, procedures, and controls approved by the appropriate officer or corporate authority of the prospective or existing Market Participant's governing body which provide an appropriate, comprehensive risk management framework that, at a minimum, clearly identifies and documents the range of risks to which the prospective or existing Market Participant is exposed, including, but not limited to, legal risk, credit risk, liquidity risk, risk of loss of financial security amounts held and invested by the CAISO, investment risk, concentration risk, default risk, operation risk, market risk, and business risk;

(3) To the extent the Market Participant engages in the CRR market, the Market Participant must demonstrate that it has policies in place that are consistent with generally accepted industry risk management standards;

(4) Has appropriate personnel resources, operating procedures and technical abilities to promptly and effectively respond to all CAISO communications and directions, including, but not limited to, the CAISO's issuance of invoices and collateral requests to the prospective or existing Market Participant; and

(5) Satisfies the requirements of Section 12.1(b)(iv).

(ii) Provide annually for CAISO review and verification, as detailed in the Business Practice Manual, the risk management policies, procedures, and controls applicable to the CRR trading activities of the prospective or existing Market Participant, if the prospective or existing Market Participant has a CRR portfolio that meets the applicable risk criterion set forth in the Business Practice Manual.

(iii) Satisfy the capitalization requirement pursuant to Sections 12.1 and 12.1.1; the prospective or existing Market Participant or its guarantor must have at least $1 million in Tangible Net Worth or $10 million in total assets, or post Financial Security of $500,000 using one or more of the forms specified in Section 12.2. In

the event the prospective or existing Market Participant must post Financial Security, that financial security will not be added to Market Participant's Aggregate Credit Limit and, therefore, cannot be used to meet Market Participant's minimum credit requirements to participate in a Congestion Revenue Rights auction or to offset any market obligations as reflected in Market Participant's Estimated Aggregate Liability. However, all Financial Security in any form may be used to satisfy any financial obligation of the Market Participant.

(iv) At all times satisfy the requirements to be one or more of the following:

(1) An "appropriate person" as defined in sections 4(c)(3)(A) through (J) of the Commodity Exchange Act;

(2) An "eligible contract participant," as defined in section 1a(18)(A) of the Commodity Exchange Act and in 17 CFR 1.3(m); or

(3) In the business of generating, transmitting, or distributing electric energy as defined in the Final Order of the Commodity Futures Trading Commission at 78 Fed. Reg. 19879.

As an alternative to satisfying (1), (2) or (3), a Market Participant that participates as a Scheduling Coordinator only and not as a CRR Holder, Candidate CRR Holder or a Convergence Bidding Entity, satisfies this Section 12.1(b)(iv) if it is in the business of providing electric energy services that are necessary to support the reliable operation of the transmission system, as defined in the Final Order of the Commodity Futures Trading Commission at 78 Fed. Reg. 19879.

(c) The CAISO will review and verify that prospective Market Participants satisfy the minimum participation requirements set forth in this Section 12.1, and the CAISO will request any information from prospective Market Participants that is needed to complete the CAISO's review and verification and the CAISO may also request Credit Related Information to complete the CAISO's review and verification. Further, the CAISO will annually select, on a random basis, up to ten (10) percent of the Market Participants that are not already subject to annual verification as set forth in Section 12.1(b)(ii), and the

CAISO will request any information from those randomly selected Market Participants that is needed to review and verify whether the Market Participants continue to satisfy the minimum participation requirements set forth in this Section 12.1 and the CAISO may request Credit Related Information. Each Market Participant randomly selected for annual verification and satisfactorily verified will be exempted from such random verification for the subsequent two (2) years, unless within that two-year period the Market Participant undergoes a Material Change in Financial Condition as set forth in Section 12.1.1.5, in which case the Market Participant will remain subject to random verification within the two-year period. In addition, the CAISO may at any time select any Market Participant for review to determine whether the Market Participant continues to satisfy the minimum participation requirements set forth in this Section 12.1, based on identified risk factors that include, but are not limited to, the CAISO Markets in which the Market Participant is transacting or seeks to transact, the magnitude of the Market Participant's transactions or potential transactions, or the volume of the Market Participant's open positions in the CAISO Markets, or Credit Related Information received from another market operator. Such review by the CAISO based on identified risk factors will not be subject to the two-year period of exemption from random verification.

(d) Each Market Participant shall respond to any CAISO request for information within five (5) Business Days. Failure to provide the requested information within the specified time period may result in the CAISO taking enforcement actions pursuant to Section 12.5. The CAISO may review and verify the information either with or without the assistance of a third party, at the CAISO's discretion, subject to confidentiality and non-disclosure restrictions, as applicable. The CAISO will provide the Market Participant with a written explanation of any deficiencies in the information provided. For purposes of Section 12, any documentation provided by a prospective or existing Market Participant in compliance with this Section shall be treated as confidential, including any Credit Related Information received from another market operator, and the CAISO shall maintain the confidentiality of all such documents. Any CAISO review and verification of the Market

Participant's risk management policies, procedures, and controls will be conducted according to generally accepted risk management standards that may be developed from time to time and shall include but not be limited to confirmation that:

- The Market Participant's risk management framework is documented in a risk policy addressing market, credit, and liquidity risks that has been approved by the Market Participant's risk management governance function, which includes appropriate corporate persons or bodies that are independent of the Market Participant's trading functions, such as a risk management committee, a designated risk officer, a board or board committee, or a board or committee of the Market Participant's parent company;
- The Market Participant maintains an organizational structure with clearly defined roles and responsibilities that segregate front-, middle-, and back-office functions to as high a level as is practicable;
- Delegations of authority specify the transactions in which traders are allowed to enter;
- The Market Participant ensures that traders have adequate training and experience relative to their delegations of authority in systems and the markets in which they transact;
- As appropriate, risk limits are in place to control risk exposures;
- Reporting is in place to ensure risks are adequately communicated throughout the organization;
- Processes are in place for independent confirmation of executed transactions; and
- As appropriate, there is periodic evaluation or mark-to-market of risk positions.

(e) For the minimum participation requirements set forth in Section 12.1(b)(iv), each Market Participant that has a direct financial relationship with the CAISO (including each Scheduling Coordinator, CRR Holder, or Candidate CRR Holder, and any applicant seeking to become a Scheduling Coordinator, CRR Holder, or Candidate CRR Holder)

must demonstrate compliance with Section 12.1(b)(iv) by submitting to the CAISO by the deadline specified in the Business Practice Manual an officer's certificate, in a form acceptable to the CAISO, stating under penalty of perjury that

(i) the Market Participant is in compliance with this requirement, and

(ii) if the certifying entity no longer satisfies the requirements set forth in Section 12.1(b)(iv) it shall immediately notify the CAISO and immediately cease all participation in the CAISO Markets.

A Market Participant that fails to submit the officer's certificate by the deadline specified in the Business Practice Manual shall not be entitled to participate in the CAISO Markets until after the Market Participant submits the certificate required by this Section 12.1(e), as detailed in the Business Practice Manual.

(f) Each prospective Market Participant that does not satisfy all of the minimum participation requirements set forth in Section 12.1 will be prohibited from participating in the CAISO Markets. Each prospective Market Participant taking part in the Scheduling Coordinator certification process pursuant to Section 4.5.1 or the Candidate CRR Holder application process pursuant to Section 4.10.1 that does not satisfy all of the minimum participation requirements set forth in this Section 12.1 will be ineligible to become a Market Participant or CRR Holder. Each existing Market Participant that does not satisfy all of the minimum participation requirements set forth in this Section 12.1 will be out of compliance with the CAISO Tariff. Any failure of a Market Participant to satisfy the minimum participation requirements set forth in Section 12.1(b) will subject the Market Participant to CAISO enforcement actions as set forth in Section 12.5 provided that, for any failure to comply with the minimum participation requirements set forth in Section 12.1(b)(i)-(iii), the Market Participant shall have thirty (30) days to cure after CAISO notification that a failure occurred. In the event a Market Participant no longer satisfies the minimum participation requirements set forth Section 12.1(b)(iv), the Market Participant shall immediately notify the CAISO of this change and immediately cease all participation in CAISO Markets. A Market Participant that no longer satisfies the

minimum participation requirements set forth Section 12.1(b)(iv) shall be subject to CAISO enforcement actions as set forth in Section 12.5.

### 12.1.1 Unsecured Credit Limit

Each Market Participant requesting an Unsecured Credit Limit shall submit an application to the CAISO in the form specified on the CAISO Website. The CAISO shall determine the Unsecured Credit Limit for each Market Participant in accordance with the procedures set forth in the applicable Business Practice Manual. The maximum Unsecured Credit Limit for any Market Participant, and group of Market Participant Affiliates, shall be $50 million. In accordance with the procedures described in the applicable Business Practice Manual, each Market Participant requesting or maintaining an Unsecured Credit Limit is required to submit to the CAISO or its agent financial statements and other information related to its overall financial health as directed by the CAISO. Each Market Participant is responsible for the timely submission of its latest financial statements as well as other information, including, but not limited to, information concerning all entities that are Affiliates or become Affiliates, that may be reasonably necessary for the CAISO to conduct its evaluation. The CAISO shall determine the Unsecured Credit Limit for each Market Participant as described in Sections 12.1.1.1, 12.1.1.1.1, and 12.1.1.1.2.
As a result of the CAISO's credit evaluation, a Market Participant may be given an Unsecured Credit Limit by the CAISO or denied an Unsecured Credit Limit with the CAISO. Following the initial application and the establishment of an Unsecured Credit limit, the CAISO will review each Market Participant's Unsecured Credit Limit on a quarterly basis, unless that entity does not prepare quarterly statements, in which case the review will occur on an annual basis, and no entity shall be required to submit a new application. In addition, the CAISO may review the Unsecured Credit Limit for any Market Participant whenever the CAISO becomes aware of information, including Credit Related Information, that could indicate a Material Change in Financial Condition. In the event the CAISO determines that the Unsecured Credit Limit of a Market Participant must be reduced as a result of a subsequent review due to a reason other than a Material Change in Financial Condition, the CAISO shall notify the Market Participant of the reduction, and shall, upon request, also provide the Market Participant with a written explanation of why the reduction was made. In the event the CAISO determines that the Unsecured Credit Limit of a Market Participant must be reduced as a result of a subsequent review due to a Material

Change in Financial Condition, the CAISO shall notify the Market Participant of the reduction in writing and shall provide the Market Participant with a written explanation of the reasons for the reduction, either in advance of the reduction if reasonably practicable or after the reduction was made if providing the written notification and explanation in advance is not reasonably practicable, as set forth in the applicable Business Practice Manual.

In the event that any credit agency issuer rating or the Moody's Analytics Equivalent Rating of the Market Participant falls below investment grade at any time, the Market Participant will be denied an Unsecured Credit Limit or have its existing Unsecured Credit Limit revoked until (i) the CAISO's next quarterly review of the Market Participant's creditworthiness or (ii) thirty (30) calendar days after the Market Participant's Unsecured Credit Limit is denied or revoked, whichever is later.

#### 12.1.1.1 Unsecured Credit Limit Calculation

An Unsecured Credit Limit (UCL) for each Market Participant that is a Rated or Unrated Public/Private Corporation, a Rated or Unrated Governmental Entity, or a Local Publicly Owned Electric Utility and that requests an Unsecured Credit Limit is calculated as follows:

1. For each Rated Public/Private Corporation, the Unsecured Credit Limit is the lesser of $50 million or an amount equal to the Market Participant's Tangible Net Worth multiplied by a calculated percentage of Tangible Net Worth. The Tangible Net Worth percentage is comprised of fifty percent (50%) of the Market Participant's lowest credit agency issuer rating and fifty percent (50%) of the Moody's Analytics Equivalent Rating, if reasonably applicable. If a Moody's Analytics Equivalent Rating is not reasonably applicable, the Tangible Net Worth percentage is comprised of one hundred percent (100%) of the Market Participant's lowest credit agency issuer rating.
2. For each Unrated Public/Private Corporation, the Unsecured Credit Limit is the lesser of $50 million or an amount equal to the Market Participant's Tangible Net Worth multiplied by a calculated percentage of Tangible Net Worth. The Tangible Net Worth percentage is comprised of one hundred percent (100%) of the Moody's Analytics Equivalent Rating.
3. For each Rated Governmental Entity, the Unsecured Credit Limit is the lesser of $50 million or an amount equal to the Market Participant's Net Assets multiplied by a

calculated percentage of Net Assets. The Net Assets percentage is comprised of one hundred percent (100%) of the Market Participant's lowest credit agency issuer rating.

4.

(a) For each Unrated Governmental Entity other than one that receives appropriations from the federal government or a state government, the Unsecured Credit Limit is the lesser of $50 million or an amount equal to a specified percentage of the Market Participant's Net Assets if the Market Participant has a minimum of $25 million in Net Assets and its Times Interest Earned, Debt Service Coverage and Equity to Assets ratios (as those ratios are defined in the applicable Business Practice Manual) meet or exceed minimums specified in the applicable Business Practice Manual.

(b) For each Unrated Governmental Entity that receives appropriations from the federal government or a state government, the Unsecured Credit Limit is the lesser of $50 million or the amount appropriated by the federal or relevant state government for the purpose of procuring Energy and Energy-related products and services for the applicable fiscal year. The Unrated Governmental Entity seeking to establish an Unsecured Credit Limit pursuant to this section shall provide documentation establishing its annual appropriations.

5. A Local Publicly Owned Electric Utility with a governing body having ratemaking authority that has submitted an application for an Unsecured Credit Limit shall be entitled to an Unsecured Credit Limit of $1 million without regard to its Net Assets. Such Local Publicly Owned Electric Utility shall be entitled to request an Unsecured Credit Limit based on Net Assets as provided in Section 12.1.1.1(3) or 12.1.1.1(4) in order to establish an Unsecured Credit Limit as the greater of $1 million or the amount determined as provided in this Section 12.1.1.1(5). A public entity that is not a Local Publicly Owned Electric Utility is not entitled to an Unsecured Credit Limit of $1 million under this Section 12.1.1.1(5) but may seek to establish an Unsecured Credit Limit as provided in any other provision of the CAISO Tariff that may apply.

Public entities, including Local Publicly Owned Electric Utilities, that operate through a Joint Powers Agreement, or a similar agreement acceptable to the CAISO with the same legal force and effect, shall be entitled to aggregate or assign their Unsecured Credit Limits subject to the following limitations and requirements. A public entity that is a party to a Joint Powers Agreement or similar agreement and that is also participating independently in the CAISO Markets with an established Unsecured Credit Limit shall not be entitled to assign or aggregate any portion of its Unsecured Credit Limit that the public entity is using to support financial liabilities associated with its individual participation in the CAISO Markets. A Local Publicly Owned Electric Utility that operates through a Joint Powers Authority or similar agreement that desires to aggregate a portion of its Unsecured Credit Limit that is equal to or less than $1 million with one or more other Local Publicly Owned Electric Utilities that operate through that Joint Powers Agreement or similar agreement or to assign a portion of its Unsecured Credit Limit that is equal to or less than $1 million to the Joint Powers Authority shall be entitled to do so. A Local Publicly Owned Electric Utility that operates through a Joint Powers Agreement or similar agreement that desires to aggregate its Unsecured Credit Limit with one or more other Local Publicly Owned Electric Utilities that operate through that Joint Powers Agreement or similar agreement or to assign a portion of its Unsecured Credit Limit to the Joint Powers Authority that exceeds $1 million, and any public entity that is not a Local Publicly Owned Electric Utility that operates through a Joint Powers Agreement or similar agreement that desires to aggregate its Unsecured Credit Limit with one or more other Local Publicly Owned Electric Utilities that operate through that Joint Powers Agreement or similar agreement or to assign any portion of its Unsecured Credit Limit to the Joint Powers Authority, shall provide documentation that is acceptable to the CAISO and that demonstrates the Local Publicly Owned Electric Utility or public entity will assume responsibility for the financial liabilities of the Joint Powers Authority associated with the assigned or aggregated portion of the Unsecured Credit Limit. Such documentation may include a guaranty or similar instrument acceptable to the CAISO.

In those cases where a Market Participant is a subsidiary or Affiliate of another entity and would like to utilize the consolidated financial statements and other relevant information of that entity for obtaining an Unsecured Credit Limit, a signed corporate guaranty is required. A guarantor would be considered reasonably acceptable and a corresponding Unsecured Credit Limit would be set based on the

guarantor's credit evaluation according to the procedures that apply to the credit evaluation of a Market Participant pursuant to Section 12.1.1. Unsecured Credit Limits established pursuant to this Section 12.1.1.1 shall be subject to the CAISO's consideration of the same qualitative factors that apply to all Market Participants as set forth in Section 12.1.1.2 and, accordingly, the CAISO may adjust their Unsecured Credit Limits pursuant to Section 12.1.1.

#### 12.1.1.1.1 Maximum Percentage of Tangible Net Worth and Net Assets

For Rated and Unrated Public/Private Corporations or Rated Governmental Entities, the maximum percentage of Tangible Net Worth or Net Assets is 7.5 percent (7.5%) for the highest quality firms; that is, those Market Participants who maintain the highest Moody's Analytics Equivalent Rating and/or highest credit agency issuer rating. The percentage of Tangible Net Worth or Net Assets that a Market Participant qualifies for will be reduced as its credit risk increases as determined by having a lower Moody's Analytics Equivalent Rating and/or lower credit agency issuer rating.

For Unrated Governmental Entities, the CAISO may provide an Unsecured Credit Limit of up to five percent (5%) of Net Assets.

With respect to either of these potential maximum percentages, a lesser amount of unsecured credit may be granted if the CAISO becomes aware of information related to a Material Change in Financial Condition or other significant information that presents a significant risk to the creditworthiness of the entity.

#### 12.1.1.1.2 Unsecured Credit Limit Calculation Steps

A six-step process is used to determine Unsecured Credit Limits for Market Participants that are Rated Public/Private Corporations, Unrated Public/Private Corporations, and Rated Governmental Entities.

**Step 1 –** If the Market Participant has a credit rating(s) from one or more of the Nationally Recognized Statistical Rating Organizations, verify the rating(s) with the appropriate organization. Regardless of the number of ratings available, the lowest rating will be used for purposes of determining the percentage of Tangible Net Worth or Net Assets.

**Step 2 –** Obtain the Market Participant's Moody's Analytics Equivalent Rating.

**Step 3 –** Calculate the percentage of Tangible Net Worth or Net Assets based on the entity type as described in Section 12.1.1.1.

**Step 4 –** Calculate the Market Participant's Tangible Net Worth or Net Assets.

(a) Tangible Net Worth for Rated or Unrated Public/Private Corporations equals total assets minus assets (net of any matching liabilities, assuming the result is a positive value) the CAISO reasonably believes to be restricted or potentially unavailable to settle a claim in the event of a default (examples include restricted assets and Affiliate assets) minus intangible assets (i.e., those assets not having a physical existence such as patents, trademarks, franchises, intellectual property, and goodwill) minus derivative assets (net of any matching liabilities, assuming the result is a positive value) minus total liabilities.

(b) Net Assets for Rated Governmental Entities equals total assets minus assets (net of any matching liabilities, assuming the result is a positive value) the CAISO reasonably believes to be restricted or potentially unavailable to settle a claim in the event of a default (examples include restricted assets) minus total liabilities.

**Step 5 –** Calculate the Market Participant's intermediate Unsecured Credit Limit.

(a) intermediate Unsecured Credit Limit = Tangible Net Worth * percentage of Tangible Net Worth for Rated or Unrated Public/Private Corporations

(b) intermediate Unsecured Credit Limit = Net Assets * percentage of Net Assets for Rated Governmental Entities

**Step 6 –** Adjust the intermediate Unsecured Credit Limit downward, if warranted based on the CAISO's review of qualitative and quantitative credit strength indicators in Section 12.1.1.2.

(a) Final Unsecured Credit Limit = intermediate Unsecured Credit Limit from Step 5 * (0 - 100%)

**12.1.1.2 Credit Strength Indicators**

In determining a Market Participant's Unsecured Credit Limit, the CAISO may rely on information gathered from financial reporting agencies, the general/financial/energy press, other market operators, and provided by the Market Participant to assess its overall financial health and its ability to meet its financial obligations. Information considered by the CAISO in this process may include the following qualitative factors:

(a) Applicant's history;

(b) Nature of organization and operating environment;

(c) Management;

(d) Contractual obligations;

(e) Governance policies;

(f) Financial and accounting policies;

(g) Risk management and credit policies;

(h) Market risk including price exposures, credit exposures and operational exposures;

(i) Event risk;

(j) The state or local regulatory environment; and

(k) Affiliate disclosure information provided pursuant to this CAISO Tariff, including Sections 4.14.2.1, 12.1.1, 39.9, and/or 39.11.1.

Material negative information in these areas may result in a reduction of up to one hundred percent (100%) in the Unsecured Credit Limit that would otherwise be granted based on the six-step process described in Section 12.1.1.1. A Market Participant, upon request, will be provided a written analysis as to how the provisions in Section 12.1.1.1 and this section were applied in setting its Unsecured Credit Limit.

**12.1.1.3 Financial Statements**

Market Participants requesting unsecured credit are required to provide financial statements so that a credit review can be completed. Based on availability, the Market Participant must submit a financial statement for the most recent financial quarter, as well as audited financial statements for the most recent three fiscal years, or the period of existence of the Market Participant, if shorter, to the CAISO or the CAISO's designee. If audited financial statements are not available, financial statements, as described below, should be submitted, signed and attested to by an officer of the Market Participant as a fair representation of the financial condition of the Market Participant in accordance with generally accepted accounting principles. The information should include, but is not limited to, the following:

(a) If publicly traded:

(i) Annual and quarterly reports on Form 10-K and Form 10-Q, respectively

(ii) Form 8-K reports, if any

(b) If privately held or governmentally owned:

(i) Management's discussion & analysis (if available)

(ii) Report of independent accountants (if available)

(iii) Financial statements, including:

- Balance sheet
- Income statement
- Statement of cash flows
- Statement of stockholder's equity

(iv) Notes to financial statements

If the above information is available electronically on the internet, the Market Participant may indicate in written or electronic communication where such statements are located for retrieval by the CAISO or the CAISO's designee.

**12.1.1.4 Determination of Unsecured Credit Limits for Affiliates**

If any Market Participant requesting or maintaining an Unsecured Credit Limit is affiliated with one or more other entities subject to the credit requirements of this Section 12, the CAISO may consider the overall creditworthiness and financial condition of such Affiliates when determining the applicable Unsecured Credit Limit. The maximum Unsecured Credit Limit specified in Section 12.1.1 applies to the combined activity of such Affiliates.

**12.1.1.5 Notification of Material Change in Financial Condition**

Each Market Participant shall notify the CAISO in writing of a Material Change in Financial Condition, within five (5) Business Days of when the Material Change in Financial Condition is known or reasonably should be known by the Market Participant. Examples of a Material Change in Financial Condition may include, but are not limited to:

a) A credit agency or Moody's Analytics equivalent rating downgrade to below investment grade;

b) Being placed on a negative credit watch list by a major rating agency;

c) A bankruptcy filing;

d) Insolvency;

e) The filing of a material lawsuit that could significantly and adversely affect past, current, or future financial results;

f) Restatement of one or more financial statements for a prior year in a way that reduces the amount of unsecured credit that was previously provided;

g) A default in another organized market for which any cure period has expired; or

h) Any change in the financial condition of the Market Participant that exceeds a five (5) percent reduction in the Market Participant's Tangible Net Worth or Net Assets for the Market Participant's preceding fiscal year, calculated in accordance with generally accepted accounting practices.

The provision to the CAISO of a copy of a Form 10-K, Form 10-Q, or Form 8-K filed with the U.S. Securities and Exchange Commission shall satisfy the requirement of notifying the CAISO of such Material Change in Financial Condition if such Material Change in Financial Condition is identified in the Form 10-K, Form 10-Q, or Form 8-K.. Alternatively, the Market Participant may direct the CAISO to the location of the information on their company website or the website of the U.S. Securities & Exchange Commission.

### 12.1.2 Financial Security and Financial Security Amount

A Market Participant that does not have an Unsecured Credit Limit, or that has an Unsecured Credit Limit that is less than its Estimated Aggregate Liability, shall post Financial Security that is acceptable to the CAISO and that is sufficient to ensure that its Aggregate Credit Limit (i.e., the sum of its Unsecured Credit Limit and Financial Security Amount) is equal to or greater than its Estimated Aggregate Liability. The Financial Security posted by a Market Participant may be any combination of the following types of Financial Security provided in favor of the CAISO and notified to the CAISO under Section 12.3:

(a) an irrevocable and unconditional letter of credit issued by a bank or financial institution that is reasonably acceptable to the CAISO; or

(b) a prepayment to the CAISO.

Financial Security instruments as listed above shall be in such form as the CAISO may reasonably require from time to time by notice to Market Participants, or in such other form as has been evaluated

and approved as reasonably acceptable by the CAISO. The CAISO shall publish and maintain standardized forms related to the types of Financial Security listed above on the CAISO Website. The CAISO shall require the use of standardized forms of Financial Security to the greatest extent possible.

#### 12.1.2.1 Additional Procedures Regarding Certain Types of Financial Security

Prepayments to the CAISO will be held in an interest-bearing account or another investment acceptable to the Market Participant and the CAISO, and interest on the investment will accrue at the rate as provided for in the investment. Interest will accrue to the Market Participant's benefit and will be added to the Market Participant's prepayment account on a monthly basis. Due to the additional administrative effort involved in tracking and posting interest on such prepayments, the use of this option is not encouraged.

#### 12.1.2.2 Process for Evaluating Requests to Use Non-Standardized Forms of Financial Security

A Market Participant that seeks permission to use a form for Financial Security other than one or more of the standardized forms posted on the CAISO Website shall seek such permission in a written request to the CAISO that explains the basis for the use of such non-standardized form. The CAISO shall have ten (10) Business Days from receipt of such request to evaluate it and determine whether it will be approved as reasonably acceptable. If the CAISO does not respond to such request within the ten (10) Business Day period, the request shall be deemed to have been denied. Until and unless the CAISO approves the use of a non-standardized form for Financial Security, the Market Participant that submitted such request shall be required to use one of the standardized forms for Financial Security described in this Section 12.1.2.

#### 12.1.2.3 Expiration of Financial Security

Each Market Participant shall ensure that the financial instruments it uses for the purpose of providing Financial Security will not expire and thereby cause the Market Participant's Aggregate Credit Limit to fall below the Market Participant's Estimated Aggregate Liability. The CAISO will treat a financial instrument that does not have an automatic renewal provision and that is not renewed or replaced within seven (7) days of its date of expiration as being out of compliance with the standards for Financial Security contained in this Section 12 and will deem the value of such financial instrument to be zero, and will draw

upon such Financial Security prior to its stated expiration if deemed necessary by the CAISO.

#### 12.1.2.4 Risk of Loss of Financial Security Amounts Held and Invested by the CAISO

In accordance with the CAISO's investment policy, the CAISO will invest each Financial Security Amount of a Market Participant only in bank accounts, money market accounts, and/or U.S. Treasury/Agency securities unless a specific written request is received from the Market Participant for a different type of investment and the CAISO provides its written consent to such alternative investment. A Market Participant that provides a Financial Security Amount that is held and invested by the CAISO on behalf of the Market Participant will bear all risks that such Financial Security Amount will incur a loss of principal and/or interest as a result of the CAISO's investment of such Financial Security Amount.

### 12.1.3 Estimated Aggregate Liability

The CAISO will periodically calculate the Estimated Aggregate Liability of each Market Participant, based on all charges and settlement amounts for which such Market Participant is liable or reasonably anticipated by the CAISO to be liable for pursuant to the CAISO Tariff. The Estimated Aggregate Liability for each Market Participant shall be determined and applied by the CAISO consistent with the procedures set forth in the applicable Business Practice Manual. The CAISO shall upon request provide each Market Participant with information concerning the basis for the CAISO's determination of its Estimated Aggregate Liability, and the CAISO's determination may be disputed in accordance with the procedures set forth in the applicable Business Practice Manual. The CAISO shall compare each Market Participant's Estimated Aggregate Liability against its Aggregate Credit Limit on a periodic basis.

#### 12.1.3.1 Calculation of Estimated Aggregate Liability

##### 12.1.3.1.1 Calculation of the EAL Amount

Except as described in Section 12.1.3.1.2, the CAISO shall use the method described in this Section 12.1.3.1.1 to calculate each Market Participant's Estimated Aggregate Liability (EAL). The Estimated Aggregate Liability represents the amount owed to the CAISO for all unpaid obligations, specifically, the obligations for the number of Trading Days outstanding at a given time based on the CAISO's Payments Calendar plus five (5) Trading Days based on the allowable period for Market Participants to respond to CAISO requests for additional Financial Security collateral (two (2) Business Days), and other liabilities including the value of a Market Participant's CRR portfolio, if negative. The charges the CAISO shall use

to calculate Estimated Aggregate Liability shall be charges described or referenced in the CAISO Tariff. The CAISO shall calculate the Estimated Aggregate Liability for each Market Participant by aggregating the following obligations, including CRR liabilities even though such liabilities are secured separately:

(a) invoiced amounts, i.e., any published but unpaid amounts on Invoices;

(b) published amounts, i.e., amounts for Trading Days for which Settlement Statements have been issued;

(c) estimated amounts, i.e., amounts based on estimated Settlement amounts calculated by the Settlement system using estimated meter data, and other available operational data;

(d) extrapolated amounts, i.e., amounts calculated for Trading Days for which neither actual nor estimated Settlement Statements have been issued;

(e) CRR portfolio value, i.e., the prospective value of the CRR portfolio, if negative, as described in Section 12.6.3;

(f) CRR Auction limit, i.e., the maximum credit limit for participation in a CRR Auction;

(g) CRR Auction awards (prior to invoicing), i.e., amounts to cover winning offers at the completion of the CRR Auction bur prior to invoicing;

(h) Estimated Aggregate Liability adjustments resulting from Virtual Bid Submission Charges and the submission of Virtual Bids and/or receipt of Virtual Awards pursuant to Section 12.8;

(i) past-due amounts, i.e., any unpaid or past due amounts on Invoices;

(j) FERC Annual FERC Charges, i.e., FERC Annual Charges for a Market Participant that has elected to pay such amounts on an annual basis that are owed and outstanding and not already captured in any other component of Estimated Aggregate Liability;

(k) WAC Charges, i.e., WAC amounts for the current year or future years as specified in Section 36.9.2;

(l) Estimated Aggregate Liability adjustments, i.e., adjustments that may be necessary as a result of analysis performed as a result of Section 12.4.2; and

(m) extraordinary adjustments, i.e., adjustments to Settlement amounts related to FERC

proceedings, if known and estimated by the CAISO, as described in Section 12.1.3.1.3. For a Market Participant that maintains multiple BAID numbers, the Estimated Aggregate Liability of the Market Participant as a legal entity shall be calculated by summing the Estimated Aggregate Liabilities for all such BAID numbers and comparing the sum of the Estimated Aggregate Liabilities to the Aggregate Credit Limit of the Market Participant. Market Participants may recommend changes to the liability estimates produced by the CAISO's Estimated Aggregate Liability calculation through the dispute procedures described in Section 12.4.2.

#### 12.1.3.1.2 Calculation Methodology Applicable to New Market Participants

Each new Market Participant (and each Market Participant that has previously been inactive) is required to have an initial Aggregate Credit Limit that is sufficient to cover a minimum of forty-five (45) Trading Days of estimated obligations. This initial credit requirement is based on anticipated transactions in the CAISO Markets, and shall be considered to be equal to the Market Participant's Estimated Aggregate Liability until the CAISO obtains sufficient data from its automated calculation of Estimated Aggregate Liability as described in Section 12.1.3.1.1 to begin relying on that calculation.

#### 12.1.3.1.3 Special Circumstances

##### 12.1.3.1.3.1 Daily Adjustments and Disputes

Charges associated with daily adjustments and disputes that are regularly calculated by the CAISO Settlement system will be included in the CAISO's determinations of Estimated Aggregate Liability as the charges are calculated.

##### 12.1.3.1.3.2 FERC Refund Orders

The CAISO will assess its ability to reasonably calculate the charges associated with a refund before the CAISO's Settlement system is re-run. If the CAISO can reasonably apportion the refund charges to specific Market Participants, it will include the amounts in its calculation of Estimated Aggregate Liability for those Market Participants and will request Financial Security from them accordingly. If the CAISO determines that complexities of a FERC refund order preclude the CAISO from reasonably being able to include refunds in its calculation of Estimated Aggregate Liability, the CAISO will not request Financial Security associated with the required refunds until the refunds are processed through the CAISO Settlement system. However, if feasible, the CAISO will make available to Market Participants, for

informational purposes only, an aggregate forecast of the effect that providing the refunds will have on the CAISO's calculation of Estimated Aggregate Liability.

#### 12.1.3.1.3.3 CAISO ADR Procedures

The CAISO will handle transactions associated with the CAISO ADR Procedures in the same manner as transactions associated with refunds provided pursuant to Section 12.1.3.1.3.2.

### 12.2 Review of Creditworthiness

The CAISO may review the creditworthiness of any Market Participant that delays or defaults in making payments due under the CAISO Tariff and, as a consequence of that review, may require such Market Participant, whether or not it has an Unsecured Credit Limit, to provide credit support in the form of any of the following types of Financial Security:

(a) an irrevocable and unconditional letter of credit by a bank or financial institution reasonably acceptable to the CAISO; or

(b) a prepayment to the CAISO.

The CAISO may require the Market Participant to maintain such Financial Security for at least one (1) year from the date of such delay or default.

### 12.3 Posting and Releases of Financial Security

Each Market Participant required to provide a Financial Security Amount under Section 12.1.2 shall notify the CAISO of the initial Financial Security Amount that it wishes to provide at least fifteen (15) days in advance and shall ensure that the CAISO has received such Financial Security Amount prior to the date the Market Participant commences activity through the CAISO, or the date the CRR Holder or Candidate CRR Holder participates in the applicable auction of CRRs. A Market Participant may at any time increase its Financial Security Amount by providing additional Financial Security in accordance with Section 12.1.2. A Market Participant may request that its Financial Security Amount be reduced or released by making its request not fewer than fifteen (15) days prior to the date on which the reduction or release is requested to occur. The CAISO shall evaluate the request and inform the Market Participant within ten (10) Business Days either that a reduction or release of the Financial Security Amount is permissible, that a reduction or release of the Financial Security Amount is impermissible, or that the

CAISO requires more information from the Market Participant in order to make its determination. The CAISO may decline to reduce or release a Financial Security Amount or may release a lesser amount for any of the following reasons:

(a) The Estimated Aggregate Liability for the Market Participant cannot be accurately determined due to a lack of supporting Settlement charge information.

(b) The most recent liabilities of the Market Participant are volatile to a significant degree and a reduction or release of the Financial Security Amount would present a high likelihood that, after the Financial Security Amount was reduced or released, the Estimated Aggregate Liability for the Market Participant, as calculated by the CAISO, would exceed its Aggregate Credit Limit.

(c) The Market Participant has provided notice or otherwise demonstrated that it is terminating or significantly reducing its participation in the CAISO Markets. The CAISO may retain a portion of the Financial Security Amount to ensure that the Market Participant is adequately secured with respect to pending liabilities that relate to Settlement re-runs or other liabilities for which the Market Participant may be responsible under this CAISO Tariff.

### 12.3.1 Self-Supply of UDC Demand

Notwithstanding anything to the contrary in the CAISO Tariff, a Scheduling Coordinator or UDC that is an Original Participating Transmission Owner or is a Scheduling Coordinator for an Original Participating Transmission Owner shall not be precluded by Section 12.3 from scheduling transactions that serve a UDC's Demand from

(1) a resource that the UDC owns; and

(2) a resource that the UDC has under contract to serve its Demand.

## 12.4 Calculation of Ongoing Financial Security Requirements

Following the date on which a Market Participant commences trading, if the Market Participant's Estimated Aggregate Liability, as calculated by the CAISO, at any time exceeds its Aggregate Credit Limit, the CAISO shall direct the Market Participant to post an additional Financial Security Amount within two (2) Business Days that is sufficient to ensure that the Market Participant's Aggregate Credit Limit is at

least equal to its Estimated Aggregate Liability. The CAISO shall also notify a Market Participant if at any time its Estimated Aggregate Liability exceeds ninety (90) percent of its Aggregate Credit Limit. For the purposes of calculating the Market Participant's Estimated Aggregate Liability, the CAISO shall include (1) outstanding charges for Trading Days for which Settlement data is available, and (2) an estimate of charges for Trading Days for which Settlement data is not yet available. To estimate charges for Trading Days for which Settlement data is not yet available, the CAISO will consider available historical Settlement data, and other available operational and market data as described in the applicable Business Practice Manual.

**12.4.1 Resolution of a CAISO Request for Additional Security Amount**

A Market Participant has two (2) Business Days to resolve a CAISO request for additional Financial Security. Within the two (2) Business Days, the Market Participant must either demonstrate to the CAISO's satisfaction that the CAISO's Financial Security request is entirely or partially unnecessary, or post the required Financial Security Amount calculated by the CAISO. If the CAISO and the Market Participant are unable to agree on the appropriate level of Financial Security during the two (2) Business Day review period, the Market Participant must post the additional Financial Security and may continue with the dispute process described in Section 12.4.2. Any excess Financial Security Amounts will be returned to the Market Participant if the dispute process finds in favor of the Market Participant.

**12.4.2 Dispute Process for a Request for Additional Security Amount**

Market Participants may dispute the Estimated Aggregate Liability calculated by the CAISO and, as a result, the CAISO may reduce or cancel a requested Financial Security adjustment. The following steps are required for a Market Participant to dispute a Financial Security request resulting from the CAISO's calculation of Estimated Aggregate Liability:

(1) Request by the Market Participant to review the CAISO calculation.

(2) A reasonable and compelling situation presented, as determined by the Market Participant's CAISO client representative.

(3) Documentation of facts and circumstances that evidence that the CAISO's calculation of Estimated Aggregate Liability results in an excessive and unwarranted Financial Security posting requirement.

(4) Approval by the CAISO Manager and/or Director of Customer Services and Industry Affairs and approval by the CAISO Treasurer.

(5) The CAISO may decline to adjust the initial Estimated Aggregate Liability, as calculated by the CAISO, if the Market Participant has had Financial Security shortfalls in the past twelve (12) months (i.e., it has been shown that the Market Participant's Aggregate Credit Limit at times during the preceding twelve (12) months has been insufficient to cover the Market Participant's Estimated Aggregate Liability).

In no such case shall a CAISO request for increased Financial Security remain outstanding for more than two (2) Business Days. Either the above process is to be completed within two (2) Business Days from the date of the CAISO request for additional Financial Security, or the Market Participant is to post additional Financial Security within the two (2) Business Days and continue this process, which may result in a return of posted Financial Security back to the Market Participant if the results of the dispute process are found to favor the Market Participant.

Factors for consideration in the event this dispute process is utilized include: weighing the risk of using the lower figure to the potential detriment of market creditors if the Market Participant is under-secured and defaults, against the desire not to impose additional potentially unwarranted costs on a Market Participant; equity and consistency of treatment of Market Participants in the dispute process; and the evidentiary value of the information provided by the Market Participant in the dispute process.

### 12.5 CAISO Enforcement Actions

#### 12.5.1 Under-Secured and Non-Compliant Market Participants

The CAISO may take action under this Section 12.5.1 against a Market Participant if its Estimated Aggregate Liability, as calculated by the CAISO, at any time exceeds its Aggregate Credit Limit, or if a Market Participant fails to satisfy all of the minimum participation requirements set forth in Section 12.1. However, before taking action against a Market Participant based on failure to comply with Section 12.1(a) or 12.1(b)(i)-(iii), the CAISO must first notify the Market Participant of the failure and allow it thirty (30) days after notification to cure the failure. The CAISO may take any or all of the following actions:

(a) The CAISO may withhold a pending payment distribution.

(b) The CAISO may limit trading, which may include rejection of Bids, including Self-

Schedules, rejection or cancellation of Inter-SC Trades in their entirety (i.e., both sides of the Inter-SC Trade) at any time, and/or limiting other CAISO Market activity, including limiting eligibility to participate in a CRR Allocation or CRR Auction. In such case, the CAISO shall notify the Market Participant of its action and the Market Participant shall not be entitled to participate in the CAISO Markets or CRR Auctions or submit further Bids, including Self-Schedules, or otherwise participate in the CAISO Markets until the Market Participant posts an additional Financial Security Amount that is sufficient to ensure that the Market Participant's Aggregate Credit Limit is at least equal to its Estimated Aggregate Liability.

(c) The CAISO may require the Market Participant to post an additional Financial Security Amount in lieu of an Unsecured Credit Limit for a period of time.

(d) The CAISO may restrict, suspend, or terminate the Market Participant's CRR Entity Agreement or any other service agreement.

(e) The CAISO may resell the CRR Holder's CRRs in whole or in part, including any Long Term CRRs, in a subsequent CRR Auction or bilateral transaction, as appropriate.

(f) The CAISO will not implement the transfer of a CRR if the transferee or transferor has an Estimated Aggregate Liability in excess of its Aggregate Credit Limit.

In addition, the CAISO may restrict or suspend a Market Participant's right to submit further Bids, including Self-Schedules, or require the Market Participant to increase its Financial Security Amount if at any time such Market Participant's potential additional liability for imbalance energy and other CAISO charges is determined by the CAISO to be excessive by comparison with the likely cost of the amount of Energy reflected in Bids or Self-Schedules submitted by the Market Participant.

### 12.5.2 Late Posting Of Financial Security

Each Market Participant that is late in posting Financial Security within two (2) Business Days as required by Section 12.4 will be subject to the following enforcement actions:

(a) After each of the first two (2) times during a rolling twelve (12) month period that a Market Participant is late in posting additional Financial Security within two (2) Business Days as required by Section 12.4, the CAISO will send the delinquent Market Participant a

warning notice.

(b) After the third time during a rolling twelve (12) month period that a Market Participant is late in posting additional Financial Security, the CAISO may require the Market Participant to post an additional Financial Security Amount that is as high as the highest level of the Market Participant's Estimated Aggregate Liability during the preceding twelve (12) months. The CAISO will hold such additional Financial Security Amount for no fewer than twelve (12) months following the month in which the Market Participant's third delinquency occurs, and the CAISO may then return to the Market Participant all or a portion of such additional Financial Security Amount if, during the intervening time, the Market Participant has timely posted all further additional Financial Security Amounts requested by the CAISO and has timely paid all of the amounts set forth in the Invoices from the CAISO.

(c) After the third time and each subsequent time during a rolling twelve (12) month period beginning no earlier than April 7, 2010 that a Market Participant is late in posting additional Financial Security, the CAISO will assess a penalty to the Market Participant equal to the greater of $1,000 or two (2) percent of the additional Financial Security Amount that the Market Participant has been late in posting, up to a maximum amount of $20,000 per each late posting for which the CAISO assesses a penalty pursuant to this Section 12.5.2(c). This penalty will be included in the next Invoice to the Market Participant. Penalty amounts collected by the CAISO pursuant to this Section 12.5.2(c) will be treated as set forth in Section 11.29.9.6.4.

(d) After the fourth and any subsequent times during a rolling twelve (12) month period that a Market Participant is late in posting additional Financial Security, the CAISO may extend the time period that it holds all or a portion of the additional Financial Security Amount resulting from the Market Participant's third delinquency during a rolling twelve (12) month period as described in Section 12.5.2(b).

(e) After the fifth time during a rolling twelve (12) month period beginning no earlier than April 7, 2010 that a Market Participant is late in posting additional Financial Security, the

CAISO may, notwithstanding any other provision of the CAISO Tariff, (i) suspend any and all rights of the Market Participant under the CAISO Tariff, effective immediately after the CAISO sends written notice of the suspension to the Market Participant, and (ii) terminate any agreement entered into between the CAISO and the Market Participant that allows the Market Participant to participate in the CAISO Markets, effective upon the date the CAISO sends written notice of the termination to the Market Participant or upon the date established in accordance with FERC rules if FERC rules require the CAISO to file the notice of termination with FERC. If the CAISO sends a notice of suspension or termination to a Market Participant pursuant to this Section 12.5.2(e), the Market Participant will not have the right to prevent such suspension or termination by curing its late posting of additional Financial Security. The CAISO will, following termination of an agreement pursuant to this Section 12.5.2(e) and within thirty (30) days of being satisfied that no sums remain owing by the Market Participant under the CAISO Tariff, return or release to the Market Participant, as appropriate, any money or credit support provided by such Market Participant to the CAISO under Section 12.

(f) Any time that a Market Participant is late in posting additional Financial Security, the CAISO may also take other enforcement actions as described in this Section 12 and in the applicable Business Practice Manual, if deemed necessary by the CAISO to protect the financial integrity of the CAISO Markets.

## 12.6 Credit Obligations Applicable to CRRs

### 12.6.1 Credit Requirements for CRR Allocations

Subject to applicable requirements of Section 36.9.2 concerning the prepayment of Wheeling Access Charges, Load Serving Entities eligible to participate in any CRR Allocation are not required to provide additional Financial Security in advance of a CRR Allocation.

### 12.6.2 Credit Requirements for CRR Auctions

#### 12.6.2.1 Credit Requirements Applicable to an Entity Other than a Federal Agency

To establish available credit for participating in any CRR Auction, each CRR Holder or Candidate CRR

Holder that is not a federal agency must satisfy the credit requirements set forth in Section 12.1 and provide Financial Security using one or more of the forms identified in Section 12.2 to secure the right to participate in the CAISO's CRR Auctions as set forth below. In order to participate in an annual CRR Auction, the CRR Holder or Candidate CRR Holder must have Financial Security using one or more of the forms identified in Section 12.2 in an amount that is the greater of $500,000 or the sum of the maximum credit exposures of all of the CRR Holder's or Candidate CRR Holder's bids for CRRs submitted in the annual CRR Auction. In order to participate in a monthly CRR Auction, the CRR Holder or Candidate CRR Holder must have Financial Security using one or more of the forms identified in Section 12.2 in an amount that is the greater of $100,000 or the sum of the maximum credit exposures of all of the CRR Holder's or Candidate CRR Holder's bids for CRRs submitted in the monthly CRR Auction. The maximum credit exposure of a positively valued CRR bid is the maximum value of the CRR Holder's or Candidate CRR Holder's bid quantity (MW) multiplied by the sum of the bid price corresponding to the bid quantity and the Credit Margin of the CRR within the range of the minimum and maximum bid quantities submitted by the CRR Holder or Candidate CRR Holder. The maximum credit exposure of a negatively valued CRR bid is the maximum bid quantity (MW) submitted by the CRR Holder or Candidate CRR Holder multiplied by the Credit Margin of the CRR.

#### 12.6.2.2 Credit Requirements Applicable to a Federal Agency

To establish available credit for participating in any CRR Auction, each CRR Holder or Candidate CRR Holder that is a federal agency must provide to the CAISO a letter, executed by an officer of the CRR Holder or Candidate CRR Holder, that satisfies all of the following requirements: (1) attests that the federal agency is lawfully authorized to participate in the CRR Auction and that any debt the federal agency incurs due to its participation in the CRR Auction is a debt of the United States; (2) identifies the current year's appropriations for the federal agency from the United States Congress; and (3) verifies that the amount of the current year's appropriations for the federal agency from the United States Congress meets or exceeds the amount required to satisfy the credit requirements set forth in Section 12.1. The provision of such an executed letter to the CAISO shall constitute sufficient Financial Security for the federal agency to participate in the CRR Auction.

#### 12.6.2.3 Failure to Satisfy Credit Requirements

A CRR Holder or Candidate CRR Holder that fails to satisfy the credit requirements set forth in Section 12.6.2.1 or Section 12.6.2.2, as applicable, shall not be permitted to participate in the relevant CRR Auction, or shall have bids the entire CRR bid portfolio, consisting of one or more CRR bids, exceeding its available Financial Security as defined in this section for participation in the CRR Auction, in accordance with the above formula, rejected by the CAISO on a last-in, first-out basis. The CAISO will retain the CRR Auction proceeds for negatively valued CRRs and will apply them to credit requirements of the applicable CRR Holder.

**12.6.3 Credit Requirements for the Holding of CRRs**

(a) Each CRR Holder that is not a federal agency, whether it obtains CRRs through a CRR Allocation or a CRR Auction, must maintain Financial Security utilizing one or more of the forms specified in Section 12.2 that meets or exceeds the credit requirement of the CRR portfolio determined as described in this Section 12.6.3. Each CRR Holder that is a federal agency, whether it obtains CRRs through a CRR Allocation or a CRR Auction, must provide to the CAISO a letter, executed by an officer of the CRR Holder, that satisfies all of the following requirements: (1) attests that the federal agency is lawfully authorized to obtain the CRRs and that any debt the federal agency incurs due to holding the CRRs is a debt of the United States; (2) identifies the current year's appropriations for the federal agency from the United States Congress; and (3) verifies that the amount of the current year's appropriations for the federal agency from the United States Congress meets or exceeds the credit requirement for the CRR portfolio determined as described in this Section 12.6.3. The provision of such an executed letter to the CAISO shall constitute sufficient Financial Security for the federal agency to hold the CRRs.

(b) Each CRR Holder shall be required to ensure that its Financial Security is sufficient to satisfy the credit requirements described in this Section 12.6.3. Except as provided in this paragraph, CRRs are evaluated on a portfolio basis as follows. If a CRR Holder owns more than one (1) CRR, such CRR Holder shall be subject to an overall credit requirement that is equal to the sum of the individual credit requirements applicable to each of the CRRs held by such CRR Holder , which is calculated after the MW

associated with any Offsetting CRRs are netted out. If this sum is positive, the amount will be added to the CRR Holder's Estimated Aggregate Liability. However, if the sum is negative, the CRR Holder's Estimated Aggregate Liability shall not be reduced. If a CRR Holder holds one (1) or more CRRs obtained through a CRR Allocation and also holds one (1) or more CRRs obtained through a CRR Auction, the individual credit requirements applicable to any of the CRRs obtained through a CRR Allocation may not be netted against the individual credit requirements applicable to any of the CRRs obtained through a CRR Auction in determining such CRR Holder's Estimated Aggregate Liability.

(c) The CAISO shall reevaluate the credit requirements for holding CRRs, and shall adjust the credit requirements accordingly, not less than monthly. The CAISO may adjust the credit requirements for holding CRRs with terms of one (1) year or less at the CAISO's discretion to account for changes in the monthly auction prices for CRRs and changes in the Historical Expected Values for CRRs, or more frequently than monthly if necessary if the CAISO finds that actual or anticipated market conditions indicate that CRR credit requirements may be inadequate to cover the financial risk of the CRRs. The CAISO may also adjust the credit requirements for holding Long Term CRRs annually to reflect the changes in auction prices of one-year CRRs in annual auctions and changes in the Historical Expected Values for CRRs, and to reflect updates to Credit Margins based on actual Locational Marginal Price data derived from market operations. Whenever the CAISO requests additional Financial Security from a Market Participant as a result of a change in CRR value that is not related to an adjustment due to the monthly CRR Auction Price or an adjustment related to Historical Expected Value, the CAISO will provide a written explanation of the reason for that request. Any additional Financial Security must be in one or more of the forms specified in Section 12.2.

(d) In cases where the ownership of a CRR is to be transferred through the Secondary Registration System, the CAISO shall evaluate and adjust the credit requirements for both the current owner of the CRR and the prospective owner of the CRR as appropriate

prior to the transfer. If additional Financial Security is required from either the current or prospective owner, the transfer will not be completed until such Financial Security has been provided to and accepted by the CAISO. CRRs transferred through the Secondary Registration System will be treated like auctioned CRRs for the purpose of calculating the credit requirements for holding the CRRs, regardless of whether the CRRs were originally allocated or purchased at auction or acquired through the Secondary Registration System. CRRs assigned to Load-gaining or Load-losing Load Serving Entities as a result of Load Migration will be treated like allocated CRRs for the purpose of calculating the credit requirements for holding the CRRs. Any additional Financial Security must be in one or more of the forms specified in Section 12.2.

**12.6.3.2 Calculation of the Credit Amount Required to Hold a CRR with a Term of One Year or Less**

Each CRR Holder that holds a CRR with a term of one year or less shall be subject to a credit requirement ($/MW) equal to the negative of the most recent CRR Auction Price of such CRR or the Historical Expected Value of such CRR, whichever is lower, plus the Credit Margin for such CRR. The CRR Auction Price will be used until twelve (12) months of historical market operations data are available.

**12.6.3.3 Calculation of the Credit Amount Required to Hold a Long Term CRR**

Each CRR Holder that holds a Long Term CRR shall be subject to a credit requirement ($/MW) equal to the negative of the most recent annual CRR Auction Price of a CRR with the same CRR Source and CRR Sink as the Long Term CRR or the Historical Expected Value of such a CRR, whichever is lower, plus the Credit Margin calculated for the CRR but with only a one-year term. If there is less than one year remaining in the term of a Long Term CRR, the credit requirement shall be determined pursuant to Section 12.6.3.2.

**12.6.3.4 Calculation of Credit Margin**

The Credit Margin ($/MW) for a CRR is equal to (i) the Expected Congestion Revenue minus (ii) the Fifth Percentile Congestion Revenue of such CRR. Both values will be based on the probability distribution of Congestion revenue of such CRR calculated using historical Locational Marginal Price data, when available, and proxy values, including data taken from Locational Marginal Price studies conducted by the

CAISO, until such time as historical Locational Marginal Price data is available, with the details of such calculation published in a Business Practice Manual. The CAISO may reassess its determinations regarding the Credit Margin determination at any time and shall require additional Financial Security if the reassessment results in an increase in a CRR Holder's CRR credit requirements that are not covered by the CRR Holder's Financial Security. Any additional Financial Security must be in one or more of the forms specified in Section 12.2.

#### 12.6.4 Credit Requirements for Sales of Allocated CRRs

Each Load Serving Entity that sells a CRR obtained through a CRR Allocation shall, as a prerequisite to the sale of any such CRR, have an Aggregate Credit Limit with a sufficient margin to cover the credit requirement for holding the Offsetting CRR that the Load Serving Entity would be responsible for assuming in the event of Load Migration from the Load Serving Entity to another Load Serving Entity pursuant to Section 36.8.5.3. The credit requirement for holding the Offsetting CRR will be included in the Estimated Aggregate Liability of the Load Serving Entity upon the transfer of the allocated CRR.

### 12.7 [Not Used]

### 12.8 Credit Requirements Applicable to Virtual Bids

#### 12.8.1 Credit Check in the Day-Ahead Market

##### 12.8.1.1 Credit Check Requirements

For each Scheduling Coordinator that submits one or more Virtual Bids in the Day-Ahead Market, the CAISO will estimate the total value of all of the submitted Virtual Bids after the Virtual Bids have been validated in accordance with Section 30.7.3. In all circumstances except where the Scheduling Coordinator submits both a Virtual Supply Bid and a Virtual Demand Bid at the same Eligible PNode or Eligible Aggregated PNode for the same Trading Hour, the CAISO will estimate the total value of the submitted Virtual Bids at each Eligible PNode or Eligible Aggregated PNode for each Trading Hour by calculating the sum of the products of the absolute values of the MWs of the submitted Virtual Bids multiplied by the applicable Virtual Bid Reference Price at the Eligible PNode or Eligible Aggregated PNode for all Trading Hours. In circumstances where the Scheduling Coordinator submits both a Virtual

Supply Bid and a Virtual Demand Bid at the same Eligible PNode or Eligible Aggregated PNode for the same Trading Hour, the CAISO will estimate the total value of the submitted Virtual Bids at the Eligible PNode or Eligible Aggregated PNode for the Trading Hour by calculating the greater of (i) the product of the absolute value of the MW of the submitted Virtual Supply Bid multiplied by the Virtual Bid Reference Price for Virtual Supply Bids at the Eligible PNode or Eligible Aggregated PNode or (ii) the product of the absolute value of the MW of the submitted Virtual Demand Bid multiplied by the Virtual Bid Reference Price for Virtual Demand Bids at the Eligible PNode or Eligible Aggregated PNode. The CAISO will then adjust the Scheduling Coordinator's Estimated Aggregate Liability to include the CAISO's estimate of the total value of the submitted Virtual Bids. If the adjusted Estimated Aggregate Liability is greater than the Scheduling Coordinator's Aggregate Credit Limit, the CAISO will reject the Scheduling Coordinator's submitted Virtual Bids. After rejection of its submitted Virtual Bids, a Scheduling Coordinator may submit revised Virtual Bids, subject to the timelines set forth in the CAISO Tariff and the applicable Business Practice Manual regarding the submission of Bids.

#### 12.8.1.2 Temporary Suspension of Virtual Bidding

In the event that the financial exposure of Scheduling Coordinators cannot be determined pursuant to Section 12.8.1.1 with a reasonable degree of accuracy due to factors such as software or system failures, the CAISO may temporarily suspend virtual bidding. If the CAISO temporarily suspends virtual bidding pursuant to this Section 12.8.1.2, as soon as reasonably practicable, the CAISO will notify FERC and Market Participants of the reason(s) for any suspension of virtual bidding, the action(s) necessary to restore virtual bidding, and the estimated time required to restore virtual bidding. The CAISO does not intend to suspend virtual bidding in the event of brief intermittent software or system failures or where the CAISO anticipates the credit checking functionality will be available prior to the close of the Day-Ahead Market. During instances of software or system failures that extend past the close of the Day-Ahead Market and in the absence of any suspension of virtual bidding, the CAISO will accept pending Virtual Bids at the close of the Day-Ahead Market even though the Virtual Bids have not been validated by the credit checking functionality. Any resulting financial obligations will be included in the next available calculation of each Scheduling Coordinator's Estimated Aggregate Liability.

### 12.8.2 Virtual Bid Reference Prices

For Virtual Supply Bids, the Virtual Bid Reference Price will be the 95th percentile value of the difference between the LMP in the Real-Time Market and the LMP in the Day-Ahead Market at a given Eligible PNode or Eligible Aggregated PNode. For Virtual Demand Bids, the Virtual Bid Reference Price will be the 95th percentile value of the difference between the LMP in the Day-Ahead Market and the LMP in the Real-Time Market at a given Eligible PNode or Eligible Aggregated PNode. Each Virtual Bid Reference Price will be calculated in $/MWh. The CAISO will calculate the Virtual Bid Reference Price for each Eligible PNode or Eligible Aggregated PNode for three-month periods (covering January-March, April-June, July-September, and October-December) of each year using the hourly actual LMPs for the same period of the previous year.

**12.8.3 Adjustment of EAL after Close of the DAM**

After the Day-Ahead Market closes but before the Real-Time Market closes, the CAISO will recalculate the estimate of the total liability of the Virtual Bids of each Scheduling Coordinator based on the MW quantity that cleared in the Day-Ahead Market. The revised total estimated liability will equal the sum of the products of the absolute values of the amounts of MWs of Virtual Awards multiplied by the Virtual Bid Reference Price. The CAISO will then adjust the Estimated Aggregate Liability of the Scheduling Coordinator to reflect the revised total estimated liability of the Virtual Bids as calculated by the CAISO.

**12.8.4 Adjustment of EAL after the Close of the RTM**

After the Real-Time Market closes, the CAISO will recalculate the total liability of each Scheduling Coordinator with Virtual Awards based on the MW quantity that cleared in the Day-Ahead Market and the LMPs produced in the Day-Ahead Market and Real-Time Market. The total liability of a Scheduling Coordinator will equal the sum of the liability of each Virtual Bid submitted by the Scheduling Coordinator that cleared in the Day-Ahead Market. The liability of a Virtual Supply Bid will equal the product of the value of the amount of cleared MWs multiplied by the difference between the Real-Time LMP and the Day-Ahead LMP at the Eligible PNode or Eligible Aggregated PNode at which the Virtual Supply Bid was submitted. The liability of a Virtual Demand Bid will equal the product of the value of the amount of cleared MWs multiplied by the difference between the Day-Ahead LMP and the Real-Time LMP at the Eligible PNode or Eligible Aggregated PNode at which the Virtual Demand Bid was submitted. The Estimated Aggregate Liability will be adjusted accordingly and will continue to be adjusted as a result of

any price correction made in accordance with Section 35.

# 13. Dispute Resolution

## 13.1 Applicability

### 13.1.1 General Applicability

Except as limited below or otherwise as limited by law (including the rights of any party to file a complaint with FERC under the relevant provisions of the FPA), the CAISO ADR Procedures shall apply to all disputes between parties which arise under the CAISO Documents except where the decision of the CAISO is stated in the provisions of this CAISO Tariff to be final. The CAISO ADR Procedures shall not apply to:

(1) Disputes arising under contracts which pre-date the CAISO Operations Date, except as the disputing parties may otherwise agree;

(2) Disputes as to whether rates and charges set forth in this CAISO Tariff are just and reasonable under the FPA.

### 13.1.2 Disputes Involving Government Agencies

If a party to a dispute is a government agency the procedures herein that provide for the resolution of claims and arbitration of disputes are subject to any limitations imposed on the agency by law, including but not limited to the authority of the agency to effect a remedy. If the governmental agency is a federal entity, the procedures herein shall not apply to disputes involving issues arising under the United States Constitution.

### 13.1.3 Injunctive and Declaratory Relief

Where the court having jurisdiction so determines, use of the CAISO ADR Procedures shall not be a condition precedent to a court action for injunctive relief nor shall the provisions of California Code of Civil Procedure sections 1281 et seq. apply to such court actions.

### 13.1.4 Disputes Arising Under Section 11

In the case of a dispute of a Settlement Statement under section 11.29.8.2 or 11.29.7.4, a Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO must initiate any good faith negotiation or other dispute resolution remedy under this Section 13 within 90 days of the day on which the CAISO provides notice of its resolution of a dispute under such section.

### 13.2 Negotiation and Mediation

#### 13.2.1 Negotiation

The CAISO and Market Participants (party or parties) shall make good-faith efforts to negotiate and resolve any dispute between them arising under CAISO Documents prior to invoking the CAISO ADR Procedures outlined herein. Each party shall designate an individual with authority to negotiate the matter in dispute to participate in such negotiations.

#### 13.2.2 Statement of Claim

In the event a dispute is not resolved through such good-faith negotiations, any one of the parties may submit a statement of claim, in writing, to each other disputing party, and the CAISO ADR Coordinator, which submission shall commence the CAISO ADR Procedures. The statement of claim shall set forth in reasonable detail (i) each claim, (ii) the relief sought, including the proposed award, if applicable, (iii) a summary of the grounds for such relief and the basis for each claim, (iv) the parties to the dispute, and (v) the individuals having knowledge of each claim. The other parties to the dispute shall similarly submit their respective statements of claim within fourteen (14) days of the date of the initial statement of claim or such longer period as permitted by mutual agreement of the parties. If any responding party wishes to submit a counterclaim in response to the statement of claim, it shall be included in such party's responsive statement of claim. A summary of the statements of claim shall be published by the CAISO on the CAISO Website, by Market Notice, and any other method chosen by the CAISO ADR Coordinator. No Market Participant shall be considered as having received notice of a claim decided or relief granted by a decision made under these procedures unless the summary of the statements of claim published by the CAISO includes such claim or relief.

#### 13.2.3 Selection of Mediator

After submission of the statements of claim, the parties may request mediation, if at least seventy-five percent (75%) of the disputing parties so agree, except that where a dispute involves three parties, at least two of the parties must agree to mediation. If the parties agree to mediate, the CAISO ADR Coordinator shall distribute to the parties by facsimile or other electronic means a list containing the names of at least seven prospective mediators with mediation experience, or with technical or business experience in the electric power industry, or both, as he or she shall deem appropriate to the dispute.

The parties shall have seven days from receipt of the CAISO ADR Coordinator's list of prospective mediators to agree upon a mediator from the list provided or from any alternative source, , unless the time is extended by mutual agreement. If the parties cannot agree on a mediator, any party may request from the American Arbitration Association a list of at least seven mediators with technical or business experience in the electric power industry, or both. The parties will alternate in striking names from the list with the last name on the list becoming the mediator. The first party to strike off a name from the list shall be determined by lot. The parties shall have seven days from receipt of the list from the American Arbitration Association to complete the mediator selection process and appoint the mediator, unless the time is extended by mutual agreement. The mediator shall comply with the requirements of Section 13.3.2

**13.2.4 Mediation**

The mediator and representatives of the disputing parties, with authority to settle the dispute, shall within fourteen (14) days after the mediator's date of appointment schedule a date to mediate the dispute. Matters discussed during the mediation shall be confidential and shall not be referred to in any subsequent proceeding. With the consent of all disputing parties, a resolution may include referring the dispute directly to a technical body (such as a WECC technical advisory panel) for resolution or an advisory opinion, or referring the dispute directly to FERC. The CAISO shall publish notice of the referral of the dispute on the CAISO's Website, and any other method adopted by the CAISO ADR Coordinator.

**13.2.5 Demand for Arbitration**

If the disputing parties have not succeeded in negotiating a resolution of the dispute within thirty (30) days of the initial statement of claim or, if within that period the parties agreed to mediate, within thirty (30) days of the parties first meeting with the mediator, such parties shall be deemed to be at impasse and any such disputing party may then commence the arbitration process, unless the parties by mutual agreement agree to extend the time. A party seeking arbitration shall provide notice of its demand for arbitration to the other disputing parties, the CAISO ADR Coordinator, who shall publish notice of such demand on the CAISO Website, and any other method adopted by the CAISO ADR Coordinator.

## 13.3 Arbitration

### 13.3.1 Selection of Arbitrator

#### 13.3.1.1 Disputes Under $1,000,000

Where the total amount of claims and counterclaims in controversy is less than $1,000,000 (exclusive of costs and interest), the disputing parties shall select an arbitrator from a list containing the names of at least ten (10) qualified individuals supplied by the American Arbitration Association within fourteen (14) days following submission of the demand for arbitration. If the parties cannot agree upon an arbitrator within fourteen (the) stated time, they shall take turns striking names from the list of proposed arbitrators. The first party to strike-off a name shall be determined by lot. This process shall be repeated until one name remains on the list, and that individual shall be the designated arbitrator.

#### 13.3.1.2 Disputes of $1,000,000 or Over

Where the total amount of claims and counterclaims in controversy is $1,000,000 or more (exclusive of interest and costs), the disputing parties may agree on any person to serve as a single arbitrator, or shall endeavor in good faith to agree on a single arbitrator from a list of ten (10) qualified individuals provided by the American Arbitration Association within fourteen (14) days following submission of the demand for arbitration. If the parties are unable to agree on a single arbitrator within the stated time, the party or parties demanding arbitration, and the party or parties responding to the demand for arbitration, shall each designate an arbitrator. Each designation shall be from the list of arbitrators no later than the tenth ($10^{th}$) day thereafter. The two arbitrators so chosen shall then choose a third arbitrator.

### 13.3.2 Disclosures Required of Arbitrators

The designated arbitrator(s) shall be required to disclose to the parties any circumstances which might preclude him or her from rendering an objective and impartial determination. Each designated arbitrator shall disclose:

(a) Any direct financial or personal interest in the outcome of the arbitration;

(b) Any information required to be disclosed by California Code of Civil Procedure Section 1281.9.; and

(c) Any existing or past financial, business, professional, or personal interest that are likely to affect impartiality or might reasonably create an appearance of partiality or bias.

The designated arbitrator shall disclose any such relationships that he or she personally has with any party or its counsel, or with any individual whom he or she has been told will be a witness. Designated arbitrators should also disclose any such relationship involving members of their families or their current employers, partners, or business associates. All designated arbitrators shall make a reasonable effort to inform themselves of any interests or relationships described above. The obligation to disclose interests, relationships, or circumstances that might preclude an arbitrator from rendering an objective and impartial determination is a continuing duty that requires the arbitrator to disclose, at any stage of the arbitration, any such interests, relationships, or circumstances that arise, or are recalled or discovered. If, as a result of the continuing disclosure duty, an arbitrator makes a disclosure which is likely to affect his or her partiality, or might reasonably create an appearance of partiality or bias or if a party independently discovers the existence of such circumstances, a party wishing to object to the continuing use of the arbitrator must provide written notice of its objection to the other parties within ten (10) days of receipt of the arbitrator's disclosure or the date of a party's discovery of the circumstances giving rise to that party's objection. Failure to provide such notice shall be deemed a waiver of such objection. If a party timely provides a notice of objection to the continuing use of the arbitrator the parties shall attempt to agree whether the arbitrator should be dismissed and replaced in the manner described in Section 13.3.1. If within ten (10) days of a party's objection notice the parties have not agreed how to proceed, the matter shall be referred to the American Arbitration Association for resolution.

**13.3.3 Arbitration Procedures**

The CAISO ADR Coordinator shall compile and make available to the arbitrator and the parties standard procedures for the arbitration of disputes, which procedures (i) shall include provision, upon good cause shown, for intervention or other participation in the proceeding by any party whose interests may be affected by its outcome, (ii) shall conform to the requirements specified herein, and (iii) may be modified or adopted for use in a particular proceeding as the arbitrator deems appropriate, in accordance with Section 13.3.4. The procedures adopted by the CAISO ADR Coordinator shall be based on the latest edition of the American Arbitration Association Commercial Arbitration Rules, to the extent such rules are not inconsistent with this Section 13. Except as provided herein, all parties shall be bound by such procedures.

### 13.3.4 Modification of Arbitration Procedures

In determining whether to modify the standard procedures for use in the pending matter, the arbitrator shall consider (i) the complexity of the dispute, (ii) the extent to which facts are disputed, (iii) the extent to which the credibility of witnesses is relevant to a resolution, (iv) the amount in controversy, and (v) any representations made by the parties. Alternatively, the parties may, by mutual agreement, modify the standard procedures. In the event of a disagreement between the arbitrator and the agreement of the parties regarding arbitration procedures to be utilized, the parties' agreement shall prevail.

### 13.3.5 Remedies

#### 13.3.5.1 Arbitrator's Discretion

The arbitrator shall have the discretion to grant the relief sought by a party, or determine such other remedy as is appropriate, unless the parties agree to conduct the arbitration "baseball" style. Unless otherwise expressly limited herein, the arbitrator shall have the authority to award any remedy or relief available from FERC, or any other court of competent jurisdiction. Where any CAISO Document leaves any matter to be agreed between the parties at some future time and provides that in default of agreement the matter shall be referred to the CAISO ADR Procedures, the arbitrator shall have authority to decide upon the terms of the agreement which, in the arbitrator's opinion, it is reasonable that the parties should reach, having regard to the other terms of the CAISO Document concerned and the arbitrator's opinion as to what is fair and reasonable in all the circumstances.

#### 13.3.5.2 "Baseball" Arbitration

If the parties agree to conduct the arbitration "baseball" style, the parties shall submit to the arbitrator and exchange with each other their last best offers in the form of the award they consider the arbitrator should make, not less than seven (7) days in advance of the date fixed for the hearing, or such other date as the arbitrator may decide. If a party fails to submit its last best offer in accordance with this Section, that party shall be deemed to have accepted the offer proposed by the other party. The arbitrator shall be limited to awarding only one of the proposed offers, and may not determine an alternative or compromise remedy.

### 13.3.6 Summary Disposition

The procedures for arbitration of a dispute shall provide a means for summary disposition of a demand for arbitration, or a response to a demand for arbitration, that in the reasoned opinion of the arbitrator does

not have a good faith basis in either law or fact. If the arbitrator determines that a demand for arbitration or response to a demand for arbitration does not have a good faith basis in either law or fact, the arbitrator shall have discretion to award the costs of the time, expenses, and other charges of the arbitrator to the prevailing party. A determination made under this Section is subject to appeal pursuant to Section 13.4.

**13.3.7 Discovery Procedures**

The procedures for the arbitration of a dispute shall include adequate provision for the discovery of relevant facts, including the taking of testimony under oath, production of documents and other things, the presentation of evidence, the taking of samples, conducting of tests, and inspection of land and tangible items. The nature and extent of such discovery shall be determined as provided herein and shall take into account (i) the complexity of the dispute, (ii) the extent to which facts are disputed, (iii) the extent to which the credibility of witnesses is relevant to a resolution, and (iv) the amount in controversy. The forms and methods for taking such discovery shall be as described in the Federal Rules of Civil Procedure, except as modified pursuant to Section 13.3.4.

**13.3.8 Evidentiary Hearing**

The arbitration procedures shall provide for an evidentiary hearing, with provision for the cross-examination of witnesses, unless all parties consent to the resolution of the matter on the basis of a written record. The forms and methods for taking evidence shall be determined by the arbitrator(s) and modified pursuant to Section 13.3.4. The arbitrator may require such written or other submissions from the parties as he or she may deem appropriate, including submission of direct and rebuttal testimony of witnesses in written form. The arbitrator may exclude any evidence that is irrelevant, immaterial, unduly repetitious or prejudicial, or privileged. The arbitrator shall compile a complete evidentiary record of the arbitration which shall be available to the parties on its completion upon request.

**13.3.9 Confidentiality**

Subject to the other provisions of this CAISO Tariff, any party may claim that information contained in a document otherwise subject to discovery is “Confidential” if such information would be so characterized under the Federal Rules of Evidence. The party making such claim shall provide to the arbitrator in writing the basis for its assertion. If the claim of confidentiality is confirmed by the arbitrator, he or she

shall establish requirements for the protection of such documents or other information designated as "Confidential" as may be reasonable and necessary to protect the confidentiality and commercial value of such information. Any party disclosing information in violation of these provisions or requirements established by the arbitrator, unless such disclosure is required by federal or state law or by a court order, shall thereby waive any right to introduce or otherwise use such information in any judicial, regulatory, or other legal or dispute resolution proceeding, including the proceeding in which the information was obtained.

**13.3.10 Timetable**

Promptly after the appointment of the arbitrator, the arbitrator shall set a date for the issuance of the arbitration decision, which shall be no later than six (6) months (or such date as the parties and the arbitrator may agree) from the date of the appointment of the arbitrator, with other dates, including the dates for an evidentiary hearing or other final submissions of evidence, set in light of this date. The date for the evidentiary hearing or other final submission of evidence shall not be changed, absent extraordinary circumstances. The arbitrator shall have the power to impose sanctions, including dismissal of the proceeding, for dilatory tactics or undue delay in completing the arbitration proceedings.

**13.3.11 Decision**

**13.3.11.1** Except as provided below with respect to "baseball" style arbitration, the arbitrator shall issue a written decision granting the relief requested by one of the parties, or such other remedy as is appropriate, if any, and shall include findings of fact and law. The arbitration decision shall be based on (i) the evidence in the record, (ii) the terms of the relevant CAISO Documents, (iii) applicable United States federal law, including the FPA and any applicable FERC regulations and decisions, and international treaties or agreements as applicable, and (iv) applicable state law. Additionally, the arbitrator may consider relevant decisions in previous arbitration proceedings. A summary of the disputed matter and the arbitrator's decision shall be published on the CAISO Website and any other method chosen by the CAISO ADR Coordinator.

**13.3.11.2** In arbitration conducted "baseball" style, the arbitrator shall issue a written decision adopting one of the awards proposed by the parties, and shall include findings of fact and law. The arbitration decision shall be based on (i) the evidence in the record, (ii) the terms of the relevant CAISO Documents,

(iii) applicable United States federal law, including the FPA and any applicable FERC regulations and decisions, and international treaties or agreements as applicable, and (iv) applicable state law. If the arbitrator concludes that no proposed award is consistent with the factors enumerated in (i) through (iv) above, or addresses all of the issues in dispute, the arbitrator shall specify how each proposed award is deficient and direct that the parties submit new proposed awards that cure the identified deficiencies. A summary of the disputed matter and the arbitrator's decision shall be published on the CAISO Website, and any other method chosen by the CAISO ADR Coordinator. An award shall not be deemed to be precedential.

**13.3.11.3** Where a panel of arbitrators is appointed pursuant to Section 13.3.1.2, a majority of the arbitrators must agree on the decision.

**13.3.12 Compliance**

Unless the arbitrator’s decision is appealed under Section 13.4, the disputing parties shall, upon receipt of the decision, immediately take whatever action is required to comply with the award to the extent the award does not require regulatory action. An award that is not appealed shall be deemed to have the same force and effect as an order entered by the FERC or any court of competent jurisdiction.

**13.3.13 Enforcement**

Following the expiration of the time for appeal of an award pursuant to Section 13.4.3, any party may apply to FERC or any court of competent jurisdiction for entry and enforcement of judgment based on the award.

**13.3.14 Costs**

The costs of the time, expenses, and other charges of the arbitrator shall be borne by the parties to the dispute, with each side on an arbitrated issue bearing its pro-rata share of such costs, and each party to an arbitration proceeding bearing its own costs and fees. If the arbitrator determines that a demand for arbitration or response to a demand for arbitration was made in bad faith, the arbitrator shall have discretion to award the costs of the time, expenses, and other charges of the arbitrator to the prevailing party. Notwithstanding the above, at the discretion of the arbitrator, the winning party in any dispute which has resulted in the enforcement of an important right affecting the public interest shall not be required to pay any of the costs of the arbitrator and may recover such of its own reasonable attorney

fees, expert witness fees and other reasonable costs from the losing party to the dispute if (a) a significant benefit, whether pecuniary or non-pecuniary, has been conferred on the general public, (b) the necessity and financial burden of private enforcement are such as to make the award appropriate, and (c) such fees should not, in the interest of justice, be paid out of the recovery.

### 13.4 Appeal of Award

#### 13.4.1 Basis for Appeal

A party may apply to the FERC or any court of competent jurisdiction to hear an appeal of an arbitration award only upon the grounds that the award is contrary to or beyond the scope of the relevant CAISO Documents, United States federal law, including, without limitation, the FPA, and any FERC regulations and decisions, or state law. Appeals shall, unless otherwise ordered by FERC or the court of competent jurisdiction, conform to the procedural limitations set forth in this Section 13.4.

#### 13.4.2 Appellate Record

The parties intend that FERC or the court of competent jurisdiction should afford substantial deference to the factual findings of the arbitrator. No party shall seek to expand the record before the FERC or court of competent jurisdiction beyond that assembled by the arbitrator, except (i) by making reference to legal authority which did not exist at the time of the arbitrator's decision, or (ii) if such party contends the decision was based upon or affected by fraud, collusion, corruption, misconduct or misrepresentation.

#### 13.4.3 Procedures for Appeals

**13.4.3.1** If a party to an arbitration desires to appeal an award, it shall provide a notice of appeal to the CAISO ADR Coordinator, all parties and the arbitrator within fourteen (14) days following the date of the award. The CAISO ADR Coordinator shall publish notice of the appeal on the CAISO Website, and any other method chosen by the CAISO ADR Coordinator.

Within ten (10) days of the filing of the notice of appeal, the appealing party must file an appropriate application, petition or motion with the FERC to trigger review under the FPA or with a court of competent jurisdiction. Such filing shall state that the subject matter has been the subject of an arbitration pursuant to the relevant CAISO Document.

**13.4.3.2** Within thirty (30) days of filing the notice of appeal (or such period as FERC or the court of competent jurisdiction may specify) the appellant shall file the complete evidentiary record of the

arbitration and a copy of the award with FERC or with the court of competent jurisdiction. The appellant shall serve copies of a description of all materials included in the submitted evidentiary record.

#### 13.4.4 Award Implementation

Implementation of the award shall be deemed stayed pending an appeal unless and until, at the request of a party, the FERC or the court of competent jurisdiction to which an appeal has been filed, issues an order dissolving, shortening, or extending such stay. However, a summary of each appeal shall be published on the CAISO Website, and any other method chosen by the CAISO ADR Coordinator.

#### 13.4.5 Judicial Review of FERC Orders

FERC orders resulting from appeals shall be subject to judicial review pursuant to the FPA.

### 13.5 Allocation of Awards Payable by or to the CAISO

#### 13.5.1 Allocation of an Award

If the CAISO must pay an award to a party pursuant to good faith negotiations or the CAISO ADR Procedures, the CAISO will recover the amount of the award from Market Participants and Scheduling Coordinators. If the CAISO receives an award from a party pursuant to good faith negotiations or the CAISO ADR Procedures, the CAISO will flow back the amount of the award to Market Participants and Scheduling Coordinators.

#### 13.5.2 Timing of Adjustments

Upon determination that an award is payable by or to the CAISO pursuant to good faith negotiations or the CAISO ADR Procedures, the CAISO shall calculate the amounts payable to and receivable from the party, Market Participants, and Scheduling Coordinators, as soon as reasonably practical, and shall show any required adjustments as a debit or a credit in a subsequent Recalculation Settlement Statement or, in the case of an amount payable by the CAISO to a party, as soon as the CAISO and that party may agree.

#### 13.5.3 Method of Allocation

##### 13.5.3.1 Allocation to Market Participants

The CAISO will use best efforts to determine which Market Participant(s) is or are responsible for and/or benefit from payment of an award by or to the CAISO and to allocate receipt of or payment for the award equitably to such Market Participant(s). In undertaking the allocation, the CAISO shall consider the extent of a Market Participant's participation in affected markets and the CAISO Tariff in effect on the applicable

Trading Day(s), and may consider any other relevant factor, including but not limited to, applicable contracts.

#### 13.5.3.2 Residual Amounts

Any awards for which the CAISO is unable to identify Market Participants in accordance with 13.5.3.1 and any award amounts that the CAISO is unable to collect that are not covered by Section 11.29.17.1 or Section 11.29.17.2 will be allocated to all Scheduling Coordinators through neutrality adjustments.

## 14. Uncontrollable Force, Indemnity, Liabilities, and Penalties

### 14.1 Uncontrollable Forces

Neither the CAISO nor a Market Participant will be considered in default of any obligation under this CAISO Tariff if prevented from fulfilling that obligation due to the occurrence of an Uncontrollable Force. The physical inability of a Market Participant to perform in accordance with a Day-Ahead Schedule or Ancillary Service Award for any reason shall not relieve the Market Participant from its financial obligations under Section 11 that result from the failure to perform.

### 14.2 Responsibilities of Affected Entity

In the event of the occurrence of an Uncontrollable Force, which prevents the CAISO or a Market Participant from performing any of its obligations under this CAISO Tariff, the affected entity shall (i) if it is the CAISO, immediately notify the Market Participants in writing of the occurrence of such Uncontrollable Force and, if it is a Market Participant, immediately notify the CAISO in writing of the occurrence of such Uncontrollable Force, (ii) not be entitled to suspend performance of its obligations under this CAISO Tariff in any greater scope or for any longer duration than is required by the Uncontrollable Force, (iii) use its best efforts to mitigate the effects of such Uncontrollable Force, remedy its inability to perform and resume full performance of its obligations hereunder, (iv) in the case of the CAISO, keep the Market Participants apprised of such efforts, and in the case of the Market Participants, keep the CAISO apprised of such efforts, in each case on a continual basis and (v) provide written notice of the resumption of its performance of its obligations hereunder.

### 14.3 Strikes, Lockouts or Labor Disputes

Notwithstanding any of the foregoing, the settlement of any strike, lockout or labor dispute constituting an Uncontrollable Force shall be within the sole discretion of the entity involved in such strike, lockout or labor dispute and the requirement that an entity must use its best efforts to mitigate the effects of the Uncontrollable Force and/or remedy its inability to perform and resume full performance of its obligations hereunder shall not apply to strikes, lockouts, or labor disputes.

### 14.4 Market Participant’s Indemnity

Each Market Participant, to the extent permitted by law, shall indemnify the CAISO and hold it harmless against all losses, damages, claims, liabilities, costs or expenses (including legal expenses) arising from

any act or omission of the Market Participant except to the extent that they result from the CAISO's default under this CAISO Tariff or gross negligence or intentional wrongdoing on the part of the CAISO or of its officers, directors or employees.

### 14.5 Limitation on Liability

#### 14.5.1 Limitation on Damages

Except as provided for in Section 13.3.14, the CAISO shall not be liable in damages to any Market Participant for any losses, damages, claims, liability, costs or expenses (including legal expenses) arising from the performance or non-performance of its obligations under this CAISO Tariff, including but not limited to any adjustments made by the CAISO in Inter-SC Trades, except to the extent that they result from gross negligence or intentional wrongdoing on the part of the CAISO.

#### 14.5.2 Exclusion of Certain Types of Loss

The CAISO shall not be liable to any Market Participant under any circumstances for any consequential or indirect financial loss including but not limited to loss of profit, loss of earnings or revenue, loss of use, loss of contract or loss of goodwill except to the extent that it results from the gross negligence or intentional wrongdoing on the part of the CAISO.

### 14.6 Potomac Economics, Ltd. Limitation of Liability

Potomac Economics, Ltd. shall not be liable in damages to any Market Participant for any losses, damages, claims, liability, costs or expenses (including legal expenses) arising from its calculation of reference levels under its Consultant Agreement with the CAISO dated as of September 3, 2002, except to the extent that they result from gross negligence or intentional wrongdoing of Potomac Economics, Ltd.

### 14.7 Allocation of Reliability-Related Penalty Costs

#### 14.7.1 Overview of Process

Under the NERC Functional Model and the NERC Rules of Procedure, Registered Entities for a specific function, including the CAISO, may be assessed monetary penalties by FERC, NERC, and/or WECC for violations of one (1) or more NERC Reliability Standards applicable to that function. This Section 14.7 sets forth the procedure through which the CAISO may seek, with FERC approval, to directly allocate, in whole or in part, the cost of any such penalties assessed upon the CAISO to an entity or entities whose conduct or omission(s) NERC, WECC and/or FERC has determined contributed, in whole or in part, to the

violation that gave rise to the penalty. This Section 14.7 also sets forth procedures through which the CAISO may seek, with FERC approval, to recover, in whole or in part, from RC Customers and Market Participants the cost associated with a monetary penalty for a NERC Reliability Standards violation(s) that is not subject to direct allocation. Penalties that are assessed upon the CAISO and become final on or after the effective date of this Section 14.7 shall be subject to the procedures set forth herein regardless of the date of the underlying violation(s) for which the penalty is assessed.

**14.7.2 Direct Allocation of Reliability Standards Penalties**

**14.7.2.1 Conditions for Direct Allocation**

If FERC, NERC, and/or WECC assess(es) one (1) or more monetary penalties against the CAISO as the Registered Entity for the violation of one or more NERC Reliability Standards, and the conduct or omission(s) of a particular RC Customer or RC Customers, or a particular Market Participant or Market Participants contributed, in whole or in part, to the violation(s) at issue, then the CAISO may seek to directly allocate, in whole or in part, such penalty costs to the RC Customer(s) or Market Participant(s) whose conduct or omission(s) contributed to the violation(s), provided that each of the following conditions are met:

(1) The RC Customer(s) or Market Participant(s) subject to potential direct allocation receive notice of, and an opportunity to fully participate in, the underlying CMEP proceeding before NERC and/or WECC, or the FERC proceeding in the case of an enforcement proceeding directly instituted by FERC without a prior NERC or WECC proceeding;

(2) The CMEP proceeding, or enforcement proceeding directly instituted by FERC, results in a finding that the conduct or omission(s) of the RC Customer(s) or Market Participant(s) subject to potential direct allocation contributed, either in whole or in part, to the Reliability Standards violation(s) at issue; and

(3) Any findings by NERC and/or WECC regarding whether the conduct or omission(s) of the RC Customer(s) or Market Participant(s) contributed, either in whole or in part, to the Reliability Standards violation(s) at issue are filed with FERC.

**14.7.2.2 Notice to Affected RC Customer or Market Participant**

The CAISO will notify the RC Customers(s) or Market Participant(s) it believes contributed to the

Reliability Standards violation(s) during the CMEP proceeding or, if applicable, during the enforcement proceeding directly instituted by FERC. This notification shall be in writing and shall: (i) inform the RC Customer(s) or Market Participant(s) that the CAISO intends to invoke the direct allocation provisions of this Section; (ii) detail the underlying factual basis for the CAISO's position; and (iii) inform the RC Customers(s) or Market Participant(s) that it may seek to participate in the CMEP proceeding or, if applicable, the enforcement proceeding directly instituted by FERC.

**14.7.2.3 Failure to Participate**

A failure by the notified RC Customer(s) or Market Participant(s) to participate in the CMEP proceeding or, if applicable, in the enforcement proceeding directly instituted by FERC, will not prevent the CAISO from directly allocating the cost associated with a monetary penalty to the RC Customer(s) or Market Participant(s) provided all other conditions in Section 14.7.2 are satisfied.

**14.7.2.4 Proposed Allocation and FERC Review Process**

Where NERC and/or WECC, or FERC as may be applicable in an enforcement proceeding directly instituted by FERC, determines that the conduct or omission(s) of the RC Customer(s) or Market Participant(s) identified by the CAISO contributed, in whole or in part, to the NERC Reliability Standard(s) violation(s) at issue, the CAISO shall inform the involved RC Customer(s) or Market Participant(s) in writing and shall initially propose an allocation of the penalty cost on a basis proportional to the parties' relative fault, consistent with the applicable regulator's analysis. Regardless of whether the involved RC Customer(s) or Market Participant(s) agree or disagree over the allocation, the reasonability of such an allocation shall be determined by FERC through submission of the matter to FERC pursuant to Section 205 of the Federal Power Act.

**14.7.2.5 Payment of Allocated Amount**

After FERC issues a final order regarding the CAISO's ability to directly allocate the penalty cost, the CAISO shall include any FERC-approved allocated amounts in the invoice for the appropriate RC Customer(s) or Market Participant(s) for the next billing period, or as soon as practicable. The amount to be paid by the RC Customer(s) or Market Participant(s) shall include the allocated portion of the penalty, as established by FERC, together with interest calculated at the FERC authorized refund rate for the period of time, if any, between the CAISO's payment of the penalty and the RC Customer(s) or Market

Participant(s) payment of its allocated portion of the penalty.

### 14.7.3 Indirect Allocation of Penalty Costs

#### 14.7.3.1 Procedure for Allocation

Where the conduct or omission(s) of a particular RC Customer or RC Customers or Market Participant or Market Participants has not been identified by NERC, WECC, or FERC as a contributing cause for a monetary penalty assessed against the CAISO for a NERC Reliability Standards violation, the CAISO may make a filing with FERC under Section 205 of the Federal Power Act seeking approval to recover the cost of such reliability-related penalties from all RC Customers or Market Participants. The CAISO's Section 205 filing may include a proposed methodology for allocating the penalty across the various types of RC Customers or Market Participants.

#### 14.7.3.2 Case-By-Case FERC Review

Any allocation of penalties pursuant to Section 14.7.3 must be determined by FERC on a case-by-case basis. Absent FERC approval, the CAISO will not allocate a penalty under Section 14.7.3 to RC Customers or Market Participants.

#### 14.7.3.3 Payment of Allocated Amount

After FERC issues a final order regarding allocation of the monetary penalty, the CAISO shall include any FERC-approved allocated amounts in the invoices for the appropriate RC Customers or Market Participants for the next billing period, or as soon as practicable.

## 15. Regulatory Filings

(a) Any amendment or other modification of any provision of this CAISO Tariff must be in writing and approved by the CAISO Governing Board in accordance with the bylaws of the CAISO.

(b) If, after a policy initiative within the primary authority of the WEM Governing Body has been presented for approval a second time pursuant to the dispute resolution process outlined in Section 2.2.2 of the Charter for WEIM and EDAM Governance, the WEM Governing Body approves a proposed amendment to this CAISO Tariff, then the Governing Board will be deemed to have approved a dual filing that includes two proposed amendments to this CAISO Tariff, one approved by the CAISO Governing Board and the other by the WEM Governing Body. In considering the proposed amendments, FERC will not be required to consider whether the then-existing filed rate is unlawful, and may adopt any or all of either proposal as it finds, in its discretion, to be just and reasonable and preferable.

(c) Any amendment or modification to the CAISO Tariff shall be effective upon the date it is permitted to become effective by FERC. Nothing contained herein shall be construed as affecting, in any way, the right of the CAISO to furnish its services in accordance with this CAISO Tariff, or any tariff, rate schedule or Scheduling Coordinator Agreement which results from or incorporates this CAISO Tariff, or for the CAISO (consistent with the terms set forth above about approval of amendments and other changes) unilaterally to make an application to FERC for a change in rates, terms, conditions, charges, classifications of service, Scheduling Coordinator Agreement, rule or regulation under FPA Section 205 and pursuant to the FERC's rules and regulations promulgated thereunder. Nothing contained in this CAISO Tariff or any Scheduling Coordinator Agreement shall be construed as affecting the ability of any Market Participant receiving service under this CAISO Tariff to exercise its rights under Section 206 of the FPA and FERC's rules and regulations thereunder.

# 16. Existing Contracts

## 16.1 Continuation of Existing Contracts for Non-Participating TOs and Subscribers

The transmission service rights and obligations of Non-Participating TOs and Subscribers under Existing Contracts, including all terms, conditions and rates of the Existing Contracts, as they may change from time to time under the terms of the Existing Contracts, will continue to be honored by the parties to those contracts, for the duration of those contracts.

### 16.1.1 Participating TO Obligation

If a Participating TO is a party to an Existing Contract under which Existing Rights are provided, the Participating TO shall attempt to negotiate changes to the Existing Contract to align the contract's scheduling and operating provisions with the CAISO's scheduling and operational procedures, rules and protocols, to align operations under the contract with CAISO operations, and to minimize the contract parties' costs of administering the contract while preserving their financial rights and obligations. In addition, the Participating TO shall attempt to negotiate changes to provisions in the Existing Contract to ensure that whenever transmission services under the Existing Contract are used to deliver power to a Market Participant that is subject to Access Charges and Non-Subscriber Usage Payment Amounts, if applicable, under this CAISO Tariff, no duplicative charge for access to the CAISO Controlled Grid will be charged under the Existing Contract. For purposes of such negotiations, there shall be a presumption that any charges in an Existing Contract that were designed to recover the embedded cost of transmission facilities within the CAISO Controlled Grid will be fully recovered through the Access Charges and Non-Subscriber Usage Payment Amounts, if applicable, established under Section 26.1.

### 16.1.2 Right to Use and Ownership of Facilities

If a Non-Participating TO has an Existing Contract with a Participating TO under which the Non-Participating TO's transmission facilities, or a portion thereof, are subject to use by the Participating TO, the Non-Participating TO's rights to the use and ownership of its facilities shall remain unchanged, regardless of the Participating TO's act of turning over the Participating TO's Entitlement to use the Non-Participating TO's facilities to the extent possible to the Operational Control of the CAISO. If a Subscriber is a Participating TO, it cannot turn over its Subscriber Rights to the Operational Control of the CAISO. The CAISO will accept valid ETC Self-Schedules from a Participating TO that is the Scheduling

Coordinator for the holder of Existing Rights, or from holders of Existing Rights that are Scheduling Coordinators, or that are represented by a Scheduling Coordinator other than the Participating TO. ETC Self-Schedules submitted by Scheduling Coordinators to the CAISO, which include the use of Existing Rights, must be submitted in accordance with Section 16.1 and Section 30. The CAISO may refuse to accept ETC Self-Schedules submitted pursuant to Existing Contracts that do not meet the requirements of the principles, protocols and rules referred to in this Section 16.1.

**16.1.3 Existing Contract Dispute Resolution**

The CAISO will, if requested, advise parties to Existing Contracts regarding the operational aspects of any Existing Contract renegotiations that they undertake.

If the parties to an Existing Contract are unable to reach agreement on the changes needed to meet the requirements of this CAISO Tariff, any disputes related thereto shall be addressed using the dispute resolution provisions of the Existing Contract, including any remedies as are provided by law. The rights of the parties to seek changes or to challenge such changes, under the FPA or as otherwise provided by law, are preserved consistent with the terms of the Existing Contract. Unless and until the necessary changes to the Existing Contract are made, all terms and conditions of the Existing Contracts will continue to be honored by the parties to the Existing Contracts.

**16.1.4 Conversion of PTO's Rights Under Existing Contracts**

Parties who are entitled to transmission service rights under Existing Contracts and who choose to become Participating TOs must, at the time of becoming a Participating TO convert those rights to Converted Rights in accordance with Section 4.3.1.6.

**16.2 Treatment of Subscriber Encumbrances**

Subscriber Encumbrances shall be treated as Existing Contracts even though they include legal restrictions or covenants meeting the definition of an Encumbrance arising under a contract or agreement entered into after the CAISO Operations Date. Subscriber Encumbrances may be converted to CRRs in accordance with Section 4.3A.9.

**16.3 Curtailment Under Emergency and Non-Emergency Conditions**

**16.3.1 Emergency Conditions**

To the extent practicable, the CAISO shall allocate necessary curtailments of Existing Rights or non-

Converted Rights under emergency conditions in accordance with the TRTC Instructions submitted by the Responsible PTO pursuant to Section 16.4. If circumstances prevent the CAISO's compliance with such TRTC Instructions, the CAISO shall allocate such curtailments in a non-discriminatory manner consistent with Good Utility Practice and Applicable Reliability Criteria.

### 16.3.2 Non-Emergency Conditions

Unless otherwise specified by the Responsible PTO in the TRTC Instructions that it submits to the CAISO pursuant to Section 16.4, the CAISO will allocate any necessary curtailments under non-emergency conditions, pro rata, among holders of Existing Rights, at particular Scheduling Points and/or on particular contract paths, in the order of: (1) non-firm, (2) each priority of conditional firm, and (3) each priority of firm rights. Priorities for firm and conditional firm transmission service are indicated using the TRTC Instructions as described in Section 16.4.

## 16.4 TRTC Instructions

### 16.4.1 Responsibility to Create TRTC Instructions

Each Participating TO and Existing Rights holder will work with the CAISO to develop the Transmission Rights and Transmission Curtailment (TRTC) Instructions that allow Existing Contracts to be exercised in a way that: (i) maintains the existing scheduling and curtailment priorities under the Existing Contract; (ii) is minimally burdensome to the CAISO (i.e., creates the least impact on the CAISO's preferred operational policies and procedures); (iii) to the extent possible, imposes no additional financial burden on either the Participating TO or the holder of Existing Rights (beyond that in the Existing Contract); (iv) consistent with the terms of the Existing Contracts, makes as much transmission capacity not otherwise utilized by the holder of Existing Rights available as possible to the CAISO for allocation to Market Participants; (v) is minimally burdensome to the Participating TO and the Existing Rights holder from an operational point of view; and (vi) does not require the CAISO to interpret or underwrite the economics of the Existing Contract. The parties to Existing Contracts will attempt to jointly develop and agree on any TRTC Instructions that will be submitted to the CAISO. The parties to an Existing Contract shall also be responsible to submit to the CAISO any other necessary operating instructions based on their contract interpretations needed by the CAISO to enable the CAISO to perform its duties.

### 16.4.2 Responsible PTO Re Multiple PTO Parties to Existing Contracts

To the extent there is more than one Participating TO providing transmission service under an Existing Contract or there is a set of Existing Contracts which are interdependent from the point of view of submitting instructions to the CAISO involving more than one Participating TO, the relevant Participating TOs will designate a single Participating TO as the responsible PTO and will notify the CAISO accordingly. If no such responsible PTO is designated by the relevant Participating TOs or the CAISO is not notified of such designation, the CAISO shall designate one of them as the responsible PTO and notify the relevant Participating TOs accordingly. The responsible PTO designated pursuant to this section shall have the same responsibility as the Participating TO under this Section 16.4.

**16.4.3 Scheduling Coordinator Responsibilities**

The Scheduling Coordinator designated by the parties to an Existing Contract as the responsible entity for submitting ETC Self-Schedules for the relevant Existing Contract shall submit ETC Self-Schedules consistent with the terms and conditions specified in the TRTC Instructions.

**16.4.4 Submission of TRTC Instructions**

For each Existing Contract, the Participating TO providing transmission service under the Existing Contract (or the Responsible PTO identified in Section 16.4.2) shall be obligated to submit the TRTC Instructions to the CAISO electronically on behalf of the holders of Existing Rights, unless the parties to the Existing Contract agree otherwise. The Participating TO shall notify the CAISO in writing the identity of the responsible party for submission of the TRTC Instructions as decided by the parties to the Existing Contract and the term of such agreement between the parties to the Existing Contract. The Participating TO shall undertake all obligations with respect to the submission of the TRTC Instructions to the CAISO and any subsequent obligations that follow with respect to the creation, management and updates to the TRTC Instructions. The CAISO is responsible for implementing only one set of TRTC Instructions for each Existing Contract and only those TRTC Instructions that have been received and accepted by the CAISO. The Participating TO shall submit the TRTC Instructions to the CAISO associated with Existing Contracts or sets of interdependent Existing Contracts thirty (30) days prior to the date on which the scheduling or curtailment of the use of the Existing Rights is to change or commence.

**16.4.5 TRTC Instructions Content**

TRTC Instructions will include the following information at a minimum and such other information as the

CAISO may reasonably require the Participating TO to provide to enable the CAISO to carry out its functions under the CAISO Tariff, Operating Procedures and Business Practice Manuals:

(1) A unique Contract Reference Number for each source and sink combination applicable to the Existing Contract (i.e., the CRN that will be assigned by the CAISO and communicated to the Participating TO that references a single Existing Contract or a set of interdependent Existing Contracts for each source and sink combination);

(2) Whether the instruction can be exercised independent of the CAISO's day-to-day involvement ("Yes/No");

(3) Name of an operational single point of contact for instructions and a 24- hour a day telephone number for the Participating TO contact for Existing Contract issues or the agreed upon party;

(4) Name(s) and number(s) of Existing Contract(s) that are represented by the unique CRN;

(5) The following information as stored in the Master File: (a) the applicable Point(s) of Receipt and Point(s) of Delivery); (b) for each Point of Receipt, the resource names for the physical resources as the eligible sources (eligible physical sources include Generating Units and System Resources), and for each Point of Delivery, the resource names for the physical resources as the eligible sinks (eligible physical sinks include Load PNodes, Custom Load Aggregation Points and System Resources); (c) for each physical source or sink, the maximum Existing Rights capacity (MW) that can be scheduled as an Existing Right under the Existing Contract; and (d) for each physical source and sink, the Scheduling Coordinator(s) and their Business Associate Identification (BAID) that is(are) eligible to submit ETC Self-Schedules utilizing these sources and sinks;

(6) Names of the party(ies) to the Existing Contract(s);

(7) The Scheduling Coordinator BAID that is entitled to the Settlement of reversal of Congestion Charges;

(8) Type(s) of service rights by the holder of the Existing Rights, by type of service (firm, conditional firm, or non-firm), with priorities for firm and conditional firm transmission

services and maximum amounts of service rights in MW;

(9) Instructions for the allowable timeframes at which the ETC Self- Schedules and ETC Self-Schedule changes may be submitted to the CAISO, which include whether the Scheduling Coordinator may submit ETC Self-Schedules or ETC Self-Schedule changes: (a) into the DAM; (b) into the RTM; (c) after the close of submitting Bids into the RTM, but before twenty (20) minutes before the applicable Trading Hour of the Trading Day; and (d) at or after twenty (20) minutes before the applicable Trading Hour of the Trading Day; in addition, the TRTC Instructions may also include any additional comments and restrictions on the submission time of ETC Self- Schedules and ETC Self-Schedule changes;

(10) Term of service period(s) of the Existing Contract(s);

(11) Any special procedures that would require the CAISO to implement curtailments in any manner different from pro rata reduction of the transfer capability of the transmission line; any such TRTC Instructions submitted to the CAISO must be clear, unambiguous, and not require the CAISO to make any judgments or interpretations as to the meaning intent, results, or purpose of the curtailment procedures or the Existing Contract and the section of the Existing Contract that provides this right for reference, otherwise, they will not be accepted by the CAISO;

(12) The forecasted usage patterns for each Existing Contract for the upcoming annual period of the annual CRR release processes as well as for the upcoming monthly period of the monthly CRR release processes, which will consist of hourly MWh data over the whole year for those resources that will use the Existing Contract; this information will be considered by the CAISO in managing its accounting for usage of Existing Rights in the release of CRRs; this information shall not be used by the CAISO to validate ETC Self-Schedules when submitted by Scheduling Coordinators and therefore shall not affect the Existing Rights holder's ability to utilize its rights under the Existing Contract;

(13) Whether or not the Existing Contract provides for the right to self-provide Ancillary Services; and

(14) Specification of any contract requirements in the ETC that warrants special consideration in the implementation of the physical rights under the ETC.

### 16.4.6 Changes and Updates to TRTC Instructions

Updates or changes to the TRTC Instructions must be submitted to the CAISO through a revised set of TRTC Instructions by the Participating TO, on an as needed or as required basis determined by the parties to the Existing Contracts. The CAISO will implement the updated or changed TRTC Instructions as soon as practicable but no later than seven (7) days after receiving clear and unambiguous details of the updated or changed instructions under normal conditions. If the CAISO finds the TRTC Instructions to be inconsistent with the CAISO Tariff, the CAISO will notify the Participating TO within forty-eight (48) hours after receipt of the updated or changed TRTC Instructions indicating the nature of the problem and allowing the Participating TO to resubmit the TRTC Instructions as if they were new, updated or changed TRTC Instructions. If the CAISO finds the updated or changed TRTC Instructions to be acceptable, the CAISO will time-stamp the updated TRTC Instructions as received, confirm such receipt to the Participating TO, and indicate the time at which the updated TRTC Instructions take effect if prior to the seven (7) day deadline referred to above. In the event of a System Emergency, the CAISO will implement such submitted changes to the TRTC Instructions as soon as practical.

### 16.4.7 Treatment of TRTC Instructions

#### 16.4.7.1 TRTC Instructions Can be Exercised Independently

To the extent that the TRTC Instructions can be exercised independently of the CAISO by the parties to the Existing Contract and the results forwarded to the CAISO, the TRTC Instructions shall be exercised by the Participating TOs, and the outcomes shall be forwarded to the CAISO. The determination of whether the TRTC Instructions can be "exercised independently of the CAISO by the parties to the Existing Contract" shall be made using the same procedures described in Section 16.4.8.

#### 16.4.7.2 TRTC Instructions Cannot be Exercised Independently

To the extent that the TRTC Instructions cannot be exercised independently of the CAISO and the results forwarded to the CAISO (because, for example, they require iteration with the CAISO's Bid submission and scheduling process, would unduly interfere with the CAISO's management of the Real-Time Market, including curtailments, or would unduly interfere with the ability of the holder of rights to exercise its

rights), the TRTC Instructions will be provided to the CAISO for day-to-day implementation. The TRTC Instructions will be provided by the Participating TO to the CAISO for implementation unless the parties to the Existing Contracts otherwise agree that the holder of the Existing Rights will do so. For these TRTC Instructions, the Scheduling Coordinators representing the holders of Existing Rights will submit their Bids to the CAISO for implementation in accordance with the TRTC Instructions. In this case, the CAISO shall act as the scheduling agent for the Participating TO with regard to Existing Rights.

**16.4.8 CAISO Role in Existing Contracts**

The CAISO will have no role in interpreting Existing Contracts. The parties to an Existing Contract will, in the first instance, attempt jointly to agree on any TRTC Instructions that will be submitted to the CAISO. In the event that the parties to the Existing Contract cannot agree upon the TRTC Instructions submitted by the parties to the Existing Contract, the dispute resolution provisions of the Existing Contract, if applicable, shall be used to resolve the dispute; provided that, until the dispute is resolved, and unless the Existing Contract specifies otherwise, the CAISO shall implement the Participating TO's TRTC Instructions. If both parties to an Existing Contract are Participating TOs and the parties cannot agree to the TRTC Instructions submitted by the parties, until the dispute is resolved, and unless the Existing Contract specifies otherwise, the CAISO shall implement the TRTC Instructions of the first Participating TO for which the Existing Contract is an Encumbrance. The CAISO shall not be responsible for resolution of any disputes that arise over the accuracy of the TRTC Instructions consistent with its obligations in Section 16.4.5.

**16.4.9 Implementation of TRTC Instructions**

The CAISO shall determine, based on the information provided by the Participating TOs under TRTC Instructions, the transmission capacities that (i) must be reserved for firm Existing Rights at Scheduling Points, (ii) may be allocated for use as CAISO transmission service (i.e., new firm uses), (iii) must be reserved by the CAISO for conditional firm Existing Rights, and (iv) remain for any non-firm Existing Rights for which a Participating TO has no discretion over whether or not to provide such non-firm service.

The CAISO shall coordinate the scheduling of Existing Rights with the scheduling of CAISO transmission service, using the CAISO's Bid submission rules. In doing so, the CAISO shall create an automated day-

to-day verification process based on parameters provided by the Participating TO for the Existing Contract to serve as the basis for ETC Self-Schedule validation. The Participating TO will be responsible for: (1) the accuracy of the data files against which the CAISO will validate the ETC Self-Schedule; and (2) providing the data file to the holder of Existing Rights as well as the CAISO.

The CAISO shall recognize that the obligations, terms or conditions of Existing Contracts may not be changed without the voluntary consent of all parties to the contract (unless such contract may be changed pursuant to any applicable dispute resolution provisions in the contract or pursuant to Section 205 or Section 206 of the FPA and the FERC's Rules and Regulations or as otherwise provided by law).

The parties to Existing Contracts shall remain liable for their performance under the Existing Contracts. The CAISO shall be liable in accordance with the provisions of this CAISO Tariff for any damage or injury caused by its non-compliance with the TRTC Instructions submitted to it pursuant to this Section 16.4.

Unless specified otherwise, in the event that the dispute resolution mechanisms prescribed in an Existing Contract, including all recourses legally available under the contract, cannot, in the first instance, result in a resolution of such a dispute, the CAISO ADR Procedures will be used to resolve any disputes between the CAISO and the Participating TO regarding any aspects of the implementation of this Section 16.4, including the reasonableness of a Participating TO's TRTC Instructions or any other decision rules which the Participating TO may submit to the CAISO as part of the TRTC Instructions. The holders of Existing Rights under the Existing Contract shall have standing to participate in the CAISO ADR Procedures.

**16.5 Treatment of Existing Contracts for Transmission Service**

The CAISO will accommodate Existing Rights, so that the holders of Existing Rights will receive the same priorities (in scheduling, curtailment, assignment and other aspects of transmission system usage) to which they are entitled under their Existing Contracts.

In addition, scheduling deadlines and operational procedures associated with Existing Rights will be honored by the CAISO, provided such information is explicitly included in the TRTC Instructions. The CAISO will accommodate and honor Existing Rights as follows:

(1) For Existing Rights that permit Interchange Schedule changes over Scheduling Points with other Balancing Authority Areas, the CAISO will reserve transmission capacity equal to the Existing Rights transmission capacity and make a corresponding adjustment in its

determination of ATC. For Existing Rights that permit Interchange Schedule changes after the Market Close of the Day-Ahead Market, the CAISO will reserve transmission capacity equal to the unscheduled ETC amount of transmission capacity for that Scheduling Point.

(2) For Existing Rights within the CAISO Balancing Authority Area, the CAISO will not set-aside capacity associated with the Existing Rights transmission capacity.

(3) In the RTM, the CAISO will give valid ETC Self-Schedules priority over other non-ETC Day-Ahead Schedules and RTM Bids. In the event of a reduction in capacity on the transmission path associated with the Existing Right, the CAISO will honor the Existing Rights priority in accordance with this Section 16.

(4) When the Existing Contract permits, the CAISO will allow the holder of Existing Rights to make changes to the scheduled amounts of Supply after the submission of HASP ETC Self-Schedules in accordance with the TRTC Instructions established for such changes. The CAISO will, as necessary, redispatch non-ETC resources to accommodate valid ETC Self-Schedule changes in Real-Time.

(5) All contractual provisions that have been communicated to the CAISO in writing in accordance with this Section 16 by the parties to the Existing Contracts, shall be honored by the CAISO and the parties to the Existing Contracts and shall be implemented by the CAISO in accordance with the terms and conditions of the relevant Existing Contracts so notified.

### 16.5.1 System Emergency Exceptions

As set forth in Section 4.2.1, all Market Participants, including Scheduling Coordinators, Utility Distribution Companies, Participating TOs, Participating Generators (which includes Pseudo-Ties of Generating Units to the CAISO Balancing Authority Area), Participating Loads, Demand Response Providers, Distributed Energy Resource Providers, Balancing Authorities (to the extent the agreement between the Balancing Authority and the CAISO so provides), and MSS Operators within the CAISO Balancing Authority Area and all System Resources must comply fully and promptly with CAISO Dispatch Instructions and Operating Instructions, unless such operation would impair public health or safety or is otherwise

exempted pursuant to Section 34.13.1. The CAISO will honor the terms of Existing Contracts, provided that in a System Emergency and circumstances in which the CAISO considers that a System Emergency is imminent or threatened, holders of Existing Rights must follow CAISO Operating Instructions even if those Operating Instructions directly conflict with the terms of Existing Contracts, unless such Operating Instructions are inconsistent with the terms of an agreement between the CAISO and a Balancing Authority. In the event of a conflict between the CAISO Tariff and an agreement between the CAISO and a Balancing Authority, the agreement will govern. For this purpose CAISO Operating Instructions to shed Load shall not be considered as an impairment to public health or safety. This section does not prohibit a Scheduling Coordinator from modifying its Bid or re-purchasing Energy in the Real-Time Market.

### 16.6 Valid ETC Self-Schedules

The CAISO will accept a valid ETC Self-Schedule from a Scheduling Coordinator. That Scheduling Coordinator shall be either the holder of Existing Rights or its designee, the Participating TO, (in the case that no Scheduling Coordinator has been so identified by the parties to the Existing Contract, the Participating TO shall be the Scheduling Coordinator for the holder of the Existing Contract). ETC Self-Schedules submitted by Scheduling Coordinators to the CAISO, which use Existing Rights, must be submitted in accordance with this CAISO Tariff.

#### 16.6.1 Validation of ETC Self-Schedules

An ETC Self-Schedule is a valid ETC Self-Schedule when the CAISO has determined that the ETC Self-Schedule, submitted to the CAISO pursuant to the requirements for Bids in Sections 30, properly reflects Existing Rights consistent with the TRTC Instructions, is labeled with a unique Existing Contract identifier, and includes balanced sources and sinks, within the ETC's capacity limits.

#### 16.6.2 Treatment of Invalid ETC Self-Schedules

##### 16.6.2.1 Inconsistent with the TRTC Instructions

The CAISO will validate ETC Self-Schedules pursuant to the rules specified below in Sections 16.6.2.2 and 16.6.2.3. If the CAISO finds that an ETC Self-Schedule is not consistent with the TRTC Instructions, the CAISO shall find that the ETC Self-Schedule is not valid. If the CAISO finds the ETC Self-Schedule to be invalid, the CAISO shall notify the Scheduling Coordinator and convert the ETC Self-Schedule to an ordinary Self-Schedule and treat the ETC Self-Schedule as an ordinary Self-Schedule for scheduling

priority and Settlements.

#### 16.6.2.2 Unbalanced ETC Self-Schedules

If the CAISO determines that an ETC Self-Schedule a Scheduling Coordinator submits to the Day-Ahead Market is not balanced, the CAISO will promptly notify the Scheduling Coordinator and will: (i) remove any scheduling priority for the entire ETC Self-Schedule; (ii) apply the ETC Settlement treatment pursuant to Section 11.2.1.5 to the valid balanced portions only; and (iii) assess any charges and make any payments consistent with the treatment of ordinary Self-Schedules for the unbalanced portions. If the CAISO determines that an ETC Self-Schedule a Scheduling Coordinator submits to the Real-Time Market is not balanced, the CAISO will: (i) apply the ETC Settlement treatment pursuant to Section 11.5.7.1 to the valid balanced portions only; and (ii) assess any charges and make any payments consistent with the treatment of ordinary Self-Schedules for the unbalanced portions. Where multiple ETC, TOR or Converted Rights Self-Schedules are submitted in an ETC, TOR or Converted Rights chain, all individual ETC, TOR, or Converted Rights Self-Schedules links in the chain must remain individually valid, including the simultaneous but separate use of an individual ETC, TOR or Converted Rights Self-Schedule, in order for all the ETC, TOR or Converted Rights Self-Schedules in the chain to remain valid and receive the full ETC, TOR or Converted Rights Self-Schedule treatment. Otherwise, the CAISO will treat any of the ETC, TOR, or Converted Rights Self-Schedules in the chain as specified above in this Section 16.6.2.2.

#### 16.6.2.3 Exceeds Capacity Limits or Invalid Contract Reference Number

##### 16.6.2.3.1 Rejection of ETC Self-Schedules

The CAISO will reject the ETC Self-Schedule and will promptly inform the responsible Scheduling Coordinator that it has rejected the ETC Self-Schedule if the CAISO determines the ETC Self-Schedule is invalid for any of the following reasons: (i) the Scheduling Coordinator submits the incorrect Contract Reference Number with the ETC Self-Schedule; (ii) the ETC Self-Schedule exceeds the resource capacity limits in the relevant Existing Contract(s) as registered and identified in the applicable TRTC Instructions; or (iii) the available capacity MW limit permissible under the Existing Contract(s) is zero (0).

##### 16.6.2.3.2 Non-Zero Available Capacity

If the CAISO determines that the ETC Self-Schedules submitted by Scheduling Coordinators for a

specific Existing Contract in total exceed the non-zero available capacity MW limit permissible under relevant Existing Contract(s) as reflected in TRTC Instructions, the CAISO will notify the Scheduling Coordinator promptly and will: (i) remove any scheduling priority for all the ETC Self-Schedules for the Existing Contract; (ii) apply the ETC Settlement treatment pursuant to Sections 11.2.1.5 and 11.5.7.1 to the valid balanced portions within the capacity limits of the Existing Contract as reflected in the TRTC Instructions; and (iii) assess any charges and make any payments consistent with the treatment of ordinary Self-Schedules for the portions in excess of the capacity limits of the Existing Contract as reflected in the TRTC Instructions. Where multiple ETC, TOR or Converted Rights Self-Schedules are submitted in an ETC, TOR or Converted Rights chain, all individual ETC, TOR, or Converted Rights Self-Schedules links in the chain must remain individually valid, including the simultaneous but separate use of an individual ETC, TOR or Converted Rights Self-Schedule, in order for all the ETC, TOR or Converted Rights Self-Schedules in the chain to remain valid and receive the full ETC, TOR or Converted Rights Self-Schedule treatment. Otherwise, the CAISO will treat any of the ETC, TOR, or Converted Rights Self-Schedules in the chain as specified above in this Section 16.6.2.3.2.

**16.6.3 Treatment of Valid ETC Self-Schedules**

The resulting valid ETC Self-Schedules shall have the following Settlement treatment:

(1) The CAISO will apply the ETC Settlement treatment in Sections 11.2.1.5 and 11.5.7.1.

(2) The CAISO shall base the Marginal Cost of Losses on LMP differentials at the Existing Contract source(s) and sink(s) identified in the valid ETC Self-Schedule.

(3) The holders of Existing Rights will not be entitled to an allocation of revenues from the CAISO, including Access Charge revenue related to those Existing Rights.

(4) Parties with Existing Rights shall continue to pay for Transmission Losses or Ancillary Services requirements in accordance with such Existing Contracts as they may be modified or changed in accordance with the terms of the Existing Contract. The Participating TOs shall continue to provide Transmission Losses and any other Ancillary Services to the holder of the rights under an Existing Contract as may be required by the Existing Contract. The CAISO will charge Scheduling Coordinators submitting the ETC Self-Schedule for Transmission Losses, Ancillary Services, and Flexible Ramping

Product, in accordance with the CAISO Tariff and any shortfall or surplus between the CAISO charges and the Existing Rights shall be settled bilaterally between the Existing Contract parties or through the relevant TO Tariff. To enable holders of Existing Rights to determine whether the CAISO's calculations result in any associated shortfall or surplus and to enable the parties to the Existing Contracts to settle the differences bilaterally or through the relevant TO Tariff, the CAISO shall calculate and provide the Scheduling Coordinator's Settlements the amounts paid for the MCL for the amounts of MWh submitted with a valid ETC Self-Schedule. Each Participating TO will be responsible for recovering any deficits or crediting any surpluses associated with differences in Transmission Losses and Transmission Loss requirements and/or Ancillary Services requirements, through its bilateral arrangements or its Transmission Owner Tariff.

**16.6.4 Notification to SCs of CAISO Determination**

After performing validation of the ETC Self-Schedule, and prior to taking any action pursuant to Section 16.6.2, the CAISO will make an automated validation notice available to the Scheduling Coordinator indicating whether the ETC Self-Schedule is valid or invalid. If an ETC Self-Schedule involves more than one Scheduling Coordinator, the complete validation of the chain of ETC Self-Schedules will occur when the last Scheduling Coordinator submits its ETC Self-Schedule. At that time, the CAISO will make an automated validation notice available to each Scheduling Coordinator registered as associated with the chain of ETC Self-Schedules. The CAISO can accommodate corrections submitted by a Scheduling Coordinator to an ETC Self-Schedule up to Market Close of the Day-Ahead Market as further described in the applicable Business Practice Manual.

**16.7 [Not Used]**

**16.8 [Not Used]**

**16.9 The HASP**

**16.9.1 Scheduling Deadlines**

Those holders of Existing Rights who have Existing Rights as reflected in the TRTC Instructions that allow scheduling after the close of the Day-Ahead Market may submit ETC Self-Schedules for the use of those rights by the deadline for the Market Close for RTM. Submission of schedule changes beyond the Market

Close for RTM that are permitted pursuant to the terms of the applicable ETC, shall not be deemed to be an unbalanced ETC Self-Schedule for the purposes of Settlement, consistent with the ETC and TOR Self-Schedule Settlement treatment described in Section 11.5.7.

### 16.10 The CAISO's Real-Time Process

Consistent with this Section 16, the CAISO will honor those scheduling flexibilities that may be exercised by holders of Existing Rights through their respective Scheduling Coordinators during the CAISO's Real-Time Market to the extent that such flexibilities do not interfere with or jeopardize the safe and reliable operation of the CAISO Controlled Grid or Balancing Authority Area operations.

### 16.11 Inter-Balancing Authority Area ETC Self-Schedule Bid Changes

Changes to ETC Self-Schedules that occur during the CAISO's Real-Time Market that involve changes to CAISO Balancing Authority Area imports or exports with other Balancing Authority Areas (that is, inter-Balancing Authority Area changes to ETC Self-Schedules) will be allowed and will be recorded by the CAISO based upon notification received from the Scheduling Coordinator representing the holder of the Existing Rights. The Scheduling Coordinator representing the holder of the Existing Right must notify the CAISO of any such changes to external import/export in submitted ETC Self-Schedules. The Scheduling Coordinator representing the holder of the Existing Right must notify the CAISO of Real-Time Market changes to external import/export Interchange Schedules in submitted ETC Self-Schedules, by telephone. The timing and content of any such notification must be consistent with the TRTC Instructions previously submitted to the CAISO by the Responsible PTO. The CAISO will manually adjust or update the FMM Schedule for the Scheduling Coordinator to conform with the other Balancing Authority Area's net ETC Self-Schedule in Real-Time, and the notifying Scheduling Coordinator will be responsible for and manage any resulting Energy imbalance. These FMM Instructed Imbalance Energy deviations will be priced and charged to the Scheduling Coordinator representing the holder of Existing Rights in accordance with the FMM LMP.

### 16.12 Intra-Balancing Authority Area ETC Self-Schedules Changes

Changes to ETC Self-Schedules that occur during the CAISO's Real-Time processes that do not involve changes to CAISO Balancing Authority Area imports or exports with other Balancing Authority Areas (that is, intra-Balancing Authority Area changes to Schedules) will be allowed and will give rise to FMM

Instructed Imbalance Energy and RTD Instructed Imbalance Energy. The imbalance energy will be priced and charged to the Scheduling Coordinator representing the holder of Existing Rights in accordance with the relevant FMM or RTD LMP.

## 17. Transmission Ownership Rights (TORs)

Transmission Ownership Rights represent transmission capacity on facilities that are located within the CAISO Balancing Authority Area that are either wholly or partially owned by an entity that is not a Participating TO. This Section 17 shall apply to the TORs of Non-Participating TOs. In any case in which (i) the CAISO has entered into a bilateral agreement with a Non-Participating TO regarding its TORs or (ii) a Participating TO has entered into a bilateral agreement with a Non-Participating TO regarding its TORs, the provisions of the agreement shall prevail over any conflicting provisions of this Section 17. Where the provisions of this Section 17 do not conflict with the provisions of the agreement, the provisions of this Section 17 shall apply to the subject TORs.

### 17.1 TRTC Instructions

#### 17.1.1 Responsibility to Create TRTC Instructions

To enable the CAISO to exercise its responsibilities as Balancing Authority in accordance with Applicable Reliability Criteria, each Non-Participating TO holding a TOR must work with the CAISO to develop the TRTC Instructions that allow the TOR to be accommodated in a way that: (i) maintains the existing scheduling and curtailment priorities of the TOR holder; (ii) is minimally burdensome to the CAISO (i.e., creates the least impact on the CAISO's preferred operational policies and procedures); (iii) to the extent possible, imposes no additional financial burden on the TOR holder (beyond that set forth in an applicable Existing Contract or any other contract pertaining to the TOR); (iv) is minimally burdensome to the TOR holder from an operational point of view; and (v) does not require the CAISO to interpret or underwrite the economics of any applicable Existing Contract. To enable the CAISO to exercise its responsibilities as Balancing Authority in accordance with Applicable Reliability Criteria, the parties holding joint ownership interests and Entitlements in facilities including TORs must attempt to jointly develop and agree on any TRTC Instructions that will be submitted to the CAISO, as provided in Section 17.1.6.

#### 17.1.2 TOR Scheduling Coordinator Responsibilities

To enable the CAISO to exercise its responsibilities as Balancing Authority in accordance with Applicable Reliability Criteria, each TOR holder must designate a Scheduling Coordinator as the responsible entity for submitting TOR Self-Schedules for the relevant TOR. The designated Scheduling Coordinator shall submit TOR Self-Schedules consistent with the terms and conditions specified in the TRTC Instructions.

### 17.1.3 Submission of TRTC Instructions

For each TOR, the Non-Participating TO holding the TOR shall be obligated to submit TRTC Instructions to the CAISO electronically, unless the Non-Participating TO specifies to the CAISO otherwise. The Non-Participating TO shall notify the CAISO in writing the identity of the responsible party for submission of the TRTC Instructions, subject to the terms of any applicable Existing Contract that may specify the responsible party for submission of the TRTC Instructions and the term of such agreement between the parties to the Existing Contract. The Non-Participating TO shall undertake all obligations with respect to the submission of the TRTC Instructions to the CAISO and any subsequent obligations that follow with respect to the creation, management and updates to the TRTC Instructions. The CAISO is responsible for implementing only one set of TRTC Instructions for each TOR and for implementing only those TRTC Instructions that have been received and accepted by the CAISO. The Non-Participating TO shall submit the TRTC Instructions to the CAISO associated with its TORs thirty (30) days prior to the date on which the scheduling or curtailment of the use of the TORs is to change or commence.

### 17.1.4 TRTC Instructions Content

TRTC Instructions will include the following information at a minimum and such other information as the CAISO may reasonably require the Non-Participating TO holder of a TOR to provide to enable the CAISO to carry out its functions under the CAISO Tariff, Operating Procedures and Business Practice Manuals:

(1) A unique Contract Reference Number for each source and sink combination applicable to the TOR (i.e., the CRN that will be assigned by the CAISO and communicated to the Non-Participating TO that references a single TOR or a set of interdependent TORs for each source and sink combination);

(2) Whether the instruction can be exercised independent of the CAISO's day-to-day involvement ("Yes/No");

(3) Name of an operational single point of contact for instructions and a 24- hour a day telephone number for the Non-Participating TO contact for TOR issues or the agreed upon party;

(4) Name(s) and number(s) of TOR(s) that are represented by the unique CRN;

(5) The following information, as stored in the Master File: (a) the applicable Point(s) of

Receipt and Point(s) of Delivery); (b) for each Point of Receipt, the resource names for the physical resources as the eligible sources (eligible physical sources include Generating Units and System Resources), and for each Point of Delivery, the resource names for the physical resources as the eligible sinks (eligible physical sinks include Load PNodes, Custom Load Aggregation Points and System Resources); (c) for each physical source or sink, the maximum capacity (MW) that can be scheduled as a TOR; and (d) for each physical source and sink, the Scheduling Coordinator(s) and their Business Associate Identification (BAID) that is (are) eligible to submit TOR Self-Schedules utilizing these sources and sinks;

(6) Names of the party(ies) holding the TOR(s) and the parties to any agreements applicable to the TORs;

(7) The Scheduling Coordinator BAID that is entitled to the Settlement of reversal of Congestion Charges;

(8) Amount of TORs, in maximum MW, that may be utilized under the relevant TRTC Instructions;

(9) Instructions for the allowable timeframes at which the TOR Self- Schedules and TOR Self-Schedule changes may be submitted to the CAISO, which include whether the Scheduling Coordinator may submit TOR Self-Schedules or TOR Self-Schedule changes: (a) into the DAM; (b) into the RTM; (c) after the close of submitting Bids into the RTM, but before twenty (20) minutes before the applicable Trading Hour of the Trading Day; and (d) at or after twenty (20) minutes before the applicable Trading Hour of the Trading Day; in addition, the Non-Participating TO may also provide any additional comments and restrictions on the submission time of TOR Self- Schedules and TOR Self-Schedule changes;

(10) Term of ownership interest in the TOR(s) and of any agreements applicable to the TOR(s);

(11) Any special procedures that would require the CAISO to implement curtailments in any manner different than pro rata reduction of the transfer capability of the transmission line;

any such instructions submitted to the CAISO must be clear, unambiguous, and not require the CAISO to make any judgments or interpretations as to the meaning, intent, results, or purpose of the curtailment procedures or of any applicable Existing Contract, otherwise, they will not be accepted by the CAISO; and

(12) Whether or not the TOR provides the right to self-provide Ancillary Services.

### 17.1.5 Changes and Updates to TRTC Instructions

Updates or changes to the TRTC Instructions must be submitted to the CAISO through a revised set of TRTC Instructions by the Non-Participating TO, on an as needed or as required basis. The CAISO will implement the updated or changed TRTC Instructions as soon as practicable but no later than seven (7) days after receiving clear and unambiguous details of the updated or changed instructions under normal conditions. If the CAISO finds the TRTC Instructions to be inconsistent with the CAISO Tariff, the CAISO will notify the Non-Participating TO within forty-eight (48) hours after receipt of the updated or changed TRTC Instructions indicating the nature of the problem and allowing the Non-Participating TO to resubmit the TRTC Instructions as if they were new, updated or changed TRTC Instructions. If the CAISO finds the updated or changed TRTC Instructions to be acceptable, the CAISO will time-stamp the updated TRTC Instructions as received, confirm such receipt to the Non-Participating TO, and indicate the time at which the updated instructions take effect if prior to the seven (7) day deadline referred to above. In the event of a System Emergency, the CAISO will implement such submitted changes to the TRTC Instructions as soon as practical.

### 17.1.6 CAISO Role in Accepting TRTC Instructions

The parties holding joint ownership interests and Entitlements in a facility including a TOR must, in the first instance, attempt jointly to agree on any TRTC Instructions that will be submitted to the CAISO. In the event that the parties holding joint ownership interests and Entitlements in a facility including a TOR cannot agree upon the TRTC Instructions, the dispute resolution provisions of any applicable Existing Contract shall be used to resolve the dispute; provided that, until the dispute is resolved, and unless the applicable Existing Contract specifies otherwise, the CAISO shall implement the Participating TO's TRTC Instructions, if one of the parties holding a joint ownership interest or an Entitlement in the facility is a Participating TO. If no party holding a joint ownership interest or Entitlement in a facility including a TOR

is a Participating TO and the parties cannot agree to the TRTC Instructions to be submitted by the parties, until the dispute is resolved, the CAISO shall implement the TRTC Instructions of the Non-Participating TO with the greatest ownership interest in the TOR. The CAISO shall not be responsible for resolution of any disputes that arise over the accuracy of the TRTC Instructions consistent with its obligations in Section 17.1.4.

**17.1.7 Implementation of TRTC Instructions**

The CAISO shall determine, based on the information provided by the Non-Participating TOs under TRTC Instructions, the transmission capacities that must be reserved for TORs at Scheduling Points.

The CAISO shall coordinate the scheduling of TORs with the scheduling of CAISO transmission service, using the CAISO's Bid submission rules. In doing so, the CAISO shall create an automated day-to-day verification process based on parameters provided by the Non-Participating TO for the TOR to serve as the basis for TOR Self-Schedule validation. The Non-Participating TO will be responsible for: (1) the accuracy of the data files against which the CAISO will validate the TOR Self-Schedule; and (2) providing the data file to the CAISO.

The TOR holders shall remain liable for their performance under any applicable Existing Contracts or other agreements pertaining to their TORs. The CAISO shall be liable in accordance with the provisions of this CAISO Tariff for any damage or injury caused by its non-compliance with the TRTC Instructions submitted to it pursuant to this Section 17.1.

Unless specified otherwise, in the event that the dispute resolution mechanisms prescribed in an Existing Contract applicable to a TOR, including all recourses legally available under the contract, cannot, in the first instance, result in a resolution of such a dispute, the CAISO ADR Procedures will be used to resolve any disputes between the CAISO and the Non-Participating TO regarding any aspects of the implementation of this Section 17.1, including the reasonableness of a Non-Participating TO's TRTC Instructions or any other decision rules which the Non-Participating TO may submit to the CAISO as part of the TRTC Instructions. The holders of TORs shall have standing to participate in the CAISO ADR Procedures.

### 17.2 Treatment of TORs

The CAISO will accommodate TORs, so that the holders of TORs will receive the same priorities (in scheduling, curtailment, assignment and other aspects of transmission system usage) to which they are entitled under any applicable Existing Contracts or other agreements pertaining to the operation of their TORs.

In addition, scheduling deadlines and operational procedures associated with TORs will be honored by the CAISO, provided such information is explicitly included in the TRTC Instructions. The CAISO will accommodate and honor TORs as follows:

(1) The CAISO will reserve transmission capacity equal to the TOR transmission capacity and make a corresponding adjustment in its determination of ATC. The CAISO will not limit parallel flow from flowing on TOR transmission capacity consistent with the redispatch provisions of Section 17.2(3), just as the CAISO does not limit TOR Self-Schedules from flowing on non-TOR transmission. There shall be no compensation for parallel flow for either the CAISO or the TOR holder.

(2) In the RTM, the CAISO will give valid TOR Self-Schedules priority over other non-TOR Day-Ahead Schedules and RTM Bids. In the event of a reduction in capacity on the transmission path associated with the TOR, the CAISO will honor the TOR priority in accordance with this Section 17.

(3) The CAISO will allow the holder of a TOR to make changes to the scheduled amounts of supply after the submission of HASP TOR Self-Schedules in accordance with the TRTC Instructions established for such changes. The CAISO will, as necessary, redispatch non-TOR resources to accommodate valid TOR Self-Schedule changes in Real-Time.

(4) The CAISO will allow the holder of a TOR to self-provide Ancillary Services, which will include the ability of the holder of a TOR to import Ancillary Services at Scheduling Points with the CAISO.

(5) The submission of a TOR Self-Schedule change that is authorized pursuant to an applicable existing agreement shall not affect the application of the IFM Congestion Credit or the RTM Congestion Credit, and the IFM Marginal Cost of Losses Credit for

Eligible TOR Self-Schedules or the RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules for a TOR Self-Schedule that satisfies the applicable requirements of Sections 17.4.1 and 17.5.

### 17.2.1 System Emergency Expectations

As set forth in Section 4.2.1, all Market Participants, including Scheduling Coordinators, Utility Distribution Companies, Participating TOs, Participating Generators(which includes Pseudo-Ties of Generating Units to the CAISO Balancing Authority Area), Participating Loads, Demand Response Providers, Distributed Energy Resource Providers, Balancing Authorities (to the extent the agreement between the Balancing Authority and the CAISO so provides), and MSS Operators within the CAISO Balancing Authority Area and all System Resources must comply fully and promptly with the CAISO's Dispatch Instructions and Operating Instructions, unless such operation would impair public health or safety or is otherwise exempted pursuant to Section 34.13.1.

The CAISO will honor the terms of TORs, provided that in a System Emergency and circumstances in which the CAISO considers that a System Emergency is imminent or threatened, to enable the CAISO to exercise its responsibilities as Balancing Authority in accordance with Applicable Reliability Criteria, holders of TORs must follow CAISO Operating Instructions even if those Operating Instructions directly conflict with the terms of applicable Existing Contracts or any other contracts pertaining to the TORs, unless such Operating Instructions are inconsistent with the terms of an agreement between the CAISO and a Balancing Authority. In the event of a conflict between the CAISO Tariff and an agreement between the CAISO and a Balancing Authority, the agreement will govern. For this purpose CAISO Dispatch Instructions or Operating Instructions to shed Load shall not be considered as an impairment to public health or safety. This section does not prohibit a Scheduling Coordinator from modifying its Bid or re-purchasing Energy in the RTM.

## 17.3 Valid TOR Self-Schedule

The CAISO will accept a valid TOR Self-Schedule from a Scheduling Coordinator. That Scheduling Coordinator shall be either the holder of the TOR or its designee. TOR Self-Schedules submitted by Scheduling Coordinators to the CAISO must be submitted in accordance with this CAISO Tariff.

### 17.3.1 Validation of TOR Self-Schedules

A TOR Self-Schedule is a valid TOR Self-Schedule when the CAISO has determined that the TOR Self-Schedule, submitted to the CAISO pursuant to the requirements for Bids in Section 30, properly reflects TORs consistent with the TRTC Instructions, is labeled with a unique TOR identifier, and includes balanced sources and sinks, within the TOR capacity limits.

### 17.3.2 Treatment of Invalid TOR Self-Schedules

#### 17.3.2.1 Inconsistent with the TRTC Instructions

Generally, except as further specified below in Sections 17.3.2.2 and 17.3.2.3, if the CAISO finds that a TOR Self-Schedule is not consistent with the TRTC Instructions, the CAISO shall find that the TOR Self-Schedule is not valid. If the CAISO finds the TOR Self-Schedule to be invalid, the CAISO shall notify the Scheduling Coordinator and convert the TOR Self-Schedule to an ordinary Self-Schedule and treat the TOR Self-Schedule as an ordinary Self-Schedule for scheduling priority and Settlements.

#### 17.3.2.2 Unbalanced TOR Self-Schedules

If the CAISO determines that a TOR Self-Schedule a Scheduling Coordinator submits to the Day-Ahead Market is not balanced, the CAISO will: (i) remove any scheduling priority for the entire TOR Self-Schedule; (ii) apply the TOR Settlement treatment pursuant to Sections 11.2.1.5 to the valid balanced portions only; and (iii) assess any charges and make any payments consistent with the treatment of ordinary Self-Schedules for the unbalanced portions. If the CAISO determines that a TOR Self-Schedule a Scheduling Coordinator submits to the Real-Time Market is not balanced, the CAISO will: (i) apply the TOR Settlement treatment pursuant to Section 11.5.7.1 to the valid balanced portions only; and (ii) assess any charges and make any payments consistent with the treatment of ordinary Self-Schedules for the unbalanced portions. Where multiple ETC, TOR or Converted Rights Self-Schedules are submitted in an ETC, TOR, or Converted Rights chain, all individual ETC, TOR, or Converted Rights Self-Schedules links in the chain must remain individually valid, including the simultaneous but separate use of an individual ETC, TOR, or Converted Rights Self-Schedule, in order for all the ETC, TOR or Converted Rights Self-Schedules in the chain to remain valid and not be rejected as specified above. Otherwise, the CAISO will treat any of the ETC, TOR, or Converted Rights Self-Schedules in the chain as specified above in this Section 17.3.2.2.

#### 17.3.2.3 Exceeds Capacity Limits or Invalid Contract Reference Numbers

##### 17.3.2.3.1 Rejection of TOR Self-Schedule

The CAISO will reject a TOR Self-Schedule and will inform the responsible Scheduling Coordinator that it has rejected the TOR Self-Schedule if the CAISO determines the TOR Self-Schedule is invalid for the following reasons: (i) the Scheduling Coordinator submits the incorrect Contract Reference Number for the TOR Self-Schedule; (ii) the TOR Self-Schedule exceeds the resource capacity limits of the TOR as registered and reflected in TRTC Instructions; or (iii) the available capacity MW limit permissible under the relevant TOR is zero (0).

##### 17.3.2.3.2 Non-Zero Available Capacity

If the CAISO determines that the TOR Self-Schedules submitted by Scheduling Coordinators for a specific Transmission Ownership Right in total exceed the non-zero available MW limit permissible under the relevant Transmission Ownership Rights as specified in the TRTC Instructions, the CAISO will: (i) remove any scheduling priority for the entire TOR Self-Schedule; (ii) apply the TOR Settlement treatment pursuant to Sections 11.2.1.5 and 11.5.7.1 to the valid and balanced portions within the capacity limits of the TOR as reflected in the TRTC Instructions; and (iii) assess any charges and make any payments consistent with the treatment of ordinary Self-Schedules for the portions in excess of the capacity limits of the TOR as reflected in the TRTC Instructions. Where multiple ETC, TOR or Converted Rights Self-Schedules are submitted in an ETC, TOR, or Converted Rights chain, all individual ETC, TOR, or Converted Rights Self-Schedules links in the chain must remain individually valid, including the simultaneous but separate use of an individual ETC, TOR, or Converted Rights Self-Schedule, in order for all the ETC, TOR or Converted Rights Self-Schedules in the chain to remain valid and not be rejected as specified above. Otherwise, the CAISO will treat any of the ETC, TOR, or Converted Rights Self-Schedules in the chain as specified above in this Section 17.3.2.3.2.

### 17.3.3 Settlement Treatment of Valid TOR Self-Schedules

The resulting valid TOR Self-Schedules shall have the following Settlement treatment:

(1) The CAISO will apply the TOR Settlement treatment in Sections 11.2.1.5 and 11.5.7.

(2) The CAISO shall base the Marginal Cost of Losses on LMP differentials at the Points of Receipt and Points of Delivery identified in the valid TOR Self-Schedule; provided,

however, that if a specific loss percentage exists in an applicable agreement between the TOR holder and the CAISO or an existing agreement between the TOR holder and a Participating TO, the CAISO will apply the IFM and RTM Marginal Cost of Losses Credit as provided in Sections 11.2.1.7 and 11.5.7.2. In any case in which the TOR holder has an existing agreement regarding its TORs with either the CAISO or a Participating TO, the provisions of the agreement shall prevail over any conflicting provisions of this Section 17.3.3(2). Where the provisions of this Section 17.3.3(2) do not conflict with the provisions of the agreement, the provisions of this Section 17.3.3(2) shall apply to the subject TORs.

(3) The CAISO will assess only charges applicable to Ancillary Services, imbalance energy, Transmission Losses, Flexible Ramping Product, and Grid Management Charges for the use of a TOR and will not assess charges for neutrality, Unaccounted For Energy, transmission Access Charges, Minimum Load Costs, or other charges that might otherwise be applicable to the Demand or exports served solely over the TOR. The CAISO will assess charges applicable to Ancillary Services for the use of a TOR only to the extent that the CAISO must procure Ancillary Services for the TOR holder because Ancillary Services are not self-provided by the TOR holder. The CAISO will assess charges and provide payments for TOR Self-Schedules pursuant to the rules specified in Sections 11.2.1.5 and 11.5.7.2. The CAISO will assess charges applicable to imbalance energy for the use of a TOR only if the CAISO must procure imbalance energy for the TOR holder. The CAISO will assess Grid Management Charges for the use of a TOR only in accordance with the provisions of Section 11.22 and Appendix F, Schedule 1.

(4) The holders of TORs will not be entitled to an allocation of revenues from the CAISO, including Access Charge revenues; provided that the Scheduling Coordinator for the TOR holder shall be allocated the applicable amount of IFM Marginal Losses Surplus Credit in accordance with the provisions of Section 11.2.1.6, except for any TOR Self-Schedule that received the IFM Marginal Cost of Losses Credit.

(5) Parties with TORs shall continue to pay for Transmission Losses or Ancillary Services requirements in accordance with any Existing Contracts applicable to those TORs as they may be modified or changed in accordance with the terms of the Existing Contract. Any affected Participating TOs shall continue to provide Transmission Losses and any other Ancillary Services to the holder of a TOR subject to an Existing Contract as may be required by the Existing Contract. As described in Section 17.3.3(3) above, the CAISO will charge Scheduling Coordinators submitting the TOR Self-Schedule the charges applicable to Transmission Losses, Ancillary Services, and imbalance energy in accordance with the CAISO Tariff (e.g., the Transmission Losses Charge based on the Marginal Cost of Losses), and any shortfall or surplus between the CAISO charges and the provisions of any applicable Existing Contract shall be settled bilaterally between the Existing Contract parties or through the relevant TO Tariff. To enable holders of TORs to determine whether the CAISO's calculations result in any associated shortfall or surplus and to enable the parties to the Existing Contracts to settle the differences bilaterally or through the relevant TO Tariff, the CAISO shall calculate and provide the Scheduling Coordinator's Settlements the amounts paid for the MCL for the amounts of MWh submitted with a valid TOR Self-Schedule. Each Participating TO will be responsible for recovering any deficits or crediting any surpluses associated with differences in Transmission Losses and Transmission Loss requirements and/or Ancillary Services requirements, through its bilateral arrangements or its Transmission Owner Tariff.

**17.3.4 Notification to SCs of CAISO Determination**

After performing validation of the TOR Self-Schedule, and prior to taking any action pursuant to 17.3, the CAISO will make an automated validation notice available to the Scheduling Coordinator indicating whether the TOR Self-Schedule is valid or invalid. If a TOR Self-Schedule involves more than one Scheduling Coordinator, the complete validation of the chain of TOR Self-Schedules will occur when the last Scheduling Coordinator submits its TOR Self-Schedule. At that time, the CAISO will make an automated validation notice available to each Scheduling Coordinator registered as associated with the chain of TOR Self-Schedules. The CAISO can accommodate corrections submitted by a Scheduling

Coordinator to a TOR Self-Schedule up to Market Close of the Day-Ahead Market as further described in the applicable Business Practice Manual.

### 17.4 The HASP

#### 17.4.1 Scheduling Deadlines

Holders of TORs may submit TOR Self-Schedules for the use of those rights by the deadlines for the Market Close for the RTM.

### 17.5 The CAISO's Real-Time Process

Consistent with this Section 17, the CAISO will honor those scheduling flexibilities that may be exercised by holders of TORs through their respective Scheduling Coordinators during the CAISO's Real-Time Market to the extent that such flexibilities do not interfere with or jeopardize the safe and reliable operation of the CAISO Controlled Grid or Balancing Authority Area operations.

### 17.6 Inter-Balancing Authority Area TOR Self-Schedule Bid Changes

Changes to TOR Self-Schedules that occur during the CAISO's Real-Time Market that involve changes to CAISO Balancing Authority Area imports or exports with other Balancing Authority Areas (that is, inter-Balancing Authority Area changes to TOR Self-Schedules) will be allowed and will be recorded by the CAISO based upon notification received from the Scheduling Coordinator representing the holder of the TOR. The Scheduling Coordinator representing the holder of the TOR must notify the CAISO of any such changes to external import/export in submitted TOR Self-Schedules. The Scheduling Coordinator representing the holder of the TOR must notify the CAISO of Real-Time Market changes to external import/export Interchange Schedules in submitted TOR Self-Schedules, by telephone. The timing and content of any such notification must be consistent with the TRTC Instructions previously submitted to the CAISO by the Non-Participating TO. The CAISO will manually adjust or update the FMM Schedule for the Scheduling Coordinator to conform with the other Balancing Authority Area's net TOR Self-Schedule in Real-Time, and the notifying Scheduling Coordinator will be responsible for and manage any resulting Energy imbalance. These imbalance energy deviations will be priced and charged to the Scheduling Coordinator representing the holder of the TOR in accordance with the relevant FMM or RTD LMP.

### 17.7 Intra-Balancing Authority Area TOR Self-Schedule Changes

Changes to TOR Self-Schedules that occur during the CAISO's Real-Time processes that do not involve changes to CAISO Balancing Authority Area imports or exports with other Balancing Authority Areas (that is, intra-Balancing Authority Area changes to Schedules) will be allowed and will give rise to Imbalance Energy deviations. These imbalance energy deviations will be priced and charged to the Scheduling Coordinator representing the holder of the TOR in accordance with the relevant FMM or RTD LMP.

### 17.8 Existing Contracts Re TORs for Non-Participating TOs

Continuation of Rights and Obligations of Non-Participating TOs Regarding TORs and Under Existing Contracts Applicable to TORs.

The transmission service rights and obligations of Non-Participating TOs under Existing Contracts applicable to their TORs, including all terms, conditions and rates of the Existing Contracts, as they may change from time to time under the terms of the Existing Contracts, will continue to be honored by the parties to those contracts, for the duration of those contracts.

#### 17.8.1 Participating TO Obligation

If a Participating TO is a party to an Existing Contract with provisions applicable to a TOR of a Non-Participating TO, the Participating TO shall attempt to negotiate changes to the Existing Contract to align the contract's scheduling and operating provisions with the CAISO's scheduling and operational procedures, rules and protocols, to align operations under the contract with CAISO operations, and to minimize the contract parties' costs of administering the contract while preserving their financial rights and obligations.

#### 17.8.2 Right to Use and Ownership of TORs

If a Non-Participating TO has an Existing Contract with a Participating TO under which the Non-Participating TO's TORs, or a portion thereof, are subject to use by the Participating TO, the Non-Participating TO's rights to the use and ownership of its TORs shall remain unchanged, regardless of the Participating TO's act of turning over the Participating TO's Entitlement to use the Non-Participating TO's TORs to the extent possible to the Operational Control of the CAISO.

The CAISO will accept valid TOR Self-Schedules from holders of TORs that are Scheduling Coordinators or that are represented by a Scheduling Coordinator. TOR Self-Schedules submitted by Scheduling

Coordinators to the CAISO must be submitted in accordance with Sections 17 and 30. The CAISO may refuse to accept TOR Self-Schedules that do not meet the requirements of the principles, protocols and rules referred to in this Section 17.

### 17.8.3 Dispute Resolution for Existing Contracts Applicable to TORs

The CAISO will, if requested, advise parties to Existing Contracts applicable to TORs regarding the operational aspects of any Existing Contract renegotiations that they undertake.

If the parties to an Existing Contract applicable to a TOR are unable to reach agreement on the changes needed to meet the requirements of this CAISO Tariff, any disputes related thereto shall be addressed using the dispute resolution provisions of the Existing Contract, including any remedies as are provided by law. The rights of the parties to seek changes or to challenge such changes, under the FPA or as otherwise provided by law, are preserved consistent with the terms of the Existing Contract. Unless and until the necessary changes to the Existing Contract are made, all terms and conditions of the Existing Contracts will continue to be honored by the parties to the Existing Contracts.

## 17.9 Conversion of PTOs' Rights Under Existing Contracts Re TORs

Non-Participating TOs holding TORs and who choose to become Participating TOs must, at the time of becoming a Participating TO, turn over Operational Control of those TORs to the CAISO in accordance with Section 4.3.1 and convert any Existing Contract rights associated with those TORs to Converted Rights in accordance with Section 4.3.1.6.

## 17.10 TOR Operations Obligations

To enable the CAISO to exercise its responsibilities as Balancing Authority in accordance with Applicable Reliability Criteria, each Non-Participating TO must operate its ownership interests in facilities in which it holds a TOR in accordance with Good Utility Practice and Applicable Reliability Criteria.

**18. [Not Used]**

# 19. Reliability Coordinator

## 19.1 General Provisions

(a) **RC Services.** The CAISO will provide RC Services to RC Customers that execute the Reliability Coordinator Services Agreement (RCSA) and the CAISO Balancing Authority.

(b) **Tariff Obligations.** RC Customers must comply with –

(1) the provisions of Section 19; and

(2) other provisions of the CAISO Tariff that apply to the extent such provisions –

(A) expressly refer to Section 19 or RC Customers;

(B) are cross referenced in Section 19; or

(C) are included in Section 1 or Appendix A.

(c) **Inconsistency Between Provisions.** If there is an inconsistency between a provision in this Section 19 and another provision of the CAISO Tariff regarding the rights or obligations of RC Customers, the provision in Section 19 shall prevail to the extent of the inconsistency.

(d) **Inconsistency With Requirements of NERC Reliability Standards.** If there is an inconsistency between a provision in this Section 19 or any other CAISO Tariff provision applied to RC Customers through Section 19 and an obligation or requirement set forth in an applicable NERC Reliability Standard, the NERC Reliability Standard shall prevail to the extent of the inconsistency.

## 19.2 Access to RC Services

(a) **In General.** The CAISO will –

(1) obtain certification from NERC and WECC to perform the functions of a Reliability Coordinator;

(2) maintain such certification as a Reliability Coordinator; and

(3) provide RC Services in accordance with the NERC Reliability Standards to –

(A) transmission operators in the CAISO Balancing Authority Area;

(B) the CAISO Balancing Authority;

(C) other Balancing Authorities that request such services from the CAISO

and execute the RCSA, including Balancing Authorities that are also registered as transmission operators; and

(D) transmission operators that are within Balancing Authority Areas receiving RC Services from the CAISO.

(b) **Implementation of RC Services.**

(1) **Balancing Authorities.** A Balancing Authority that elects to receive Reliability Coordinator services from the CAISO must first execute an RCSA with the CAISO that establishes –

(A) the Balancing Authority as an RC Customer of the CAISO;

(B) the transmission operators within the Balancing Authority Area that will take RC Services from the CAISO, including itself if the Balancing Authority is also registered as a transmission operator;

(C) the date upon which the Balancing Authority and the identified transmission operators will receive RC Services from the CAISO (the "RC Services Date"); and

(D) the obligation of the Balancing Authority to complete the onboarding requirements in Section 19.2(b)(7)-(9) prior to the RC Services Date.

(2) **Transmission Operators in Balancing Authority Areas External to CAISO.** Transmission operators in an RC Customer Balancing Authority Area must execute a RCSA that establishes –

(A) whether the transmission operator will be invoiced by their associated Balancing Authority or invoiced directly by the CAISO; and

(B) the date upon which the transmission operator will begin receiving RC Services from the CAISO (the "RC Services Date"); and

(C) the obligation of the transmission operator to complete the onboarding requirements set forth in Section 19.2(b)(7)-(9) prior to the RC Services Date.

(3) **Transmission Operators in the CAISO Balancing Authority Area.** Transmission operators in the CAISO Balancing Authority Area must execute a RCSA that establishes the obligation of the transmission operator to complete the onboarding requirements in Section 19.2(b)(7)-(9) prior to the RC Services Date for the CAISO Balancing Authority Area.

(4) **RC Services Date.** The CAISO, in consultation with the RC Customer, will in its discretion determine the RC Services Date for each entity requesting RC Services, which will be targeted for April 1 of each calendar year except for the initial onboarding dates established in Section 19.2(b)(6).

(5) **Onboarding Period.** The CAISO, in consultation with the RC Customer, will in its discretion establish the onboarding period based on the complexity and compatibility of the Balancing Authority's transmission and technology systems with the CAISO systems, certification requirements, number and size of transmission operators within the Balancing Authority Area, and the planned timing of the CAISO's implementation of RC Services.

(6) **Initial Onboarding Dates**. The initial RC Services Dates will be –

(A) no earlier than July 1, 2019 for RC Customers within the CAISO's Balancing Authority Area and other RC Customers with that RC Services Date; and

(B) no earlier than September 1, 2019 for RC Customers outside of the CAISO's Balancing Authority Area with an RC Services Date other than what may be provided under Section 19.2(b)(6)(A).

(7) **Integration Testing and Shadow Operations.** The CAISO and the RC Customer will, prior to the RC Services Date, engage in functional and system integration testing, shadow operations, and other activities that confirm the RC Customer's onboarding requirements are complete and sufficient to meet the readiness criteria as set forth in the Business Practice Manual for RC Services.

(8) **Readiness Determination.** No later than 30 days prior to the RC Services Date, the CAISO will determine, in consultation with the RC Customer, whether the systems and processes of the RC Customer and the CAISO will be ready for the CAISO to begin to provide the RC Customer with RC Services, according to the readiness criteria set forth in the Business Practice Manual for RC Services.

(9) **Readiness Statement.** The CAISO and the RC Customer will exchange a readiness statement with each other at least 30 days prior to the RC Services Date in which a senior officer of each entity states –

(A) that the processes and systems of the prospective RC Customer and the CAISO have satisfied or will have satisfied the readiness criteria set forth in the Business Practice Manual for RC Services;

(B) any exceptions from the readiness criteria specified in the Business Practice Manual for RC Services, and that despite such exceptions, the criteria were met or will be met;

(C) that the RC Services Date is conditional on the resolution of the known issues identified in the statements and any unforeseen issues that undermine the satisfaction of the readiness criteria set forth in the Business Practice Manual for RC Services; and

(D) if, subsequent to exchanging readiness statements, the CAISO or the RC Customer determines that it cannot proceed with implementation on the RC Services Date, the CAISO or the RC Customer will notify the other of the delay, the reason for the delay, the proposed new RC Services Date, if it can be determined, and whether it will need to re-issue a portion or all of the readiness statement.

(10) **Readiness Reporting.** The CAISO will report on the CAISO Website periodically, but not less than monthly during integration testing and shadow operations, on progress towards achieving the readiness criteria set forth in the Business Practice Manual for RC Services.

**19.3 Supplemental Services – Hosted Advanced Network Applications (HANA)**

(a) **Scope of HANA Services.** The CAISO will also offer web-based HANA services to its RC Customers as those services are described in the Business Practice Manual for RC Services.

(b) **Initial Commitment and Term.** An RC Customer that elects to obtain HANA services from the CAISO will be required to make a three-year initial commitment for these services, after which the RC Customer may take HANA services for additional one-year terms as provided in the Business Practice Manual for RC Services.

(c) **Notification of Election.** An RC Customer must notify the CAISO in writing 90 calendar days in advance of the date that the RC Customer elects to take HANA.

(d) **Termination of HANA Services.** An RC Customer may terminate HANA services in accordance with the RCSA.

**19.4 Supplemental Services – Physical Security Review**

(a) **Physical Security Review.** If requested by the RC Customer, the CAISO will provide RC Customers that are transmission operators with verification of their periodic risk assessments of their transmission stations and substations in accordance with Critical Infrastructure Protection Standard 014 (CIP-014) if requested pursuant to the RCSA.

(b) **Scope of Other Supplemental Services.** Further detail regarding the nature of the physical security review, as well as any other supplemental services offered by the CAISO, is described in the Business Practice Manual for RC Services.

**19.5 Roles and Responsibilities**

(a) **CAISO Reliability Coordinator Obligations.**

(1) **Reliability Coordinator Services.** The CAISO, as the Reliability Coordinator for the RC Customer, will perform the specific tasks and functions applicable to a Reliability Coordinator pursuant to the NERC Reliability Standards as detailed in the RC Operating Procedures, which include –

(A) providing outage coordination services;

(B) performing operations planning analysis;

(C) conducting real-time assessment, monitoring and wide area situational awareness;

(D) administering a system operating limit (SOL) methodology;

(E) approving system restoration plans and facilitating system restoration drills; and

(F) issuing operating instructions to RC Customers with respect to monitored facilities.

(2) **Other CAISO Reliability Responsibilities.** Nothing in Section 19 shall alter the CAISO's responsibilities under the other sections of the CAISO Tariff, under any agreement not required by Section 19, or under the NERC Reliability Standards or any other Applicable Reliability Criteria as the Balancing Authority for the CAISO Balancing Authority Area and the transmission operator for the CAISO Controlled Grid, provided that the CAISO, as the Balancing Authority for the CAISO Balancing Authority Area and the transmission operator for the CAISO Controlled Grid, must comply with applicable obligations in Section 19, including Section 19.5(b)(2)(B).

(3) **Relationship Among CAISO Registered Functions.** The CAISO in its function as the Reliability Coordinator shall at all times provide RC Services in a manner that does not unduly discriminate or give undue preference to any RC Customer, including itself as a Balancing Authority and transmission operator.

(b) **RC Customer Obligations.**

(1) **RC Customer Eligibility.** An RC Customer must be registered and certified under the applicable authorities as –

(A) a Balancing Authority;

(B) a transmission operator within a Balancing Authority Area that receives RC Services from the CAISO; or

(C) a transmission operator within the CAISO Balancing Authority Area.

(2) **RC Customer Obligations.** An RC Customer will perform the obligations of an RC Customer in accordance with the RCSA and Section 19 and the obligations required by NERC Reliability Standards applicable to the functions for which it is registered, insofar as they relate to interactions with the Reliability Coordinator, which include –

(A) exchanging data, operating plans, operating procedures, studies, and reports with the CAISO in accordance with the Business Practice Manual for RC Services and applicable RC Operating Procedures;

(B) following CAISO operating instructions as the Reliability Coordinator with respect to monitored transmission facilities in accordance with applicable RC Operating Procedures; and

(C) promptly providing such information as the CAISO may reasonably request in relation to major incidents consistent with the NERC event analysis program.

(3) **Other Balancing Authority or Transmission Operator Responsibilities.** Nothing in the CAISO Tariff will alter an RC Customer's responsibilities under NERC Reliability Standards as the Balancing Authority for its Balancing Authority Area, as a transmission operator, or any other function for which the RC Customer is registered.

(4) **RC Customer Termination of Services.**

(A) **Reliability Coordinator Services Agreement.** An RC Customer located outside of the CAISO Balancing Authority Area that elects to terminate RC Services must terminate the RCSA pursuant to its terms.

(B) **Notice.** Delivery to the CAISO of a written notice of termination pursuant to the terms of the RCSA shall represent the commitment by the RC Customer to undertake all necessary preparations to receive services from a Reliability Coordinator other than the CAISO.

(C) **Actions Following Notice.** Upon receipt of such notice, the CAISO will undertake all reasonably necessary preparations to assist in transitioning the RC Customer to a Reliability Coordinator other than the CAISO.

**19.6 Provision of Settlement Data by RC Customers**

(a) **Applicability.** This Section 19.6 applies to the following RC Customers:

(1) Balancing Authorities other than the CAISO;

(2) Transmission operators located in a Balancing Authority Area other than the CAISO that (i) have executed the RCSA and indicated in the RCSA that they have load, and (ii) have elected in the RCSA to receive direct billing of RC Services from the CAISO.

(b) **Data Requirements.** By no later than the date and in the format specified in the Business Practice Manual for RC Services, such RC Customers must submit the following data regarding billing volumes –

(1) for RC Customers that are, or are located in, generation-only Balancing Authorities, total annual Net Generation in MWh from January 1 through December 31 of the previous year; and

(2) for all other RC Customers, total annual Net Energy for Load in MWh from January 1 through December 31 of the previous year.

(c) **Failure to Submit Data.** If the RC Customer does not submit the required billing volume data by the date specified in the Business Practice Manual for RC Services, the CAISO will utilize the RC Customer's default MWh specified in the RCSA, which will be established as follows:

(1) the default total annual Net Generation in MWh for RC Customers that are, or are located in, generation-only Balancing Authorities will equal the sum of the RC Customer's installed generation capacity times a 90 percent capacity factor times 8,760 hours per year for RC Customers that are, or are located in, generation-only Balancing Authorities; and

(2) the default total annual Net Energy for Load in MWh for all other RC Customers will equal the volumes reported by NERC/WECC for the year prior to the effective date of the RCSA, multiplied by 1.25.

(d) **Reporting Zero Values.** If the RC Customer is a transmission operator that has indicated in its RCSA that it has no Net Energy for Load or Net Generation during the period January 1 through December 31 of the prior year, the RC Customer will indicate such to the CAISO.

(e) **RC Customer Validation.** By no later than a date specified in the Business Practice Manual for RC Services, the CAISO will publish an informational statement containing the billing data volume for each RC Customer and a shared billing data volume statement including only RC Customer non-confidential information.

(f) **RC Customer Acceptance.** An RC Customer shall be deemed to have validated and accepted its billing data volume published by the CAISO unless it modifies its billing data volume by no later than the date specified in the Business Practice Manual for RC Services.

(g) **CAISO Audit of Submitted Data.** The CAISO may, with good cause, review actual Net Energy for Load or Net Generation information available to the CAISO and, following an opportunity for the RC Customer to comment, adjust an RC Customer's RC Services Charge assessed up to two years prior to the most recently issued invoice to account for inaccuracies between the billing volumes reported to the CAISO and the actual Net Energy for Load or Net Generation for the same period, and such adjustments will be reflected on the next annual RC Services Invoice.

(h) **RC Customers in the CAISO Balancing Authority Area.** For RC Customers in the CAISO Balancing Authority Area no submission is required pursuant to this Section 19.6 since the CAISO will calculate such RC Customers' share of the CAISO Balancing Authority Area's Net Energy for Load in accordance with Section 11.20.9.

## 19.7 Settlements and Billing for RC Customers

(a) **Applicability.** Section 19.7, rather than Section 11, shall apply to the CAISO Settlement with RC Customers, unless the RC Customer is also a Scheduling Coordinator for a Load Serving Entity in the CAISO Balancing Authority Area, in which case Section 11.20.9 will apply rather than Section 19.7 and the CAISO will invoice such Scheduling Coordinators in accordance with Section 11.20.9.

(b) **Reliability Coordinator Services Charge.**

(1) **In General.** The CAISO will charge RC Customers an RC Services Charge based on the rate calculated according to the formula in Appendix F, Schedule 7.

(2) **Minimum RC Services Charge.** The CAISO will charge RC Customers a minimum RC Services Charge as set forth in Appendix F, Schedule 7.

(3) **Application of Revenues.** The CAISO will apply revenues received from the RC Services Charge against the costs to be recovered through the Grid Management Charge as described in Appendix F, Schedule 7.

(c) **Billing Procedures.**

(1) **In General.** The CAISO will invoice RC Customers on an annual basis for RC Services provided during that calendar year, except for the initial year of RC Services which will be invoiced in accordance with Section 19.7(c)(3).

(2) **RC Services Invoice.** The CAISO will provide RC Customers with an RC Services Invoice by the first business day of each calendar year for RC Services to be provided during that calendar year.

(3) **Initial RC Services Invoice Period.** The CAISO will invoice RC Customers for RC Services from the RC Services Date determined in accordance with Section 19.2(b)(6) until the end of that calendar year based on the applicable rate in Appendix F, Schedule 7 at the same time the CAISO invoices RC Customers for the year following that initial year.

(d) **Validation and Disputes of RC Services Invoices.**

(1) **Review.** RC Customers will have the opportunity to review and validate the charges included in the RC Services Invoice.

(2) **Validation.** An RC Services Invoice shall be binding on the RC Customer to which it relates and will not be subject to later dispute unless the RC Customer has raised a dispute within 21 Business Days of the date of issuance.

(3) **Disputes.** RC Customers shall be prohibited from disputing any RC Services Invoice, except on the grounds that an error causes the invoiced amount to differ from the amount that would result from the application of the rate set forth in the CAISO Tariff.

(4) **Confirmation.** Confirmation, validation and resolution of any dispute associated with the invoicing of RC Services shall be managed through the CAISO's customer inquiry, dispute, and information system and as provided in the Business Practice Manual for RC Services.

(5) **Corrected Invoices.** If the CAISO determines that an RC Services Invoice contains an error that causes the invoiced amount to differ from the amount that would result from the application of the rate set forth in the CAISO Tariff, and the resolution of the dispute makes correction necessary, the CAISO will issue a corrected invoice within 21 Business Days of the date the initial invoice was issued.

(A) each RC Customer that receives an invoice for RC Services shall pay any net debit and shall be entitled to receive any net credit specified on a corrected invoice; and

(B) payment of any net debit shall be made in accordance with the procedures set forth in Section 19.7(e), except that payment shall be made by no later than 21 Business Days after a corrected invoice is issued.

(e) **Payment by RC Customers.**

(1) **Payment Date.** RC Customers shall make timely payment to the CAISO of any charges on an RC Services Invoice by no later than 21 Business Days after an RC Services Invoice is issued, except as otherwise may be required to comply with Schedule 2 of the RCSA.

(2) **Payment Procedures.**

(A) **General.** All payments to the CAISO made pursuant to this Section 19 will be denominated in United States dollars and cents and shall be made by Fedwire or, at the option of each RC Customer, by Automated Clearing House by 10:00 am on the relevant payment date.

(B) **RC Customer System Failure.** If any RC Customer becomes aware that a payment will not be, or is unlikely to be, received by the CAISO Bank by 10:00 am on the relevant payment date for any reason (including failure of the Fedwire or any computer system), it shall immediately notify the CAISO, giving full details of the payment delay (including the reasons for the payment delay), and shall make all reasonable efforts to remit payment as soon as possible, by an alternative method if necessary, to ensure that funds are received for value no later than 10:00 am on the payment date, or as soon as possible thereafter.

(C) **CAISO System Failure.** In the event of failure of any electronic transfer system affecting the CAISO Bank, the CAISO shall notify RC Customers of the occurrence of the system failure and the alternative methods and anticipated time of payment. In the event that a payment is received late by the CAISO Bank due to a system failure affecting the CAISO Bank, the procedures set forth in Section 19.7(e)(3)-(5) below shall not apply.

(3) **Late Payment and Default.** If payment is not received by 21 Business Days after an RC Services Invoice is issued, the RC Customer will be charged a

$1,000 late payment fee on a supplemental RC Services Invoice and will be considered to be in default, understanding that the CAISO reserves the right to terminate, consistent with the terms of the RCSA, such RC Customer's RC Services until such time as payment is received except as otherwise may be required to comply with Schedule 2 of the RCSA.

(4) **Payment Pending Dispute.** If there is any dispute relating to a charge included on an RC Services Invoice that is not resolved prior to the payment due date, the RC Customer shall pay any amounts shown on the relevant RC Services Invoice, despite the continuing pendency of the dispute, and the provisions of Section 19.10 will thereafter apply to the resolution of the dispute.

(5) **Default Collection Procedures.**

(A) **In General.** In the event an RC Customer defaults on the payment of all or any portion of the RC charges included on an RC Services Invoice, the CAISO may, at its discretion, issue a supplemental RC Services Invoice to all other RC Customers that reallocates any amounts unpaid by the defaulting RC Customer to all other RC Customers in proportion to the amounts included on those RC Customers' RC Services Invoices.

(B) **Supplemental Payment.** RC Customers shall, subject to the dispute resolution procedures in Section 19.7(d), make payment to the CAISO of any charges on a supplemental invoice within 21 Business Days of the date the supplemental invoice is issued.

(C) **CAISO Collection.** Notwithstanding any reallocation pursuant to this Section 19.7, the CAISO shall –

(i) use all commercially reasonable efforts (including suspension of RC Services) to collect amounts invoiced in accordance with this Section 19.7; and

(ii) credit other RC Customers in proportion to the amount of the supplemental invoice they received pursuant to this Section 19.7

in an amount equal to any amounts collected by CAISO from a defaulting RC Customer, provided that any such credits will be included on the next annual invoice after the CAISO collects such amounts.

**19.8 Supplemental Services – HANA Services Charge**

(a) **HANA Services Charge.** The CAISO will charge RC Customers that elect HANA services the annual cost for the ongoing software license fee, which will be passed through directly to the RC Customers, and the costs set forth in Appendix F, Schedule 7 which will include –

(1) a start-up cost amortized over an initial 3-year minimum commitment period; and

(2) the annual cost for CAISO support of the HANA services.

(b) **Invoicing for HANA Services.** The CAISO will invoice the RC Customer for HANA services 21 Business Days prior to when the services commence. Each year thereafter, the CAISO will invoice the RC Customer for HANA services 21 Business Days prior to the anniversary date of when the RC Customer first began to receive HANA services, unless otherwise provided in Schedule 2 of the RCSA.

(c) **Payment for HANA Services.** Payment for HANA services will be due within 21 Business Days of the invoice date, unless otherwise provided in Schedule 2 of the RCSA.

(d) **Termination of HANA Services.** An RC Customer that has elected to receive HANA services will continue to be invoiced for the services annually during the initial 3-year commitment period and each year thereafter until the services have been terminated in accordance with the Business Practice Manual for RC Services.

**19.9 Supplemental Services – Physical Security Review Charge**

(a) **In General.** An RC Customer may request in writing that the CAISO perform physical security review or other supplemental reliability services as specified in the Business Practice Manual for RC Services.

(b) **Charges.** An RC Customer electing such services will be charged the actual costs incurred by the CAISO provided that (i) the RC Customer requests in writing that the

CAISO perform the services, and (ii) the RC Customer provides a $50,000 deposit to the CAISO at the time the request is submitted along with any information required by the CAISO to perform the services, and –

(1) if the deposit exceeds the actual cost incurred to provide physical security review services, the CAISO will refund the excess amount to the RC Customer;

(2) if the actual cost of performing the services exceeds the deposit, the CAISO will invoice the RC Customer for the excess, and the RC Customer shall pay the undisputed amount within thirty (30) calendar days;

(3) if the RC Customer fails to timely pay any undisputed costs, the CAISO shall not be obligated to continue to perform physical security review services unless and until the RC Customer has paid all undisputed amounts.

**19.10 Dispute Resolution Procedures**

(a) **In General.** The dispute resolution provisions in Section 13 shall apply to any dispute arising under Section 19 or the RCSA, except that any reference in Section 13 to Market Participants will be read as a reference to the RC Customer, and except as provided in Section 19.10(c).

(b) **Timing.** An RC Customer that has disputed an RC Services Invoice under Section 19.7 must initiate any good faith negotiation or other dispute resolution remedy under Section 13 within 90 days after the day on which the CAISO provides notice of resolution of the dispute; otherwise, the RC Services Invoice will be binding on the RC Customer.

(c) **Limitation on Disputes.** Claims or disputes asserting that the CAISO or any RC Customer was not, or is not, in compliance with the NERC Reliability Standards, and claims the CAISO failed to perform a specific task or function required of a Reliability Coordinator, will not be subject to resolution under Section 13 of the CAISO Tariff; provided that nothing in this section shall limit the function of the Reliability Coordinator Oversight Committee under its charter established pursuant to Section 19.11.

### 19.11 Reliability Coordinator Oversight

(a) **In General.** The CAISO will establish a Reliability Coordinator Oversight Committee that provides RC Customer input and oversight to the CAISO's provision of RC Services.

(b) **Charter.** The CAISO will, in consultation with prospective RC Customers, adopt a public charter that prescribes the membership, responsibilities and procedures of the Reliability Coordinator Oversight Committee.

### 19.12 Uncontrollable Forces

The provisions of Sections 14.1 – 14.3 regarding Uncontrollable Forces will apply to RC Customers, except that all references to "Market Participants" in such provisions shall be read as including RC Customers for purposes of application.

### 19.13 Liability

The provisions of Article VIII of the RCSA will apply to the CAISO and RC Customers with respect to any liability arising under Section 19.

### 19.14 Penalties

The provisions of Section 14.7 regarding the allocation of Reliability Standards penalties will apply to RC Customers.

### 19.15 Confidentiality

The confidentiality provisions of Section 20 will apply to provision of RC Services to RC Customers, including any information provided by RC Customers to the CAISO in connection with the provision of RC Services, except that all references to "Market Participants" in Section 20 shall be read as including RC Customers for purposes of application.

### 19.16 Miscellaneous Provisions in Addition to Section 22

Section 22 will apply to the CAISO's provision of RC Services pursuant to Section 19, except that all references to "Market Participants" in Section 22 shall be read as including RC Customers for purposes of application.

## 20. Confidentiality

### 20.1 CAISO

The CAISO shall maintain the confidentiality of all of the documents, data and information provided to it by any Market Participant that are treated as confidential or commercially sensitive under Section 20.2; provided, however, that the CAISO need not keep confidential: (1) information that is explicitly subject to public data exchange pursuant to Section 6; (2) information that the CAISO or the Market Participant providing the information is required to disclose pursuant to this CAISO Tariff, or applicable regulatory requirements (provided that the CAISO shall comply with any applicable limits on such disclosure); or (3) information that becomes available to the public on a non-confidential basis (other than as a result of the CAISO's breach of this CAISO Tariff).

### 20.2 Confidential Information

The following information provided to the CAISO shall be treated by the CAISO as confidential:

(a) individual Bids;

(b) CRR bids and other CRR Allocation nomination information;

(c) transactions between Scheduling Coordinators, including Inter-SC Trades;

(d) individual Generator Outage programs unless a Generator makes a change to its Generator Outage program which causes Congestion in the short term (i.e. one month or less), in which case, the CAISO may publish the identity of that Generator; and

(e) The following information related to the resource adequacy program in accordance with Section 40:

  (i) Annual and monthly Resource Adequacy Plans and Supply Plans;

  (ii) Demand Forecasts; and

  (iii) Information on existing import contracts.

(f) The following information related to the Transmission Planning Process in accordance with Section 24:

  (i) Information received under Section 24.8 to the extent such information has been designated as confidential in accordance with the Business Practice Manual;

  (ii) Information deemed confidential by DMM, per Section 8.6 of Appendix P;

(iii) Information received by the CAISO pursuant to agreements and contracts, executed prior to December 21, 2007, that preclude the release of the information;

(iv) Information that involves proprietary analytical tools, computer codes, or any other material that is protected by intellectual property rights held by the CAISO, Project Sponsor, Market Participant or other third-party; and

(v) Critical Energy Infrastructure information.

However, composite documents, data, and other information that may be developed based on confidential information under this Section shall not be deemed confidential if the composite documents, data, and other information do not disclose any confidential information of any individual Scheduling Coordinator, Market Participant, or other third-party or Critical Energy Infrastructure Information.

**20.3 Other Parties**

No Market Participant shall have the right hereunder to receive from the CAISO or to review any documents, data or other information of another Market Participant to the extent such documents, data or information is to be treated as in accordance with Section 20.2; provided, however, a Market Participant may receive and review any composite documents, data, and other information that may be developed based upon such confidential documents, data, or information, if the composite document does not disclose such confidential data or information relating to an individual Market Participant and provided, however, that the CAISO may disclose information as provided for in its bylaws.

**20.4 Disclosure**

Notwithstanding anything in this Section 20 to the contrary,

(a) The CAISO: (i) shall publish individual bids ninety (90) days after the Trading Day with respect to which the bid was submitted and in a manner that does not reveal the specific resource or the name of the Scheduling Coordinator submitting the bid, but that allows the bidding behavior of individual, unidentified resources and Scheduling Coordinators to be tracked over time; (ii) may publish data sets analyzed in any public report issued by the CAISO or by the MSC, provided that such data sets shall be published no sooner than six (6) months after the latest Trading Day to which data in the data set apply, and in

a manner that does not reveal any specific resource or the name of any Scheduling Coordinator submitting bids included in such data sets; and (iii) shall, consistent with 18 CFR § 35.28 (g)(4), electronically deliver to FERC, on an ongoing basis and in a form and manner consistent with the CAISO's own collection of data and in a form and manner acceptable to FERC, data related to the CAISO Markets.

(b) If the CAISO is required by applicable laws or regulations, or in the course of administrative or judicial proceedings, to disclose information that is otherwise required to be maintained in confidence pursuant to this Section 20, the CAISO may disclose such information; provided, however, that as soon as the CAISO learns of the disclosure requirement and prior to making such disclosure, the CAISO shall notify any affected Market Participant of the requirement and the terms thereof. The Market Participant may, at its sole discretion and own cost, direct any challenge to or defense against the disclosure requirement and the CAISO shall cooperate with such affected Market Participant to the maximum extent practicable to minimize the disclosure of the information consistent with applicable law. The CAISO shall cooperate with the affected Market Participant to obtain proprietary or confidential treatment of confidential information by the person to whom such information is disclosed prior to any such disclosure.

(c) The CAISO may disclose confidential or commercially sensitive information, without notice to an affected Market Participant, in the following circumstances:

(i) If the FERC, the Commodity Futures Trading Commission ("CFTC"), or the staff of one of those agencies, during the course of an investigation or otherwise, requests information that is confidential or commercially sensitive. In providing the information to FERC or its staff, the CAISO shall take action consistent with 18 C.F.R. §§ 1b.20 and 388.112, or to the CFTC or its staff, the CAISO shall take action consistent with 17 C.F.R. §§ 11.3 and 145.9, and request that the information be treated as confidential and non-public by the agency and its staff and that the information be withheld from public disclosure. The CAISO shall

provide the requested information to the agency or its staff within the time provided for in the request for information. The CAISO shall notify an affected Market Participant within a reasonable time after the CAISO is notified by the agency or its staff that a request for disclosure of, or decision to disclose, the confidential or commercially sensitive information has been received, at which time the CAISO and the affected Market Participant may respond before such information would be made public; or

(ii) If the National Cyber Communication Information Center ("NCCIC," part of the Department of Homeland Security), or a federal agency with similar cybersecurity responsibilities, or the staff of one of those agencies, requests information that is confidential or commercially sensitive in response to a Cyber Exigency that threatens or has the potential to threaten reliable operation of the CAISO Balancing Authority Area. In providing the information to the agency or its staff, the CAISO shall take action consistent with applicable laws and regulations, as well as other applicable policies or procedures of the agency, and request that the information be treated as confidential and non-public by the agency and its staff and that the information be withheld from public disclosure. The CAISO shall notify an affected Market Participant within a reasonable time after the CAISO is notified by the agency or its staff that a request for disclosure of, or decision to disclose, the confidential or commercially sensitive information has been received, at which time the CAISO and the affected Market Participant may respond before such information would be made public; or

(iii) As provided in 18 C.F.R. § 35.47(h)(1), the CAISO may share Credit Related Information with another market operator if the receiving market operator will treat the Credit Related Information as confidential under the terms set forth in the receiving market operator's FERC-approved tariff. If the CAISO receives Credit Related Information from another market operator, the CAISO will treat the information in accordance with the confidentiality protections in Section 20. The

CAISO will use the Credit Related Information received from another market operator to the same extent and for the same purpose as information received from its own Market Participants.

(iv) In order to maintain reliable operation of the CAISO Balancing Authority Area, the CAISO may share critical operating information, system models, and planning data with the WECC Reliability Coordinator that has executed the Western Electricity Coordinating Council Confidentiality Agreement for Electric System Data, or is subject to similar confidentiality requirements; or

(v) In order to maintain reliable operation of the CAISO Balancing Authority Area, the CAISO may share individual Generating Unit Outage information with the operations engineering and the outage coordination division(s) of other Balancing Authorities, Participating TOs, MSS Operators and other transmission system operators engaged in the operation and maintenance of the electric supply system whose system is significantly affected by the Generating Unit and who have executed the Western Electricity Coordinating Council Confidentiality Agreement for Electric System Data; or

(vi) In order to maintain reliable operation of the CAISO Balancing Authority Area, the CAISO may share information regarding Maintenance Outages and Forced Outages of natural gas-fired generation resources and Maintenance Outages and Forced Outages of elements of the ISO Controlled Grid with natural gas transmission and distribution utilities operating inter-state and/or intra-state natural gas pipelines that serve natural gas-fired generation resources within the CAISO Balancing Authority Area. The CAISO may share information necessary for day-to-day coordination and longer term planning of gas transmission and pipeline outages which information includes, but is not limited to, the identity of individual natural gas-fired generation resources that are needed to support reliability of the ISO Balancing Authority Area in the event of natural gas shortage, natural gas pipeline testing and maintenance, or other curtailment of

natural gas supplies. The information will be shared only pursuant to a non-disclosure agreement and non-disclosure statement included as part of the Business Practice Manual.

(d) Notwithstanding the provisions of Section 20.2(e), information submitted through Resource Adequacy Plans and Supply Plans in accordance with Section 40 may be provided to:

(i) the Scheduling Coordinator(s) and/or Market Participant(s) involved in a dispute or discrepancy as to whether a resource is properly identified in a Resource Adequacy Plan or a Supply Plan only to the limited extent necessary to identify the disputed transaction and the relevant counterparty or counterparties.

(ii) the regulatory entity, whether the CPUC, other Local Regulatory Authority, or federal agency, with jurisdiction over a Load Serving Entity involved in a dispute or discrepancy as to whether a resource is properly identified in a Resource Adequacy Plan or the Supply Plan, or otherwise identified by the CAISO as exhibiting a potential deficiency in demonstrating compliance with resource adequacy requirements adopted by the CPUC, other Local Regulatory Authority, or federal agency, as applicable. The information provided shall be limited to the particular dispute, discrepancy, or deficiency.

(iii) the California Energy Commission with respect to Demand Forecast information provided to the CAISO under Sections 40.2.2.3 and 40.2.3.3(b) to the extent the CAISO seeks, and the California Energy Commission grants, confidential treatment of such information pursuant to California Public Resources Code Section 25322 and related regulations.

(e) Notwithstanding the provisions of Section 20.2(f), information submitted through the Transmission Planning Process shall be disclosed as follows:

(i) Critical Energy Infrastructure Information may be provided to a requestor where such person is employed or designated to receive CEII by: (a) a Market

Participant; (b) an electric utility regulatory agency within California; (c) an Interconnection Customer that has submitted an Interconnection Request to the CAISO under the CAISO's Large Generator Interconnection Procedure or Small Generator Interconnection Procedure (LGIP or SGIP); (d) a developer having a pending or potential proposal for development of a Generating Facility or transmission addition, upgrade or facility and that is performing studies in contemplation of filing an Interconnection Request or submitting a transmission infrastructure project through the CAISO Transmission Planning Process; or (e) a not-for-profit organization representing consumer regulatory or environmental interests before a Local Regulatory Authority or federal regulatory agency. To obtain Critical Energy Infrastructure Information, the requestor must submit a statement as to the need for the CEII, and must execute and return to the CAISO the form of the non-disclosure agreement and non-disclosure statement included as part of the Business Practice Manual. The CAISO may, at its sole discretion, reject a request for CEII and, upon such rejection, the requestor will be directed to utilize the FERC procedures for access to the requested CEII.

(ii) Information that is confidential under Section 20.2(f)(i) or 20.2.(f)(ii) may be disclosed to any individual designated by a Market Participant, electric utility regulatory agency within California, or other stakeholder that signs and returns to the CAISO the form of the non-disclosure agreement, nondisclosure statement and certification that the individual is a non-Market Participant, which is any person or entity not involved in a marketing, sales, or brokering function as market, sales, or brokering are defined in FERC's Standards of Conduct for Transmission Providers (18 C.F.R. § 358 et seq.), included as part of the Business Practice Manual; provided, however, that information obtained pursuant to this Section 20.4(e)(ii) will be provided only in composite form so that information related to individual Load Serving Entities or Scheduling Coordinators will not be disclosed.

(iii) Data base and other transmission planning information obtained from the WECC, or its successor, may be disclosed to individuals designated by a Market Participant, electric utility regulatory agency within California, or other stakeholder in accordance with the procedures set forth in the Business Practice Manual.

Nothing in this Section 20 shall limit the ability of the CAISO to aggregate data for public release about the adequacy of supply.

**20.5 Confidentiality**

The CAISO shall implement and maintain a system of communications with Scheduling Coordinators that includes the strict use of passwords for access to data to ensure compliance with Section 20. Access within the CAISO to such data on CAISO's communications systems, including databases and backup files, shall be strictly limited to authorized CAISO personnel through the use of passwords and other appropriate means.

**21. [Not Used]**

# 22. Miscellaneous

## 22.1 Audits

### 22.1.1 Materials Subject to Audit

The CAISO's financial books, cost statements, accounting records and all documentation pertaining to its operation as a state chartered independent institution which controls the operation of the CAISO Controlled Grid to ensure open, non-discriminatory transmission access to all Market Participants and promotes the efficient use and reliable operation of the CAISO Controlled Grid in accordance with this CAISO Tariff, are subject to audit in the manner prescribed below:

### 22.1.2 CAISO Audit Committee

The CAISO Governing Board shall have overall audit responsibility for the CAISO. The CAISO Audit Committee shall make recommendations to the CAISO Governing Board in relation to the approval, initiation and scheduling of the following audits:

#### 22.1.2.1 Certified Financial Statement Audit

Each year, an audit by an external independent certified public accounting firm shall be performed. This audit will be conducted in accordance with generally accepted auditing standards to verify that the CAISO's financial statements are in compliance with generally accepted accounting principles and fairly present, in all material respects, the financial position, results of operation and cash flows for the audit period. The audit report will be addressed to the CAISO Governing Board, copies will be provided to the CAISO Audit Committee, and, upon request, to Market Participants.

#### 22.1.2.2 Review of Compliance with Operations Policies and Procedures

Each year, an independent review shall be conducted of the CAISO management's compliance with its operations policies and procedures. The CAISO Audit Committee will appoint an independent party to perform this review. This review may also include material issues raised by Market Participants and approved by the CAISO Audit Committee for inclusion in the review. The report will be addressed to the CAISO Governing Board, copies provided to the CAISO Audit Committee, and upon request, to Market Participants.

#### 22.1.2.3 Code of Conduct Audits

On a periodic basis, but not less than once a year, an independent accounting firm shall conduct a

management review of governors, officers, employees, substantially full-time consultants, or contractors of the CAISO for compliance with the CAISO Code of Conduct to ensure adherence to the highest standards of lawful and ethical conduct in their activities. The audit report shall be addressed to the CAISO Audit Committee with copies provided to the CAISO Governing Board and, upon request, to Market Participants.

#### 22.1.2.4 Interim Audits

At such other intervals agreed upon by a majority of the CAISO Audit Committee members, audits may be undertaken for specific issues and concerns of Market Participants that the CAISO Audit Committee believes, at its sole discretion, to be of significant and critical magnitude to the CAISO. Such audits will be conducted by an independent accounting firm. The costs of such an audit will be borne by the requesting Market Participant(s), unless the CAISO Audit Committee determines otherwise. Interim audits will be conducted during normal business hours, after reasonable notice has been given to the CAISO, and in accordance with the guidelines to be established by the CAISO Audit Committee.

### 22.1.3 Audit Results

Exceptions identified as a result of an audit will be reviewed with the CAISO Audit Committee. The results of the audits and actions to be taken by the CAISO as a result of the audit shall be made available to Market Participants upon request.

### 22.1.4 Availability of Records

The CAISO will provide full and complete access to all financial books, cost statements, accounting records, and all documentation pertaining to the requirements of the specific audits being performed. Records relating to audits will be retained until the records retention requirements of the CAISO are satisfied or until the audit issues are fully resolved, whichever is the later. The right of access to records does not require the creation of new records, reports, studies, or evaluations not already available.

### 22.1.5 Confidentiality of Information

All proprietary information obtained through any audits will remain strictly confidential. All auditors shall sign a confidentiality agreement prior to being accepted as auditors by the CAISO Audit Committee.

### 22.1.6 Payments

Any payments agreed to between Market Participants and the CAISO as a result of an audit, or directed

by FERC, or disclosed by the CAISO in reviews of its own books and records shall include Interest computed at the rate calculated in accordance with the methodology specified for interest on refunds in FERC's regulations at 18 C.F.R. § 35.19a(a)(2)(iii) (as amended from time to time) from the due date to the date such adjustments are due.

### 22.2 Assignment

Obligations and liabilities under this CAISO Tariff and any Scheduling Coordinator Agreement or other agreements giving contractual effect to this CAISO Tariff shall be binding on the successors and assigns of the parties to such agreements. No assignment of any Scheduling Coordinator Agreement or other agreements giving contractual effect to this CAISO Tariff shall relieve the original party from its obligations or liabilities to the CAISO under this CAISO Tariff or any such agreement arising or accruing due prior to the date of assignment.

### 22.3 Term and Termination

#### 22.3.1 Effective Date of CAISO Tariff

This CAISO Tariff shall become effective on the date it is permitted to become effective by the FERC.

#### 22.3.2 Termination of CAISO Tariff with Board and FERC Approval

This CAISO Tariff shall terminate upon approval of termination by the CAISO Governing Board in accordance with the bylaws of the CAISO and receipt of any necessary regulatory approval from FERC.

### 22.4 Notice

#### 22.4.1 Effectiveness

Any notice, demand, or request in accordance with this CAISO Tariff, unless otherwise provided in this CAISO Tariff, shall be in writing and shall be deemed properly served, given, or made: (a) upon delivery if delivered in person, (b) five (5) days after deposit in the mail if sent by first class United States mail, postage prepaid, (c) upon receipt of confirmation by return facsimile if sent by facsimile, (d) upon receipt of confirmation by return e-mail if sent by e-mail, or (e) upon delivery if delivered by prepaid commercial courier service.

#### 22.4.2 Addresses

Notices to the CAISO shall be sent to such address as shall be notified by the CAISO to Market Participants from time to time. Notices issued by the CAISO to any Scheduling Coordinator shall be

delivered to the address of the representative designated to receive notices for the Scheduling Coordinator included in the Scheduling Coordinator Agreement. Notices to any Market Participant other than a Scheduling Coordinator shall be delivered by the CAISO to the address given to it by the Market Participant. The CAISO and any Market Participant may at any time change their address for notice by notifying the other party in writing.

### 22.4.3 Notice of Changes in Operating Procedures and BPMs

The CAISO will issue notice of any changes to any Operating Procedure or proposed changes to any Business Practice Manual. The effective date of any change or proposed change in any Business Practice Manual shall be established as part of the change management process set forth in Section 22.11 but will be no earlier than at least thirty (30) days from the date of publication of a Market Notice describing the change or proposed change, unless: (1) a different notice period is specified by state or federal law, (2) the change falls within Category A of Section 22.11.1.4(a) in which case the provisions of that section shall apply; (3) the change is reasonably required to address an emergency affecting the CAISO Controlled Grid or its operations, or (4) the change is to a provision of a Business Practice Manual that is necessitated by emergency circumstances specific to that Business Practice Manual. Such circumstances include, but are not limited to, any change necessary to ensure that the Business Practice Manual is consistent with the CAISO Tariff or any applicable law, regulation, NERC or WECC operating policies, guidelines and standards, or FERC order, in which case the CAISO shall give Market Participants as much notice as is reasonably practicable. Any notices issued under this provision shall be issued in accordance with the procedures set out in Section 22.11.

## 22.5 Waiver

Any waiver at any time by the CAISO or any Market Participant of its rights with respect to any default under this CAISO Tariff, or with respect to any other matter arising in connection with this CAISO Tariff, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this CAISO Tariff. Any delay short of the statutory period of limitations in asserting or enforcing any right shall not constitute or be deemed a waiver.

## 22.6 Staffing and Training to Meet Obligations

The CAISO shall engage sufficient staff to perform its obligations under this CAISO Tariff in a satisfactory

manner consistent with Good Utility Practice. The CAISO shall make its own arrangements for the engagement of all staff and labor necessary to perform its obligations hereunder and for their payment. The CAISO shall employ (or cause to be employed) only persons who are appropriately qualified, skilled and experienced in their respective trades or occupations. CAISO employees and contractors shall abide by the CAISO Code of Conduct for employees.

### 22.7 Accounts and Reports

The CAISO shall notify Market Participants of any significant change in the accounting treatment or methodology of any costs or any change in the accounting procedures, which is expected to result in a significant cost increase to any Market Participant. Such notice shall be given at the earliest possible time, but no later than, sixty (60) days before implementation of such change.

### 22.8 Applicable Law and Forum

This CAISO Tariff shall be governed by and construed in accordance with the laws of the State of California, except its conflict of laws provisions. Market Participants irrevocably consent that any legal action or proceeding arising under or relating to this CAISO Tariff to which the CAISO ADR Procedures do not apply, shall be brought in any court of the State of California or any federal court of the United States of America located in the State of California. Market Participants irrevocably waive any objection that they may have now or in the future to said courts in the State of California as the proper and exclusive forum for any legal action or proceeding arising under or related to this CAISO Tariff.

### 22.9 Consistency with Federal Laws and Regulations

(a) Nothing in the CAISO Tariff shall compel any person or federal entity to: (1) violate federal statutes or regulations; or (2) in the case of a federal agency, to exceed its statutory authority, as defined by any applicable federal statutes, regulations, or orders lawfully promulgated thereunder. If any provision of this CAISO Tariff is inconsistent with any obligation imposed on any person or federal entity by federal law or regulation to that extent, it shall be inapplicable to that person or federal entity. No person or federal entity shall incur any liability by failing to comply with a CAISO Tariff provision that is inapplicable to it by reason of being inconsistent with any federal statutes, regulations, or orders lawfully promulgated thereunder; provided, however, that such person or federal

entity shall use its best efforts to comply with the CAISO Tariff to the extent that applicable federal laws, regulations, and orders lawfully promulgated thereunder permit it to do so.

(b) [Not Used]

(c) To the extent that the CAISO suffers any loss as a result of being unable to enforce any indemnity as a result of such enforcement being in violation of federal laws or regulations to which it is entitled under the CAISO Tariff under this Section or otherwise, it shall be entitled to recover such loss through the Grid Management Charge.

**22.10 Administrative Fees**

The CAISO may charge a Scheduling Coordinator requesting archived copies of its Settlement Statements or Invoices an administrative fee for providing copies of the Settlement Statements or Invoices. The administrative fee for each request shall be $200 per Settlement Statement or Invoice for the first two copies and $50 for each additional copy.

**22.11 Operating Procedures and BPM Development and Amendment**

The CAISO shall prepare, maintain, promulgate and update the Operating Procedures and Business Practice Manuals. The Operating Procedures and Business Practice Manuals shall be consistent with the CAISO Tariff, and any NERC or WECC operating policies, guidelines and standards, and shall be available on the CAISO Website, provided that the CAISO shall not make available on the CAISO Website any portions of CAISO Operating Procedures that are confidential. The CAISO shall establish a stakeholder process as set forth in Section 22.11.1 and in a Business Practice Manual for BPM change management in order to ensure that all affected parties have an opportunity to comment on and shape the proposed nature of any proposed changes to any Business Practice Manual. Under that process, the CAISO and stakeholders shall consider whether any amendments to the CAISO Tariff are necessary in order to ensure the consistency of the CAISO Tariff and the Business Practice Manuals.

**22.11.1 Process for Revisions of Business Practice Manuals**

Revisions of Business Practice Manuals shall be made in accordance with the process set forth in this Section 22.11.1, provided that the details and procedures for submittal and consideration of a BPM Proposed Revision Request (PRR) and other elements of the BPM change management process shall be

set forth in a separate Business Practice Manual for BPM change management.

#### 22.11.1.1 BPM Proposed Revision Request Submittal

A request to make any change to a BPM, including any attachments thereto that are incorporated by reference, and any changes to the BPM PRR must be initiated through a submittal of a BPM PRR, except as provided in Section 22.4.3 or 22.11.1.2.

The following entities may submit a BPM PRR:

(1) Any Market Participant;

(2) Local Regulatory Authority;

(3) CAISO management; and

(4) Any other entity that meets the following qualifications:

(a) The entity must represent a Market Participant in dealings with the CAISO or operate in the CAISO Markets, and

(b) The entity must demonstrate that the entity (or those it represents) is affected by the subject section(s) of the BPM.

BPM PRRs shall be submitted electronically to the CAISO in the form and manner described in the Business Practice Manual for BPM change management. The BPM PRR shall include a description of the requested revision, the reason for the suggested change, the impacts and benefits of the suggested change (including any impact on the CAISO Market structure, CAISO operations and Market Participants, to the extent the submitter may know this information), a list of affected BPM sections and subsections, general administrative information, suggested language for the requested revision, and for BPM PRRs submitted by CAISO management, a BPM PRR impact analysis.

#### 22.11.1.2 BPM Proposed Revision Request Processing

The CAISO shall review the BPM PRR for completeness and shall notify the submitter if the BPM PRR is incomplete, including the reasons for its determination, based upon the timelines provided in the BPM for BPM change management. An incomplete BPM PRR shall not receive further consideration until it is completed. In order to pursue the revision requested, a submitter must submit a completed version of the BPM PRR with the deficiencies corrected. If a submitted BPM PRR is complete or once a BPM PRR is corrected, the CAISO shall post the completed or corrected BPM PRR to the CAISO Website and publish

a Market Notice of such posting.

#### 22.11.1.3 BPM PRR Coordinator

The consideration and disposition of BPM PRRs shall be led by a BPM change management coordinator. The BPM change management coordinator shall be an identified employee of the CAISO with responsibility for ensuring that BPM PRRs are processed and reviewed in accordance with the provisions of the Business Practice Manual for BPM change management. The BPM change management coordinator shall also be responsible for submitting a report to the CAISO Governing Board at each regularly scheduled CAISO Governing Board meeting that includes (1) the status of pending BPM PRRs, (2) a summary of proposed revisions that have been accepted, and (3) a summary of proposed revisions that have been rejected and the reason(s) that the proposed revisions have been rejected, including the positions of stakeholders, and any decision on appeal as provided in Section 22.11.1.6.

#### 22.11.1.4 Types and Treatments of BPM PRRs

Each BPM PRR shall be preliminarily classified by the BPM change management coordinator as either a Category A revision or a Category B or C revision. After further consultation with internal CAISO business units, the submitter (if not the CAISO), and representatives from potentially affected stakeholders in the BPM PRR review process, the BPM change management coordinator may reclassify the BPM PRR as appropriate. Types of BPM PRRs include:

(a) Category A – Clarifications or existing BPM language, grammatical errors, and revisions with minor significance.

In the event the CAISO receives no comments or no adverse comments within the specified time frame, the CAISO may incorporate the proposed changes into the BPM, if reasonably acceptable to the CAISO, before the next BPM change management meeting. These changes may be placed into effect at any time after the comment period expires.

(b) Category B – Revisions of substantial significance or revisions that require changes to CAISO or Market Participant's systems.

For proposals falling in this category, the CAISO will, unless urgent or emergency circumstances exist, delay implementation until after the next regularly scheduled BPM change management meeting even if no comments or no adverse comments are received. In the case of a proposed change affecting the

CAISO's systems, the CAISO will prepare a BPM PRR impact analysis, if not already prepared, in accordance with the procedures set forth in the Business Practice Manual. The CAISO shall post the completed BPM PRR impact analysis to the CAISO Website and publish a Market Notice of such posting. Comments may be filed concerning the BPM PRR impact analysis. The comments must be delivered electronically to the CAISO within ten (10) Business Days or otherwise as specified in a Market Notice. Comments shall be posted to the CAISO Website.

(c) Category C – Revisions implementing significant new CAISO policies and/or potentially requiring revisions to the CAISO Tariff.

Proposed revisions implementing significant new CAISO policies may have implications outside the scope of a proposed change to a BPM and may require alternative treatment. For proposals falling in this category, the CAISO will, unless urgent or emergency circumstances exist, delay implementation until after the next regularly scheduled BPM change management meeting. If the CAISO concludes that a Category C BPM PRR cannot be implemented without an amendment to the CAISO Tariff, the CAISO will provide a written explanation and indicate its support for or opposition to the need or appropriateness of a tariff amendment. The written explanation shall also indicate a lead department or business unit within the CAISO that would have responsibility for leading any stakeholder process necessary for the tariff amendment.

**22.11.1.5 BPM PRR Review and Action**

Any interested stakeholder or CAISO management may comment on a posted BPM PRR in accordance with the process set forth in the Business Practice Manual for BPM change management. To receive consideration, comments must be delivered electronically to the CAISO within ten (10) Business Days, or within any shorter period determined to be necessary or appropriate pursuant to the provisions of either Sections 22.11.1.7 or 22.11.1.8. Comments shall be posted to the CAISO Website and BPM PRRs shall be considered by the CAISO at a regularly established monthly public meeting or specially-noticed meeting dedicated to that purpose. Following any meeting to consider pending BPM PRRs and subject to the standards set forth in Section 22.11.1.4, the BPM change management coordinator shall issue a recommendation for action on each pending BPM PRR and shall publish for public comment a report on the recommendation in accordance with the procedures set forth in the Business Practice Manual for

BPM change management. The report shall be sufficiently detailed and shall be published in a timeframe that allows interested stakeholders a meaningful opportunity to provide written comment. The BPM change management coordinator shall publish a final decision on any BPM PRR after considering stakeholder comments and all relevant impacts on their business needs and after the PRR recommendation report and comments concerning it have been discussed at a BPM change management meeting, in accordance with procedures set forth in the Business Practice Manual for BPM change management.

**22.11.1.6 Right to Appeal to CAISO**

Any entity eligible to submit a BPM PRR under Section 22.11.1.1 may, within ten (10) Business Days, appeal in writing the outcome of any BPM PRR to a committee comprising at least three CAISO executives established in accordance with procedures set forth in the Business Practice Manual for BPM change management. The CAISO will establish a standing meeting time for the BPM appeals committee to be used if needed and will establish the composition of the BPM appeals committee, including alternates in the case of schedule or other conflicts. Standing meeting dates and the BPM appeals committee composition will be established at least three months in advance. The CAISO may change the meeting time with ten (10) Business Days notice if required to accommodate schedules of the members of the BPM appeals committee. The executive sponsor of a BPM PRR may not sit in review of any appeal of a final decision regarding that same BPM PRR but may participate in and be present during the public discussion of any appeal. The CAISO committee will review the appeal and publish its decision to the appealing party and to the CAISO Website. If not satisfied with the decision on appeal, the appellant may raise concerns it may have with the CAISO Governing Board at the next regularly scheduled board meeting through the public comment period or through prior letter to the CAISO Governing Board.

**22.11.1.7 CAISO Expedited Action in Emergency Circumstances**

Notwithstanding the provisions of Section 22.11.1.1, the CAISO may take expedited action to change or clarify a provision of a BPM under emergency circumstances. In addition to the circumstances identified in Section 22.4.3, emergency circumstances exist whenever the CAISO determines in good faith that (i) failure to implement a change or clarification to a BPM on an expedited basis would substantially and adversely affect System Reliability or security or the competitiveness of the CAISO Markets, and (ii) there

is insufficient time to comply with the BPM PRR procedures set forth in Section 22.11.1. The CAISO shall take reasonable steps to communicate with Market Participants and any other directly-affected entities prior to taking expedited action if practicable. If the CAISO takes expedited action to change or clarify a provision of a BPM in emergency circumstances, the CAISO shall promptly issue a Market Notice and submit a BPM PRR to examine the necessity of the change and its impacts.

#### 22.11.1.8 Urgent Requests by Entities for BPM Revisions

An entity submitting a BPM PRR may request that the BPM PRR be considered on an urgent basis and may be required to show reasonable necessity for such an urgent request. The BPM change management coordinator may designate a BPM PRR for urgent consideration if the BPM change management coordinator determines that such BPM PRR (1) requires immediate attention due to (i) serious concerns about CAISO System Reliability or market operations under the unmodified language or (ii) the crucial nature of Settlement activity conducted pursuant to any Settlement formula, and (2) is of a nature that allows for rapid implementation without negative consequences to the reliability and integrity of the CAISO's system or market operations. The BPM change management coordinator shall consider the urgent BPM PRR at its next regularly scheduled meeting, or at a special meeting called by the BPM change management coordinator to consider the urgent BPM PRR. Any revisions to a BPM that take effect pursuant to an urgent BPM PRR shall be subject to a BPM PRR impact analysis.

### 22.11.2 Changes to BPM for BPM Change Management

Any changes to the Business Practice Manual for BPM change management shall require CAISO Governing Board approval.

### 22.11.3 Requests for and Access to Nonpublic Operating Procedures

Non-public Operating Procedures contain information that is either market sensitive, system security sensitive, or proprietary to third parties. The CAISO may limit access to these non-public Operating Procedures. Subject to agreed upon controls, the CAISO will make non-public CAISO Operating Procedures or portions thereof available to entities that are operationally affected by implementation of the Operating Procedure or any proposed changes to the Operating Procedure. Such controls may include execution of a nondisclosure agreement or other measures to limit access, disclosure and use of

any non-public information. Subject to agreed upon controls, the CAISO will provide access to employees or representatives acting as agents of the requesting entity. For purposes of this tariff section an entity is "operationally affected" if (1) the entity is a party to the Transmission Control Agreement, a neighboring Balancing Authority or a Market Participant and (2) the Operating Procedure, if implemented, would require a change outside of the CAISO Markets in the operation of that entity's facilities that are part of or interconnected to the CAISO Controlled Grid. An entity that may merely be affected economically or financially by implementation or revision of a non-public Operating Procedure or portion thereof is not entitled to access to that Operating Procedure or portion thereof pursuant to this Section 22.11.3.

Any entity that believes it is operationally affected by a non-public CAISO Operating Procedure may seek access to that Operating Procedure by providing a written request to the CAISO. Any such request must identify the specific Operating Procedure to which the entity seeks access, the name and position of the employees and representatives of the entity that seek to review the non-public Operating Procedure, a representation that each employee or representative needs to review the non-public Operating Procedure or portion thereof to perform their employment responsibilities and a representation that each employee or representative does not perform a market function on behalf of the requesting entity. The CAISO shall respond in writing to a request for access to a non-public Operating Procedure or portion thereof within ten (10) Business Days after receipt of the request. The CAISO will state whether it will allow access to review the non-public Operating Procedure and under what set of proposed controls. The CAISO will determine whether to provide access to review the non-public Operating Procedure based on whether the entity is operationally affected as a result of implementation of the Operating Procedure or a portion thereof. If the CAISO determines that the entity is operationally affected by the Operating Procedure or portion thereof, the CAISO will, subject to agreed-upon controls, provide access to the non-public Operating Procedure within thirty (30) days of the entity's written request. If the CAISO determines that the entity is not operationally affected by the Operating Procedure or portion thereof, the CAISO will explain the reason for its determination in its written response. If the CAISO denies a request for access to a non-public Operating Procedure or portion thereof, the requesting entity shall have the right to invoke the CAISO ADR Procedures in Section 13.

### 22.12 [Not Used]

### 22.13 Scheduling Responsibilities and Obligations

Nothing in this CAISO Tariff is intended to permit or require the violation of federal or California law concerning hydro-generation and Dispatch, including but not limited to fish release requirements, minimum and maximum dam reservoir levels for flood control purposes, and in-stream flow levels. In carrying out its functions, the CAISO will comply with and will have the necessary authority to give instructions to Participating TOs and Market Participants to enable it to comply with requirements of environmental legislation and environmental agencies having authority over the CAISO in relation to Environmental Dispatch and will expect that submitted Bids, including Self-Schedules will support compliance with the requirements of environmental legislation and environmental agencies having authority over Generators in relation to Environmental Dispatch.

## 23. Transmission Capacity

### 23.1 Categories of Transmission Capacity

References to new firm uses shall mean any use of CAISO transmission service, except for uses associated with Existing Rights or TORs. Prior to the start of the Day-Ahead Market, for each Balancing Authority Area Transmission Interface, the CAISO will allocate the forecasted Total Transfer Capability of the Transmission Interface to four categories. This allocation will represent the CAISO's best estimates at the time, and is not intended to affect any rights provided under Existing Contracts or TORs. The CAISO's forecast of Total Transfer Capability for each Balancing Authority Area Transmission Interface will depend on prevailing conditions for the relevant Trading Day, including limiting operational conditions. This information will be posted on OASIS in accordance with this CAISO Tariff. The four categories are as follows:

(a) transmission capacity that must be reserved for firm Existing Rights;

(b) transmission capacity that may be allocated for use as CAISO transmission service, including transmission capacity for CAISO Demand and Priority Wheeling Through and non-Priority Wheeling Through transactions (i.e., "new firm uses");

(c) transmission capacity that may be allocated by the CAISO for conditional firm Existing Rights; and

(d) transmission capacity that may remain for any other uses, such as non-firm Existing Rights for which the Responsible PTO has no discretion over whether or not to provide such non-firm service.

### 23.2 Accessing Available Transfer Capability

The provisions of Sections 23.2 through 23.9 apply to Wheeling Through Priorities and Priority Wheeling Through transactions that will be effective beginning June 1, 2024 and thereafter.

#### 23.2.1 General Requirements For Monthly or Daily Requests for a Wheeling Through Priority

Scheduling Coordinators may obtain a monthly or daily Wheeling Through Priority to support Priority Wheeling Throughs under the process in this Section 23. A Scheduling Coordinator can submit a request for a Wheeling Through Priority for a given month(s) up to twelve (12) months before the month for which it seeks the priority and for a day(s) up to seven (7) days before the day for which it seeks a priority. To

be eligible for a Wheeling Through Priority for a month(s) or day(s), the Scheduling Coordinator for an external load serving entity, or the Scheduling Coordinator for a seller of Energy to the external load serving entity, must submit a Wheeling Through Priority request and attest to the following: (1) the Wheeling Through Priority request is supported by an executed firm power supply contract to serve an external load serving entity's load, a firm power supply contract to serve an external load serving entity's load where execution is contingent upon the availability of a Wheeling Through Priority on the CAISO system, or the external load serving entity's ownership of an external resource to serve external load; (2) the MW quantity of the firm power supply contract with an external load serving entity supporting the request and the Scheduling Points which the Energy will be imported to and exported from the CAISO Controlled Grid; (3) the start and end dates of the contract and the specific hours during the month or day covered by the power supply contract and for which the Scheduling Coordinator seeks a Wheeling Through Priority; (4) any information specified in the Business Practice Manual has been provided; and (5) whether the Scheduling Coordinator is willing to accept a pro rata allocation of capacity, or an award of only part of its request, if the result of the monthly or daily request window process in Sections 23.4 and 23.5, respectively, is that there is insufficient ATC to accommodate the entire request, because of a tie among competing requesters or for some other reason. The same MW in a firm power supply contract cannot support a Wheeling Through Priority for both the seller and the buyer for the same period of time. Scheduling Coordinators cannot seek, and the CAISO will not award in the request window processes specified in Section 23.4 and 23.5, a monthly or daily Wheeling Through Priority for a MW quantity greater than the MW quantity in the underlying power supply contract or for a period greater than or non-coincident with the hours of the underlying firm power supply contract, or for a MW quantity or duration greater than the physical and operational capabilities of the external load serving entity's resource, whichever is applicable. Thus, for any month or day, an awarded Wheeling Through Priority will only apply during the hours of the underlying power supply contract and no other hours. For example, if the supporting power supply contract is a six (6)-days-by-sixteen (16)-hours contract, the priority will only apply to Priority Wheeling Throughs that the Scheduling Coordinator self-schedules during those specified hours. The minimum duration of any power supply contract that can support a monthly or daily Wheeling Through Priority is specified in Sections 23.4 and 23.5, respectively. All other Wheeling

Throughs without a priority will be considered non-Priority Wheeling Throughs. Priority Wheeling Throughs will have a priority equal to CAISO Demand as set forth in Sections 31.4 and 34.12.1.

**23.2.2 Nature of a Wheeling Through Priority**

A Wheeling Through Priority does not convey a physical transmission right and is not a physical reservation of transmission service. A Wheeling Through Priority only accords a priority when a Scheduling Coordinator actually schedules a Priority Wheeling Through transaction on a given day (as new firm use in the CAISO markets). A Priority Wheeling Through accords the Scheduling Coordinator the highest scheduling priority of new firm use, equal to the priority of CAISO Demand. If a Scheduling Coordinator does not actually schedule a Priority Wheeling Through on a given day that it has the right, the Wheeling Through Priority is inapplicable.

**23.2.3 Termination or Modification of a Firm Power Supply Agreement Underlying a Monthly or Daily Wheeling Through Priority**

(a) If the firm power supply contract supporting the Wheeling Through Priority is terminated for any reason or is modified such that the MW quantity, hours of service, import point, or export point changes, the Scheduling Coordinator with a monthly or daily Wheeling Through Priority must notify the CAISO by the earlier of (i) five (5) Business Days after the effective date of the termination or (ii) eleven (11) Business Days before the date any Priority Wheeling Through transaction would actually occur under the awarded priority. The Scheduling Coordinator will also attest to the circumstances surrounding and reason for termination or modification of the underlying firm power supply contract.

(b) If the supporting firm power supply contract is terminated eleven (11) or more Business Days before the date on which the Scheduling Coordinator with the Wheeling Through Priority can first schedule a Priority Wheeling Through transaction using its Wheeling Through Priority, the Wheeling Through Priority will terminate unless the Scheduling Coordinator can demonstrate an equivalent replacement power supply contract (including MW quantity, import and export points, and service hours) by the earlier of (i) sixty (60) days from the date of termination, or (ii) eleven (11) Business Days before the date any Priority Wheeling Through transaction would actually occur under the awarded priority,

provided the Wheeling Through Priority will be prorated if the replacement contract is for a lower MW quantity or for fewer hours than the original contract. If the Scheduling Coordinator decides it will not seek to replace the terminated power supply contract, it must notify the CAISO within five (5) Business Days of that decision, but no later than eleven (11) Business Days before the date any Priority Wheeling Through transaction would actually occur under the awarded priority. The CAISO will account for any capacity associated with a terminated Wheeling Through Priority in a revised ATC calculation.

(c) If the MW quantity or hours of service of the original supporting firm power supply contract are reduced eleven (11) or more Business Days before the date on which the Scheduling Coordinator with the Wheeling Through Priority can first schedule a Priority Wheeling Through transaction using its Wheeling Through Priority, the MW quantity or hours of the Wheeling Through Priority will be reduced correspondingly unless the Scheduling Coordinator demonstrates, by the earlier of (i) sixty (60) days from the date of the modification, or (ii) eleven (11) Business Days before the date any Priority Wheeling Through transaction would actually occur under the awarded priority, the following: (1) a replacement contract for a MW quantity or hours of service, that when added to the reduced MW quantity or hours of service of the revised supporting contract, equals the MW quantity or hours of service reflected in the original contract supporting the Wheeling Through Priority, provided that the Scheduling Coordinator can receive a priority for a total MW quantity or number of hours less than the MW quantity or number of hours in the original contract, but greater than the MW quantity or number of hours in the revised contract, and (2) the replacement contract has a Scheduling Point where the energy is to be imported to the CAISO and a Scheduling Point where the energy is to be exported from the CAISO identical to the Scheduling Points in the original contract supporting the priority. If the Scheduling Coordinator decides it will not seek any replacement contract if the original power supply contract has been modified, it must notify the CAISO within five (5) Business Days of that decision, but no later than eleven (11) Business Days before the date any Priority Wheeling Through transaction would actually occur under the

awarded priority. The CAISO will account for any capacity associated with a modified Wheeling Through Priority in a revised ATC calculation.

(d) If the Scheduling Coordinator seeks a priority in a replacement contract for a MW quantity greater than the MW quantity in the original contract, hours that are different than the hours in the hours in the original contract, or either the import or export Scheduling Point in the replacement contract is different than the import or export point in the original contract supporting the Wheeling Through Priority, the Scheduling Coordinator must re-apply for a Wheeling Through Priority for such deviations in a subsequent request window.

(e) If the supply contract supporting the Wheeling Through Priority is terminated or modified after eleven (11) Business Days before the Day-Ahead Market run for the date on which the Scheduling Coordinator can first schedule a Priority Wheeling Through transaction using the Wheeling Through Priority, the Scheduling Coordinator will retain the Wheeling Through Priority and will be charged for such Wheeling Through Priority for the term of the priority.

### 23.3 ATC Requirements Related to CAISO LSEs

#### 23.3.1 ATC Request Window Applicability to CAISO LSEs

The CAISO will consider Native Load needs of its Load Serving Entities in determining ATC pursuant to Section 23.3 and Appendix L-1. In addition, Scheduling Coordinators for CAISO LSEs can compete to obtain ATC to support an import into the CAISO Balancing Authority Area in the daily request window process set forth in Section 23.5. The Scheduling Coordinator must attest to the following: (1) its ATC request is supported by an executed firm power supply contract, a firm power supply contract where execution is contingent upon the receipt of ATC, or ownership of a resource to serve the Load Serving Entity's load; (2) the MW quantity of the firm power supply contract with the Load Serving Entity supporting the request and the CAISO Scheduling Points to which the energy will be imported to the CAISO Controlled Grid; (3) the start and end dates of the power supply contract and the specific hours during the day(s) covered by the power supply contract for which the Scheduling Coordinator seeks ATC; (4) all information specified in the Business Practice Manual to support a daily ATC request has been

provided; and (5) whether the Scheduling Coordinator is willing to accept a pro rata allocation of capacity, or an award of only part of its request, if the result of the monthly or daily request window process in Sections 23.4 and 23.5, respectively, is that there is insufficient ATC to accommodate the entire request, because of a tie among competing requesters or for some other reason.

#### 23.3.2 Historical Contract Information Regarding Non-Resource Adequacy Resource Import Supply

Under the process and by the deadline established in the Business Practice Manual, to enable the CAISO to calculate ATC on the Interties under Appendix L-1, each Scheduling Coordinator for a Load Serving Entity may attest to the CAISO and submit information regarding firm non-Resource Adequacy Resource import supply contracts the Load Serving Entity had in place to serve its load during the two (2) years prior to the month for which the CAISO is determining ATC. The firm import supply contracts that can be reported under this Section 23.3.1 must be contracts for a period greater than one month that includes the applicable month, monthly contracts for the month, or a portfolio of shorter-term contracts for the month. They cannot be contracts to replace other external capacity that becomes unavailable. LSEs must attest to and provide: (1) the start and end dates of the contract; (2) the MW quantity; and (3) the CAISO Scheduling Point where the energy is imported.

#### 23.3.3 New Contract Information

Before the CAISO initially establishes ATC for a month that is thirteen (13) months away, under the process and deadlines established in the Business Practice Manual, Load Serving Entities must (1) notify the CAISO of any new firm contracts for imports to serve their load that are for a period greater than one month and include the applicable month, monthly contracts for the month, or a portfolio of shorter-term contracts for the month, and that are not reflected in the historical two (2) year period and (2) notify the CAISO of any import contracts reflected in the historical data that will be discontinued any time in the thirteen (13)-month horizon and will not be replaced with another import at the same Scheduling Point. The CAISO will consider these representations in establishing the initial ATC for the month. The Load Serving Entity must attest to whether the new import contract replaces capacity that the Load Serving Entity had under contract during the historical two (2)-year period or is incremental to that capacity. The Load Serving Entity must attest to and provide: (1) the start and end dates of the import contract; (2) the

specific hours to which the contract applies; (3) the MW quantity of the contract by month; and (4) the CAISO Scheduling Point where the energy will be imported. If the new contract is intended as replacement capacity, the LSE must attest to and indicate the contract that is being replaced, the term of that contract, the MW quantity of the contract each month, and the CAISO Scheduling Point where the energy was imported under the contract.

If the LSE intends the new contract to be incremental capacity, the LSE must attest that the capacity will be additive to the import capacity under contract during the historic period and will be shown as such in the monthly Resource Adequacy or non-Resource Adequacy contract showings. Upon request of the CAISO, Load Serving Entities should be ready to provide information to demonstrate the incremental nature of the capacity including, but not limited to: Load Serving Entity resource plans that include the contract; the LSE's expected load growth, incremental procurement ordered or approved by Local Regulatory Authorities, replacement of generation internal to the CAISO, or other relevant information demonstrating the additive nature of the new contract. The CAISO will use contracts that meet the requirements in this section to determine the existing transmission commitments (ETComm) component of the ATC calculation under Appendix L-1.

**23.3.4 Monthly Non-Resource Adequacy Contract Showings**

According to the process set forth in the Business Practice Manual, before the end of the Resource Adequacy cure period under Section 40 for the applicable month, a Load Serving Entity may show to the CAISO any firm non-Resource Adequacy contracts it has for the month that should be considered for inclusion in the existing transmission commitments (ETComm) component of the ATC calculation for the month under Appendix L-1. The contracts cannot be contracts to replace other external capacity that becomes unavailable. The Load Serving Entity seeking to make such a showing must attest to and indicate the following: (1) it has an executed firm power supply contract to serve its load, a firm power supply contract to serve its load where execution is contingent upon the receipt of ATC, or ownership of a resource to serve the Load Serving Entity's load; (2) the MW quantity of the firm power supply contract with the Load Serving Entity and the Scheduling Point(s) at which the energy will be imported to the CAISO Controlled Grid; and (3) the start and end dates of the power supply contract and the specific hours and days during the month covered by the power supply contract. Shown non-Resource Adequacy

contracts must be monthly contracts or a portfolio of shorter-term contracts for the month.

### 23.3.5 CPM Access to ATC

If the CAISO designates import capacity under the CPM for any reason other than to address an annual or monthly Resource Adequacy deficiency, the CAISO will first utilize the CPM import capacity under the TRM to the extent any TRM capacity is available. If insufficient TRM capacity is available, then the CAISO will utilize ATC for the term of the CPM designation, or for part of the term, only to the extent ATC is available at the time of the designation. If the CAISO designates import capacity under the CPM to address an annual or monthly RA deficiency, the CAISO will first utilize ATC to the extent any ATC is available for all or part of the term and, if no ATC is available, then it will utilize TRM.

### 23.3.6 Annual Summer ATC and TRM Assessment Meeting with Stakeholders

Before the summer season (May-October) each year, the CAISO will meet with stakeholders to discuss ATC and its components and expected conditions for the upcoming summer and the following year's summer. The CAISO will issue a Market Notice announcing the meeting(s) in accordance with the timeline specified in the Business Practice Manual.

## 23.4 Obtaining a Monthly Wheeling Through Priority

On the date specified in the annual Wheeling Through priority request calendar, the CAISO will open a request window whereby Scheduling Coordinators can submit a request for a priority for Wheeling Throughs for a month(s). Scheduling Coordinators can request a monthly Wheeling Through Priority for any month or months ATC is calculated and available, no sooner than twelve (12) months in advance and no later than one (1) month prior to the effective date of the priority. The CAISO will hold the request window open for fourteen (14) days. Closure of the request window each month will coincide with the closure of the monthly Resource Adequacy cure period under Section 40 for that month. At a minimum, Wheeling Through Priority requests for a month(s) must be supported by a six (6)-days-by-four (4)-hours firm power supply contract for each full week during the month plus the relevant days in any partial week during the month. The CAISO will make its determination regarding monthly Wheeling Through Priority awards no later than three (3) Business Days after the request window closes. The CAISO will treat all requests for a monthly Wheeling Through Priority submitted during the request window as having been submitted simultaneously. The CAISO will treat all requests for a monthly priority during the request

window as confidential during the request window period and treat them in accordance with Section 20 thereafter. The CAISO will award ATC to support Wheeling Through Priority requests based on the total number of hours of the requested priority (which must be supported by a firm power supply contract supporting the priority request for those hours) over the entire thirteen (13)-month horizon. Thus, supported priority requests for more hours during the thirteen (13)-month period will be awarded ATC before requests for fewer hours. For example, a priority request supported by a six (6)-days-by-sixteen (16)-hours power supply contract for one (1) month will have priority over a request supported by a six (6)-days-by-eight (8)-hours power supply contract for the same month; a priority request supported by a six (6)-days-by-four (4)-hours power supply contract for five (5) months will have priority over a request supported by a six (6)-days-by-eight (8)-hours power supply contract for just one (1) of those months. If there is a tie among requests and insufficient remaining ATC to accommodate all such priority requests for the month, the CAISO will allocate Wheeling Through priorities on a pro rata MW basis, or grant part of the ATC request, to those Scheduling Coordinators that indicated they would accept a pro rata allocation or partial awards. Wheeling Through Priority awards coming out of a monthly request window are unconditional and cannot be unwound by Wheeling Through Priority awards in subsequent request windows. A Scheduling Coordinator for a Priority Wheeling Through does not lose an awarded scheduling priority if it does not self-schedule the transaction in the Day-Ahead Market.

### 23.5 Obtaining a Daily Wheeling Through Priority

The CAISO will open a request window each day whereby Scheduling Coordinators can request a daily Wheeling Through Priority or daily ATC to support an import into the CAISO Balancing Authority Area by a CAISO LSE (LSE ATC), for any day or days in that request window to the extent ATC is calculated and available, no sooner than seven (7) days in advance and no later than one (1) day prior to the effective date of the priority. The CAISO will hold the request window open for five (5) hours during the hours specified in the Business Practice Manual. At a minimum, Wheeling Through Priority requests in the Day-Ahead horizon must be supported by a firm power supply contract of at least four (4) hours for each day during the seven (7)-day horizon for which the Scheduling Coordinator seeks a Wheeling Through Priority or LSE ATC. The CAISO will make its determination regarding daily Wheeling Through Priority awards no later than two (2) hours after the daily request window closes and one (1) hour before the Day-Ahead

Market runs. The CAISO will treat all requests for a Wheeling Through Priority or LSE ATC for a day submitted during the request window as having been submitted simultaneously. The CAISO will treat all requests for a daily priority during the request window as confidential during the request window and in accordance with Section 20 thereafter. The CAISO will award ATC to support Wheeling Through Priority or LSE ATC requests based on the total number of hours of the requested priority (which must be supported by a firm power supply contract for the priority request for those hours) over the entire seven (7)-day horizon. Thus, supported priority requests for more hours during the seven (7)-day period will be awarded ATC before requests for fewer hours. For example, a priority request supported by a six (6)-days-by-sixteen (16)-hours power supply contract for one (1) day will have priority over a request supported by a six (6)-days-by-eight (8)-hours power supply contract for the same day; a priority request supported by a six (6)-days-by-four (4)-hours power supply contract for five (5) days will have priority over a request supported by a six (6)-days-by-eight (8)-hours power supply contract for one (1) of those days. If there is a tie among requests and insufficient remaining ATC to accommodate all such priority requests for the day, the CAISO will allocate Wheeling Through Priorities on a pro rata MW basis, or grant a part of the request, to those Scheduling Coordinators that indicated they would accept a pro rata allocation or a partial award. Awards of Wheeling Through Priorities or LSE ATC coming out of a daily request window are unconditional and cannot be unwound by Wheeling Through Priority or LSE ATC awards in subsequent daily request windows. A Scheduling Coordinator for a Priority Wheeling Through does not lose an awarded scheduling priority if it does not schedule in the Day-Ahead Market.

**23.6 [Not Used]**

**23.7 Use of ETC or TOR Capacity to Support a Wheeling Through Priority**

A Scheduling Coordinator may use ETC or TOR capacity to support a Wheeling Through Priority. The Scheduling Coordinator may use ETC or TOR capacity for that portion of the Wheeling Through Priority from the import Scheduling Point to the export Scheduling Point that is covered by the ETC or TOR capacity the Scheduling Coordinator chooses to use. The Scheduling Coordinator must use transmission capacity on the CAISO Controlled Grid to support the balance of the Wheeling Through Priority. The Scheduling Coordinator will be assessed the applicable Wheeling Through Priority charges pursuant to Section 26.1.4.5 for the MW quantity of the Wheeling Through Priority.

### 23.8 Sale or Assignment of a Wheeling Through Priority

#### 23.8.1 Procedures for Reselling a Monthly Wheeling Through Priority

A Wheeling Through Priority Reseller Market Participant with a monthly Wheeling Through Priority may sell all or a portion of the MW quantity of its Wheeling Through Priority for the month, or remainder of the month or term, to another Market Participant (the assignee). The Wheeling Through Priority Reseller must notify the CAISO by the deadline specified in the Business Practice Manual, which will be before the effective date of any resale, and it cannot sell a priority MW amount for more MW or a longer term than it has. The Wheeling Through Priority Reseller must also attest to the CAISO its reason for reselling or assigning the priority. Any resale or assignment must be at the same import Scheduling Point as the original Wheeling Through Priority, but it may be at a different export Scheduling Point if the CAISO can accommodate such change and maintain the status of the Wheeling Through Priority. The compensation to Wheeling Through Priority Resellers for any sale of a Wheeling Through Priority will be at rates established by agreement between the Wheeling Through Priority Reseller and the assignee. The Scheduling Coordinator for the assignee will be subject to all applicable charges, terms, and conditions of the CAISO Tariff. The Scheduling Coordinator for the Assignee will receive the same priority as the Wheeling Through Priority Reseller at the same Scheduling Points of import into and export out of the CAISO Balancing Authority Area unless the CAISO has authorized a different export Scheduling Point to receive the Wheeling Through Priority. The CAISO will continue to charge the Wheeling Through Priority Reseller at the applicable Priority Wheeling Through rate for the term of its original Wheeling Through Priority. A Wheeling Through Priority Reseller will remain responsible for complying with all requirements of this Section 23. Resales of a Wheeling Through Priority only allow the transfer of a Wheeling Through Priority and do not convey to the assignee any other rights, and the assignee is not responsible to the CAISO for the Wheeling Through Priority Reseller's financial obligation to the CAISO for ultimate payment of the original Wheeling Through Priority, which obligation remains with the Wheeling Through Priority Reseller. A Wheeling Through Priority Reseller cannot resell or assign a Wheeling Through Priority for the purpose of enabling avoidance of the firm power supply contract requirement of Section 23.2.1.

#### 23.8.2 Information on Assignment or Transfer of a Wheeling Through Priority

All sales or transfers of Wheeling Through priorities must be conducted or otherwise posted on the

CAISO's OASIS on or before the date the reassigned priority commences. Wheeling Through Priority Resellers may also use the CAISO's OASIS to post priorities available for resale.

### 23.8.3 Resales or Transfers of Capacity Directly from a TOR and ETC Rights Holder to an Assignee

An ETC or TOR rights holder can resell or transfer ETC or TOR capacity if it is permitted to do so in the underlying contract and such sale or transfer is supported by any applicable TRTC instructions. If a holder of a TOR or ETC sells or transfers capacity that can support a Wheeling Through transaction, the assignee of such capacity will have the same rights and obligations as the holder of the TOR or ETC with respect to such capacity, including the associated scheduling priority and perfect hedge. The assignee will be subject to all applicable terms and conditions of the CAISO Tariff, including having a Scheduling Coordinator with a Scheduling Coordinator Agreement. The holder of the TOR or ETC must notify the CAISO of the sale, assignment, or transfer by the deadline specified in the Business Practice Manual. The holder of the TOR or ETC cannot sell, assign, or transfer more MW of capacity than it owns. The holder of the TOR or ETC must indicate the MW quantity sold, assigned, or transferred, the party to whom it sold, assigned, or transferred the capacity, and the start and end hours and dates of the transaction. The compensation from an assignee to the holder of a TOR or ETC for the sale or transfer of TOR or ETC rights to the assignee will be at rates established by the agreement between the holder of the TOR or ETC and the assignee and will occur outside of the CAISO's settlements systems and processes. The assignee will be responsible for all applicable CAISO charges associated with its use of the assigned capacity.

## 23.9 TOR Capacity Made Available to the CAISO

To the extent the holder of a TOR makes some or all of its TOR capacity available to the CAISO pursuant to a contract, the CAISO will implement the release of TOR capacity under the contract and reflect any released capacity in its ATC calculations as being available for new firm use and priority requests under Sections 23.4 and 23.5.

# 24. Comprehensive Transmission Planning Process

## 24.1 Overview

The CAISO will develop a comprehensive Transmission Plan and approve transmission solutions using the Transmission Planning Process set forth in this Section 24. For purposes of this Section 24, transmission solutions include both entirely new transmission facilities and upgrades or additions to existing transmission facilities that are proposed, considered, and/or specified in the comprehensive Transmission Plan during Phase 2 to meet an identified need determined by the CAISO. Alternatives to transmission solutions are referred to as non-transmission solutions. Solutions to meet an identified need can be either transmission solutions or non-transmission solutions. The CAISO will analyze the need for transmission solutions in accordance with the methodologies and criteria set forth in this Section 24, the Transmission Control Agreement, and the applicable Business Practice Manuals. The comprehensive Transmission Plan will identify Merchant Transmission Facilities meeting the requirements for inclusion in the Transmission Plan and transmission solutions needed (1) to maintain System Reliability; (2) to satisfy the requirements of a Location Constrained Resource Interconnection Facility; (3) to maintain the simultaneous feasibility of allocated Long-Term CRRs; (4) as additional components or expansions to LGIP Network Upgrades are identified pursuant to Section 24.4.6.5; (5) to meet state, municipal, county and federal policy requirements and directives, including renewable portfolio standards policies; and (6) to reduce congestion costs, production supply costs, transmission losses, or other electric supply costs resulting from improved access to cost-effective resources. For purposes of this Section 24, the term "the year X/(X+1) planning cycle" will refer to the Transmission Planning Process initiated during year X to complete a comprehensive Transmission Plan in year X+1.

### 24.1.1 [Not Used]

### 24.1.2 [Not Used]

### 24.1.3 [Not Used]

### 24.1.4 [Not Used]

## 24.2 Nature of the Transmission Planning Process

The CAISO will develop the annual comprehensive Transmission Plan and approve transmission upgrades or additions using a Transmission Planning Process with three (3) phases. In Phase 1, the

CAISO will develop and complete the Unified Planning Assumptions and Study Plan. In Phase 2, the CAISO will complete the comprehensive Transmission Plan. In Phase 3, the CAISO will evaluate proposals to construct and own certain transmission upgrades or additions specified in the comprehensive Transmission Plan. The Transmission Planning Process shall, at a minimum:

(a) Coordinate and consolidate in a single plan the transmission needs of the CAISO Balancing Authority Area for maintaining the reliability of the CAISO Controlled Grid in accordance with Applicable Reliability Criteria and CAISO Planning Standards, in a manner that promotes the economic efficiency of the CAISO Controlled Grid and considers federal and state environmental and other policies affecting the provision of Energy;

(b) Reflect a planning horizon covering a minimum of ten (10) years that considers previously approved transmission upgrades and additions, Demand Forecasts, Demand-side management, capacity forecasts relating to generation technology type, additions and retirements, and such other factors as the CAISO determines are relevant;

(c) Seek to avoid unnecessary duplication of facilities and ensure the simultaneous feasibility of the CAISO Transmission Plan and the transmission plans of interconnected Balancing Authority Areas, and coordinate with other Planning Regions and interconnected Balancing Authority Areas in accordance with, but not limited to, the Order 1000 Common Interregional Coordination and Cost Allocation Tariff Language in Section 24.18;

(d) Identify existing and projected limitations of the CAISO Controlled Grid's physical, economic or operational capability or performance and identify transmission upgrades and additions, including alternatives thereto, deemed needed to address the existing and projected limitations;

(e) Account for any effects on the CAISO Controlled Grid of the interconnection of Generating Units, including an assessment of the deliverability of such Generating Units in a manner consistent with CAISO interconnection procedures;

(f) Provide an opportunity for Interregional Transmission Projects submitted to the CAISO as a Relevant Planning Region to be evaluated as potential solutions to CAISO regional

transmission needs; and

(g) Evaluate projects of entities that have commenced the process to become Subscriber Participating TOs or have initiated related transmission interconnection studies with one or more existing Participating TOs.

**24.2.1 [Not Used]**

**24.2.2 [Not Used]**

**24.2.3 [Not Used]**

**24.2.4 [Not Used]**

### 24.3 Transmission Planning Process Phase 1

Phase 1 consists of the development of the Unified Planning Assumptions and Study Plan.

#### 24.3.1 Inputs to the Unified Planning Assumptions and Study Plan

The CAISO will develop Unified Planning Assumptions and a Study Plan using information and data from the approved Transmission Plan developed in the previous planning cycle. The CAISO will consider the following in the development of the Unified Planning Assumptions and Study Plan:

(a) WECC base cases, as may be modified for the relevant planning horizon;

(b) Transmission upgrades and additions approved by the CAISO in past Transmission Planning Process cycles, including upgrades and additions which the CAISO has determined address transmission needs in the comprehensive Transmission Plan developed in the previous planning cycle;

(c) Category 2 policy-driven transmission upgrades and additions from a prior planning cycle as described in Section 24.4.6.6;

(d) Location Constrained Resource Interconnection Facilities conditionally approved under Section 24.4.6.3;

(e) Network Upgrades identified pursuant to Section 25 and Appendices S, T, U, V, W, Y, Z, BB, CC, DD, EE, and FF that were not otherwise included in the comprehensive Transmission Plan from the previous annual cycle;

(f) Operational solutions validated by the CAISO in the Local Capacity Technical Study under Section 40.3.1;

(g) Policy requirements and directives, as appropriate, including programs initiated by state, federal, municipal and county regulatory agencies;

(h) Energy Resource Areas or similar resource areas identified by Local Regulatory Authorities;

(i) Demand response programs that are proposed for inclusion in the base case or assumptions for the comprehensive Transmission Plan;

(j) Generation and other non-transmission alternatives that are proposed for inclusion in long-term planning studies as alternatives to transmission additions or upgrades;

(k) Beginning with the 2011/2012 planning cycle, Economic Planning Study requests submitted in comments on the draft Unified Planning Assumptions and Study;

(l) Planned facilities in interconnected Balancing Authority Areas;

(m) The most recent Annual Interregional Information provided by other Planning Regions;

(n) Import Capability expansion requests submitted in comments on the draft Unified Planning Assumptions and Study; and

(o) Subscriber Participating TO transmission facilities, and any generation facilities receiving Subscriber Rights and requesting to interconnect to the CAISO Controlled Grid over Subscriber Participating TO transmission facilities, that have met the following criteria:

1. The Applicant Participating Transmission Owner Agreement has been executed;

2. The generator interconnection agreement with the Subscriber is executed;

3. The Subscriber Participating TO has provided written notice to the CAISO that Construction Activities regarding the Subscriber Participating TO transmission facilities have begun; and

4. Transmission interconnection studies required by the interconnecting Transmission Owner(s) have begun.

### 24.3.2 Content of the Unified Planning Assumptions and Study Plan

The Unified Planning Assumptions and Study Plan shall, at a minimum, provide:

(a) The planning data and assumptions to be used in the Transmission Planning Process

cycle, including, but not limited to, those related to Demand Forecasts and distribution, potential generation capacity additions and retirements, and transmission system modifications;

(b) A description of the computer models, methodology and other criteria used in each technical study performed in the Transmission Planning Process cycle;

(c) A list of each technical study to be performed in the Transmission Planning Process cycle and a summary of each technical study's objective or purpose;

(d) A description of significant modifications to the planning data and assumptions as allowed by Section 24.3.1(a) and consistent with Section 24.3.2;

(e) The identification of any entities directed to perform a particular technical study or portions of a technical study;

(f) A proposed schedule for all stakeholder meetings to be held as part of the Transmission Planning Process cycle and the means for notification of any changes thereto, the location on the CAISO Website of information relating to the technical studies performed in the Transmission Planning Process cycle, and the name of a contact person at the CAISO for each technical study performed in the Transmission Planning Process cycle;

(g) To the maximum extent practicable, and where applicable, appropriate sensitivity analyses, including project or solution alternatives, to be performed as part of the technical studies;

(h) Descriptions of the High Priority Economic Planning Studies as determined by the CAISO under section 24.3.4.2;

(i) Identification of state or federal, municipal or county requirements or directives that the CAISO will utilize, pursuant to Section 24.4.6.6, to identify policy-driven transmission solutions; and

(j) The status of transmission capacity reservations for long lead-time resources for policy-driven transmission solutions.

**24.3.3 Stakeholder Input – Unified Planning Assumptions/Study Plan**

(a) Beginning with the 2011/2012 planning cycle and in accordance with the schedule set forth in the Business Practice Manual, the CAISO will provide a comment period during

which Market Participants, electric utility regulatory agencies and all other interested parties may submit the following proposals for consideration in the development of the draft Unified Planning Assumptions and Study Plan:

(i) Demand response programs for inclusion in the base case or assumptions;

(ii) Generation and other non-transmission alternatives, consistent with Section 24.3.2(a) proposed as alternatives to transmission solutions; and

(iii) State, municipal, county or federal policy requirements or directives.

(b) Following review of relevant information, including stakeholder comments submitted pursuant to Section 24.3.3(a), the CAISO will prepare and post on the CAISO Website a draft of the Unified Planning Assumptions and Study Plan. The CAISO will issue a Market Notice announcing the availability of such draft, soliciting comments, and scheduling a public conference(s) as required by Section 24.3.3(c);

(c) No less than one (1) week subsequent to the posting of the draft Unified Planning Assumptions and Study Plan, the CAISO will conduct a minimum of one (1) public meeting open to Market Participants, electric utility regulatory agencies, and other interested parties to review, discuss, and recommend modifications to the draft Unified Planning Assumptions and Study Plan. Additional meetings, web conferences, or teleconferences may be scheduled as needed. All stakeholder meetings, web conferences, or teleconferences shall be noticed by Market Notice;

(d) Interested parties will be provided a minimum of two (2) weeks following the first public meeting to provide comments on the draft Unified Planning Assumptions and Study Plan. Such comments may include Economic Planning Study requests based on the comprehensive Transmission Plan from the prior cycle and Import Capability expansion study requests. All comments on the draft Unified Planning Assumptions and the Study Plan will be posted by the CAISO to the CAISO Website;

(e) Following the public conference(s), and under the schedule set forth in the Business Practice Manual, the CAISO will determine and publish to the CAISO Website the final Unified Planning Assumptions and Study Plan in accordance with the procedures set

forth in the Business Practice Manual. The final Unified Planning Assumptions and Study Plan will include an explanation as to the public policy requirements or directives that were selected for consideration in the current planning cycle as well as the suggested public policy requirements and directives that were not selected for consideration and the reasons therefor. The CAISO will post the base cases to be used in the technical studies to its secured website as soon as possible after the final Unified Planning Assumptions and Study Plan have been published;

(f) A public policy requirement or directive selected for consideration in a transmission planning cycle will be carried over into subsequent transmission planning cycles unless the ISO determines that such public policy requirement or directive has been eliminated, modified, or is otherwise not applicable or relevant for transmission planning purposes in a current transmission planning cycle. The ISO will post on its website an explanation of any decision not to consider a previously identified public policy requirement or directive from consideration in the current transmission planning process cycle.

### 24.3.4 Economic Planning Studies

#### 24.3.4.1 CAISO Assessment of Requests for Economic Planning Studies

Following the submittal of a request for an Economic Planning Study, the CAISO will determine whether the request shall be designated as a High Priority Economic Planning Study for consideration in the development of the comprehensive Transmission Plan. In making the determination, the CAISO will consider:

(a) Whether the requested Economic Planning Study seeks to assess Congestion not identified or identified and not mitigated by the CAISO in previous Transmission Planning Process cycles;

(b) Whether the requested Economic Planning Study addresses delivery of Generation from Location Constrained Resource Interconnection Generators or network transmission facilities intended to access Generation from an Energy Resource Area or similar resource area assigned a high priority by the CPUC or CEC;

(c) Whether the requested Economic Planning Study is intended to address Local Capacity Area Resource requirements;

(d) Whether resource and Demand information indicates that Congestion described in the Economic Planning Study request is projected to increase over the planning horizon used in the Transmission Planning Process and the magnitude of that Congestion; or

(e) Whether the Economic Planning Study is intended to encompass the upgrades necessary to integrate new generation resources or loads on an aggregated or regional basis.

#### 24.3.4.2 Selection of High Priority Economic Planning Studies

In accordance with the schedule and procedures set forth in the Business Practice Manual, the CAISO will post to the CAISO Website the list of selected High Priority Economic Planning Studies to be included in the draft Unified Planning Assumptions and Study Plan. The CAISO may assess requests for Economic Planning Studies individually or in combination where such requests may have common or complementary effects on the CAISO Controlled Grid. As appropriate, the CAISO will perform requested High Priority Economic Planning Studies, up to five (5); however, the CAISO retains discretion to perform more than five (5) High Priority Economic Planning Studies should stakeholder requests or patterns of Congestion or anticipated Congestion so warrant. Market Participants may, consistent with Section 24.3.1 and 24.3.2, conduct Economic Planning Studies that have not been designated as High Priority Economic Planning Studies at their own expense and may submit such studies for consideration in the development of the comprehensive Transmission Plan.

### 24.3.5 Import Capability Expansion Requests

The following Market Participants may submit an Import Capability expansion request pursuant to Section 24.3.3(d):

(a) Load Serving Entities with existing Resource Adequacy import contracts not fully accounted for as Pre-RA Import Commitment or New Use Import Commitment during the relevant study year(s) of the request;

(b) Owners of new transmission projects connecting to the ISO grid from an external Balancing Authority Area or connecting into a neighboring Balancing Authority Area

immediately adjacent to the CAISO Controlled Grid; or

(c) Other Market Participants demonstrating financial commitments for serving CAISO internal load.

Import Capability expansion requests should provide the relevant information as defined in the Business Process Manual.

### 24.4 Transmission Planning Process Phase 2

#### 24.4.1 Conducting Technical Studies

(a) In accordance with the Unified Planning Assumptions and Study Plan and with the procedures and deadlines in the Business Practice Manual, the CAISO will perform, or direct the performance by third parties of technical studies and other assessments necessary to develop the comprehensive Transmission Plan, including such technical studies and other assessments as are necessary in order to determine Regional Transmission Facilities or other alternatives identified by the CAISO during the Phase 2 studies in the comprehensive Transmission Plan. According to the schedule set forth in the applicable Business Practice Manual, the CAISO will post the preliminary results of its technical studies and proposed mitigation solutions on the CAISO Website. The CAISO's technical study results and mitigation solutions shall be posted not less than one-hundred and twenty (120) days after the final Unified Planning Assumptions and Study Plan are published, along with the results of the technical studies conducted by Participating TOs or other third parties at the direction of the CAISO.

(b) All technical studies, whether performed by the CAISO, the Participating TOs or other third parties under the direction of the CAISO, must utilize the Unified Planning Assumptions for the particular technical study to the maximum extent practical, and deviations from the Unified Planning Assumptions for the particular technical study must be documented in results of each technical study. The CAISO will measure the results of the studies against Applicable Reliability Criteria, the CAISO Planning Standards, and other criteria established by the Business Practice Manual. After consideration of the comments received on the preliminary results, the CAISO will complete, or direct the

completion of, the technical studies and post the final study results on the CAISO Website.

(c) The CAISO technical study results will identify needs and proposed solutions to meet Applicable Reliability Criteria, CAISO planning standards, and other applicable planning standards. The CAISO and Participating TOs shall coordinate their respective transmission planning responsibilities required for compliance with the NERC Reliability Standards and for the purposes of developing the annual Transmission Plan according to the requirements and time schedules set forth in the Business Practice Manual.

**24.4.2 Proposed Reliability Driven Transmission Solutions**

Pursuant to the schedule described in the Business Practice Manual and based on the technical study results, the CAISO, CEC, CPUC, and other interested parties may propose any transmission solutions deemed necessary to ensure System Reliability consistent with Applicable Reliability Criteria and CAISO Planning Standards through the Phase 2 Request Window. Participating TOs will submit such proposed transmission solutions through the Phase 2 Request Window within thirty (30) days after the CAISO posts its preliminary technical study results. The substantive description of reliability driven projects is set forth in Section 24.4.6.2.

**24.4.3 Phase 2 Request Window**

(a) Following publication of the results of the technical studies, and in accordance with the schedule set forth in the Business Practice Manual, the CAISO will open a Request Window during Phase 2 for the submission of proposed transmission solutions for reliability-driven needs identified in the studies, Location Constrained Resource Interconnection Facility projects, demand response or generation proposed as alternatives to transmission additions or upgrades to meet reliability needs, proposals for Merchant Transmission Facility projects, proposed transmission solutions needed to maintain the feasibility of long-term CRRs and efficient or cost effective Regional Transmission Facility alternatives for meeting identified needs. The CEC, CPUC, and interested parties may submit potential reliability transmission solutions within the same timeframe established for Participating TOs to submit reliability transmission solutions,

but they are not required to do so to the extent the Business Practice Manual grants them a longer period of time.

(b) All facilities proposed during the Request Window must use the forms and satisfy the information and technical requirements set forth in the Business Practice Manual. Proposed transmission solutions must be within or connect to the CAISO Balancing Authority Area or CAISO Controlled Grid. The CAISO will determine whether each of these proposed solutions will be considered in the development of the comprehensive Transmission Plan. In accordance with the schedule and procedures set forth in the Business Practice Manual, the CAISO will notify the party submitting the proposed solution of any deficiencies in the proposal and provide the party an opportunity to correct the deficiencies. Such proposed solutions can only be considered in the development of the comprehensive Transmission Plan if the CAISO determines that:

(i) the proposed solution satisfies the information requirements for the particular type of facility submitted as set forth in templates included in the Business Practice Manual; and

(ii) the proposed solution is not functionally duplicative of transmission upgrades or additions that have previously been approved by the CAISO.

(c) The duration of the Request Window will be set forth in the Business Practice Manual.

**24.4.4 [Not Used]**

**24.4.5 Determination of Needed Transmission Solutions**

To determine which transmission solutions should be included in the comprehensive Transmission Plan, the CAISO will evaluate the conceptual transmission facilities identified by the CAISO during the Phase 2 studies, proposed solutions for reliability-driven needs, LCRIF project proposals, proposals required to maintain the feasibility of long term CRRs, proposed Network Upgrades pursuant to Section 24.4.6.5 and the results of Economic Planning Studies or other economic studies the CAISO has performed and will consider potential transmission solutions and non-transmission or generation alternatives proposed by interested parties. In determining which transmission solutions should be included in the comprehensive Transmission Plan the CAISO shall consider the degree to which a Regional Transmission Facility may

be substituted for one or more Local Transmission Facilities as a more efficient or cost effective solution to identified needs.

### 24.4.6 Categories of Transmission Solutions

#### 24.4.6.1 Merchant Transmission Facility Proposals

The CAISO may include a proposed Merchant Transmission Facility in the comprehensive Transmission Plan if a Project Sponsor demonstrates to the CAISO the financial capability to pay the full cost of construction and operation of the Merchant Transmission Facility. The Merchant Transmission Facility must mitigate all operational concerns identified by the CAISO to the satisfaction of the CAISO, in consultation with the Participating TO(s) in whose PTO Service Territory the Merchant Transmission Facility will be located, and ensure the continuing feasibility of allocated Long Term CRRs over the length of their terms. To ensure that the Project Sponsor is financially able to pay the construction and operating costs, of the Merchant Transmission Facility, and where the Participating TO is not the Project Sponsor and is to construct the Merchant Transmission Facility under Section 24.4.1, the CAISO in cooperation with the Participating TO may require (1) a demonstration of creditworthiness (e.g., an appropriate credit rating), or (2) sufficient security in the form of an unconditional and irrevocable letter of credit or other similar security sufficient to meet its responsibilities and obligations for the full costs of the Merchant Transmission Facility.

#### 24.4.6.2 Reliability Driven Solutions

The CAISO, in coordination with each Participating TO with a PTO Service Territory will, as part of the Transmission Planning Process and consistent with the procedures set forth in the Business Practice Manual, identify the need for any transmission solutions required to ensure System Reliability consistent with all Applicable Reliability Criteria and CAISO Planning Standards. In making this determination, the CAISO, in coordination with each Participating TO with a PTO Service Territory and other Market Participants, shall consider lower cost solutions, such as acceleration or expansion of existing transmission solutions, Demand-side management, Remedial Action Schemes, appropriate Generation, interruptible Loads, storage facilities or reactive support. The CAISO shall direct each Participating TO with a PTO Service Area, as a registered Transmission Planner with NERC, to perform the necessary studies, based on the Unified Planning Assumptions and Study Plan and any applicable Interconnection

Study, and in accordance with the Business Practice Manual, to determine the solutions needed to meet all Applicable Reliability Criteria and CAISO Planning Standards. The Participating TO with a PTO Service Area shall provide the CAISO and other Market Participants with all information relating to the studies performed under this Section, subject to any limitation provided in Section 20.2 or the applicable LGIP. The CAISO will determine the solution that meets the identified reliability need in the more efficient or cost effective manner.

**24.4.6.3 LCRIF Projects**

**24.4.6.3.1 Proposals for LCRIFs**

The CAISO, CPUC, CEC, a Participating TO, or any other interested parties may propose a transmission addition as a Location Constrained Resource Interconnection Facility. A proposal shall include the following information, to the extent available:

(a) Information showing that the proposal meets the requirements of Section 24.4.6.3.2; and

(b) A description of the proposed facility, including the following information:

(1) Transmission studies demonstrating that the proposed facility satisfies Applicable Reliability Criteria and CAISO Planning Standards;

(2) Identification of the most feasible and cost-effective alternative transmission additions, which may include network upgrades, that would accomplish the objective of the proposal;

(3) A planning level cost estimate for the proposed facility and all proposed alternatives;

(4) An assessment of the potential for the future connection of further transmission additions that would convert the proposed facility into a network transmission facility, including conceptual plans;

(5) The estimated in-service date of the proposed facility; and

(6) A conceptual plan for connecting potential LCRIGs, if known, to the potential facility.

**24.4.6.3.2 Criteria for Qualification as a LCRIF**

(a) The CAISO shall conditionally approve a facility as a Location Constrained Resource Interconnection Facility if it determines that the facility is needed and all of the following requirements are met:

(1) The facility is to be constructed for the primary purpose of connecting to the CAISO Controlled Grid two (2) or more Location Constrained Resource

Interconnection Generators in an Energy Resource Area, and at least one of the Location Constrained Resource Interconnection Generators is to be owned by an entity(ies) that is not an Affiliate of the owner(s) of another Location Constrained Resource Interconnection Generator in that Energy Resource Area;

(2) The facility will operate at or above 200 kV;

(3) At the time of its in-service date, the facility will not be a network facility and would not be eligible for inclusion in a Participating TO's TRR other than as an LCRIF; and

(4) The facility meets Applicable Reliability Criteria and CAISO Planning Standards.

(b) The proponent of a facility that has been determined by the CAISO to meet the requirements of Section 24.4.6.3.2(a) shall provide the CAISO with information concerning the requirements of this subsection not less than ninety (90) days prior to the planned commencement of construction, and the facility shall qualify as a Location Constrained Resource Interconnection Facility if the CAISO determines that both of the following requirements are met:

(1) The addition of the capital cost of the facility to the RTRR of a Participating TO will not cause the aggregate of the net investment of all LCRIFs (net of the amount of the capital costs of LCRIFs to be recovered from LCRIGs pursuant to Section 26.6) included in the RTRRs of all Participating TOs to exceed fifteen (15) percent of the aggregate of the net investment of all Participating TOs in all transmission facilities reflected in their RTRRs (net of the amount of the capital costs of LCRIFs to be recovered from LCRIGs pursuant to Section 26.6) in effect at the time of the CAISO's evaluation of the facility; and

(2) Existing or prospective owners of LCRIGs have demonstrated their interest in connecting LCRIGs to the facility consistent with the requirements of Section 24.4.6.3.4, which establishes the necessary demonstration of interest.

**24.4.6.3.3 Responsibilities of Participating Transmission Owner**

Each Participating TO shall report annually to the CAISO the amount of its net investment in LCRIFs (net of the amount of the capital costs of LCRIFs to be recovered from LCRIGs pursuant to Section 26.6), and its net investment in transmission facilities reflected in its RTRR (net of the amount of the capital costs of LCRIFs to be recovered from LCRIGs pursuant to Section 26.6), to enable the CAISO to make the determination required under Section 24.4.6.3.2(b)(1).

**24.4.6.3.4 Demonstration of Interest in a LCRIF**

A proponent of an LCRIF must demonstrate interest in the LCRIF equal to sixty (60) percent or more of the capacity of the facility in the following manner:

(a) the proponent's demonstration must include a showing that LCRIGs that would connect to the facility and would have a combined capacity equal to at least twenty-five (25) percent of the capacity of the facility have executed Large Generator Interconnection Agreements or Small Generator Interconnection Agreements, as applicable; and

(b) to the extent the showing pursuant to Section 24.4.6.3.4(a) does not constitute sixty (60) percent of the capacity of the LCRIF, the proponent's demonstration of the remainder of the required minimum level of interest must include a showing that additional LCRIGs:

(1) in the case of Large Generating Facilities subject to the LGIP set forth in Appendix Y, have obtained Site Exclusivity or paid the Site Exclusivity Deposit in lieu of Site Exclusivity, provided that any Site Exclusivity Deposit paid pursuant to Section 3.5 of the LGIP set forth in Appendix Y shall satisfy this requirement, or, in the case of Large Generating Facilities subject to the LGIP set forth in Appendix U and Small Generating Facilities, have obtained control over their site or paid a deposit to the CAISO in the amount of $250,000, which deposit shall be refundable if the LCRIF is not approved or is withdrawn by the proponent; and

(2) have demonstrated interest in the LCRIF by one of the following methods:

(i) executing a firm power sales agreement for the output of the LCRIG for a period of five (5) years or longer; or

(ii) in the case of Large Generating Facilities subject to the LGIP set

forth in Appendix Y, filing an Interconnection Request and paying the Interconnection Study Deposit required by Section 3.5 of the LGIP set forth in Appendix Y; or

(iii) in the case of Large Generating Facilities subject to the LGIP set forth in Appendix U and Small Generating Facilities, being in the CAISO's interconnection queue and paying a deposit to the CAISO equal to the sum of the minimum deposits required of an Interconnection Customer for all studies performed in accordance with the Large Generator Interconnection Procedures (Appendix U) or Small Generator Interconnection Procedures (Appendix S), as applicable to the LCRIG, less the amount of any deposits actually paid by the LCRIG for such studies. The deposit shall be credited toward such study costs. If the LCRIF is not approved or is withdrawn by the proponent, any deposit paid under this provision shall be refundable to the extent it exceeds costs incurred by the CAISO for such studies; or

(iv) paying a deposit to the CAISO equal to five (5) percent of the LCRIG's pro rata share of the capital costs of a proposed LCRIF. The deposit shall be credited toward costs of Interconnection Studies performed in connection with the Large Generator Interconnection Procedures (Appendix U or Appendix Y, as applicable) or Small Generator Interconnection Procedures (Appendix S), whichever is applicable. If the LCRIF is not approved or is withdrawn by the proponent, any deposit paid under this provision shall be refundable to the extent it exceeds the costs incurred by the CAISO for such studies.

**24.4.6.3.5 Coordination with Non-Participating TOs**

In the event that a facility proposed as an LCRIF would connect to LCRIGs in an Energy Resource Area that would also be connected by a transmission facility that is in existence or is proposed to be constructed by an entity that is not a Participating TO and that does not intend to place that facility under the Operational Control of the CAISO, the CAISO shall coordinate with the entity owning or proposing that transmission facility through any regional planning process to avoid the unnecessary construction of duplicative transmission additions to connect the same LCRIGs to the CAISO Controlled Grid.

**24.4.6.3.6 Evaluation of LCRIFs**

In evaluating whether a proposed LCRIF that meets the requirements of Section 24.4.6.3.2 is needed, and for purposes of ranking and prioritizing LCRIF projects, the CAISO will consider the following factors:

(a) Whether, and if so, the extent to which, the facility meets or exceeds applicable CAISO Planning Standards, including standards that are Applicable Reliability Criteria.

(b) Whether, and if so, the extent to which, the facility has the capability and flexibility both to interconnect potential LCRIGs in the Energy Resource Area and to be converted in the future to a network transmission facility.

(c) Whether the projected cost of the facility is reasonable in light of its projected benefits, in comparison to the costs and benefits of other alternatives for connecting Generating Units or otherwise meeting a need identified in the CAISO Transmission Planning Process, including alternatives that are not LCRIFs. In making this determination, the CAISO shall take into account, among other factors, the following:

(1) The potential capacity of LCRIGs and the potential Energy that could be produced by LCRIGs in each Energy Resource Area;

(2) The capacity of LCRIGs in the CAISO's interconnection process for each Energy Resource Area;

(3) The projected cost and in-service date of the facility in comparison with other transmission facilities that could connect LCRIGs to the CAISO Controlled Grid;

(4) Whether, and if so, the extent to which, the facility would provide additional reliability or economic benefits to the CAISO Controlled Grid; and

(5) Whether, and if so, the extent to which, the facility would create a risk of stranded

costs.

#### 24.4.6.4 Solutions to Maintain the Feasibility of Long Term CRRs

The CAISO is obligated to ensure the continuing feasibility of Long Term CRRs that are allocated by the CAISO over the length of their terms. In furtherance of this requirement the CAISO shall, as part of its annual Transmission Planning Process cycle, test and evaluate the simultaneous feasibility of allocated Long Term CRRs, including, but not limited to, when acting on the following types of projects: (a) planned or proposed transmission solutions; (b) Generating Unit or transmission retirements; (c) Generating Unit interconnections; and (d) the interconnection of new Load. Pursuant to such evaluations, the CAISO shall identify the need for any transmission solutions required to ensure the continuing feasibility of allocated Long Term CRRs over the length of their terms and shall publish a Congestion Data Summary along with the results of the CAISO technical studies. In assessing the need for transmission solutions to maintain the feasibility of allocated Long Term CRRs, the CAISO, in coordination with the Participating TOs and other Market Participants, shall consider lower cost alternatives to the construction of transmission solutions, such as acceleration or expansion of existing transmission solutions; Demand-side management; Remedial Action Schemes; constrained-on Generation; interruptible Loads; reactive support; or in cases where the infeasible Long Term CRRs involve a small magnitude of megawatts, ensuring against the risk of any potential revenue shortfall using the CRR Balancing Account and uplift mechanism described in Section 11.2.4. As part of the CAISO's Transmission Planning Process, the Participating TOs and Market Participants shall provide the necessary assistance and information to the CAISO to allow it to assess and identify transmission solutions that may be necessary under Section 24.4.6.4. The CAISO will determine the solution that meets the identified need to maintain the feasibility of long-term CRRs in the more efficient or cost effective manner.

#### 24.4.6.5 LGIP Network Upgrades

Beginning with the 2011/2012 planning cycle, Network Upgrades originally identified during the Phase II Interconnection Study or Interconnection Facilities Study Process of the Large Generation Interconnection Process as set forth in Section 7 of Appendix Y that are not already included in a signed LGIA may be assessed as part of the comprehensive Transmission Plan if these Network Upgrades satisfy the following criteria:

(a) The Network Upgrades consist of new transmission lines 200 kV or above, and have capital costs of $100 million or greater;

(b) The Network Upgrade is a new 500 kV substation that has capital costs of $100 million or greater; or

(c) The Network Upgrades have a capital cost of $200 million or more.

The CAISO will post a list of the Network Upgrades eligible for assessment in the Transmission Planning Process in accordance with the schedule set forth in the applicable Business Practice Manual. Network Upgrades included in the comprehensive Transmission Plan may include additional components not included in the Network Upgrades originally identified during the Phase II Interconnection Study or may be expansions of the Network Upgrades originally identified during the Phase II Interconnection Study if the CAISO determines during the Transmission Planning Process that such components or expansions are needed under section 24.1. Network Upgrades identified in the LGIP Phase II studies but not assessed in the Transmission Planning Process will be included in Large Generator Interconnection Agreements, as appropriate. Network Upgrades assessed in the Transmission Planning Process but not modified or replaced will be included in Large Generator Interconnection Agreements, as appropriate. Construction and ownership of Network Upgrades specified in the comprehensive Transmission Plan under this section, including any needed additional components or expansions, will be the responsibility of the Participating TO if the Phase II studies identified the original Network Upgrade as needed and such Network Upgrade has not yet been set forth in an executed Large Generator Interconnection Agreement. To the extent that additional components or expansions to Network Upgrades remain the responsibility of the Participating TO and such Network Upgrades are subsequently abandoned, the Participating TO shall be presumed to be eligible, subject to prudency and any other applicable review by FERC, to include in its TRR the costs of such Network Upgrades if the costs attributable to the abandonment of such Network Upgrades (as modified, replaced or otherwise reconfigured in the Transmission Planning Process) exceed the amounts funded by Interconnection Customers pursuant to Appendix Y. This presumption shall not apply in the case of Network Upgrades which the applicable Participating TO agreed to up-front fund independent of any obligation to fund pursuant to the Transmission Planning Process. If, through the Transmission Planning Process, the CAISO identifies any additional components or expansions of

Network Upgrades that result in the need for other transmission solutions, the responsibility to build and own such transmission solutions will be determined by this Section 24, according to the category of those other transmission solutions. Any decision in the Transmission Planning Process to modify Network Upgrades identified in the Large Generator Interconnection Process will not increase the cost responsibility of the Interconnection Customer as described in Appendix Y, Section 7. Category 1 policy-driven transmission solutions identified under Section 24.4.6.7 could supplant the need for LGIP Network Upgrades that would be developed in subsequent Generator Interconnection Process cycles. To the extent that a Category 1 policy-driven transmission solution eliminates or downsizes the need for a Network Upgrade, the Interconnection Customer's cost responsibility for such Network Upgrade shall be eliminated or reduced. Any financial security posting shall be adjusted accordingly.

**24.4.6.6 Policy-Driven Transmission Solutions**

Once the CAISO has identified reliability-driven solutions, LCRIF projects eligible for conditional or final approval, solutions needed to maintain long-term CRR feasibility, qualified Merchant Transmission Facilities, needed LGIP Network Upgrades as described in Section 24.4.6.5, and Subscriber Participating TO transmission facilities as well as generation facilities seeking to interconnect to the CAISO Controlled Grid on Subscriber Participating TO transmission facilities, the CAISO shall evaluate transmission solutions needed to meet state, municipal, county or federal policy requirements or directives as specified in the Study Plan pursuant to Section 24.3.2(i). Policy-driven transmission solutions will be either Category 1 or Category 2 transmission solutions. Category 1 transmission solutions are those which under the criteria of this section are found to be needed and are recommended for approval as part of the comprehensive Transmission Plan in the current cycle. Category 2 transmission solutions are those that could be needed to achieve state, municipal, county or federal policy requirements or directives but have not been found to be needed in the current planning cycle based on the criteria set forth in this section. The CAISO will determine the need for, and identify such policy-driven transmission solutions that efficiently and effectively meet applicable policies under alternative resource location and integration assumptions and scenarios, while mitigating the risk of stranded investment. The CAISO will create a baseline scenario reflecting the assumptions about resource locations that are most likely to occur and one or more reasonable stress scenarios that will be compared to the baseline scenario. Any

transmission solutions that are in the baseline scenario and at least a significant percentage of the stress scenarios may be Category 1 transmission solutions. Consistent with the state, federal, municipal or county requirements or directives underlying the Category 1 transmission solution, the Transmission Plan will specify where the CAISO will reserve the transmission capacity created by a Category 1 transmission solution for certain long lead-time resources, and the amount of reserved capacity. The Transmission Plan will specify criteria for eligible resources, including at a minimum, but without limitation: location, MW capacity, generating technology, and expected in-service date. Each Transmission Plan may modify these criteria for policy-driven transmission solutions as needed to meet state, federal, municipal or county requirements or directives.

Transmission solutions that are included in the baseline scenario but which are not included in any of the stress scenarios or are included in an insignificant percentage of the stress scenarios, generally will be Category 2 transmission solutions, unless the CAISO finds that sufficient analytic justification exists to designate them as Category 1 transmission solutions. In such cases, the ISO will make public the analysis upon which it based its justification for designating such transmission solutions as Category 1 rather than Category 2. In this process, the CAISO will consider the following criteria:

(a) commercial interest in the resources in the applicable geographic area (including renewable energy zones) accessed by potential transmission solutions as evidenced by signed and approved power purchase agreements and interconnection agreements;

(b) the results and identified priorities of the California Public Utilities Commission's or California Local Regulatory Authorities' resource planning processes;

(c) the expected planning level cost of the transmission solution as compared to the potential planning level costs of other transmission solutions;

(d) the potential capacity (MW) value and energy (MWh) value of resources in particular zones that will meet the policy requirements, as well as the cost supply function of the resources in such zones;

(e) the environmental evaluation, using best available public data, of the zones that the transmission is interconnecting as well as analysis of the environmental impacts of the transmission solutions themselves; the extent to which the transmission solutions will be

needed to meet Applicable Reliability Criteria or to provide additional reliability or economic benefits to the CAISO grid;

(f) potential future connections to other resource areas and transmission facilities;

(g) resource integration requirements and the costs associated with these requirements in particular resource areas designated pursuant to policy initiatives;

(h) the potential for a particular transmission solution to provide access to resources needed for integration, such as pumped storage in the case of renewable resources;

(i) the effect of uncertainty associated with the above criteria, and any other considerations, that could affect the risk of stranded investment; and

(j) the effects of other solutions being considered for approval during the planning process.

**24.4.6.7 Economic Studies and Mitigation Solutions**

Once the CAISO has identified reliability-driven solutions, LCRIF projects eligible for conditional or final approval, qualified Merchant Transmission Facilities and policy-driven transmission solutions, the CAISO will conduct the High Priority Economic Planning Studies selected under Section 24.3.4 and any other studies that the CAISO concludes are necessary to determine whether additional transmission solutions are necessary to address:

(a) Congestion identified by the CAISO in the Congestion Data Summary published for the applicable Transmission Planning Process cycle and the magnitude, duration, and frequency of that Congestion;

(b) Local Capacity Area Resource requirements;

(c) Congestion projected to increase over the planning horizon used in the Transmission Planning Process and the magnitude of that Congestion; or

(d) Integration of new generation resources or loads on an aggregated or regional basis.

In determining whether additional transmission solutions are needed, the CAISO shall consider the degree to which, if any, the benefits of the transmission solutions outweigh the costs, in accordance with the procedures set forth in the Business Practice Manual. The benefits of the solutions may include a calculation of any reduction in production costs, Congestion costs, Transmission Losses, capacity or other electric supply costs resulting from improved access to cost-efficient resources. The cost of the

transmission solution must consider any estimated costs identified under Section 24.4.6.4 to maintain the simultaneous feasibility of allocated Long Term CRRs for the length of their term. The CAISO, in determining whether a particular solution is needed, shall also consider the comparative costs and benefits of viable alternatives to the particular transmission solution, including: (1) other potential transmission solutions, including those being considered or proposed during the Transmission Planning Process; (2) acceleration or expansion of any transmission solution already approved by the CAISO Governing Board or included in any CAISO comprehensive Transmission Plan, and (3) non-transmission solutions, including demand-side management.

**24.4.6.8 [Not Used]**

### 24.4.7 Description of Transmission Solutions

The transmission solutions identified in the revised draft and final comprehensive Transmission Plan, or in a supplemental assessment to the final comprehensive Transmission Plan, that are subject to the competitive solicitation process will provide sufficient engineering detail to permit Project Sponsors to submit complete proposals, under section 24.5.1 to build the identified transmission solution. As further described in the Business Practice Manual, such details may include, but are not limited to:

(a) Minimum Conductor Ampacity;

(b) Approximate Line impedance required;

(c) Approximate Series compensation levels;

(d) Substation bus and breaker configuration;

(e) Breaker clearing times;

(f) Transformer characteristics (capacity, impedance, tap range);

(g) Minimum Shunt capacitor and reactor sizes;

(h) Minimum FACTS device specifications;

(i) RAS requirements;

(j) Planning level cost estimates;

(k) Projected in-service date.

### 24.4.8 Additional Contents of Comprehensive Transmission Plan

In addition to the detailed descriptions of specific needed transmission additions and upgrades, the draft

and final comprehensive Transmission Plan may include: (1) the results of technical studies performed under the Study Plan; (2) determinations and recommendations regarding the need for identified transmission upgrades and additions and their identification as either Local or Regional Transmission Facilities; (3) assessments of transmission upgrades and additions submitted as alternatives to the potential solutions to transmission needs identified by the CAISO and studied during the Transmission Planning Process cycle; (4) results of Economic Planning Studies (except for the 2010/2011 cycle); (5) an update on the status of transmission upgrades or additions previously approved by the CAISO, including identification of mitigation plans, if necessary, to address any potential delay in the anticipated completion of an approved transmission upgrade or addition; (6) a description of transmission additions and upgrades with an estimated capital investment of $50 million or more for which additional studies are required before being presented to the CAISO Governing Board for approval following completion of the studies; (7) a description of Category 2 transmission upgrades or additions recommended for consideration in future planning cycles; (8) identification of Interregional Transmission Projects that were submitted in the current planning cycle, could potentially meet regional needs, and will be evaluated in the next planning cycle; and (9) determinations and recommendations regarding the need for Interregional Transmission Projects that have been evaluated and found to be more cost effective and efficient solutions to regional transmission needs and that satisfy all requirements relevant to meeting such needs.

**24.4.9 Phase 2 Stakeholder Process**

(a) According to the schedule and procedures set forth in the Business Practice Manual, the CAISO will schedule one (1) public meeting after the CAISO technical study results have been posted and Participating TOs have submitted (i) the results of technical studies conducted at the direction of the CAISO (if applicable); and (ii) reliability-driven solutions. All stakeholder meetings, web conferences, or teleconferences shall be noticed by Market Notice. Interested parties will be provided a minimum two (2) week period to provide written comments regarding the technical study results and the proposals submitted by the Participating TOs.

(b) The CAISO will schedule at least one (1) other public meeting before the draft comprehensive Transmission Plan is posted to provide information about any policy-

driven transmission solution evaluations or economic planning studies that have been completed since the prior public meeting was held, as well as updated information about any studies or evaluations that are still in progress. Notice of such meeting, web conference or teleconference will be provided to stakeholders via Market Notice.

(c) In accordance with the schedule and procedures in the Business Practice Manual, but not less than one-hundred and twenty (120) days after the results of the CAISO's technical studies are posted and not less than six (6) weeks after the Request Window closes, the CAISO will post a draft comprehensive Transmission Plan. The CAISO will subsequently conduct a public conference regarding the draft comprehensive Transmission Plan and solicit comments, consistent with the timelines and procedures set forth in the Business Practice Manual. Additional meetings, web conferences, or teleconferences may be scheduled as needed. All stakeholder meetings, web conferences, or teleconferences shall be noticed by Market Notice and such notice shall be posted to the CAISO Website. After consideration of comments, the CAISO will post the revised draft comprehensive Transmission Plan to the CAISO Website.

**24.4.10 Transmission Plan Approval Process**

The revised draft comprehensive Transmission Plan, along with the stakeholder comments, will be presented to the CAISO Governing Board for consideration and approval. Upon approval of the plan, all needed transmission additions and upgrades, and Interregional Transmission Projects, net of all transmission and non-transmission alternatives considered in developing the comprehensive Transmission Plan, will be deemed approved by the CAISO Governing Board. Following Governing Board approval, the CAISO will post the final comprehensive Transmission Plan to the CAISO Website. According to the schedule set forth in the Business Practice Manual, transmission upgrades and additions with capital costs of $50 million or less can be approved by CAISO management and Subscriber Participating TO transmission facilities, provided the CAISO Governing Board has already approved the Subscriber Participating TO as a Participating TO or conditional Participating TO, may proceed to permitting and construction prior to Governing Board approval of the plan. Such CAISO management approved transmission solutions may be subject to a competitive solicitation process, consistent with

Section 24.5, on an accelerated schedule that will allow the approved Project Sponsor to proceed to permitting and construction prior to Governing Board approval of the plan. CAISO management may also expedite approval of a transmission solution ahead of the approval schedule for other solutions with capital costs of $50 million or less if: (1) there is an urgent need for approval of the solution ahead of the schedule established in the Business Practice Manual; (2) there is a high degree of certainty that approval of the upgrade or addition will not conflict with other solutions being considered in Phase 2; and (3) the need to accelerate a solution is driven by the CAISO's study process or by external circumstances. Should the CAISO find that a transmission solution with capital of $50 million or less is needed on an expedited basis, after a stakeholder consultation process, CAISO management shall brief the Governing Board at a regularly-scheduled or special public session prior to approving the solution and conducting the competitive solicitation, if appropriate. A Participating Transmission Owner will have the responsibility to construct, own, finance and maintain any Local Transmission Facility deemed needed under this section 24 that is located entirely within such Participating Transmission Owner's PTO Service Territory or footprint. The provisions of Section 24.5 will apply to a Regional Transmission Facility deemed needed under this section 24. Section 24.5 will also apply to any transmission upgrades or additions that are associated with both Regional Transmission Facilities and Local Transmission Facilities but for which the CAISO determines that it is not reasonable to divide construction responsibility among multiple Project Sponsors. Construction and ownership of a selected Interregional Transmission Project shall be determined in accordance in Section 24.17.3.

## 24.5 Transmission Planning Process Phase 3

### 24.5.1 Competitive Solicitation Process

According to the schedule set forth in the Business Practice Manual, in the month following the CAISO Governing Board's approval of the comprehensive Transmission Plan, or a supplemental assessment to the final comprehensive Transmission Plan, whichever is applicable, the CAISO will initiate a period of at least ten (10) weeks that will provide an opportunity for Project Sponsors to submit specific proposals to finance, own, and construct the Regional Transmission Facilities subject to competitive solicitation identified in the comprehensive Transmission Plan or supplemental assessment. If the transmission solution adopted in Phase 2 involves an upgrade or improvement to, addition on, or a replacement of a

part of an existing Participating TO facility, the Participating TO will construct and own such upgrade, improvement, addition or replacement facilities unless a Project Sponsor and the Participating TO agree to a different arrangement. For Regional Transmission Facilities with capital costs of $50 million or less that were approved by CAISO management before Governing Board approval of the comprehensive Transmission Plan, the ten week period will be initiated following management approval of the facility, and the Project Sponsor selection process may follow an accelerated schedule described in the Business Practice Manual. Such proposals must include plan of service details and supporting information as set forth in the Business Practice Manual sufficient to: (1) enable the CAISO to determine whether the Project Sponsor meets the qualification criteria specified in section 24.5.3.1; (2) enable the CAISO to determine whether a Project Sponsor's proposal meets the proposal qualification criteria in section 24.5.3.2; and (3) enable the CAISO, if there are multiple qualified Project Sponsors bidding on the same Regional Transmission Facility, to conduct a comparative analysis of the proposals and Project Sponsors and select an Approved Project Sponsor as described in section 24.5.3.5. The project proposal will identify the authorized governmental body from which the Project Sponsor will seek siting approval for the project. Within 30 days after the CAISO posts the revised draft comprehensive Transmission Plan, or a supplemental assessment to the final comprehensive Transmission Plan, to its website, whichever is applicable, for each Regional Transmission Facility identified in the revised draft comprehensive Transmission Plan or supplemental assessment that is subject to competitive solicitation, the CAISO will post, for informational purposes only, those existing qualification criteria and selection factors, in addition to any binding cost containment commitments, which the CAISO believes are key for purposes of selecting an Approved Project Sponsor for the particular transmission solution, consistent with the comparative analysis described in section 24.5.4 and the project sponsor qualification and selection criteria specified in sections 24.5.3.1 and 24.5.4, respectively. The posting of such key criteria is solely intended to provide information to Project Sponsors to assist them in the preparation of their applications and to highlight specific topics to which particular attention should be paid in the application given their importance in connection with a particular Regional Transmission Facility. The posting of the key selection criteria is not a replacement or substitute for the qualification and selection criteria set forth in sections 24.5.3.1 and 24.5.4, and in its comparative analysis conducted in accordance with section

24.5.4, the CAISO is required to comparatively assess all of the qualification and selection criteria, not just those listed as key selection criteria. In its posting of the key selection criteria, the CAISO cannot add new or different criteria than those already specified in sections 24.5.3.1 and 24.5.4. To determine the key criteria for each transmission solution subject to competitive solicitation, the CAISO will consider: (1) the nature, scope and urgency of the need for the transmission solution; (2) expected severity of siting or permitting challenges; (3) the size of the transmission solution, potential financial risk associated with the transmission solution, expected capital cost magnitude, cost overrun likelihood and the ability of the Project Sponsor to contain costs; (4) the degree of permitting, rights-of-way, construction, operation and maintenance difficulty; (5) risks associated with the construction, operation and maintenance of the transmission solution ; (6) technical and engineering design difficulty or whether specific expertise in design or construction is required; (7) special circumstances or difficulty associated with topography, terrain or configuration; (8) specific facility technologies or materials associated with the transmission solution; (9) binding cost containment measures, including cost caps; (10) abandonment risk; and (11) whether the overall cost of the transmission solution impacts the CAISO's prior determination of, and inclusion in, the comprehensive Transmission Plan of the more efficient or cost effective solution during Phase 2 of the transmission planning process.

The posting of the key selection criteria shall not undermine the CAISO's prior determination in Phase 2 of the transmission planning process of the more efficient or cost-effective transmission solution to be reflected in the comprehensive Transmission Plan, nor shall the posting of the key criteria replace or be inconsistent with the CAISO's obligation under section 24.5.4 to undertake a comparative analysis of each Project Sponsor with respect to each Project Sponsor qualification and selection criterion. If the CAISO determines in Phase 2 of the transmission planning process that more than one transmission solution could constitute the more efficient or cost-effective solution to meet a specific identified need depending on the outcome of the competitive solicitation, the CAISO shall have the authority to identify more than one potential transmission solution in the comprehensive Transmission Plan. Under those circumstances, based on the outcome of the competitive solicitation, the CAISO will make the final determination of which alternative transmission solution identified in the Board-approved comprehensive Transmission Plan constitutes the more efficient or cost-effective transmission solution to be selected for

construction.

### 24.5.2 Project Sponsor Application and Information Requirements

All project sponsors must submit a Project Sponsor application form as set forth in the Business Practice Manual and posted on the CAISO website. Any entity may submit a Project Sponsor application to finance, construct, own, operate and maintain a transmission solution identified in the comprehensive Transmission Plan subject to the competitive solicitation process. There is no requirement that a Project Sponsor first be qualified before it may submit a Project Sponsor application for such a transmission solution.

#### 24.5.2.1 Opportunity for Collaboration

Any entity interested in collaborating with another entity may notify the CAISO of such interest within two weeks after the CAISO opens the competitive solicitation window for a specified Regional Transmission Facility. The CAISO will post a list of entities interested in collaborating and their contact information on the CAISO website. Prior notice to the CAISO is not a prerequisite for a Project Sponsor to submit an application, including a joint application, to finance, own, construct, operate, and maintain a Regional Transmission Facility under Section 24.5. All Project Sponsors, including collaborating Project Sponsors, must submit an application prior to the close of the competitive solicitation window.

#### 24.5.2.2

A Project Sponsor will provide to the CAISO, Participating TOs (as listed on Appendix F to the Transmission Control Agreement), and Approved Project Sponsors a copy of all initial filings it submits in a FERC docket that affect the rates (including the Transmission Revenue Requirement), terms, or conditions of service for any Regional Transmission Facility that is the subject of an ongoing competitive solicitation process under this section 24.5. The Project Sponsor will provide such copy either via email or first class U.S. mail on the same day it makes the filing with FERC; provided that if the copy is sent via U.S. mail, the Project Sponsor will satisfy the requirement if it places the copy in the mail on the date of filing. The CAISO will post the contact information for Approved Project Sponsors on the CAISO website.

#### 24.5.2.3 Project Sponsor Information Requirements

The application to be submitted to the CAISO by an entity desiring to become an Approved Project Sponsor shall include the following general information (as well as related details) in response to the

questions on the application form:

(a) The following information:

(i) A proposed financial plan demonstrating that adequate capital resources are available to the Project Sponsor to finance the transmission solution, and that constructing, operating and maintaining the facilities will not significantly impair the Project Sponsor's creditworthiness or financial condition;

(ii) A showing from the Project Sponsor's most recent audited financial statements that the Project Sponsor's assets are in excess of liabilities as a percentage of the total cost of the transmission solution;

(iii) Financial funding ratios from the most recent audited financial statements;

(iv) Credit arrangements between affiliated entities, including corporate parent, and compliance with regulatory restrictions and requirements; and

(v) Bankruptcy, dissolution, merger or acquisition history;

(b) The credit rating from Moody's Investor Services and Standard & Poors of the Project Sponsor, or its parent company, controlling shareholder, or any other entity providing a bond guaranty or corporate commitment to the Project Sponsor;

(c) Information showing the Project Sponsor's ability to assume liability for major losses resulting from failure of, or damage to, the transmission facility, including damage after the facility has been placed into operation;

(d) The project in-service date of each transmission solution with a construction plan and timetable;

(e) A description of the Project Sponsor's proposed engineering, construction, maintenance and management teams, including relevant capability and experience;

(f) A description of the Project Sponsor's resources for operating and maintaining the transmission solution after it is placed in-service;

(g) A discussion of the capability and experience of the Project Sponsor that would enable it to comply with all on-going scheduling, operating, and maintenance activities required for each transmission solution, including those required by the tariff, business practice

manuals, policies, rules, guidelines, and procedures established by the CAISO;

(h) Resumes for all key management personnel, including contractors, that will be involved in obtaining siting approval and other required regulatory approvals and for constructing, operating and maintaining each transmission solution;

(i) A description of the Project Sponsor's business practices that demonstrate consistency with Good Utility Practice for proper licensing, designing and right-of-way acquisition for constructing, operating and maintaining transmission solutions that will become part of the CAISO Controlled Grid;

(j) The Project Sponsor's previous record regarding construction, operation and maintenance of transmission facilities within and outside the CAISO Controlled Grid;

(k) The Project Sponsor's pre-existing procedures and practices for acquiring and managing right of way and other land for transmission facility, or, in the absence of preexisting procedures or practices, a detailed description of its plan for right of way and other land acquisition;

(l) A description of existing rights of way or substations upon which all or a portion of the transmission facility can be located and incremental costs, if any, that would be incurred in connection with placing new or additional facilities associated with the transmission solution on such existing rights of way;

(m) The Project Sponsor's preexisting practices or procedures for mitigating the impact of the transmission solution on affected landowners and for addressing public concerns regarding facilities associated with the transmission solution. In the absence of such preexisting practices or procedures, the Project Sponsor shall provide a detailed plan for mitigating such impacts and addressing public concerns;

(n) A description of the following and any related or relevant information regarding:

(i) the proposed structure and composition, conductor size and type;

(ii) the proposed route and rights of way; and

(iii) a plan for topography issues;

(o) Cost containment capabilities and cost cap, if any;

(p) Description of the Project Sponsor's plan for complying with standardized maintenance and operation practices and all applicable reliability standards;

(q) Any other strengths and advantages that the Project Sponsor and its team may have to build and own the transmission solution, as well as any specific efficiencies or benefits demonstrated in its Project Sponsor proposal; and

(r) The authorized government body from which the Project Sponsor will seek siting approval for the transmission solution and the authority of the selected siting authority to impose binding cost caps or cost containment measures on the Project Sponsor, as well as its history of imposing such measures.

Additional details about the information that must be submitted is set forth in the Business Practice Manual and on the application form. On the CAISO's request, the Project Sponsor will provide additional information that the CAISO reasonably determines is necessary to conduct its qualification and selection evaluation with respect to the particular transmission solutions that are subject to competitive solicitation.

#### 24.5.2.4 Posting Applications with Sufficient Information

Upon receipt of a Project Sponsor's application, the CAISO will review the application for completeness and will verify that the application contains sufficient information for the CAISO to determine whether the Project Sponsor is qualified to be selected as an Approved Project Sponsor. By the deadline set forth in the Business Practice Manual, the ISO will notify each Project Sponsor whether the application is complete or whether additional information is required. Project Sponsors will be given an opportunity to cure any deficiencies in their application submissions in accordance with the schedule set forth in the Business Practice Manual. After the end of the cure period, and subject to the confidentiality provisions set forth in Tariff Section 20, the CAISO will post to its Website a list of Project Sponsors whose applications contain sufficient information and have met the requirements set forth in the Business Practice Manual.

### 24.5.3 Project Sponsor and Proposal Qualifications

#### 24.5.3.1 Project Sponsor Qualifications

After posting the list of information-sufficient applications and, if applicable, after the conclusion of any

applicable collaboration process under Section 24.5.2.2, the CAISO will evaluate the information submitted by each Project Sponsor in response to the questions on the application pertaining to sections 24.5.2.1(a)-(i) to determine whether the Project Sponsor has demonstrated that its team is physically, technically, and financially capable of (i) completing the needed transmission solution in a timely and competent manner; and (ii) operating and maintaining the transmission solution in a manner that is consistent with Good Utility Practice and applicable reliability criteria for the life of the project, based on the following qualification criteria:

(a) whether the Project Sponsor has demonstrated that it has assembled, or has a plan to assemble, a sufficiently-sized team with the manpower, equipment, knowledge and skill required to undertake the design, construction, operation and maintenance of the transmission solution;

(b) whether the Project Sponsor and its team have demonstrated that they have sufficient financial resources, by providing information including, but not limited to, satisfactory credit ratings, audited financial statements, or other financial indicators;

(c) whether the Project Sponsor and its team have demonstrated the ability to assume liability for major losses resulting from failure of any part of the facilities associated with the transmission solution by providing information such as letters of credit, letters of interest from financial institutions regarding financial commitment to support the Project Sponsor, insurance policies or the ability to obtain insurance to cover such losses, the use of account set asides or accumulated funds, the revenues earned from the transmission solution, sufficient credit ratings, contingency financing, or other evidence showing sufficient financial ability to cover these losses in the normal course of business;

(d) whether the Project Sponsor has (1) proposed a schedule for development and completion of the transmission solution consistent with need date identified by the CAISO; and (2) has the ability to meet that schedule;

(e) whether the Project Sponsor and its team have the necessary technical and engineering qualifications and experience to undertake the design, construction, operation and maintenance of the transmission solution;

(f) whether the Project Sponsor makes a commitment to become a Participating TO for the purpose of turning the Regional Transmission Facility that the Project Sponsor is selected to construct and own as a result of the competitive solicitation process over to the ISO's Operational Control , to enter into the Transmission Control Agreement with respect to the transmission solution, to adhere to all Applicable Reliability Criteria and to comply with NERC registration requirements and NERC and WECC standards, where applicable.

If the CAISO determines that a Project Sponsor meets these criteria, it shall be deemed a qualified Project Sponsor.

**24.5.3.2 Proposal Qualification**

After evaluating the Project Sponsor's qualifications as described in section 24.5.3.1, the ISO will determine whether the transmission solution proposed by a Project Sponsor is qualified for consideration, based on the following criteria:

(a) Whether the proposed design of the transmission solution is consistent with needs identified in the comprehensive Transmission Plan;

(b) Whether the proposed design of the transmission solution satisfies Applicable Reliability Criteria and CAISO Planning Standards;

**24.5.3.3 Posting Qualified Project Sponsors and Proposals**

The CAISO will post a list of qualified Project Sponsors and proposals in accordance with the schedule set forth in the Business Practice Manual. Once the list has been posted, the CAISO will provide any Project Sponsors who did not meet the Project Sponsor qualification criteria or whose proposal did not meet the proposal qualification criteria a period within which to cure deficiencies in the application submission, as set forth in the Business Practice Manual. The CAISO will evaluate any additional information provided by these Project Sponsors and will re-post the list of qualified Project Sponsors, if necessary, once the re-assessment has been completed and in accordance with the schedule in the Business Practice Manual.

**24.5.3.4 Single Qualified Project Sponsor and Proposal**

If only one (1) Project Sponsor, including joint Project Sponsors resulting from a collaboration submits a proposal to finance, own, and construct a specific transmission solution and the CAISO determines that

the Project Sponsor is qualified to own and construct the transmission solution under the criteria set forth in Section 24.5.3.1 and the proposal meets the proposal qualification criteria in Section 24.5.3.2, the Project Sponsor will be the Approved Project Sponsor and must execute an Approved Project Sponsor Agreement with the CAISO within one-hundred twenty (120) calendar days of CAISO approval, unless otherwise agreed by the Parties.

#### 24.5.3.5 Multiple Qualified Project Sponsors and Proposals: Selection of Approved Project Sponsor

If there are multiple qualified Project Sponsors and proposals for the same transmission solution, the CAISO will select one qualified Approved Project Sponsor based on a comparative analysis of the degree to which each Project Sponsor's proposal meets the qualification criteria set forth in Section 24.5.3.1 and the selection factors set forth in 24.5.4. The CAISO will engage an expert consultant to assist with the selection of the Approved Project Sponsor. Thereafter, the Approved Project Sponsor must execute an Approved Project Sponsor Agreement with the CAISO within one-hundred twenty (120) calendar days of CAISO approval, unless otherwise agreed by the Parties.

### 24.5.4 Project Sponsor Selection Factors and Comparative Analysis

The CAISO will conduct a comparative analysis to select an Approved Project Sponsor from among multiple project sponsor proposals, as described in section 24.5.3.5. The purpose of this comparative analysis is to take into account all transmission solutions being proposed by competing Project Sponsors seeking approval of their transmission solution and to select a qualified Project Sponsor which is best able to design, finance, license, construct, maintain, and operate the particular transmission facility in a cost-effective, efficient, prudent, reliable, and capable manner over the lifetime of the facility, while maximizing overall benefits and minimizing the risk of untimely project completion, project abandonment, and future reliability, operational and other relevant problems, consistent with Good Utility Practice, applicable reliability criteria, and CAISO Documents. To conduct this comparative analysis, the CAISO will use the qualification criteria described in Section 24.5.3.1 as well as the following selection factors:

(a) the current and expected capabilities of the Project Sponsor and its team to finance, license, and construct the facility and operate and maintain it for the life of the solution;

(b) the Project Sponsor's existing rights of way and substations that would contribute to the

transmission solution in question;

(c) the experience of the Project Sponsor and its team in acquiring rights of way, if necessary, that would facilitate approval and construction, and in the case of a Project Sponsor with existing rights of way, whether the Project Sponsor would incur incremental costs in connection with placing new or additional facilities associated with the transmission solution on such existing right of way;

(d) the proposed schedule for development and completion of the transmission solution and demonstrated ability to meet the schedule of the Project Sponsor and its team;

(e) the financial resources of the Project Sponsor and its team;

(f) the technical and engineering qualifications and experience of the Project Sponsor and its team;

(g) if applicable, the previous record regarding construction and maintenance of transmission facilities, including facilities outside the CAISO Controlled Grid of the Project Sponsor and its team;

(h) demonstrated capability to adhere to standardized construction, maintenance and operating practices of the Project Sponsor and its team;

(i) demonstrated ability to assume liability for major losses resulting from failure of facilities of the Project Sponsor;

(j) demonstrated cost containment capability of the Project Sponsor and its team, specifically, binding cost control measures the Project Sponsor agrees to accept, including any binding agreement by the Project Sponsor and its team to accept a cost cap that would preclude costs for the transmission solution above the cap from being recovered through the CAISO's Transmission Access Charge, and, if none of the competing Project Sponsors proposes a binding cost cap, the authority of the selected siting authority to impose binding cost caps or cost containment measures on the Project Sponsor, and its history of imposing such measures; and

(k) any other strengths and advantages the Project Sponsor and its team may have to build and own the specific transmission solution, as well as any specific efficiencies or benefits

demonstrated in their proposal.

### 24.5.5 Notice to Project Sponsors

The CAISO will notify Project Sponsors as to results of the project evaluation process in accordance with the schedule and procedures set forth in the Business Practice Manual. Within 10 Business Days after selecting an Approved Project Sponsor(s) for a needed transmission solution, the CAISO will post on the CAISO website a report regarding the selection of the Approved Project Sponsor(s). The report will set forth in a detailed manner the results of the comparative analysis undertaken by the CAISO, the reasons for the CAISO's decision(s), and how the CAISO's decision is consistent with the objectives identified in Section 24.5.4. The report will specifically identify the role of the selection factors set forth in 24.5.4 in determining, or not determining, the ultimate selection of project sponsors.

### 24.5.6 Competitive Solicitation Project Proposal Fee

(a) **In General.** For competitive solicitations opening in 2023 and thereafter, Project Sponsors shall, on a pro rata basis, be responsible for the actual costs that the ISO incurs in qualifying and selecting an Approved Project Sponsor through the competitive solicitation process, including the costs of the expert consultant engaged to assist with the selection process pursuant to Section 24.5.3.5. Such costs include the actual costs of the validation, qualification and selection process for each solution subject to the competitive solicitation process.

(b) **Deposit.** For competitive solicitations opening in 2023 and thereafter, each Project Sponsor will pay a deposit of $100,000 to the CAISO with the submission of each Project Sponsor application project proposal under section 24.5.2. A separate deposit is required for each solution for which a Project Sponsor submits an application.

(c) **Reconciliation of costs for unqualified Project Sponsors.** Within seventy-five days of the final listing of qualified Project Sponsors for each solution under Section 24.5.3.3, in accordance with the schedule in the Business Practice Manual, the CAISO will determine each Project Sponsor's pro rata share of the costs that the CAISO incurred in determining the qualified Project Sponsors for that solution and will refund to or charge each Project Sponsor that the CAISO did not include in the list of qualified Project

Sponsors the difference between its pro rata costs and the deposit. If a refund is owed the Project Sponsor, the refund shall include interest at the rate that the CAISO earned on the deposit.

(d) **Reconciliation of Costs for Qualified Project Sponsors.** Within seventy-five days of the CAISO's Notice to qualified Project Sponsors under Section 24.5.5, in accordance with the schedule in the Business Practice Manual, the CAISO will determine each Project Sponsor's pro rata share of the costs that the CAISO incurred in selecting an Approved Project Sponsor from among the qualified Project Sponsors for each solution. The ISO will refund to or charge each qualified Project Sponsor the difference between its pro rata costs and the deposit. If a refund is owed to the Project Sponsor, the refund shall include interest at the rate that the CAISO earned on the deposit.

(e) **Posting of Incurred Costs.** Following the reconciliation of costs in (d) above, the ISO will post an accounting of the costs incurred in qualifying and selecting the Approved Project Sponsor for each solution and how the deposit reconciliation for each Project Sponsor was calculated.

### 24.6 Obligation to Construct Transmission Solutions

The Approved Project Sponsor selected to construct the needed transmission solution or the applicable Participating TO where there is no Approved Project Sponsor, must make a good faith effort to obtain all approvals and property rights under applicable federal, state and local laws that are necessary to complete the construction of the required transmission solution. This obligation includes the Approved Project Sponsor's use of eminent domain authority, where provided by state law. A Participating TO in whose PTO Service Territory or footprint either terminus of the transmission solution is located shall be obligated to construct all regional transmission solutions included in the comprehensive Transmission Plan for which there is no Approved Project Sponsor either from the first competitive solicitation or future competitive solicitations. The Approved Project Sponsor shall not sell, assign or otherwise transfer its rights to finance, construct and own the needed transmission solution, or any element thereof, before the facilities have been energized and, if applicable, turned over to the CAISO's Operational Control unless the CAISO has approved such proposed transfer, which approval shall not be unreasonably withheld.

The CAISO shall not approve such sale, assignment or transfer unless the purchaser, transferee or assignee (i) meets the qualification requirements set forth in section 24.5.3.1; (ii) agrees to honor any binding cost containment measures or cost caps agreed to by the Approved Project Sponsor in its proposal; (iii) agrees to meet the factors that the ISO relied upon in selecting the proposal of the Approved Project Sponsor; and (iv) assumes the rights and obligations set forth in the Approved Project Sponsor Agreement.

**24.6.1 Approved Project Sponsor Reporting Requirements**

Starting one hundred and twenty (120) days after the Project Sponsor, or Participating TO with a service territory pursuant to Section 24.6 above, has been notified by the CAISO that it has been selected as an Approved Project Sponsor, such Approved Project Sponsor must submit a construction plan to the CAISO. At a minimum, and as further described in the Business Practice Manual, the construction plan will provide information on the following: land acquisition and permitting, materials procurement, and construction financing. Every ninety (90) days thereafter until the transmission solution has been energized and placed under CAISO Operational Control, the Approved Project Sponsor shall provide to the CAISO a construction plan status report. The status report shall conform to the format set forth in the Business Practice Manual and include, among other things, the following information: project schedule, status of obtaining necessary environmental permits and meeting licensing requirements, status of right-of-way acquisition, status of design and engineering, any changes in the continuing ability of the Approved Project Sponsor to meet the design specifications of the transmission solution and the date upon which the transmission solution was found to be needed in the Transmission Plan. Unless the Approved Project Sponsor is the Participating TO in whose Participating TO service territory the project is wholly located, the CAISO shall provide a copy of the Approved Project Sponsor's status report to the Participating TO(s) in whose Participating TO service territory the transmission solution is fully or partially located and to any Participating TO with which the facilities interconnects. According to the schedule set forth in the Business Practice Manual, the CAISO shall, after providing the Participating TO(s) a copy of the report, hold a call with the Participating TO(s) to review whether the transmission solution completion date proposed by the Approved Project Sponsor can reasonably be expected to be met and to review any other items of concern to either the CAISO or the Participating TO(s).

### 24.6.2 Delay in the Transmission Solution In-Service Date

If the CAISO determines that the proposed completion date has been delayed beyond the date upon which the transmission solution was found to be needed, the CAISO shall issue a market notice stating that it is necessary for the CAISO, the Approved Project Sponsor (to the extent the Approved Project Sponsor has not abandoned the project), and the applicable Participating TO(s) to develop a plan to address potential NERC reliability standards violations as set forth in Section 24.6.3 as well as any other issues that may be of material concern arising from the delay of the transmission solution. If the potential NERC reliability standards violations, or other issues of material concern, cannot be promptly and adequately addressed, the CAISO will take appropriate action including but not limited to, determining that an alternate Approved Project Sponsor is necessary to complete the transmission solution as set forth in Section 24.6.4.

### 24.6.3 Development and Submittal of Mitigation Plans

If the CAISO determines that a delay in the date upon which a transmission solution is proposed to be energized may cause one or more Participating TO(s) or the CAISO to violate a NERC reliability standard, the CAISO shall identify the potential violation and direct the impacted Participating TO(s) to develop a mitigation plan. The CAISO or the impacted Participating TOs shall take any and all reasonable actions necessary to meet the requirements of the mitigation plan.

### 24.6.4 Inability to Complete the Transmission Solution

If the CAISO determines that the Approved Project Sponsor cannot secure necessary approvals or property rights or is otherwise unable to construct a transmission solution, or if the CAISO finds that an alternative Project Sponsor is necessary pursuant to Section 24.6.2, or if the Approved Project Sponsor determines that it is unable to proceed with construction of the transmission solution and so notifies the CAISO, the CAISO shall take such action as it reasonably considers appropriate, in coordination with the Participating TO and other affected Market Participants, to facilitate the development and evaluation of alternative solutions. In conducting such evaluation the CAISO will consider (1) the reasons that the Approved Project Sponsor was unable to construct the transmission solution; (2) whether the transmission solution is still needed; and (3) whether there are other solutions that could replace the original transmission solution as it was originally configured. If the ISO determines that the transmission

solution is no longer needed, the ISO will not pursue the solution and will not direct a Participating TO to backstop the continued development of the solution. For reliability driven transmission solutions, the CAISO may direct, at its discretion, the Participating TO in whose PTO Service Territory or footprint either terminus of the transmission solution is located, to build the transmission solution, or the CAISO may open a new solicitation for Project Sponsors to finance, own, and construct the transmission solution. For all other transmission solutions, the CAISO shall open a new solicitation for Project Sponsors to finance, own, and construct the transmission solution. Where there is no Approved Project Sponsor, the CAISO shall direct the Participating TO in whose PTO Service Territory or footprint either terminus of the transmission solution is located, to finance, own and construct the transmission solution. The previous Approved Project Sponsor shall be obligated to work cooperatively and in good faith with the CAISO, the new Approved Project Sponsor (if any) and the affected Participating TO, to implement the transition. The obligations of the Participating TO to construct the transmission solution will not alter the rights of any entity to construct and expand transmission facilities as those rights would exist in the absence of a Participating TO's obligations under this CAISO Tariff or as those rights may be conferred by the CAISO or may arise or exist pursuant to this CAISO Tariff.

### 24.7 Documentation of Compliance with NERC Reliability Standards

The Transmission Plan and underlying studies, assessments, information and analysis developed during the Transmission Planning Process, regardless of whether performed by CAISO or by Participating TOs or other third parties at the direction of CAISO, shall be used by the CAISO as part of its documentation of compliance with NERC Reliability Standards.

### 24.8 Additional Planning Information

#### 24.8.1 Information Provided by Participating TOs

In addition to any information that must be provided to the CAISO under the NERC Reliability Standards, Participating TOs shall provide the CAISO on an annual or periodic basis in accordance with the schedule and procedures and in the form required by the Business Practice Manual any information and data reasonably required by the CAISO to perform the Transmission Planning Process, including, but not limited to: (1) modeling data for power flow, including reactive power, short-circuit and stability analysis; (2) a description of the total Demand to be served from each substation, including a description of any

Energy efficiency programs reflected in the total Demand; (3) the amount of any interruptible Loads included in the total Demand (including conditions under which an interruption can be implemented and any limitations on the duration and frequency of interruptions); (4), a description of Generating Units to be interconnected to the Distribution System of the Participating TO, including generation type and anticipated Commercial Operation Date; (5) detailed power system models of their transmission systems that reflect transmission system changes, including equipment replacement not requiring approval by the CAISO; (6) Distribution System modifications; (7) transmission network information, including line ratings, line length, conductor sizes and lengths, substation equipment ratings, circuits on common towers and with common rights-of-ways and cross-overs, Remedial Action Schemes, and protection setting information; and (8) Contingency lists.

**24.8.2 Limitation on Regional Activities**

In addition to any information that must be provided to the CAISO under the NERC Reliability Standards, Participating Generators shall provide the CAISO on an annual or periodic basis in accordance with the schedule, procedures and in the form required by the Business Practice Manual any information and data reasonably required by the CAISO to perform the Transmission Planning Process, including, but not limited to: (1) modeling data for short-circuit and stability analysis and (2) data, such as term, and status of any environmental or land use permits or agreements the expiration of which may affect that the operation of the Generating Unit.

**24.8.3 Information Requested from Load Serving Entities**

In addition to any information that must be provided to the CAISO under the NERC Reliability Standards, the CAISO shall solicit from Load Serving Entities through their Scheduling Coordinators information required by, or anticipated to be useful to, the CAISO in its performance of the Transmission Planning Process, including, but not limited to: (1) long-term resource plans; (2) existing long-term contracts for resources and transmission service outside the CAISO Balancing Authority Area; and (3) Demand Forecasts, including forecasted effect of Energy efficiency and Demand response programs.

**24.8.4 Information from BAAs and Regulators**

The CAISO shall obtain or solicit from interconnected Balancing Authority Areas, the CPUC, the CEC, and Local Regulatory Authorities information required by, or anticipated to be useful to, the CAISO in its

performance of the Transmission Planning Process, including, but not limited to: (1) long-term transmission system plans; (2) long-term resource plans; (3) generation interconnection process information; (4) Demand Forecasts; and (5) any other data necessary for the development of power flow, short-circuit, and stability cases over the planning horizon of the CAISO Transmission Planning Process.

### 24.8.5 Obligation to Provide Updated Information

If material changes to the information provided under Sections 24.8 occur during the annual Transmission Planning Process, the providers of the information must provide notice to the CAISO of the changes.

## 24.9 Participating TO Study Obligation

The Participating TO constructing or expanding facilities will be directed by the CAISO to coordinate with the Project Sponsor or Participating TO(s) with PTO Service Territories in which the transmission upgrade or addition will be located, neighboring Balancing Authority Areas, as appropriate, and other Market Participants to perform any study or studies necessary, including a Facility Study, to determine the appropriate facilities to be constructed in accordance with the CAISO Transmission Planning Process and the terms set forth in the TO Tariff.

## 24.10 Operational Review and Impact Analysis

The CAISO will perform an analysis on the ISO Controlled Grid and an operational review of all Regional Transmission Facilities studied as part of the CAISO Transmission Planning Process that are proposed to be connected to, or made part of, the CAISO Controlled Grid to ensure that the solutions included in the comprehensive Transmission Plan provide for acceptable Operational Flexibility and meet all their requirements for proper integration with the CAISO Controlled Grid. This analysis includes identifying the impacts of Regional Transmission Facilities on neighboring Planning Regions or Balancing Authority Areas, including the resulting need, if any, for new solutions in such neighboring Planning Regions or Balancing Authority Areas. If the CAISO finds that a Regional Transmission Facility does not provide for acceptable Operational Flexibility, does not adequately integrate with the CAISO Controlled Grid or causes impacts on neighboring Planning Regions, transmission systems or Balancing Authority Areas, the CAISO shall coordinate with the operators of neighboring Balancing Authority Areas or transmission systems, if applicable, to reassess and redesign the Regional Transmission Facility to be constructed. If the impacts caused by Regional Transmission Facilities proposed to be added to the CAISO Controlled

Grid can be mitigated through other solutions on the ISO Controlled Grid or through operational adjustments, the costs of such solutions shall be recovered through the CAISO's Regional Access Charge as part of the costs of the transmission solution. The CAISO shall not be responsible for compensating another transmission provider, Planning Authority, or Balancing Area Authority for the costs of any required solutions, or other consequences, on their systems associated with Regional Transmission Facilities, whether identified by the CAISO or the neighboring system, unless the CAISO voluntarily agrees to bear such costs pursuant to a written agreement with the neighboring system; provided that the CAISO will not agree to bear such costs until it first discusses the matter with stakeholders and provides stakeholders with an opportunity to submit comments. Transmission solutions that do not provide acceptable Operational Flexibility or do not adequately integrate with the CAISO Controlled Grid cannot be included in the CAISO Transmission Plan or approved by CAISO management or the CAISO Governing Board, as applicable. Any costs in connection with required solutions in neighboring transmission systems associated with Regional Transmission Facilities that the CAISO agrees to bear will be the responsibility of the Approved Project Sponsor who will construct and own the Regional Transmission Facilities that necessitated the solutions or on the neighboring transmission system, and such mitigation costs may be recovered through the CAISO's Regional Access Charge, subject to FERC approval, and all relevant tariff provisions pertaining to the calculation, billing, and recovery of the Regional Access Charge, and any related applicable provisions, shall apply.

**24.10.1 [Not Used]**

**24.10.2 [Not Used]**

**24.10.3 [Not Used]**

**24.10.4 [Not Used]**

**24.11 [Not Used]**

**24.11.1 [Not Used]**

**24.11.2 [Not Used]**

**24.11.3 [Not Used]**

**24.12 WECC and Interregional Coordination**

The Project Sponsor will have responsibility for completing any applicable WECC requirements and rating

study requirements to ensure that a proposed transmission addition or upgrade meets regional planning requirements. The Project Sponsor may request the Participating TO to perform this coordination on behalf of the Project Sponsor at the Project Sponsor's expense.

### 24.13 Interregional Transmission Proposals in the Regional Process

Under the procedures set forth in Sections 24.3.3 and 24.4.3, the CAISO may consider potential interregional solutions to regional needs during Phase 2 of the Transmission Planning Process. Potential interregional solutions submitted to the CAISO pursuant to these sections will be evaluated on the basis of the need for the entire proposed facility as a CAISO regional solution, the costs of which would be recovered through the Transmission Access Charge if approved as part of the comprehensive Transmission Plan. A potential interregional solution found by the CAISO to meet identified regional needs will be submitted to the CAISO Board for approval in the Transmission Plan and, if approved and applicable, the Project Sponsor will be selected in accordance with the competitive solicitation process described in Section 24.5. Subsequently, the Project Sponsor may elect to have the project studied by Relevant Planning Regions other than the CAISO pursuant to section 24.18.3 and may elect to seek Interregional Cost Allocation per section 24.18.4. The Project Sponsor must comply with the submission requirements contained in sections 24.18.3.1 and 24.18.4.1, respectively. The CAISO may also identify an interregional solution to the Relevant Planning Regions if the CAISO believes such conceptual solution could provide benefits to the other Planning Regions.

#### 24.13.1 [Not Used]

#### 24.13.2 [Not Used]

### 24.14 Cost Responsibility for Transmission Additions or Upgrades

Cost responsibility for transmission additions or upgrades constructed pursuant to this Section 24 shall be determined as follows:

#### 24.14.1 Project Sponsor Commitment to Pay Full Cost

Where a Project Sponsor commits to pay the full cost of a transmission addition or upgrade as set forth in subsection (2) of Section 24.4.6.1, the full costs shall be borne by the Project Sponsor.

#### 24.14.2 Cost of Needed Addition or Upgrade to be Borne by PTO

Where the need for a transmission addition or upgrade is determined by the CAISO, the cost of the

transmission addition or upgrade shall be borne by the Participating TO that will be the owner of the transmission addition or upgrade and shall be reflected in its Transmission Revenue Requirement.

**24.14.3 CRR Entitlement for Project Sponsors Not Recovering Costs**

Provided that the CAISO has Operational Control of the Merchant Transmission Facility, a Project Sponsor that does not recover the investment cost under a FERC-approved rate through the Access Charge or a reimbursement or direct payment from a Participating TO shall be entitled to receive Merchant CRRs as provided in Section 36.11. The full amount of capacity added to the system by such transmission upgrades or additions will be as determined through the regional reliability council process of the Western Electricity Coordinating Council or its successor.

**24.14.3.1 Western Path 15**

Pursuant to its Project Sponsor status as specified in Section 4.3.1.3, consistent with FERC's findings in Docket Nos. EL04-133-001, ER04-1198-000, and ER04-1198-001, issued on May 16, 2006 (115 FERC ¶ 61,178), Western Path 15 shall receive compensation associated with transmission usage rights modeled for Western Path 15. In the event that Western Path 15 has an approved rate schedule that returns excess revenue from any compensation obtained from the CAISO associated with the transmission usage rights for Western Path 15, such revenue shall be returned to the CAISO through a procedure established by the CAISO and the Western Area Power Administration for that purpose.

**24.14.3.2 FPL Energy, LLC**

Pursuant to its Project Sponsor status, consistent with FERC's findings in Docket No. ER03-407, issued on June 15, 2006 (115 FERC ¶ 61, 329), FPL Energy, LLC shall receive Merchant CRRs associated with transmission usage rights modeled for the Blythe Path 59 upgrade, such Merchant CRRs to be in effect for a period of thirty (30) years, or the pre-specified intended life of the Merchant Transmission Facility, whichever is less, from the date Blythe Path 59 was energized. For the purpose of allocating Merchant CRRs to FPL Energy, LLC over the Blythe Path 59 upgrade, the allocation of CRR Options in the import (east to west, from the Blythe Scheduling Point to the 230 kV side of the 161 kV to 230 kV transformer at the Eagle Mountain substation) as well as of CRR Options in the export (west to east) direction will be based on 57.1 percent of the total upgrade (96 MW out of the 168 MW), which is FPL Energy, LLC's share of the total upgrade as approved by FERC in the letter order issued by FERC on June 15, 2006 in

Docket No. ER03-407 (115 FERC ¶ 61,329).

**24.14.4 RAC Treatment of New Regional Transmission Facilities Costs**

Once a New Participating TO has executed the Transmission Control Agreement and it has become effective, the cost for new Regional Transmission Facilities for all Participating TOs, except Subscriber Participating TOs, shall be included in the CAISO Grid-wide component of the Regional Access Charge in accordance with Schedule 3 of Appendix F, unless and with respect to Western Path 15 only, cost recovery is provided in Section 24.14.3. With respect to cost recovery due to Non-Subscriber use of the Subscriber Participating TO transmission assets and Entitlements and unscheduled Subscriber Rights, Non-Subscriber Usage Payment Amounts will be included in the RAC allocation in accordance with Section 15 of Schedule 3 of Appendix F. The Participating TO (unless it is the Subscriber Participating TO with respect to its transmission assets and Entitlements and Subscriber Encumbrances used to provide Subscriber Rights) who is supporting the cost of the new Regional Transmission Facility shall include such costs in its Regional Transmission Revenue Requirement.

**24.15 Ownership of and Charges for Expansion Facilities**

**24.15.1 Transmission Additions and Upgrades under TCA**

All transmission additions and upgrades constructed by Participating TOs in accordance with this Section 24 that form part of the CAISO Controlled Grid shall be operated and maintained by a Participating TO in accordance with the Transmission Control Agreement. Where such transmission additions and upgrades are jointly developed by Participating TOs and non-Participating TOs, nothing herein shall be construed to require that the non-Participating TO transfer its portion of the transmission additions or upgrades to the CAISO's Operational Control or place such facilities within the CAISO's Balancing Authority Area.

**24.15.2 Access and Charges for Transmission Additions and Upgrades**

Each Participating TO that owns or operates transmission additions and upgrades constructed in accordance with this Section 24 shall provide access to them and charge for their use in accordance with this CAISO Tariff and its TO Tariff.

**24.16 Expansion by Local Furnishing Participating TOs**

Notwithstanding any other provision of this CAISO Tariff, a Local Furnishing Participating TO shall not be obligated to construct or expand facilities, (including interconnection facilities as described in Section 8 of

the TO Tariff) unless the CAISO or Project Sponsor has tendered an application under FPA Section 211 that requests FERC to issue an order directing the Local Furnishing Participating TO to construct such facilities pursuant to Section 24. The Local Furnishing Participating TO shall, within ten (10) days of receiving a copy of the Section 211 application, waive its right to a request for service under FPA Section 213(a) and to the issuance of a proposed order under FPA Section 212(c). Upon receipt of a final order from FERC that is no longer subject to rehearing or appeal, such Local Furnishing Participating TO shall construct such facilities in accordance with this Section 24.

### 24.17 Evaluation of Interregional Transmission Projects

In coordination with other Planning Regions and in accordance with the Order 1000 Common Interregional Coordination and Cost Allocation Tariff Language set forth in Section 24.18, the CAISO will assess whether proposed Interregional Transmission Projects provide more cost effective or efficient solutions to regional transmission needs than proposed regional solutions and should be included in the comprehensive Transmission Plan. The CAISO's evaluation will generally be conducted in a two year evaluation cycle as set forth in this section, but could be concluded earlier if all Relevant Planning Regions complete their assessments to allow an earlier decision.

#### 24.17.1 Submission of Interregional Transmission Projects

Starting at the beginning of the first even-numbered calendar year after the effective date of this section 24.17, and at the beginning of every even-numbered year thereafter, the CAISO will initiate a submission period in which proponents may request evaluation of an Interregional Transmission Project. The date upon which the submission period begins will be as set forth in the Business Practice Manual and the CAISO will provide notice of this date to interested parties. The submission window will close on March 31. Interregional Transmission Project proponents must use the forms and satisfy the technical and other requirements set forth in the Business Practice Manual for Transmission Planning.

#### 24.17.2 Interregional Transmission Project Assessment

During the planning cycle in which an Interregional Transmission Project is submitted, the CAISO will make a preliminary assessment as to whether the submitted project could potentially meet a regional need by eliminating or deferring the need for a regional transmission solution. The CAISO, working with its stakeholders, will then develop an initial estimate of the benefits, in dollars, of the CAISO share of the

costs of the Interregional Transmission Project, determine whether it meets the regional reliability, economic, or public policy need identified by the CAISO in the transmission planning process, and use such information to determine if the Interregional Transmission Project will more cost effectively or efficiently address the regional transmission solution identified in the comprehensive Transmission Plan consistent with Tariff Sections 24.17.2 and 24.17.3. The CAISO determination will consider and compare the benefits and costs of the regional transmission solution and the estimated CAISO benefits and CAISO costs of the Interregional Transmission Project which eliminates or defers the regional need consistent with Tariff Section 24.4.6.7 and the applicable Business Practice Manual. If the Interregional Transmission Project could potentially meet a regional need more cost-effectively and efficiently than the regional transmission solution and the project proponent has properly requested Interregional Cost Allocation from each Relevant Planning Region, the CAISO will confer with the Relevant Planning Regions, consistent with Section 24.18.4, to determine the assignment of Interregional Transmission Project costs to the CAISO. Based on this initial assessment of Interregional Transmission Project benefits, the CAISO cost share assignment and the urgency of the need for a regional transmission solution, the CAISO will determine whether to further evaluate the project during the next planning cycle. Should the CAISO determine that the need for the regional solution is not urgent, the CAISO will defer approval of the regional solution until the Interregional Transmission Project assessment is concluded in the second cycle.

**24.17.3 Selection in the Comprehensive Transmission Plan**

During the second planning cycle after an Interregional Transmission Project is submitted, the CAISO will conduct a more in-depth analysis of the Interregional Transmission Project which will include a consideration of the timing in which a regional solution is needed and the likelihood that the proposed Interregional Transmission Project will be constructed and operational in the same timeframe as the regional solution. The CAISO will also determine the regional benefits of the Interregional Transmission Project to the CAISO that shall be used for purposes of allocating any costs of the Interregional Transmission Project to the CAISO. The CAISO shall determine those regional benefits to the CAISO, in dollars, by calculating (1) the net cost (cost of regional transmission solution minus its economic benefits determined in accordance with Tariff Section 24.4.6.7 and the applicable Business Practice Manual) for

which it eliminates or defers the regional need, plus (2) the regional economic benefits of the Interregional Transmission Project determined in accordance with Tariff Section 24.4.6.7 and the applicable Business Practice Manual. If the CAISO determines that the proposed Interregional Transmission Project is a more efficient or cost effective solution to a regional need and the Interregional Transmission Project can be constructed and operational in the same timeframe as the regional solution, the CAISO will identify such facility as the preferred solution and recommend it for approval by the CAISO Governing Board in the comprehensive Transmission Plan. The CAISO will also identify the regional transmission additions or upgrades that were initially identified but were eliminated by selecting the Interregional Transmission Project. Once an Interregional Transmission Project has been selected in the CAISO comprehensive Transmission Plan and the transmission plans of all Relevant Planning Regions, the CAISO will seek to coordinate with the project proponent, the other Relevant Planning Regions and all affected transmission providers to address project implementation issues, including, project financing, cost overruns, ownership and construction, operational control, scheduling rights and other matters related to the Interregional Transmission Project.

**24.17.4 Interregional Transmission Project Cost Recovery**

The designated owner of the Interregional Transmission Project shall recover the CAISO's assigned share of the Interregional Transmission Project costs through its Regional Transmission Revenue Requirement as approved by FERC.

**24.17.5 Monitoring the Status of Interregional Transmission Projects**

The CAISO will monitor the progress of an Interregional Transmission Project selected in the comprehensive transmission plan to meet regional needs with regard to the status of the project owner, financing, permitting, construction, and other milestones pertinent to the completion and commercial operation date of the Interregional Transmission Project. Such monitoring may include a request for periodic reports from the project sponsor and the Relevant Planning Region or affected transmission provider who are sharing the costs of the project. The CAISO shall make available to all Participating TOs with which the project interconnects all information about the status of the project and its progress towards completion and energization. As necessary, the CAISO will hold a call with such Participating TO to review whether the project completion date for the Interregional Transmission Project owner can

reasonably be expected to be met and to review any other items of concern to either the CAISO or the Participating TO.

**24.17.6 Delay in Interregional Transmission Project In-Service Date**

If the CAISO determines that the Interregional Transmission Project completion and energization date has been delayed beyond the date upon which the regional transmission solution was found to be needed, the CAISO shall issue a Market Notice stating that it is necessary for the CAISO, the Interregional Transmission Project owner and the applicable Participating TO to develop a plan to address potential NERC Reliability Standards violations as set forth in Section 24.6.3 as well as any other issues that may be of material concern to the CAISO or Participating TO. If the potential NERC Reliability Standards violations or other issues of material concern cannot be promptly and adequately addressed, the CAISO shall reconsider the need for a regional solution and identify a regional solution to supplant the Interregional Transmission Project. The CAISO will use its best efforts to identify such a regional solution during the planning cycle in which the CAISO determined that the Interregional Transmission Project would not be completed and energized in the identified timeframe to meet the regional need originally identified in the comprehensive Transmission Plan. The regional solution may consist of the same transmission elements that were originally identified in the comprehensive Transmission Plan in which the Interregional Transmission Project was selected, or it may be a different transmission or non-transmission solution.

**24.18 Order 1000 Common Interregional Tariff**

**24.18.1 Annual Interregional Information Exchange**

Annually, prior to the Annual Interregional Coordination Meeting, the CAISO will make available by posting on its website or otherwise provide to each of the other Planning Regions the following information, to the extent such information is available in its regional transmission planning process, relating to regional transmission needs in the CAISO's transmission planning region and potential solutions thereto:

(i) study plan or underlying information that would typically be included in a study plan, such as:

(a) identification of base cases;

(b) planning study assumptions; and

(c) study methodologies;

(ii) initial study reports (or system assessments); and

(iii) regional transmission plan

(collectively referred to as "Annual Interregional Information").

The CAISO will post its Annual Interregional Information on its website according to its regional transmission planning process. Each other Planning Region may use in its regional transmission planning process the CAISO's Annual Interregional Information. The CAISO may use in its regional transmission planning process Annual Interregional Information provided by other Planning Regions. The CAISO is not required to make available or otherwise provide to any other Planning Region (i) any information not developed by the CAISO in the ordinary course of its regional transmission planning process, (ii) any Annual Interregional Information to be provided by any other Planning Region with respect to such other Planning Region, or (iii) any information if the CAISO reasonably determines that making such information available or otherwise providing such information would constitute a violation of the Commission's Standards of Conduct or any other legal requirement. Annual Interregional Information made available or otherwise provided by the CAISO shall be subject to applicable confidentiality and CEII restrictions and other applicable laws, under the CAISO's regional transmission planning process.

**24.18.2 Annual Interregional Coordination Meeting**

The CAISO will participate in an Annual Interregional Coordination Meeting with the other Planning Regions. The CAISO will host the Annual Interregional Coordination Meeting in turn with the other Planning Regions, and is to seek to convene such meeting in February, but not later than March 31st. The Annual Interregional Coordination Meeting is to be open to stakeholders. The CAISO will provide notice of the meeting to its stakeholders in accordance with its regional transmission planning process. At the Annual Interregional Coordination Meeting, topics discussed may include the following:

(i) each Planning Region's most recent Annual Interregional Information (to the extent it is not confidential or protected by CEII or other legal restrictions);

(ii) identification and preliminary discussion of interregional solutions, including conceptual solutions, that may meet regional transmission needs in each of two or more Planning

Regions more cost effectively or efficiently; and

(iii) updates of the status of ITPs being evaluated or previously included in the CAISO's comprehensive transmission plan.

### 24.18.3 Interregional Transmission Project Joint Evaluation Process

#### 24.18.3.1 Submission Requirements

A proponent of an Interregional Transmission Project may seek to have its Interregional Transmission Project jointly evaluated by the Relevant Planning Regions pursuant to Section 24.18.3.2 by submitting the Interregional Transmission Project into the regional transmission planning process of each Relevant Planning Region in accordance with such Relevant Planning Region's regional transmission planning process and no later than March 31st of any even-numbered calendar year. Such proponent of an Interregional Transmission Project seeking to connect to a transmission facility owned by multiple transmission owners in more than one Planning Region must submit the Interregional Transmission Project to each such Planning Region in accordance with such Planning Region's regional transmission planning process. In addition to satisfying each Relevant Planning Region's information requirements, the proponent of an Interregional Transmission Project must include with its submittal to each Relevant Planning Region a list of all Planning Regions to which the Interregional Transmission Project is being submitted.

#### 24.18.3.2 Joint Evaluation of an Interregional Transmission Project

For each Interregional Transmission Project that meets the requirements of Section 24.18.3.1, the CAISO (if it is a Relevant Planning Region) will participate in a joint evaluation by the Relevant Planning Regions that is to commence in the calendar year of the Interregional Transmission Project's submittal in accordance with Section 24.18.3.1, or the immediately following calendar year. With respect to any such Interregional Transmission Project, the CAISO (if it is a Relevant Planning Region) will confer with the other Relevant Planning Region(s) regarding the following:

(i) Interregional Transmission Project data and projected Interregional Transmission Project costs; and

(ii) the study assumptions and methodologies it is to use in evaluating the Interregional Transmission Project pursuant to its regional transmission planning process.

For each Interregional Transmission Project that meets the requirements of Section 24.18.3.1, the CAISO (if it is a Relevant Planning Region):

(a) will seek to resolve any differences it has with the other Relevant Planning Regions relating to the Interregional Transmission Project or to information specific to other Relevant Planning Regions insofar as such differences may affect the CAISO's evaluation of the Interregional Transmission Project;

(b) will provide stakeholders an opportunity to participate in the CAISO's activities under this Section 24.18.3.2 in accordance with its regional transmission planning process;

(c) will notify the other Relevant Planning Regions if the CAISO determines that the Interregional Transmission Project will not meet any of its regional transmission needs; thereafter the CAISO has no obligation under this Section 24.18.3.2 to participate in the joint evaluation of the Interregional Transmission Project; and

(d) will determine under its regional transmission planning process if such Interregional Transmission Project is a more cost effective or efficient solution to one or more of the CAISO's regional transmission needs.

### 24.18.4 Interregional Cost Allocation Process

#### 24.18.4.1 Submission Requirements

For any Interregional Transmission Project that has been properly submitted in each Relevant Planning Region's regional transmission planning process in accordance with Section 24.18.3.1, a proponent of such Interregional Transmission Project may also request Interregional Cost Allocation by requesting such cost allocation from the CAISO and each other Relevant Planning Region in accordance with its regional transmission planning process. The proponent of an Interregional Transmission Project must include with its submittal to each Relevant Planning Region a list of all Planning Regions in which Interregional Cost Allocation is being requested.

#### 24.18.4.2 Interregional Cost Allocation Process

For each Interregional Transmission Project that meets the requirements of Section 24.18.4.1, the CAISO

(if it is a Relevant Planning Region) is to confer with or notify, as appropriate, any other Relevant Planning Region(s) regarding the following:

(i) assumptions and inputs to be used by each Relevant Planning Region for purposes of determining benefits in accordance with its regional cost allocation methodology, as applied to Interregional Transmission Projects;

(ii) the CAISO's regional benefits stated in dollars resulting from the Interregional Transmission Project, if any; and

(iii) assignment of projected costs of the Interregional Transmission Project (subject to potential reassignment of projected costs pursuant to Section 24.18.5.2 below) to each Relevant Planning Region using the methodology described in this section 24.18.4.2.

For each Interregional Transmission Project that meets the requirements of Section 24.18.4.1, the CAISO (if it is a Relevant Planning Region):

(a) will seek to resolve with the other Relevant Planning Regions any differences relating to Interregional Transmission Project data or to information specific to other Relevant Planning Regions insofar as such differences may affect the CAISO's analysis;

(b) will provide stakeholders an opportunity to participate in the CAISO's activities under this Section 24.18.4.2 in accordance with its regional transmission planning process;

(c) will determine its regional benefits, stated in dollars, resulting from an Interregional Transmission Project; in making such determination of its regional benefits in the CAISO's region, the CAISO will use its regional cost allocation methodology, as applied to Interregional Transmission Projects;

(d) will calculate its assigned pro rata share of the projected costs of the Interregional Transmission Project, stated in a specific dollar amount, equal to its share of the total benefits identified by the Relevant Planning Regions multiplied by the projected costs of the Interregional Transmission Project;

(e) will share with the other Relevant Planning Regions information regarding what its regional cost allocation would be if it were to select the Interregional Transmission Projects in its regional transmission plan for purposes of Interregional Cost Allocation; the

CAISO may use such information to identify its total share of the projected costs of the Interregional Transmission Projects to be assigned to the CAISO in order to determine whether the Interregional Transmission Project is a more cost effective or efficient solution to a transmission need in the CAISO region;

(f) will determine whether to select the Interregional Transmission Project in its regional transmission plan for purposes of Interregional Cost Allocation, based on its regional transmission planning process; and

(g) will endeavor to perform its Interregional Cost Allocation activities pursuant to this Section 24.18.4.2 in the same general time frame as its joint evaluation activities pursuant to Section 24.18.3.2.

**24.18.5 Application of Regional Cost Allocation Methodology**

**24.18.5.1 Selection by All Relevant Planning Regions**

If the CAISO (if it is a Relevant Planning Region) and all of the other Relevant Planning Regions select an Interregional Transmission Project in their respective regional transmission plans for purposes of Interregional Cost Allocation, the CAISO will apply its regional cost allocation methodology to the projected costs of the Interregional Transmission Project assigned to it under Sections 24.18.4.2(d) or 24.18.4.2(e) above in accordance with its regional cost allocation methodology, as applied to Interregional Transmission Project.

**24.18.5.2 Selection by at Least Two but Fewer than All Regions**

If the CAISO (if it is a Relevant Planning Region) and at least one, but fewer than all, of the other Relevant Planning Regions select the Interregional Transmission Project in their respective regional transmission plans for purposes of Interregional Cost Allocation, the CAISO is to evaluate (or reevaluate, as the case may be) pursuant to Sections 24.18.4.2(d), 24.18.4.2(e), and 24.18.4.2(f) above whether, without the participation of the non-selecting Relevant Planning Region(s), the Interregional Transmission Project is selected (or remains selected, as the case may be) in its regional transmission plan for purposes for Interregional Cost Allocation. Such reevaluation(s) are to be repeated as many times as necessary until the number of selecting Relevant Planning Regions does not change with such reevaluation.

If following such evaluation (or reevaluation), the number of selecting Relevant Planning Regions does not change and the Interregional Transmission Project remains selected for purposes of Interregional Cost Allocation in the respective regional transmission plans of the CAISO and at least one other Relevant Planning Region, the CAISO will apply its regional cost allocation methodology to the projected costs of the Interregional Transmission Project assigned to it under Sections 24.18.4.2(d) or 24.18.4.2(e) above in accordance with its regional cost allocation methodology, as applied to Interregional Transmission Projects.

## 25. Interconnection of Generating Units and Facilities

### 25.1 Applicability

This Section 25 applies to:

(a) each new Generating Unit that seeks to interconnect to the CAISO Controlled Grid;

(b) each existing Generating Unit connected to the CAISO Controlled Grid that will be modified with a resulting increase in the total capability of the power plant;

(c) each Generating Unit connected to the CAISO Controlled Grid that will be modified without increasing the total capability of the power plan but has change the electrical characteristics of the power plant such that its re-energization may violate Applicable Reliability Criteria.

(d) each existing Generating Unit connected to the CAISO Controlled Grid whose total Generation was previously sold to a Participating TO or on-site customer but whose Generation, or any portion thereof, will now be sold in the wholesale market, subject to Section 25.1.2;

(e) each existing Generating Unit that is a Qualifying Facility and that is converting to a Participating Generator without repowering or reconfiguring the existing Generating Unit, subject to Section 25.1.2;

(f) each existing Generating Unit connected to the CAISO Controlled Grid that proposes to repower its Generating Unit pursuant to Section 25.1.2; and

(g) Generating Units interconnecting to the CAISO Controlled Grid over a Subscriber Participating TO transmission facilities using Subscriber Rights are required to apply for TP Deliverability under Section 25.1 once (1) the Subscriber Participating TO transmission facilities have completed their transmission interconnection studies with all interconnecting Transmission Owner(s), (2) Subscriber(s) have executed the Generator Interconnection Agreement, (3) the Subscriber Participating TO has committed to proceed with Construction Activities regarding the Subscriber Participating TO transmission facilities, and (4) the applicant provides a notice in writing to the applicable interconnecting Transmission Owners that it is proceeding with Construction Activities.

Once these criteria have been completed, the Generating Unit must apply as follows:

(1) each Generating Unit possessing Subscriber Rights and receiving Deliverability from TPP-approved Network Upgrades shall apply for TP Deliverability allocation through the submission of a Subscriber Participating TO-specific deliverability allocation request and does not submit an Interconnection Request under Section 25;

(2) each Generating Unit that does not meet the criteria under Section 25.1(g)(1) shall be treated in accordance with Section 25.1(a).

**25.1.1 Interconnection Request and Generating Unit Requirements**

The owner of a Generating Unit described in Section 25.1 (a), (b), (c), or (g), or its designee, shall be an Interconnection Customer required to submit an Interconnection Request and comply with Appendix KK.

**25.1.2 Affidavit Requirements**

If the owner of a Generating Unit described in Section 25.1(d), (e), or (f) or its designee, represents that the total generating capability and electrical characteristics of the Generating Unit will be substantially unchanged, then that entity must submit an affidavit to the CAISO and the applicable Participating TO representing that the total generating capability and electrical characteristics of the Generating Unit have remained substantially unchanged. However, if there is any change to the total generating capability and electrical characteristics of the Generating Unit, the affidavit shall include supporting information describing any such changes and a $50,000 deposit for the study. The CAISO, in coordination with the applicable Participating TO, will evaluate whether the total generating capability or electrical characteristics of the Generating Unit have substantially changed or will substantially change. The CAISO may engage the services of the applicable Participating TO in conducting such verification activities. Costs incurred by the CAISO and Participating TO (if any) shall be borne by the party making the request under Section 25.1.2, and such costs shall be included in a CAISO invoice for verification activities.

**25.1.2.1** If the CAISO and the applicable Participating TO confirm that the electrical characteristics are substantially unchanged, then that request will not be placed into the interconnection queue. However, the owner of the Generating Unit, or its designee, will be required to execute a CAISO Generator

Interconnection Agreement, as applicable. All Generation Units described in Section 25.1(d), (e), and (f) will be required to comply with the CAISO's new resource implementation process to ensure compliance with applicable tariff provisions and Applicable Reliability Criteria, as specified in the Business Practice Manuals.

**25.1.2.2** If the CAISO and the applicable Participating TO cannot confirm that the total capability and electrical characteristics are and will be substantially unchanged, then the owner of the Generating Unit, or its designee, shall be an Interconnection Customer required to submit an Interconnection Request and comply with Appendix KK.

**25.1.2.3** Upon receipt of the affidavit, the complete technical data, and the deposit, the CAISO will issue a draft study plan to the Generating Unit owner within thirty (30) days. Upon receipt of an executed study plan the CAISO will commence the study. The CAISO will complete the study within ninety (90) calendar days from the date the CAISO receives the signed study plan. If the CAISO cannot complete the study within that time period, the CAISO shall notify the Generating Unit owner and provide an estimated completion date and an explanation of the reasons why additional time is required. The CAISO will issue a final study report to the Generating Unit owner upon completion of the study. Any and all costs of the study shall be borne by the Generating Unit owner requesting the study.

**25.1.2.4** The Generating Unit owner will be responsible for the actual costs incurred by the CAISO and applicable Participating TO(s) in conducting the study. If the actual costs of the study are less than the deposit provided by the Generating Unit owner, the Generating Unit owner will be refunded the balance. If the actual costs of the study are greater than the deposit provided by the Generating Unit owner, the Generating Unit owner shall pay the balance within thirty (30) days of being invoiced by the CAISO. The Participating TO(s) shall invoice the CAISO for any study work within seventy-five (75) calendar days of completion of the study, and, within thirty (30) days of payment of the Participating TO(s) invoice, the CAISO shall issue an invoice or refund to the Generating Unit owner, as applicable, based upon such submitted Participating TO invoices and the CAISO's costs for the study.

### 25.2 Interconnection to the Distribution System

Any proposed interconnection by the owner of a planned Generating Unit, or its designee, to connect that

Generating Unit to a Distribution System of a Participating TO will be processed, as applicable, pursuant to the Wholesale Distribution Access Tariff or CPUC Rule 21, or other Local Regulatory Authority requirements, if applicable, of the Participating TO; provided, however, that the owner of the planned Generating Unit, or its designee, shall be required to mitigate any adverse impact on reliability of the CAISO Controlled Grid consistent with Appendix KK. In addition, each Participating TO will provide to the CAISO a copy of the system impact study used to determine the impact of a planned Generating Unit on the Distribution System and the CAISO Controlled Grid pursuant to a request to interconnect under the applicable Wholesale Distribution Access Tariff or CPUC Rule 21, or other Local Regulatory Authority requirements, if applicable.

### 25.3 Maintenance of Encumbrances

No new Generating Unit shall adversely affect the ability of the applicable Participating TO to honor its Encumbrances existing as of the time an Interconnection Customer submits its Interconnection Request to the CAISO. The applicable Participating TO, in consultation with the CAISO, shall identify any such adverse effect on its Encumbrances in the applicable Interconnection Study. To the extent the applicable Participating TO determines that the connection of the new Generating Unit will have an adverse effect on Encumbrances, the Interconnection Customer shall mitigate such adverse effect.

### 25.4 Asynchronous Generating Facilities

#### 25.4.1 Asynchronous Generating Facilities-Reactive Power

The reactive power requirements set forth in FERC's Order No. 827 will apply to: 1) the entirety of an existing Asynchronous Generating Facility in the event such Generating Facility makes modifications that require the submission of a new Interconnection Request, and a subsequent Interconnection Study finds that the reactive power requirement is necessary to ensure system safety or reliability; 2) new Asynchronous Electric Generating Units, when an existing Generating Facility replaces Electric Generating Units with new Asynchronous Electric Generating Units, whether or not submission of a new Interconnection Request is required. Under these requirements, the Asynchronous Electric Generating Facility or Asynchronous Electric Generating Unit, as applicable, will maintain a composite power delivery at continuous rated power output at the high-side of the generator substation at a power factor within the range of 0.95 leading to 0.95 lagging, unless the CAISO has established a different power factor range

that applies to all Asynchronous Generating Facilities on a comparable basis. This power factor range standard shall be dynamic and can be met using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors or reactors, or a combination of the two.

An existing Asynchronous Generating Facility making upgrades to its Generating Unit(s) through the Fast Track Process will maintain a composite power delivery at continuous rated power output at the high-side of the generator substation at a power factor within the range of 0.95 leading to 0.95 lagging, unless the CAISO has established a different power factor range that applies to all Asynchronous Generating Facilities on a comparable basis. This power factor range standard shall be dynamic and can be met using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors or reactors, or a combination of the two.

**25.4.2 Asynchronous Generating Facilities – GIA Technical Criteria**

The technical requirements for Asynchronous Generating Facilities set forth in Appendix H to Appendix LL to the CAISO tariff and Attachment 7 to Appendix MM to the CAISO tariff, or applicable successor requirements, apply to existing individual Generating Units to the extent the Generating Facility makes modifications that replace its Generating Unit(s) or any inverter(s), even where a new Interconnection Request is not required or the Interconnection Customer is subject to an earlier SGIA or LGIA. The same technical requirements will not apply where the Generating Facility replaces an inverter as part of routine maintenance or repairs due to malfunction or failure.

**25.5 Modifications to Generating Facilities**

Pursuant to the modification provisions of their GIAs, Generating Facilities that have achieved their Commercial Operation Date may make modifications to their Generating Facilities where the CAISO and the Participating TO are notified at least ninety (90) calendar days in advance of commencement of work and sufficient information is provided such that the CAISO and the Participating TO(s) have determined that Section 25.1 does not apply to the modification.

**25.5.1**

Prior to making any modification after the Generating Facility's Commercial Operation Date, the Generating Unit owner must first request that the CAISO evaluate whether Section 25.1 would apply to the modification. In response to the Generating Unit owner's request, the CAISO, in coordination with the affected Participating TO, will evaluate the proposed modification. The CAISO may engage the services of the applicable Participating TO to assess the modification. The CAISO will inform the Generating Unit owner in writing whether Section 25.1 would apply to the modification and therefore be denied. Costs incurred by the Participating TO and the CAISO (if any) shall be borne by the party making the request under Section 25.5, and such costs shall be included in any CAISO invoice for modification assessment activities.

**25.5.2**

The Generating Unit owner will provide the CAISO a $50,000 deposit for repowering requests, or a $30,000 deposit for all other modification assessments at the time the request is submitted. Except as provided below, any modification assessment will be concluded, and a response provided to the Generating Unit owner in writing, within sixty (60) calendar days from the date the CAISO receives all of the following: the Generating Unit owner's written notice to modify the project, technical data required to assess the request, and payment of the applicable deposit. If the modification assessment cannot be completed within that time period, the CAISO will notify the Generating Unit owner and provide an estimated completion date and an explanation of the reasons why additional time is required.

**25.5.3**

The Generating Unit owner will be responsible for the actual costs incurred by the CAISO and applicable Participating TO(s) in conducting the modification assessment. If the actual costs of the modification assessment are less than the deposit provided by the Generating Unit owner, the Generating Unit owner will be refunded the balance. If the actual costs of the modification assessment are greater than the deposit provided by the Generating Unit owner, the Generating Unit owner will pay the balance within thirty (30) days of being invoiced. The CAISO will coordinate the modification request with the Participating TO(s). The Participating TO(s) will invoice the CAISO for any assessment work within seventy-five (75) calendar days of completion of the assessment, and, within thirty (30) days of payment of the Participating TO(s) invoice, the CAISO will issue an invoice or refund to the Generating Unit owner,

as applicable, based upon such submitted Participating TO invoices and the CAISO's own costs for the assessment.

## 26. Transmission Rates and Charges

### 26.1 Access Charge

(a) **In General.** All Market Participants withdrawing Energy from the CAISO Controlled Grid shall be assessed Access Charges in accordance with this Section 26.1 and Appendix F, Schedule 3, except (1) as provided in Section 4.1 of Appendix I (Station Power Protocol) and (2) for storage resources, including Non-Generator Resources and Pumped-Storage Hydro Units, withdrawing Energy for later resale to the CAISO Markets or to provide Ancillary Services. The Access Charge shall comprise two components, which together shall be designed to recover each Participating TO's or Approved Project Sponsor's Transmission Revenue Requirement. The first component shall be the annual authorized revenue requirement, as approved by FERC, associated with (1) the transmission facilities and Entitlements turned over to the Operational Control of the CAISO by a Participating TO or (2) transmission facilities that are not yet in operation, but approved under Section 24, and assigned to an Approved Project Sponsor. The second component shall be based on the Transmission Revenue Balancing Account (TRBA), which shall be designed to flow through the Participating TO's Transmission Revenue Credits calculated in accordance with Section 5 of the TO Tariff and other credits identified in Sections 6 and 8 of Schedule 3 of Appendix F of the CAISO Tariff. Non-Subscribers scheduling transactions on transmission assets or Entitlements of a Subscriber Participating TO shall be assessed the Access Charge and Wheeling Access Charge, as applicable.

The Access Charges shall be paid by any UDC or MSS Operator that is serving Gross Load in a PTO Service Territory, and shall consist, where applicable, of a Regional Access Charge, and a Local Access Charge. The Regional Access Charge and the Local Access Charges shall each comprise two components, which together shall be designed to recover each Participating TO's Regional Transmission Revenue Requirement and Local Transmission Revenue Requirement, as applicable. The Regional Access Charge and the Local Access Charge for the applicable Participating

TO shall be paid by each UDC and MSS Operator based on its Gross Load in the PTO Service Territory.

(b) **Allocation of Transmission Revenue Requirement.** Each Participating TO or Approved Project Sponsor shall provide in its TO Tariff or Approved Project Sponsor Tariff filing with FERC an appendix to such filing that states the Participating TO's or Approved Project Sponsor's Regional Transmission Revenue Requirement, its Local Transmission Revenue Requirement (if applicable) and its Gross Load used in developing the rate. The allocation of each Participating TO's Transmission Revenue Requirement between the Regional Transmission Revenue Requirement and the Local Transmission Revenue Requirement shall be undertaken in accordance with Section 11 of Schedule 3 of Appendix F. To the extent necessary, each Participating TO shall make conforming changes to its TO Tariff. A Participating TO that is a UDC or MSS Operator to whom the Local Access Charge of a Non-Load-Serving Participating TO is assessed shall include these billed Local Access Charge amounts in its Local TRBA adjustment for its Local Access Charge, together with all other applicable Local TRBA adjustments. If an Approved Project Sponsor that is a Non-Load-Serving Participating TO has been assigned responsibility to construct and own a Local Transmission Facility because the CAISO concluded, pursuant to Section 24.4.10, that it was not reasonable to divide construction responsibility, the Approved Project Sponsor shall include any pre-operational cost recovery approved by FERC for the Local Facility in its Local Transmission Revenue Requirement, The division of the total revenue requirement associated with the facility between Regional and Local Transmission Revenue Requirements shall consistent with Appendix F, Schedule 3, Sections 11 and 12.

(c) **Assessment of Regional Access Charge.** The Regional Access Charge shall be paid to the CAISO by each UDC and MSS Operator based on its Gross Load connected to a Regional Transmission Facility in a PTO Service Territory, either directly or through intervening distribution facilities, but not through a Local Transmission Facility. The applicable Regional Access Charge shall be assessed by the CAISO as a charge for

transmission service under this CAISO Tariff, shall be determined in accordance with Schedule 3 of Appendix F, and shall include all applicable components of the Regional Access Charge set forth therein.

(d) **Assessment of Local Access Charge of Load-Serving Participating TO.** The Local Access Charge for each Load-Serving Participating TO is set forth in that Participating TO's TO Tariff. Each Participating TO shall charge for and collect the Local Access Charge, as provided in its TO Tariff, except that the CAISO shall charge for and collect the Local Access Charge of each Non-Load-Serving Participating TO that qualifies under this Section 26.1 and Appendix F, Schedule 3, Section 13, unless otherwise agreed by the affected Participating TOs. If a Participating TO that is also a UDC, MSS Operator, or Scheduling Coordinator serving End-Use Customers is using the Local Transmission Facilities of another Participating TO, such Participating TO shall also be assessed the Local Access Charge of the other Participating TO by such other Participating TO, or by the CAISO pursuant to Section 13 of Schedule 3 of Appendix F. The CAISO shall provide to the applicable Participating TO a statement of the amount of Energy delivered to each UDC and MSS Operator serving Gross Load that utilizes the Local Transmission Facilities of that Participating TO on a monthly basis. If a UDC or MSS Operator that is serving Gross Load in a PTO Service Territory has Existing Rights to use another Participating TO's Local Transmission Facilities, such entity shall not be charged the Local Access Charge for delivery of Energy to Gross Load for deliveries using the Existing Rights.

(e) **Standby Transmission Charges.** Each Participating TO shall recover Standby Transmission Revenues directly from the Standby Service Customers of that Participating TO through its applicable retail rates.

(f) **Assessment of Local Access Charge of Non-Load Serving Participating TOs.** Where a Non-Load-Serving Participating TO has Local Transmission Facilities, the CAISO shall assess the Local Access Charge for each project of that Non-Load-Serving Participating TO to the UDC or MSS Operator of each Participating TO that is directly

connected to one or more Local Transmission Facilities of that project, unless otherwise agreed by the affected Participating TOs. The Non-Load-Serving Participating TO shall calculate separately its Local Transmission Revenue Requirement for each individual transmission project that includes one or more Local Transmission Facilities. If the Non-Load-Serving Participating TO's Local Transmission Facilities projects are directly connected to the facilities of the same Participating TO(s), the Local Access Charge shall be calculated for the group of Local Transmission Facilities. A separate Local Access Charge shall apply based on the Local Transmission Revenue Requirement for the relevant project or projects of such Non-Load-Serving Participating TO divided by the Gross Load of all UDCs or MSS Operators of a Participating TO that are directly connected to the relevant Local Transmission Facility or group of facilities.

A Non-Load-Serving Participating TO must include any over- or under-recovery of its annual Local Transmission Revenue Requirement for the relevant project or group of projects in its Local TRBA adjustment for its Local Access Charge for the relevant project or group of projects pursuant to Section 13.1 of Schedule 3 of Appendix F.

(g) **Reporting Gross Load and Excess Behind the Meter Production.** In reporting Gross Load to the CAISO, each Scheduling Coordinator also will report the extent to which Excess Behind the Meter Production served that Gross Load. The value for Excess Behind the Meter Production will be reported as a separate value, and Scheduling Coordinators must include Load served by Excess Behind the Meter Production in reporting Gross Load. The CAISO will use Excess Behind the Meter Production values for informational purposes and to ensure Scheduling Coordinators report Gross Load accurately. The CAISO will publish Excess Behind the Meter Production values on OASIS.

(h) **Specification of the Non-Subscriber Usage Rate.** Each Subscriber Participating TO shall provide in its TO Tariff filing with FERC an appendix to such filing that specifies the Subscriber Participating TO's Non-Subscriber Usage Rate in $/MWh. To the extent necessary, each Subscriber Participating TO shall make conforming changes to its TO

Tariff.

(i) **Provision of Non-Subscriber Usage Payment Amounts.** The CAISO shall provide Non-Subscriber Usage Payment Amounts to Subscriber Participating TOs for Non-Subscriber use of each Subscriber Participating TO's transmission assets and Entitlements and Subscriber Encumbrances used to provide Subscriber Rights, in accordance with Schedule 3 of Appendix F.

### 26.1.1 Publicly Owned Electric Utilities Access Charge

Local Publicly Owned Electric Utilities whose transmission facilities are under CAISO Operational Control or who are Approved Project Sponsors shall file with the FERC their proposed Regional Transmission Revenue Requirements, and any proposed changes thereto, under procedures determined by the FERC to be applicable to such filings and shall give notice to the CAISO and to all Scheduling Coordinators of any such filing. A prospective New Participating TO that is a Local Publicly Owned Electric Utility shall submit its first proposed Regional Transmission Revenue Requirement to the FERC and the CAISO at the time the Local Publicly Owned Electric Utility submits its application to become a New Participating TO in accordance with the Transmission Control Agreement. Federal power marketing agencies whose transmission facilities are under CAISO Operational Control shall develop their Regional Transmission Revenue Requirement pursuant to applicable federal laws and regulations.

The procedures for public participation in a federal power marketing agency's ratemaking process are posted on the federal power marketing agency's website. Each federal power marketing agency shall also post on its website the Federal Register notices and FERC orders for rate making processes that impact the federal power marketing agency's Regional Transmission Revenue Requirement. At the time the federal power marketing agency submits its application to become a New Participating TO in accordance with the Transmission Control Agreement, it shall submit its first proposed Regional Transmission Revenue Requirement to the FERC and the CAISO.

### 26.1.2 Regional Access Charge Settlement

UDCs and MSS Operators serving Gross Load in a PTO Service Territory shall be charged on a monthly basis, in arrears, the applicable Regional Access Charge. The Regional Access Charge for a billing period is calculated by the CAISO as the product of the applicable Regional Access Charge, and Gross

Load connected to the facilities of the UDC and MSS Operator in the PTO Service Territory. The Regional Access Charge are determined in accordance with Schedule 3 of Appendix F. Subscriber Participating TOs will receive on a monthly basis, in arrears, the applicable Non-Subscriber Usage Payment Amounts for Non-Subscriber use of each Subscriber Participating TO's transmission assets and Entitlements and Subscriber Encumbrances used to provide Subscriber Rights, in accordance with Schedule 3 of Appendix F. These rates may be adjusted from time to time in accordance with Schedule 3 of Appendix F.

**26.1.3 Distribution of RAC Revenues**

The CAISO shall charge and credit, on a monthly basis, to Participating TOs and Approved Project Sponsors all Regional Access Charge revenues, and shall credit to Subscriber Participating TOs all Non-Subscriber Usage Payment Amounts, at the same time as other CAISO charges are settled and invoiced. Regional Access Charge revenues received with respect to the Regional Access Charge shall be distributed to Participating TOs and Approved Project Sponsors in accordance with Appendix F, Schedule 3, Section 10. Non-Subscriber Usage Payment Amounts will be provided to the Subscriber Participating TO in accordance with Appendix F, Schedule 3, Sections 10 and 15.

**26.1.4 Wheeling**

Any Scheduling Coordinator or other such entity submitting a Bid or Self-Schedule for a Wheeling transaction shall be charged the product of (i) the applicable Wheeling Access Charge, and (ii) the total hourly Schedules and awards of Wheeling in kilowatt-hours for each month at each Scheduling Point associated with that transaction, except as provided in Section 4.1 of Appendix I (Station Power Protocol). Schedules and awards that include Wheeling transactions shall be subject to any charges resulting from the CAISO Markets in accordance with Section 27.

**26.1.4.1 Wheeling Access Charge**

The Wheeling Access Charge shall be determined by the transmission ownership or Entitlement, less all Encumbrances, associated with the Scheduling Point at which the Energy exits the CAISO Controlled Grid. The Wheeling Access Charge for Scheduling Points that are not joint facilities shall be equal to the Regional Access Charge in accordance with Schedule 3 of Appendix F plus the applicable Local Access Charge if the Scheduling Point is on a Local Transmission Facility. Wheeling Access Charges shall not

apply for Wheeling under a bundled non-economy Energy coordination agreement of a Participating TO executed prior to July 9, 1996.

#### 26.1.4.2 Wheeling Over Joint Facilities

To the extent that more than one Participating TO owns or has Entitlement to transmission capacity, less all Encumbrances, exiting the CAISO Controlled Grid at a Scheduling Point, the Scheduling Coordinator shall be charged each month a rate for Wheeling at that Scheduling Point which reflects an average of the Wheeling Access Charge applicable to those Participating TOs, weighted by the relative share of such ownership or Entitlement to transmission capacity, less all Encumbrances, at such Scheduling Point. If the Scheduling Point is located at Regional Transmission Facilities, the Wheeling Access Charge will consist of a Regional Wheeling Access Charge component. Additionally, if the Scheduling Point is located at Local Transmission Facilities, the applicable Local Wheeling Access Charge component will be added to the Wheeling Access Charge. The methodology for developing the weighted average rate for Wheeling at each Scheduling Point is set forth in Appendix F, Schedule 3, Section 14.4.

#### 26.1.4.3 Disbursement of Wheeling Revenues

The CAISO shall collect and credit to Participating TOs and other entities as provided in Section 24.14.4 all Wheeling revenues at the same time as other CAISO charges and credits are settled and invoiced. For Wheeling revenues associated with CRRs allocated to Load Serving Entities outside the CAISO Balancing Authority Area, the CAISO shall credit to the Participating TOs and other entities as provided in Section 24.14.3 any excess prepayment amounts within thirty (30) days of the end of the term of the CRR Allocation. The CAISO shall provide to the applicable Participating TO and other entities as provided in Section 24.14.4 a statement of the aggregate amount of Energy delivered to each Scheduling Coordinator using such Participating TO's Scheduling Point to allow for calculation of Wheeling revenue and auditing of disbursements. Wheeling revenues shall be disbursed by the CAISO based on the following:

##### 26.1.4.3.1 Scheduling Point with All Participating TOs in the Same TAC Area

With respect to revenues received for the Regional Wheeling Access Charges for Wheeling to a Scheduling Point at which all of the facilities and Entitlements, less all Encumbrances, are owned by Participating TOs in the same TAC Area, Wheeling revenues shall be disbursed to each such

Participating TO based on the ratio of each Participating TO's Regional Transmission Revenue Requirement to the sum of all such Participating TOs' Regional Transmission Revenue Requirements. If the Scheduling Point is located at a Local Transmission Facility, revenues received with respect to Local Wheeling Access Charges for Wheeling to that Scheduling Point shall be disbursed to the Participating TOs that own facilities and Entitlements making up the Scheduling Point in proportion to their Local Transmission Revenue Requirements. Additionally, if a Participating TO has a transmission upgrade or addition that was funded by a Project Sponsor, the Wheeling revenue allocated to such Participating TO shall be disbursed as provided in Section 24.14.4.

#### 26.1.4.3.2 Scheduling Point without All Participating TOs in the Same TAC Area

With respect to revenues received for the Wheeling Access Charges for Wheeling to a Scheduling Point at which the facilities and Entitlements, less all Encumbrances, are owned by Participating TOs in different TAC Areas, Wheeling revenues shall be disbursed to such Participating TOs as follows. First, the revenues shall be allocated between such TAC Areas in proportion to the ownership and Entitlements of transmission capacity, less all Encumbrances, at the Scheduling Point of the Participating TOs in each such TAC Area. Second, the revenues thus allocated to each TAC Area shall be disbursed among the Participating TOs in the TAC Area in accordance with Section 26.1.4.3.1.

#### 26.1.4.3.3 Scheduling Point of a Subscriber Participating TO

With respect to Non-Subscriber Usage Payment Amounts provided for Wheeling to a Scheduling Point at which all of the facilities and Entitlements, less all Encumbrances, are owned by Subscriber Participating TOs, the Non-Subscriber Usage Payment Amounts shall be provided to Subscriber Participating TO based on the Non-Subscriber's usage of the Scheduling Point in accordance with Sections 10 and 15 of Schedule 3 of Appendix F. Additionally, if a Subscriber Participating TO has a transmission upgrade or addition that was funded by a Project Sponsor, the Wheeling revenue allocated to the Subscriber Participating TO shall be disbursed as provided in Section 24.14.4.

### 26.1.4.4 Information Required from Scheduling Coordinators

Scheduling Coordinators for Wheeling Out or Wheeling Through transactions to a Bulk Supply Point, or other point of interconnection between the CAISO Controlled Grid and the transmission system of a Non-Participating TO, that are located within the CAISO Balancing Authority Area, shall provide the CAISO, by

eight (8) Business Days after the Trading Day (T+8B), details of such transactions (other than transactions submitted as Self-Schedules pursuant to Existing Contracts) sorted by Bulk Supply Point or point of interconnection for each Settlement Period (including kWh for each transaction). The CAISO shall use such information, which may be subject to review by the CAISO, to settle and pay Wheeling Access Charges. The CAISO shall publish a list of the Bulk Supply Points or interconnection points to which this Section 26.1.4.4 applies together with details of the electronic form and procedure to be used by Scheduling Coordinators to submit the required information on the CAISO Website.

**26.1.4.5 Charges for Wheeling Through Priorities**

Scheduling Coordinators for customers with a monthly or daily Wheeling Through Priority awarded under Section 23 will be charged the applicable Wheeling Access Charge, as illustrated in the Business Practice Manual, based on the MW amount and total hours of the priority for the applicable period of the Wheeling Through Priority. For example, a Scheduling Coordinator with a monthly Wheeling Through Priority based on a (six) 6-day-by-sixteen (16)-hours power supply contract would be charged Wheeling Access Charges on a six (6)-day-by-sixteen (16)-hour basis for all applicable days during the entire month of the Wheeling Through Priority regardless of the Scheduling Coordinator's actual scheduled Priority Wheeling Throughs during that period. A Scheduling Coordinator with a one (1)-day Wheeling Through Priority based on an eight (8)-hour power supply contract would be charged Wheeling Access Charges for eight (8) hours regardless of the Scheduling Coordinator's actual scheduled Wheeling Throughs during that day. To the extent a Scheduling Coordinator with a Wheeling Through Priority schedules a Wheeling Through transaction in excess of its Wheeling Through Priority quantity or outside of the hours associated with its Wheeling Through Priority, such volumes are not covered by the Wheeling Through Priority and will be separately charged at the applicable Wheeling Access Charge based on the amount of scheduled energy delivered.

**26.1.5 Unbundled Retail Transmission Rates**

The Access Charge for unbundled retail transmission service provided to End-Users by a FERC-jurisdictional electric utility Participating TO shall be determined by the FERC and submitted to the CAISO for information only. For a Local Publicly Owned Electric Utility, retail transmission service rates shall be determined by the Local Regulatory Authority and submitted to the CAISO for information only.

### 26.2 CAISO Balancing Authority Area EDAM Recoverable Revenue and EDAM Access Charges

EDAM Recoverable Revenue for the CAISO Balancing Authority Area will be calculated as provided in Section 26.2.2 and allocated proportionally to EDAM Entity Balancing Authority Areas through the EDAM Entity EDAM Access Charge consistent with Section 33.26. EDAM Entity EDAM Access Charges assessed in accordance with Section 33.26 will include a proportional share of the EDAM Recoverable Revenue for the CAISO Balancing Authority Area, as provided in Section 26.2.1.1. CAISO EDAM Access Charges assessed in accordance with Section 33.26 will include the CAISO Balancing Authority Area's proportional share of EDAM Recoverable Revenue for EDAM Entity Balancing Authority Areas, as provided in Section 26.2.1.2.

#### 26.2.1 CAISO Participation as a Balancing Authority Area in the EDAM Area

**26.2.1.1** When deriving the EDAM Access Charge $/MWh rates for each EDAM Entity Balancing Authority Area in the manner provided for in Section 33.26.1.1, the CAISO will also include a proportional share of the EDAM Recoverable Revenue for the CAISO Balancing Authority Area, including true-up consistent with Section 33.26.1.2, when assessing EDAM Entity EDAM Access Charges in accordance with Section 33.26.3. Calculation of EDAM Recoverable Revenue for the CAISO Balancing Authority Area is further described in Section 26.2.2.

**26.2.1.2** When deriving the EDAM Access Charge $/MWh rates for the CAISO Balancing Authority Area in the manner provided for in Section 33.26.1.1, the CAISO will include the CAISO Balancing Authority Area's proportional share of EDAM Recoverable Revenue for each EDAM Entity Balancing Authority Area, including any associated true-ups as provided in Section 33.26.1.2, but will not include the EDAM Recoverable Revenue for the CAISO Balancing Authority Area when assessing the CAISO EDAM Access Charges in accordance with Section 33.26.3. CAISO EDAM Access Charges will be proportionality allocated to Scheduling Coordinators representing Gross Load in the CAISO Balancing Authority Area, as further described in Section 26.2.3.

#### 26.2.2 Calculation of EDAM Recoverable Revenue for the CAISO Balancing Authority Area

The CAISO will determine the EDAM Recoverable Revenue for the CAISO Balancing Authority Area based on the aggregate EDAM Recoverable Revenue requirements of each Participating Transmission Owner in the CAISO Balancing Authority Area, with such aggregate amount included as part of the

calculation of the EDAM Entity EDAM Access Charges consistent with Sections 26.2.1.1 and 33.26.1. Following the process and procedures in the Business Practice Manual, each Participating Transmission Owner recovering EDAM Recoverable Revenue must include its associated EDAM Recoverable Revenue requirement within its High Voltage Transmission Revenue Requirement, unless the Participating Transmission Owner demonstrates that a portion of its EDAM Recoverable Revenue requirement is associated with local facilities recoverable through its Low Voltage Transmission Revenue Requirement. The CAISO will distribute amounts received through the EDAM Entity EDAM Access Charges to each individual Participating Transmission Owner based on its individual portion of the EDAM Recoverable Revenue requirement in relation to the EDAM Recoverable Revenue requirements for all Participating Transmission Owners in the CAISO Balancing Authority Area, with each Participating Transmission Owner performing a true-up of its EDAM Recoverable Revenue requirement in the course of calculating the next year's EDAM Access Charges, consistent with Section 33.26.1.2.

**26.2.2.1 Participating Transmission Owner EDAM Recoverable Revenue Requirement Component 1**

Each Participating Transmission Owner may include the appropriate portion of the historical Wheeling Access Charge revenue foregone only for each Scheduling Point that corresponds with an EDAM Internal Intertie as component 1 of its EDAM Recoverable Revenue requirement in the manner further detailed in Section 33.26.2.1.1 and sub-sections set forth below.

**26.2.2.1.1** Each Participating Transmission Owner will calculate component 1 of its EDAM Recoverable Revenue requirement in the manner set forth in Section 33.26.2.1.1 based on the historical annual average of Wheeling Access Charge revenues for the three years leading up to its EDAM participation. Component 1 will include such Wheeling Access Charge revenues the Participating Transmission Owner reasonably expects to forgo at each Scheduling Point that corresponds with an EDAM Internal Intertie. Each Participating Transmission Owner's component 1 will be fixed for purposes of calculating the EDAM Recoverable Revenue for the CAISO Balancing Authority Area's participation, as provided in Section 33.26.2.1.1.

**26.2.2.1.2** Consistent with Section 33.26.2.1.2, component 1 EDAM Recoverable Revenue for the

CAISO Balancing Authority Area will be limited to not exceed the product of (a) the Wheeling Access Charge revenue at the Scheduling Points associated with the CAISO-Controlled Grid and (b) the percentage resulting from dividing exports from the CAISO Balancing Authority Area to the EDAM Area by the total exports from the CAISO Balancing Authority Area. If the component 1 EDAM Recoverable Revenue for the CAISO Balancing Authority Area would otherwise exceed this limit, then each Participating Transmission Owner will reduce its individual component 1 EDAM Recoverable Revenue to allow the CAISO Balancing Authority Area to meet the limit. Any such reduction in component 1 EDAM Recoverable Revenue will be calculated in proportion to the share of an individual Participating Transmission Owner's EDAM Recoverable Revenue requirement in relation to the EDAM Recoverable Revenue requirements for all Participating Transmission Owners in the CAISO Balancing Authority Area, following the processes and procedures in the Business Practice Manual.

**26.2.2.2 Participating Transmission Owner EDAM Recoverable Revenue Requirement Component 2**

Each Participating Transmission Owner may include the appropriate portion of costs resulting from reduced revenues associated with the release of transmission from Existing Contracts or forgone transmission sales on certain new Upgrades as component 2 of its EDAM Recoverable Revenue requirement in the manner further detailed in Section 33.26.2.2.1 and sub-sections set forth below.

**26.2.2.2.1** A Participating Transmission Owner with Existing Contracts will calculate its component 2 EDAM Recoverable Revenue requirement to include those revenue shortfalls associated with the release of transmission capacity resulting from expiring Existing Contracts that were not included in component 1, subject to the limitations set forth in Section 33.26.2.2.1. For each Existing Contract that is expiring, the Participating Transmission Owner will calculate the amounts to be included in component 2 of its EDAM Recoverable Revenue requirement in accordance with Section 33.26.2.2.1.

**26.2.2.2.2** A Participating Transmission Owner with new Upgrades will calculate its component 2 EDAM Recoverable Revenue requirement to include those revenue shortfalls associated with the facilities that (a) are energized after the CAISO Balancing Authority Area begins participation in EDAM; (b) increase transfer capability between the CAISO Balancing Authority Area and an EDAM Entity Balancing Authority Area, in the manner described in Section 33.26.2.2.2; and (c) otherwise meet the requirements of Section

33.26.2.2.2. For each new Upgrade, the Participating Transmission Owner will calculate the amounts to be included in component 2 of its EDAM Recoverable Revenue requirement in accordance with Section 33.26.2.2.2. A Participating Transmission Owner will utilize, as a proxy historical baseline for new Upgrades when establishing component 2 for the first year, the ratio of (a) historical Wheeling Access Charge revenue for the CAISO Balancing Authority Area to (b) total Transmission Revenue Requirements for the CAISO Balancing Authority Area. After the first year the new Upgrade is included in the EDAM Access Charge, the Participating Transmission Owner will true-up actual forgone revenues to projected forgone revenues in the following year's calculations of component 2 EDAM Recoverable Revenue requirement based on the proxy baseline, consistent with Section 33.26.2.2.2.

**26.2.2.3 Participating Transmission Owner EDAM Recoverable Revenue Requirement Component 3**

As provided in Section 33.26.2.3, in periods where the total volume of EDAM wheeling-through transactions exceeds the total net transfers (imports and exports) of the CAISO Balancing Authority Area, the CAISO will calculate the component 3 EDAM Recoverable Revenue for each Participating Transmission Owner by multiplying (a) its share of the excess volume, based on its individual Transmission Revenue Requirement in relation to the total Transmission Revenue Requirements for the CAISO Balancing Authority Area, by (b) the applicable Wheeling Access Charge rate. Each Participating Transmission Owner may include component 3 revenues as part of its EDAM Recoverable Revenue requirement, consistent with Section 33.26.2.3.

**26.2.3 CAISO EDAM Access Charges**

Any EDAM Entity Access Charges assessed to the CAISO Balancing Authority Area in accordance with Sections 26.2.1.2 and 33.26.3 will be sub-allocated to Scheduling Coordinators representing Gross Load in the CAISO Balancing Authority Area through the CAISO EDAM Access Charge. Each Scheduling Coordinator's proportional allocation of CAISO EDAM Access Charges will be based on its share of represented Gross Load in relation to the total Gross Load represented in the CAISO Balancing Authority Area during the assessment period. CAISO EDAM Access Charge revenue will be credited to EDAM Entity Balancing Authority Areas in the manner set forth in Section 33.26.3. Any difference between the amount of CAISO EDAM Access Charges and revenues will be reflected as debits or credits in the annual

true-up, as provided in Section 33.26.1.2.

### 26.3 Addition of New Facilities After CAISO Implementation

The costs of transmission facilities placed in service after the CAISO Operations Date shall be recovered consistent with the cost recovery determinations made pursuant to Appendix F, Schedule 3 and Section 24.

### 26.4 Effect on Tax-Exempt Status

Nothing in this Section 26 shall compel any Participating TO to violate any restrictions applicable to facilities financed with tax-exempt bonds or contractual restrictions and covenants regarding the use of transmission facilities.

### 26.5 [Not Used]

### 26.6 Location Constrained Resource Interconnection Facilities

The costs of an LCRIF shall be includable in a Participating TO's Regional Transmission Revenue Requirement. Any Participating TO that owns an LCRIF shall set forth in its TO Tariff a charge payable by LCRIGs connected to that facility. The charge shall require each LCRIG to pay on a going forward basis its pro rata share of the Transmission Revenue Requirement associated with the LCRIF, which shall be calculated based on the maximum capacity of the LCRIG relative to the capacity of the LCRIF. Each Participating TO shall credit its Regional TRR with revenues received from LCRIGs with respect to such charges either by recording such revenues in its TRBA or through another mechanism approved by FERC.

#### 26.6.1 LCRIFs that Become Network Facilities

If the construction of a new transmission facility or upgrade causes an LCRIF to become a network facility, then, effective on the in-service date of such new transmission facility or upgrade, the LCRIGs connected to the LCRIF shall not be required to pay charges described in Section 26.6. The LCRIGs shall remain responsible for charges due prior to that date.

## 27. CAISO Markets and Processes

In the Day-Ahead and Real-Time time frames the CAISO operates a series of procedures and markets that together comprise the CAISO Markets Processes. In the Day-Ahead time frame, the CAISO conducts the Market Power Mitigation (MPM) process, the Integrated Forward Market (IFM) and the Residual Unit Commitment (RUC) process. In the Real-Time time frame, the CAISO does the following: 1) accepts the Economic Bids and Self-Schedules used in the Real-Time Market procedures, 2) conducts the MPM process for the RTM, 3) accepts and awards HASP Block Intertie Schedules for Energy and Ancillary Services, 4) provides HASP Advisory Schedules for Energy and Ancillary Services for Bids that do not create a HASP Block Intertie Schedule, 5) conducts the Real-Time Unit Commitment (RTUC), 6) conducts the Short-Term Unit Commitment (STUC), 7) conducts the Fifteen Minute Market (FMM), and 8) conducts the five-minute Real-Time Dispatch (RTD). As appropriate, the CAISO Markets Processes utilize transmission and Security Constrained Unit Commitment and dispatch algorithms in conjunction with a Base Market Model adjusted as described in Sections 27.5.1 and 27.5.6 to optimally commit, schedule and Dispatch resources and determine marginal prices for Energy, Imbalance Reserves, Ancillary Services and RUC Capacity. Congestion Revenue Rights are available and entitle holders of such instruments to a stream of hourly payments or charges associated with revenue the CAISO collects or pays from the Marginal Cost of Congestion component of hourly Day-Ahead LMPs for Energy, Locational IRU Prices, and Locational IRD Prices. Through the operation of the CAISO Markets Processes the CAISO develops Day-Ahead Schedules, Imbalance Reserves Awards, Day-Ahead AS Awards and RUC Schedules, HASP Block Intertie Schedules for Energy and AS Awards, HASP Advisory Schedules, FMM Energy Schedules, and FMM Ancillary Services Awards, Real-Time AS Awards and Dispatch Instructions to ensure that sufficient supply resources are available in Real-Time to balance Supply and Demand and operate in accordance with Reliability Criteria. The CAISO Balancing Authority Area also is a Balancing Authority Area in the Market Area.

### 27.1 LMPs and Ancillary Services Marginal Prices

Through the workings of CAISO Market Processes, the CAISO produces: 1) Locational Marginal Prices as provided in Section 27.1.1 and its subparts, and as further provided in Appendix C; and 2) Ancillary Services Marginal Prices as provided below in Section 27.1.2, and its subparts.

### 27.1.1 Locational Marginal Prices for Energy

As further described in Appendix C, the LMP for Energy at any PNode is the marginal cost of serving the next increment of Demand at that PNode calculated by the CAISO through the operations of the CAISO Markets considering, as described further in the CAISO Tariff, among other things, modeled Transmission Constraints (including Remedial Action Schemes), transmission losses, the performance characteristics of resources, and Bids submitted by Scheduling Coordinators and as modified through the Locational Market Power Mitigation process. The LMP at any given PNode is comprised of four marginal cost components: the Marginal Energy Cost (MEC); Marginal Cost of Losses (MCL); Marginal Cost of Congestion (MCC); and Marginal Greenhouse Gas Cost. Through the IFM the CAISO calculates LMPs for each Trading Hour of the next Trading Day. Through the FMM the CAISO calculates distinct financially binding fifteen-minute LMPs for each of the four fifteen-minute intervals within a Trading Hour. Through the Real-Time Dispatch, the CAISO calculates five-minute LMPs for each of the twelve (12) five (5) minute Dispatch Intervals of each Trading Hour. The CAISO uses the FMM or RTD LMPs for Settlements of the Real-Time Market.

#### 27.1.1.1 Marginal Energy Cost

The Marginal Energy Cost (MEC) component of the LMP reflects the marginal cost of providing Energy from a designated reference Location. For this designated reference Location the CAISO will utilize a distributed Reference Bus whose constituent PNodes are weighted in proportions referred to as Reference Bus distribution factors. The MEC shall be the same throughout the Balancing Authority Area.

#### 27.1.1.2 Marginal Cost Losses

For all PNodes and Aggregated PNodes in the CAISO Balancing Authority Area, including Scheduling Points, the use of the Base Market Model adjusted as described in Sections 27.5.1 and 27.5.6 in the DAM and the RTM processes incorporates Transmission Losses. At each PNode or Aggregated PNode, the Marginal Cost of Losses is the Marginal Energy Cost multiplied by the Marginal Loss factor at that PNode or Aggregated PNode. The Marginal Cost of Losses at a Location (PNode or APNode) may be positive or negative depending on whether an increase in Demand at that Location marginally increases or

decreases the cost of Transmission Losses, using the distributed Reference Bus to balance it. The Marginal Loss factors are determined through a process that calculates the sensitivities of Transmission Losses with respect to changes in injection at each Location in the FNM. For CAISO Controlled Grid facilities outside the CAISO Balancing Authority Area, the CAISO shall assess the cost of Transmission Losses to Scheduling Coordinators using each such facility based on the quantity of losses agreed upon with the neighboring Balancing Authority multiplied by the LMP at the PNode of the Transmission Interface with the neighboring Balancing Authority Area. The MCLs calculated for Locations within the CAISO Balancing Authority Area shall not reflect the cost of Transmission Losses on those facilities.

#### 27.1.1.3 Marginal Cost of Congestion

The Marginal Cost of Congestion at a PNode reflects the net contribution of the Shadow Prices of the binding Transmission Constraints (including Remedial Action Schemes) at the optimal solution, weighted by the corresponding Power Transfer Distribution Factors (PTDFs), as described in Appendix C. The Marginal Cost of Congestion for a Transmission Constraint may be positive or negative depending on whether a power injection at that Location marginally increases or decreases Congestion.

##### 27.1.1.3.1 Marginal GHG Cost

The Marginal GHG Cost at a PNode reflects the allocation of a GHG Transfer for a GHG Regulation Area as described in Appendix C. The Marginal GHG Cost for a GHG Regulation Area may be positive or zero depending on the resources receiving an attribution of GHG Transfers for that GHG Regulation Area.

#### 27.1.1.4 Disconnected Pricing Node or Aggregated Pricing Node

In the event that a Pricing Node or Aggregated Pricing Node becomes electrically disconnected from the market model during a CAISO Market run, the LMP, including the Marginal Energy Cost, Marginal Cost of Congestion, Marginal Cost of Losses, and Marginal Greenhouse Gas Cost at the closest electrically connected Pricing Node will be used as the LMP at the affected location. The CAISO will include the impact of the disconnected Pricing Node on any modeled Remedial Action Scheme in determining the LMP.

### 27.1.2 Ancillary Service Prices

#### 27.1.2.1 Ancillary Service Marginal Prices – Sufficient Supply

As provided in Section 8.3, Ancillary Services are procured and awarded through the IFM and the FMM,

and the CAISO also accepts and awards HASP Block Intertie Schedules for Ancillary Services in HASP. Ancillary Services awarded through HASP are made financially binding in the FMM. The IFM calculates hourly Day-Ahead Ancillary Service Awards and establishes Ancillary Service Marginal Prices (ASMPs) for the accepted Regulation Up, Regulation Down, Spinning Reserve and Non-Spinning Reserve Bids. The IFM co-optimizes Energy, Imbalance Reserves, and Ancillary Services subject to resource, network and regional constraints. In the HASP, the CAISO accepts and awards Ancillary Services from HASP Block Intertie Schedules for the next Trading Hour as described in Section 34.2. The CAISO calculates the price for the settlement of Ancillary Services accepted and awarded in HASP based on the FMM ASMP as described herein and further described in Section 34.4. The FMM process that is performed every fifteen (15) minutes establishes fifteen (15) minute Ancillary Service Schedules, Awards, and prices for the upcoming quarter of the given Trading Hour. ASMPs are determined by first calculating Shadow Prices of Ancillary Services for each Ancillary Service type and the applicable Ancillary Services Regions. The Ancillary Services Shadow Prices are produced as a result of the co-optimization of Energy and Ancillary Services through the IFM and the Real-Time Market, subject to resource, network, and requirement constraints. The Ancillary Services Shadow Prices represent the marginal cost of the relevant binding regional constraints at the optimal solution, or the reduction of the combined Energy and Ancillary Service procurement cost associated with a marginal relaxation of that constraint. If the constraint for an Ancillary Services Region is not binding, the corresponding Ancillary Services Shadow Price in the Ancillary Services Region is zero (0). During periods in which supply is sufficient, the ASMP for a particular Ancillary Service type and Ancillary Services Region is then the sum of the Ancillary Services Shadow Prices for the specific type of Ancillary Service and all the other types of Ancillary Services for which the subject Ancillary Service can substitute, as described in Section 8.2.3.5, for the given Ancillary Service Region and all the other Ancillary Service Regions that include that given Ancillary Service Region. During periods in which supply is insufficient, the ASMP for a particular Ancillary Service type and Ancillary Services Region will reflect the Scarcity Reserve Demand Curve Values set forth in Section 27.1.2.3.

#### 27.1.2.2 Opportunity Cost in ASMP

The Ancillary Services Shadow Price, which, as described above, is a result of co-optimizing procurement

of Energy, Imbalance Reserves, and Ancillary Services, includes the foregone opportunity cost of the marginal resource, if any, for not providing Energy, Imbalance Reserves, or Ancillary Services the marginal resource is capable of providing in the relevant market. The ASMPs determined by the IFM or FMM optimization process for each resource whose Ancillary Service Bid is accepted will be no lower than the sum of (i) the Ancillary Service capacity Bid price submitted for that resource, and (ii) the foregone opportunity cost of Energy or Imbalance Reserves in the IFM or Energy and FRP in the FMM for that resource. The foregone opportunity cost of Energy or Imbalance Reserves for this purpose is measured as the positive difference between the price in the relevant market for the given product at the resource's Pricing Node and the resource's Bid price in the relevant market for the given product. If the Bid price for the resource is higher than the LMP, the opportunity cost measured for this calculation is $0. If a resource has submitted an Ancillary Service Bid but no Energy Bid and this Tariff obligates the resource to submit Bids for Energy in the Day-Ahead Market, then the CAISO inserts an Energy Bid at its Default Energy Bid and the CAISO calculates its opportunity cost based on that Default Energy Bid. If a resource has submitted an Ancillary Service Bid but no Energy Bid and is not under an obligation to offer Energy in the Day-Ahead Market, its Energy opportunity cost measured for this calculation is $0 since it cannot be dispatched for Energy. For Self-Scheduled Hourly Block Bids for Ancillary Services awarded in the Real-Time Market, the opportunity cost measured for this purpose is $0 because, as provided in Section 34.2.3, the CAISO cannot Schedule Energy in the Real-Time Market from the Energy Bid under the same Resource ID as the submitted Ancillary Service Bid.

#### 27.1.2.3 Ancillary Services Pricing – Insufficient Supply

The CAISO will develop Scarcity Reserve Demand Curves as further described in an applicable Business Practice Manual that will apply to both the Day-Ahead Market and the Real-Time Market during periods in which supply is insufficient to meet the minimum procurement requirements for Regulation Down, Non-Spinning Reserve, Spinning Reserve and Regulation Up as required by Section 8.3. The CAISO shall review the performance of the Scarcity Reserve Demand Curves and assess whether changes are necessary every three (3) years or more frequently, if the CAISO determines more frequent reviews are appropriate. When supply is insufficient to meet any of the minimum procurement requirements for Regulation Down, Non-Spinning Reserve, Spinning Reserve and Regulation Up, the Scarcity Reserve

Demand Curve Values for the affected Ancillary Services, as set forth in this Section 27.1.2.3 and as reflected in the Scarcity Demand Curve Value described in Section 27.1.2.3.5, shall apply to determine the Shadow Prices of the affected Ancillary Services. ASMPs for an Ancillary Service type will not sum these Shadow Prices across Ancillary Service Regions, if there is insufficient supply for the Ancillary Service type in both the Expanded System Region and an Ancillary Service Sub-Region.

#### 27.1.2.3.1 Regulation Down Pricing – Insufficient Supply

When the shortage of supply to meet the Regulation Down requirement in the Expanded System Region or in an Ancillary Service Sub-Region is less than or equal to thirty-two (32) MW, the Scarcity Reserve Demand Curve Value for Regulation Down shall be fifty (50) percent of the Soft Energy Bid Cap or the Hard Energy Bid Cap, as applicable based on the conditions specified in Sections 27.4.3.2 and 27.4.3.3, as specified in the tables in Section 27.1.2.3.5. When the shortage of supply to meet the Regulation Down requirement in the Expanded System Region is less than or equal to eighty-four (84) MW but greater than thirty-two (32) MW, the Scarcity Reserve Demand Curve Value for Regulation Down shall be sixty (60) percent of the Soft Energy Bid Cap of the Hard Energy Bid Cap, as applicable based on the conditions specified in Section 27.4.3.2 and 27.4.3.3, as specified in the tables in Section 27.1.2.3.5. When the shortage of supply to meet the Regulation Down requirement in the Expanded System Region is greater than eighty-four (84) MW, the Scarcity Reserve Demand Curve Value for Regulation Down shall be seventy (70) percent of the Soft Energy Bid Cap or the Hard Energy Bid Cap, as applicable based on the conditions specified in Section 27.4.3.2 and 27.4.3.3, as specified in the tables in Section 27.1.2.3.5.

#### 27.1.2.3.2 Non-Spinning Reserve Pricing – Insufficient Supply

When the shortage of supply to meet the Non-Spinning Reserve requirement in the Expanded System Region or in an Ancillary Service Sub-Region is less than or equal to seventy (70) MW, the Scarcity Reserve Demand Curve Value for Non-Spinning Reserve shall be fifty (50) percent of the Soft Energy Bid Cap or the Hard Energy Bid Cap, as applicable based on the conditions specified in Section 27.4.3.2 and 27.4.3.3, as specified in the tables in Section 27.1.2.3.5. When the shortage of supply to meet the Non-Spinning Reserve requirement in the Expanded System Region is less than or equal to two-hundred ten (210) MW but greater than seventy (70) MW, the Scarcity Reserve Demand Curve Value for Non-

Spinning Reserve shall be sixty (60) percent of the Soft Energy Bid Cap or the Hard Energy Bid Cap, as applicable based on the conditions specified in Sections 27.4.3.2 and 27.4.3.3, as specified in the tables in Section 27.1.2.3.5. When the shortage of supply to meet the Non-Spinning Reserve requirement in the Expanded System Region is greater than two-hundred ten (210) MW, the Scarcity Reserve Demand Curve Value for Non-Spinning Reserve shall be seventy (70) percent of the Soft Energy Bid Cap or the Hard Energy Bid Cap, as applicable based on the conditions specified in Section 27.4.3.2 and 27.4.3.3, as specified in the tables in Section 27.1.2.3.5.

**27.1.2.3.3 Spinning Reserve Pricing – Insufficient Supply**

The Scarcity Reserve Demand Curve Value for Spinning Reserve in the Expanded System Region or in an Ancillary Service Sub-Region shall be ten (10) percent of the Soft Energy Bid Cap or the Hard Energy Bid Cap, as applicable based on the conditions specified in Section 27.4.3.2 and 27.4.3.3, as specified in the tables in Section 27.1.2.3.5.

**27.1.2.3.4 Regulation Up Pricing – Insufficient Supply**

The Scarcity Reserve Demand Curve Value for Regulation Up in the Expanded System Region or in an Ancillary Service Sub-Region shall be twenty (20) percent of the Soft Energy Bid Cap or the Hard Energy Bid Cap, as applicable based on the conditions specified in Section 27.4.3.2 and 27.4.3.3, as specified in Section 27.1.2.3.5.

**27.1.2.3.5 Scarcity Demand Curve Value Tables**

| **Scarcity Demand Curve Value ($/MWh) When Energy Pricing Parameters based on Soft Energy Bid Cap as Specified In Section 27.4.3.2** | | | | |
|---|---|---|---|---|
| | **Percent of Soft Energy Bid Cap** | | | |
| **Reserve** | **Expanded System Region** | **System Region and Sub-Region** | **Expanded System Region** | **System Region and Sub-Region** |
| Regulation Up | 20% | 20% | $200 | $200 |
| Spinning | 10% | 10% | $100 | $100 |
| Non-Spinning Shortage > 210 MW | 70% | 70% | $700 | $700 |
| Non-Spinning Shortage > 70 & ≤ 210 MW | 60% | 60% | $600 | $600 |
| Non-Spinning Shortage ≤ 70 MW | 50% | 50% | $500 | $500 |
| **Upward Sum** | **100%** | **100%** | **$1000** | **$1000** |

| | | | | |
|---|---|---|---|---|
| Regulation Down Shortage > 84 MW | 70% | 70% | $700 | $700 |
| Regulation Down Shortage > 32 & ≤ 84 MW | 60% | 60% | $600 | $600 |
| Regulation Down Shortage ≤ 32 MW | 50% | 50% | $500 | $500 |

| **Scarcity Demand Curve Value ($/MWh) When Energy Pricing Parameters based on Hard Energy Bid Cap as Specified In Section 27.4.3.3** | | | | |
|---|---|---|---|---|
| | | | | |
| | **Percent of Hard Energy Bid Cap** | | | |
| **Reserve** | **Expanded System Region** | **System Region and Sub-Region** | **Expanded System Region** | **System Region and Sub-Region** |
| Regulation Up | 20% | 20% | $400 | $400 |
| Spinning | 10% | 10% | $200 | $200 |
| Non-Spinning Shortage > 210 MW | 70% | 70% | $1,400 | $1,400 |
| Non-Spinning Shortage > 70 & ≤ 210 MW | 60% | 60% | $1,200 | $1,200 |
| Non-Spinning Shortage ≤ 70 MW | 50% | 50% | $1,000 | $1,000 |
| **Upward Sum** | **100%** | **100%** | **$2,000** | **$2,000** |
| Regulation Down Shortage > 84 MW | 70% | 70% | $1,400 | $1,400 |
| Regulation Down Shortage > 32 & ≤ 84 MW | 60% | 60% | $1,200 | $1,200 |
| Regulation Down Shortage ≤ 32 MW | 50% | 50% | $1,000 | $1,000 |

#### 27.1.2.4 Opportunity Cost in LMPs for Energy

In the event that there is insufficient supply to meet an Ancillary Services procurement requirement in a particular Ancillary Service Region or Sub-Region, the Ancillary Services Shadow Prices will rise automatically to the Scarcity Reserve Demand Curve Values in that Ancillary Service Region or Sub-Region. LMPs for Energy will reflect the forgone opportunity cost of the marginal resource, if any, for not providing other products procured in the IFM.

### 27.1.3 Regulation Mileage Clearing Price

As provided in Section 8.3, Regulation Up and Regulation Down are procured and awarded through the

Day Ahead Market and Real-Time Market. The CAISO will calculate uniform Mileage clearing prices for Regulation Up and Regulation Down, respectively, based on the intersection of the demand curve for Mileage requirements and supply curve for Bid-in Mileage. These uniform Mileage clearing prices shall apply to the CAISO Expanded System Region.

The CAISO will calculate a System Mileage Multiplier for Regulation Up by summing the total Mileage provided by all resources with Regulation Up awards each week for a corresponding hour of each Trading Day and then dividing that sum by the Regulation Up capacity procured for that week in that same hour. The CAISO will calculate a System Mileage Multiplier for Regulation Down by summing the total Mileage provided by all resources with Regulation Down awards each week for a corresponding hour of each Trading Day and then dividing that sum by the Regulation Down capacity procured for that week in that same hour. For purposes of these calculations, the CAISO shall calculate each week using a rolling seven-day period. The CAISO will use the System Mileage Multiplier to assess Mileage requirements for Regulation Up and Regulation Down capacity.

The CAISO will calculate resource specific Mileage multipliers and apply these multipliers to resources' Bid-in Regulation Up and Regulation Down capacity. The resource specific Mileage multipliers will reflect resources' Historic Regulation Performance Accuracy and certified 10-minute ramp capability. The CAISO will apply resource specific Mileage multipliers to Bid-in Regulation Up and Regulation Down capacity to determine the expected Mileage. In the event that an existing certified resource has not provided Regulation over the prior thirty (30) days, the CAISO will use the resource's last Historic Regulation Performance Accuracy as an adjustment factor. For newly certified or recertified resources, the CAISO will use the simple average Historic Regulation Performance Accuracy for all resources from the prior thirty (30) days as an initial adjustment factor. Upon request, the CAISO will provide a resource with historical data used to derive its Mileage multipliers. A resource will receive a Mileage award that is at least as much as its self-provided or awarded Regulation Up or Regulation Down capacity, but not more than the product of its resource specific mileage multiplier and its self-provided or awarded capacity. The CAISO may adjust resource specific Mileage multipliers to align a resource's awarded Mileage with the resource's expected Mileage. The CAISO will use Mileage awards to determine a uniform clearing mileage price for Regulation Up and Regulation Down, but the Mileage quantity awards will not be

financially binding. Resources will receive payments based upon Instructed Mileage as calculated pursuant to Section 11.10.1.7. The CAISO will publish on OASIS the Mileage clearing prices for each hour of the Day-Ahead Market and each fifteen (15) minute period in Real-Time for the Trading Day.

### 27.1.4 Locational IRU Price and Locational IRD Price

As further described in Appendix C, the Locational IRU Price or Locational IRD Price at any PNode is the marginal cost of procuring the next increment of IRU or IRD, respectively, at that PNode calculated by the CAISO through the operations of the CAISO Markets considering, as described further in the CAISO Tariff, among other things, modeled Transmission Constraints (including Remedial Action Schemes), the performance characteristics of resources, and Imbalance Reserves Bids submitted by Scheduling Coordinators as modified by the IFM MPM. The Locational IRU Price or Locational IRD Price at a PNode is comprised of two marginal cost components: (1) the Shadow Price of the IRU or IRD procurement constraint for the relevant BAA in the EDAM Area; and (2) the MCC for IRU or IRD.

### 27.1.5 Locational RCU Price and Locational RCD Price

As further described in Appendix C, the Locational RCU Price or Locational RCD Price at any PNode is the marginal cost of procuring the next increment of RCU or RCD, respectively, at that PNode calculated by the CAISO through the operations of the CAISO Markets considering, as described further in the CAISO Tariff, among other things, modeled Transmission Constraints (including Remedial Action Schemes), the performance characteristics of resources, and RUC Availability Bids submitted by Scheduling Coordinators as modified by the RUC MPM. The Locational RCU Price or Locational RCD Price at a PNode is comprised of three marginal cost components: (1) the Shadow Price of the RUC power balance constraint for the relevant BAA in the EDAM Area; (2) the Marginal Cost of Losses; and (3) the MCC for RCU or RCD.

## 27.2 Load Aggregation Points (LAP)

The CAISO shall create Load Aggregation Points and shall maintain Default LAPs at which all Demand shall Bid and be settled, except as provided in Sections 27.2.1 and 30.5.3.2.

### 27.2.1 Metered Subsystems

The CAISO shall define specific MSS LAPs for each MSS. The MSS LAP shall be made up of the PNodes within the MSS that have Load served off of those Nodes. The MSS LAPs have unique Load

Distribution Factors that reflect the distribution of the MSS Demand to the network Nodes within the MSS. These MSS LAPs are separate from the Default LAPs, and the Load Distribution Factors of the Default LAP do not reflect any MSS Load. As further provided in Sections 11.2.3 and 11.5, MSS Demand is settled either at the price at the Default LAP for MSS Operators that have selected gross Settlement or at the price at the applicable MSS LAP for MSS Operators that have selected net Settlement.

### 27.2.2 Determination of LAP Prices

#### 27.2.2.1 IFM LAP Prices

The IFM LAP Price for Settlement of Demand at any LAP for a given Trading Hour is the price as produced by the IFM optimization run based on the distribution of system Load at the constituent Pricing Nodes within the applicable LAP and is determined by the effectiveness of the Load within the LAP in relieving a Transmission Constraint within the effectiveness threshold as specified in Section 27.4.3.6.

#### 27.2.2.2 Real-Time Market LAP Prices

The FMM LAP Price and RTD LAP Price for a fifteen-minute FMM interval and five minute Dispatch Interval is the price as produced by the FMM and RTD optimization runs, respectively, based on the distribution of system Load at the constituent Pricing Nodes within the applicable LAP and is determined by the effectiveness of the Load within the LAP in relieving a Transmission Constraint within the effectiveness threshold as specified in Section 27.4.3.6. The Hourly Real-Time LAP Price is then determined for Settlement purposes as further described in Section 11.5.2.2.

## 27.3 Trading Hubs

The CAISO shall create and maintain Trading Hubs, including Existing Zone Generation Trading Hubs, to facilitate bilateral Energy transactions in the CAISO Balancing Authority Area. Each Trading Hub will be based on a pre-defined set of PNodes. The CAISO Market run will produce a Trading Hub price for each Settlement Period or Settlement Interval that is derived from the CAISO Market optimization based on the effectiveness of the Trading Hub aggregation in relieving congestion. The Trading Hub price will reflect congestion on Transmission Constraints whose effectiveness factor for the respective Trading Hub is greater than the effectiveness threshold specified in Section 27.4.3.6. There are three Existing Zone Generation Trading Hubs, which correspond geographically to the three Existing Zones. Each Existing Zone Generation Trading Hub is comprised of an aggregation of PNodes for Generating Units within the

corresponding Existing Zone. The specification of seasons will be identical to the seasons used in the annual CRR Allocation, and the annual calculation of Existing Zone Generation Trading Hub weights will be performed in a timely manner to be coordinated with the annual CRR Allocation and CRR Auction processes.

### 27.4 Optimization in the CAISO Market Processes

The CAISO runs the Day-Ahead Market and Real-Time Market and their component CAISO Markets Processes utilizing a set of integrated optimization programs, including SCUC and SCED.

#### 27.4.1 Security Constrained Unit Commitment

The CAISO uses SCUC to run the MPM process associated with the DAM and the RTM. SCUC is conducted over multiple varying intervals to commit and schedule resources as follows: (1) in the Day-Ahead time frame, to meet Demand reflected in Bids submitted in the Day-Ahead Market and considered in the MPM process and IFM, and to procure AS in the IFM; (2) to meet the CAISO Forecast of CAISO Demand in the RUC, HASP, STUC and FMM, and in the MPM process utilized in the HASP and RTM; and (3) to procure any incremental AS in the RTM, and (4) to procure Flexible Ramping Product in the RTM. In the Day-Ahead MPM, IFM and RUC processes, the SCUC commits resources over the twenty-four (24) hourly intervals of the next Trading Day. In the FMM, which runs every fifteen (15) minutes and commits resources for the RTM, the SCUC optimizes over a number of 15-minute intervals corresponding to the Trading Hours for which the Real-Time Markets have closed. The Trading Hours for which the Real-Time Markets have closed consist of (a) the Trading Hour in which the applicable run is conducted and (b) all the fifteen-minute intervals of the entire subsequent Trading Hour. In the HASP, which runs once per hour, the SCUC: (1) accepts and awards HASP Block Intertie Schedules for Energy and Ancillary Services, respectively; (2) provides HASP Advisory Schedules to Economic Hourly Block Bids with Intra-Hour Option that will change for economic reasons at most once in the Trading Hour; and (3) provides HASP Advisory Schedules to all other participants in the RTM. In the STUC, which runs once an hour, the SCUC commits resources over the last fifteen (15) minutes of the imminent Trading Hour and the entire next four Trading Hours. The CAISO will commit Extremely Long Start Resources, for which commitment in the DAM does not provide sufficient time to Start-Up and be available to supply Energy during the next Trading Day as provided in Section 31.7.

#### 27.4.1.1 Timing of Unit Commitment Instructions

For the applicable market intervals of any given CAISO Markets Process, the associated SCUC optimization will typically commit resources having different Start-Up Times, not all of which need to be started up immediately upon completion of that CAISO Markets Process. The CAISO may defer issuing a Start-Up Instruction to a resource that can be started at a later time and still be available to supply Energy at the time the CAISO Markets Process indicated it would be needed. The CAISO shall re-evaluate the need to commit such resources in a subsequent CAISO Markets Process based on the most recent forecasts and other information about system conditions.

### 27.4.2 Security Constrained Economic Dispatch

SCED is the optimization engine used to run the RTD to determine the optimal five-minute Dispatch Instructions throughout the Trading Hour consistent with resource constraints and Transmission Constraints within the CAISO Balancing Authority Area. In any given hour, the Real-Time Economic Dispatch of the Real-Time Market runs every five (5) minutes during which the SCED produces binding Dispatch Instructions for the immediately subsequent five-minute interval. For the applicable five-minute time period, through its SCED, the CAISO produces LMPs at each PNode that are used for Settlements as described in Section 11.5.

### 27.4.3 CAISO Markets Scheduling and Pricing Parameters

#### 27.4.3.1 Generally

The SCUC and SCED optimization software for the CAISO Markets utilize a set of configurable scheduling and pricing parameters to enable the software to reach a feasible solution and set appropriate prices in instances where Effective Economic Bids are not sufficient to allow a feasible solution. The scheduling parameters specify the criteria for the software to adjust Non-priced Quantities when such adjustment is necessary to reach a feasible solution. The scheduling parameters are configured so that the SCUC and SCED software will utilize Effective Economic Bids as far as possible to reach a feasible solution, and will skip Ineffective Economic Bids and perform adjustments to Non-priced Quantities pursuant to the scheduling priorities for Self-Schedules specified in Sections 31.4 and 34.12. The scheduling parameters utilized for relaxation of enforced internal and Intertie Transmission Constraints are specified in Section 27.4.3.2.1 and 27.4.3.3.1. The pricing parameters specify the criteria for

establishing market prices in instances where one or more Non-priced Quantities are adjusted by the Market Clearing software. The pricing parameters are specified in Sections 27.4.3.2.2, 27.4.3.2.3, 27.4.3.2.4, 27.4.3.3.2, 27.4.3.3.3, and 27.4.3.3.4. The complete set of scheduling and pricing parameters used in all CAISO Markets is maintained in the Business Practice Manuals.

#### 27.4.3.2 Parameters Related to Soft Energy Bid Cap

For CAISO Market intervals for which the conditions specified in Section 27.4.3.3 do not apply, the CAISO will apply the parameters specified in Sections 27.4.3.2.1 through 27.4.3.2.4, 31.4, 34.12, and the Ancillary Services Scarcity Prices in Section 27.1.2.3.5.

##### 27.4.3.2.1 Scheduling Parameters for Transmission Constraint Relaxation

Scheduling parameters, or penalty prices, are used to determine when the SCUC and SCED software will relax an enforced Transmission Constraint rather than adjust Supply or Demand bids or Non-priced Quantities as specified in Sections 31.3.1.3, 31.4 and 34.12 to relieve Congestion on the constrained facility. In the IFM, the enforced internal and Intertie Transmission Constraint scheduling parameter is set to $5,000 per MWh. The corresponding scheduling parameter in RUC is set to $1,250 per MWh for internal Transmission Constraints and $3,200 for Intertie Transmission Constraints. In the RTM, this scheduling parameter is set to $1,500 per MWh for internal Transmission Constraints and $2,900 MWh for Intertie Transmission Constraints. The effect of this scheduling parameter is that if the optimization can re-dispatch resources to relieve Congestion on a Transmission Constraint or below the applicable price per MWh, the Market Clearing software will utilize such re-dispatch; but if the cost exceeds the applicable price per MWh, the market software will relax the Transmission Constraint.

##### 27.4.3.2.2 Pricing Parameters for Transmission Constraint Relaxation

For the purpose of determining how the relaxation of a Transmission Constraint will affect the determination of prices in the IFM and RTM, the pricing parameter of the Transmission Constraint being relaxed is set to the Soft Energy Bid Cap. In the case of Contingency-related Transmission Constraints, the CAISO will determine the amount of relaxation required to clear the market using the most limiting condition among the applicable Contingencies and the base case. The CAISO will establish prices based on the parameter pricing specified in this Section as it applies to the most limiting Contingency and base case. The corresponding pricing parameter used in the RUC is set at the maximum RUC Availability Bid

price specified in Section 39.6.1.2.

#### 27.4.3.2.3 Insufficient Supply to Meet Self-Schedule Demand in IFM

In the IFM, when available supply is insufficient to meet all self-scheduled Demand, self-scheduled Demand is reduced to the point where the available supply is sufficient to clear the market. For price-setting purposes in such cases, the cleared self-scheduled Demand is deemed to be willing to pay the Soft Energy Bid Cap price.

#### 27.4.3.2.4 Insufficient Supply to Meet CAISO Forecast of CAISO Demand in the RTM

In the RTM, in the event that Energy offers are insufficient to meet the CAISO Forecast of CAISO Demand, the SCUC and SCED software will relax the system energy-balance constraint. In such cases the software utilizes a pricing parameter set to the Soft Energy Bid Cap for price-setting purposes.

### 27.4.3.3 Parameters Related to Hard Energy Bid Cap

(a) **Integrated Forward Market and Real-Time Market.** The scheduling and pricing parameters in Sections 27.4.3.3.1 through 27.4.3.3.4, 31.4, and 34.12 will apply for all Trading Hours of the IFM and Real-Time Market for the same Trading Day if the CAISO has accepted a Bid with an Energy Bid price that exceeds the Soft Energy Bid Cap pursuant to Section 30.7.12, or the Maximum Import Bid Price exceeds the Soft Energy Bid Cap for any Trading Hour of the IFM.

(b) **Real-Time Market Only.** If the CAISO has not accepted a Bid with an Energy Bid price that exceeds the Soft Energy Bid Cap pursuant to Section 30.7.12, or the Maximum Import Bid Price does not exceed the Soft Energy Bid Cap for any Trading Hour of the IFM for the same Trading Day, the parameters in Sections 27.4.3.3.1 through 27.4.3.3.4, 31.4, and 34.12 will apply

(i) in any Trading Hour of the Real-Time Market for which the CAISO has accepted a Bid with an Energy Bid price that exceeds the Soft Energy Bid Cap pursuant to Section 30.7.12, or the Maximum Import Bid Price exceeds the Soft Energy Bid Cap; and

(ii) for all intervals of the applicable Real-Time Market run for which these conditions apply in at least one interval of the applicable market run.

#### 27.4.3.3.1 Scheduling Parameters for Transmission Constraint Relaxation

Scheduling parameters or penalty prices, are used to determine when the SCUC and SCED software will relax an enforced Transmission Constraint rather than adjust Supply or Demand bids or Non-priced Quantities as specified in Sections 31.3.1.3, 31.4 and 34.12 to relieve Congestion on the constrained facility. In the IFM, the enforced internal and Intertie Transmission Constraint scheduling parameter is set to $10,000 per MWh. The corresponding scheduling parameter in RUC is set to $1,250 for internal Transmission Constraints and $3,200 for Intertie Transmission Constraints. In the RTM, this scheduling parameter is set to $3,000 per MWh for internal Transmission Constraints and $5,800 for Intertie Transmission Constraints. The effect of this scheduling parameter is that if the optimization can re-dispatch resources to relieve Congestion on a Transmission Constraint at or below the applicable price per MWh, the Market Clearing software will utilize such re-dispatch; but if the cost exceeds the applicable price per MWh, the market software will relax the Transmission Constraint.

#### 27.4.3.3.2 Pricing Parameters for Transmission Constraint Relaxation

In the case of Contingency-related Transmission Constraints, the CAISO will determine the amount of relaxation required to clear the market using the most limiting condition among the applicable Contingencies and the base case. The CAISO will establish prices based on the parameter pricing specified in this Section as it applies to the most limiting Contingency and base case. The corresponding pricing parameter used in the RUC is set at the maximum RUC Availability Bid price specified in Section 39.6.1.2.

#### 27.4.3.3.3 Insufficient Supply to Meet Self-Schedule Demand in IFM

In the IFM, when available supply is insufficient to meet all self-scheduled Demand, self-scheduled Demand is reduced to the point where the available supply is sufficient to clear the market. For price-setting purposes in such cases, the cleared self-scheduled Demand is deemed to be willing to pay the Hard Energy Bid Cap price.

#### 27.4.3.3.4 Insufficient Supply to Meet CAISO Forecast of CAISO Demand in the RTM

In the RTM, in the event that Energy offers are insufficient to meet the CAISO Forecast of CAISO Demand, the SCUC and SCED software will relax the system energy-balance constraint. In such cases, for price-setting purposes the software utilizes a pricing parameter set to

(a) the highest-priced cleared Economic Bid if the infeasibility detected in the scheduling run does not exceed the Constraint Relaxation Threshold, but no less than the Soft Energy Bid Cap price; or

(b) the Hard Energy Bid Cap price if the infeasibility detected in the scheduling run exceeds the Constraint Relaxation Threshold.

#### 27.4.3.4 Protection of TOR, ETC and Converted Rights Self-Schedules in the IFM

In accordance with the submitted and accepted TRTC Instructions, valid Day-Ahead TOR Self-Schedules, Day-Ahead ETC Self-Schedules and Day-Ahead Converted Rights Self-Schedules shall not be adjusted in the IFM in response to an insufficiency of Effective Economic Bids. The scheduling parameters associated with the TOR, ETC, or Converted Rights Self-Schedules will be set to values higher than the scheduling parameter associated with relaxation of an enforced internal and Intertie Transmission Constraint as specified in Section 27.4.3.2, so that when there is a congested Transmission Constraint that would otherwise subject a Supply or Demand resource submitted in a valid and balanced ETC, TOR or Converted Rights Self-Schedule to adjustment in the IFM, the IFM software will relax the Transmission Constraint rather than curtail the TOR or ETC Self-Schedule. This priority will be adhered to by the operation of the IFM Market Clearing software, and if necessary, by adjustment of Schedules after the IFM has been executed and the results have been reviewed by the CAISO operators.

#### 27.4.3.5 Effectiveness Threshold

The CAISO Markets software includes a lower effectiveness threshold setting that governs whether the software will consider a bid “effective” for managing congestion on a congested Transmission Constraint, which in the case of Nomograms will be applied to the individual flowgates that make up the Nomogram, rather than to the Nomogram itself. The CAISO sets this threshold at two-tenth of a percent (.2%) for Trading Hubs and Default LAPs. The CAISO sets the threshold at two percent (2%) for all other Nodes. For the purposes of applying these thresholds in procuring Imbalance Reserves Awards under Section 31.3.1.6.3, the CAISO considers the product of the shift factor and the Deployment Factor.

## 27.5 Full Network Model

### 27.5.1 Network Models used in CAISO Markets

The FNM is a representation of the WECC network model including the CAISO Balancing Authority Area that enables the CAISO to produce a Base Market Model that the CAISO then uses as the basis for

formulating the individual market models used to conduct power flow analyses to manage Transmission Constraints for the optimization of each of the CAISO Markets.

#### 27.5.1.1 Base Market Model used in the CAISO Markets

Based on the FNM the CAISO creates the Base Market Model, which is used as the basis for formulating, as described in section 27.5.6, the individual market models used in each of the CAISO Markets to establish, enforce, and manage the enforced internal and Intertie Transmission Constraints associated with network facilities. The Base Market Model is derived from the FNM by (1) introducing locations for modeling Intertie Schedules; and (2) introducing market resources that do not currently exist in the FNM due to their size and lack of visibility. In the Base Market Model, external Balancing Authority Areas and external transmission systems are modeled to the extent necessary to 1) improve the accuracy of the CAISO Market solutions for purposes of reliable operations, and 2) support the commercial requirements of the CAISO Markets. For those portions of the FNM that are external to the CAISO Balancing Authority Area, the Base Market Model may model the resistive component for accurate modeling of Transmission Losses, but accounts for losses in the external portions of the market model separately from Transmission Losses within the CAISO Balancing Authority Area. As a result, the Marginal Cost of Losses in the LMPs is not affected by external losses. For portions of the Base Market Model that are external to the CAISO Balancing Authority Area, the CAISO Markets only enforce Transmission Constraints that reflect limitations of the transmission facilities and Entitlements turned over to the Operational Control of the CAISO by a Participating Transmission Owner, or that affect Congestion Management within the CAISO Balancing Authority Area or on Interties. External connections are retained between Intertie branches within Transmission Interfaces. Certain external loops are modeled, which allows the CAISO to increase the accuracy of the Congestion Management process. The CAISO Markets' optimizations also factor in forecasted unscheduled flow at the Interties consistent with the requirements specified in the Business Practice Manuals. Resources are modeled at the appropriate network Nodes.

The pricing Location (PNode) of a Generating Unit generally coincides with the Node where the relevant revenue quality meter is connected or corrected, to reflect the point at which the Generating Unit is connected to the CAISO Controlled Grid. The Dispatch, Schedule, and LMP of a Generating Unit refers to a PNode, but the Energy injection is modeled in the Base Market Model for network analysis purposes at

the corresponding Generating Unit's physical interconnection point), taking into account any losses in the non-CAISO Controlled Grid leading to the point where Energy is delivered to CAISO Controlled Grid. Based on the Base Market Model, the market models used in each of the CAISO Markets incorporate physical characteristics needed for determining Transmission Losses and model Transmission Constraints within the CAISO Balancing Authority Area, which are then reflected in the Day-Ahead Schedules, AS Awards and RUC Awards, FMM Schedules, Dispatch Instructions, and LMPs resulting from each CAISO Markets Process. The Dispatch, Schedule, and LMP of a Dynamic System Resource or Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area refer to a PNode, or Aggregated Pricing Node, if applicable, of the resource at its physical location in the external transmission systems that are modeled in the Base Market Model, subject to the modeling of Transmission Losses in the portions of the FNM and exclusion of such Transmission Losses' effects on the LMPs that are external to the CAISO Balancing Authority Area described in this Section 27.5.1.1. The LMP price thus associated with a Dynamic System Resource or Pseudo-Tie Generating Unit will be used for Settlement of Energy and will include the Marginal Cost of Congestion and Marginal Cost of Losses components of the LMP to that Dynamic System Resource or Pseudo-Tie Generating Unit point, excluding losses and congestion external to the CAISO Balancing Authority Area, in accordance with this Section 27.5.1.1. Further, in formulating the market models for the CAISO Market processes, except for specific Intertie locations as specified in the BPM, power flow parameters developed from applicable data sources, including available outage information, system status data, and the State Estimator for the Real-Time Dispatch, are applied to the Base Market Model.

**27.5.1.2 [Not Used]**

**27.5.1.2.1 [Not Used]**

**27.5.1.2.2 [Not Used]**

**27.5.1.2.3 [Not Used]**

**27.5.2 Metered Subsystems**

The FNM includes a full model of MSS transmission networks used for power flow calculations and Congestion Management in the CAISO Markets Processes. Transmission Constraints (i.e. circuit ratings, thermal ratings, etc.) within the MSS, or at its boundaries, that are modeled in the Base Market Model

shall be monitored but not enforced in operation of the CAISO Markets. If overloads are observed in the forward markets, are internal to the MSS or at the MSS boundaries, and are attributable to MSS operations, the CAISO shall communicate such events to the Scheduling Coordinator for the MSS and coordinate any manual Re-dispatch required in Real-Time. If, independent of the CAISO, the Scheduling Coordinator for the MSS is unable to resolve Congestion internal to the MSS or at the MSS boundaries in Real-Time, the CAISO will use Exceptional Dispatch Instructions on resources that have been bid into the RTM to resolve the Congestion. The costs of such Exceptional Dispatch will be allocated to the responsible MSS Operator. Consistent with Section 4.9, the CAISO and MSS Operator shall develop specific procedures for each MSS to determine how Transmission Constraints will be handled.

### 27.5.3 Integrated Balancing Authority Areas

To the extent sufficient data are available or adequate estimates can be made for an IBAA, the Base Market Model used by the CAISO for the CAISO Markets Processes will include a model of the IBAA's network topology. The CAISO monitors but does not enforce the Transmission Constraints for an IBAA in running the CAISO Markets Processes. Similarly, the CAISO models the resistive component for transmission losses on an IBAA but does not allow such losses to determine LMPs that apply for pricing transactions to and from an IBAA and the CAISO Balancing Authority Area, unless allowed under a Market Efficiency Enhancement Agreement. For Bids and Schedules between the CAISO Balancing Authority Area and the IBAA, the CAISO will model the associated sources and sinks that are external to the CAISO Balancing Authority Area using individual or aggregated injections and withdrawals at locations in the FNM that allow the impact of such injections and withdrawals on the CAISO Balancing Authority Area to be reflected in the CAISO Markets Processes as accurately as possible given the information available to the CAISO.

#### 27.5.3.1 Currently Established Integrated Balancing Authority Areas

The FNM includes the established IBAAs listed below. Additional details regarding the modeling specifications for these IBAAs are provided in the Business Practice Manuals.

(1) The Sacramento Municipal Utility District (SMUD) IBAA including the transmission facilities of the following entities:

(a) Western Area Power Administration – Sierra Nevada Region

(b) Modesto Irrigation District

(c) City of Redding

(d) City of Roseville

(2) Turlock Irrigation District IBAA

**27.5.3.2 Information Required to Develop and Obtain Pricing under a Market Efficiency Enhancement Agreement**

The CAISO shall enter into an MEEA with an entity controlling supply resources within an IBAA to provide modeling and pricing for imports or exports between the IBAA and the CAISO Balancing Authority Area if the entity agrees to provide the information as specified herein. These information requirements apply to all entities seeking to enter into and having entered into an MEEA, including external Balancing Authorities within the IBAA or sub-entities therein such as Scheduling Coordinators or sub-Balancing Authority Areas in control of specific resources or a portfolio of resources. For these purposes, the term resource includes sources or sinks within the IBAA. An MEEA signatory may use generation as a resource to support an import to the CAISO and may use load or reduce generation to support an export from the CAISO. Control includes ownership or any contractual arrangements that provide authority to schedule and/or receive the financial benefits of a resource. Entities controlling a portfolio of resources within the IBAA are eligible to enter into MEEAs for interchange transactions using portfolios of resources. For the purposes of this provision, Western Area Power Administration base resource customers have sufficient control over Western Area Power Administration base resource portfolio of resources within the IBAA to be eligible to enter into MEEAs for interchange transactions utilizing these resources.

In order to obtain non-default, location-specific pricing for interchange transactions with the CAISO Balancing Authority Area, an MEEA signatory must provide the information described in this section 27.5.3.2. The information is necessary to: (i) establish the location of the resources that will be used to calculate location-specific prices under the MEEA, (ii) verify that the resources operating to implement an interchange transaction are the same as the resources identified in the MEEA, (iii) verify the amount of an interchange transaction that was implemented by the dispatch of resources identified in the MEEA, and (iv) settle all charges and payments for interchange transactions under the MEEA.

Subject to the requirements in Section 27.5.3.2.2, the CAISO will provide an LMP to an MEEA signatory for an interchange transaction between the CAISO Balancing Authority Area and the IBAA at the Scheduling Point at which the actual Import or Export Bid is submitted to the CAISO Markets. This MEEA-specific LMP for MEEA transactions shall be calculated for each such Scheduling Point and reflect the nodes where the specific import or export is demonstrated in the MEEA to actually be located. The CAISO will develop generation distribution factors that apply to the relevant MEEA transactions as provided in Section 27.5.3.2.1. The CAISO and an MEEA signatory may negotiate an alternative to the historical average distribution generation factors of MEEA resources, if an MEEA signatory establishes that a different structure more accurately identifies the actual location of resources within the IBAA that support interchange transactions with the CAISO.

**27.5.3.2.1 Information Required to Develop a Market Efficiency Enhancement Agreement**

An entity seeking to enter into an MEEA with the CAISO will provide the CAISO with historical hourly metered generation data for the supply resources to be identified in the MEEA and the historical hourly metered load data within the IBAA for the load served by the MEEA signatory, if any. The data shall be provided in a format that the WECC accepts or other commonly used format. MEEA pricing will typically be based on historical average distribution of generation among a portfolio of resources identified in an MEEA, using negotiated generation distribution factors, subject to revision to reflect changes in usage. The CAISO and an MEEA signatory may, therefore, agree on a set of weighted distribution factors for a specified set of resource locations, which will be used to calculate the MEEA price that will apply to Bids, including Self-Schedules, cleared and processed as further provided in the CAISO Tariff, submitted for resources identified in an MEEA. By applying a set of weighted distribution factors to a set of generator locations, an MEEA signatory is not required to associate a specific generator within a MEEA portfolio of resources with a specific customer of the MEEA signatory. The CAISO will negotiate any generation distribution factors as provided below. For portfolios of resources, the CAISO and a potential MEEA signatory will develop a weighted average price methodology based upon an agreed set of weights for the resources that comprise the MEEA portfolio. Such weights will be based on historical data of operation of the resources comprising the portfolio.

The distribution factors may reflect seasonal, peak and off-peak or other usage and may be periodically

revised through bilateral negotiations using updated historical operation data of the MEEA portfolio. All executed MEEAs between the CAISO and an entity with resources within the IBAA must include:

(a) a list of the external supply resources and loads within the IBAA over which the MEEA signatory has control or serves (for these purposes control includes ownership or any contractual arrangements that provide authority to schedule and/or receive the financial benefits of a resources);

(b) the location of the resource identified in the MEEA for which non-default LMP's will be calculated;

(c) the injection and withdrawal points for the resources identified in the MEEA; and

(d) the appropriate Resource IDs that apply for the MEEA transactions.

**27.5.3.2.2 Information Needed to Determine Application of MEEA Specific Pricing in any Settlement Interval or Settlement Period**

If an MEEA signatory submits a Bid in the CAISO Market and seeks to obtain an MEEA-specific LMP for an interchange transaction, the CAISO must be capable of verifying what portion (output in MWh) of the resources identified in the MEEA, if any, were dispatched to implement the interchange transaction. To the extent that the resources identified in the MEEA, or portion thereof, were dispatched and operated for purposes other than the interchange transaction submitted in the CAISO Market, the Schedule or Imbalance Energy associated with the Bid submitted and cleared in the CAISO Market will not receive an MEEA-specific LMP, and will instead receive the default IBAA price specified in Appendix C, Section I.1.1. The CAISO will establish Resource IDs that are to be used only to submit Bids, including Self-Schedules, for the purpose of obtaining MEEA-specific pricing. MEEA signatories may obtain and use other Resource IDs to submit Bids, including Self-Schedules, that are not covered by an MEEA. Prior to obtaining and settling Resource IDs under the terms of the MEEA, the relevant Scheduling Coordinator shall attest that use of the Resource ID shall mean that the MEEA signatory dispatched a resource identified in an MEEA to support the MEEA interchange transaction. This attestation shall be executed under oath by an officer of the MEEA with knowledge of the MEEA signatory's operations. By actually using such Resource IDs, the Scheduling Coordinator represents that MEEA resources are dispatched to support such Bids, including Self-Schedules. The CAISO may challenge the use of these Resource IDs

and conduct an audit under Section 27.5.3.7.

In connection with any such audit, the MEEA signatory shall support its certification with information demonstrating that an MEEA signatory resource was dispatched to support the interchange transaction. This information may include, but is not limited to, NERC tags, OASIS transmission service data, day-ahead load and resource plans, power purchase agreements or contracts demonstrating use of the California Oregon Transmission Project as well as marginal cost information. An MEEA signatory, however, is not required to provide marginal cost information to the CAISO to support its self-certification and may support its self-certification with other information, including information identified in the preceding sentence. The MEEA signatory shall provide data in a format that the WECC accepts or other commonly used format. For any Settlement Interval or Period for which the CAISO challenges the use of Resource IDs under an MEEA, the CAISO shall apply MEEA pricing to the Settlement Interval or Period pending resolution of the challenge.

In addition, in the event that there is a Dynamic Resource-Specific System Resource in the IBAA, the MEEA may further provide that the MEEA signatory in control of such resource may also obtain pricing under the MEEA for imports to the CAISO Balancing Authority Area from the Dynamic Resource-Specific System Resource. For any portion of an interchange transaction for which the MEEA Entity has not self-certified that the resources were used to support interchange transactions, the default IBAA price specified in Appendix C, Section I.1.1 will apply for the corresponding volume and time period.

#### 27.5.3.3 Process for Establishing a Market Efficiency Enhancement Agreement

Any entity seeking to negotiate an MEEA with the CAISO may submit a written request to the CAISO. The CAISO and the requesting entity shall negotiate in good faith the terms and conditions of the MEEA. The CAISO shall file any executed MEEA with FERC for review and approval under Section 205 of the Federal Power Act. In the event an MEEA is not executed within 180 days of the initial written request for an MEEA, a requesting entity may invoke the CAISO ADR Procedures under Section 13.

#### 27.5.3.4 Use of Data Provided under a Market Efficiency Enhancement Agreement

Data provided to the CAISO pursuant to an MEEA shall be used for purposes of modeling and pricing Interchange transactions between the CAISO Balancing Authority Area and the relevant IBAA at Scheduling Points specified in the MEEA. The configuration of the pricing points for the MEEA, which

may include specific distribution factors for the represented resources, established through the negotiation of the MEEA will also be used for the purposes of modeling the resources in the IBAA subject to the MEEA. The CAISO and the MEEA signatory may agree to changes to these configurations over time that do not require the renegotiation of the terms of the MEEA or may agree to static terms until such time the parties re-execute a new MEEA. Such modeling information regarding the location of the resources will be incorporated into the Full Network Model, including the CRR FNM, which is used for all CAISO Markets as further described in Sections 27.3, 27.5.1 and 27.5.6. The FNM and the CRR FNM will not include the hourly transactional data provided pursuant to Section 27.5.3.2, except in such cases where the CAISO and the MEEA signatory have agreed to dynamic changes to the configuration of the modeling of the MEEA resources during the life of the agreement as further provided by the MEEA.

**27.5.3.5 Measures to Preserve Confidentiality of Data under a Market Efficiency Enhancement Agreement**

Subject to the provisions of Section 27.5.3.4, data provided to the CAISO by any entity under an MEEA or in connection with negotiations to develop an MEEA shall be treated as confidential data. Consistent with applicable law, the CAISO shall take all steps reasonably necessary to limit disclosure of this information to CAISO personnel that need to review such information as part of their work-related responsibilities. In the event a disclosing entity does not execute an MEEA, the CAISO shall return the confidential data to the disclosing entity if the CAISO can physically return the data and shall destroy the confidential data if the CAISO cannot physically return the confidential data to the disclosing entity.

**27.5.3.6 Dispute Resolution under Market Efficiency Enhancement Agreements**

Any disputes arising out of or in connection with an MEEA shall be subject to the CAISO ADR Procedures of Section 13.

**27.5.3.7 Audit Rights under Market Enhancement Efficiency Agreement**

The CAISO reserves the right to audit data supplied under an MEEA by giving written notice at least ten (10) Business Days in advance of the date that the CAISO wishes to initiate such audit, with completion of the audit occurring within 180 days of such notice. The audit shall be for the limited purposes of verifying that the MEEA signatory has accurately represented available resources and has met the

requirements specified for MEEA pricing. Upon request of the CAISO as part of such audit, any signatory to an MEEA shall provide information to support its certification under Section 27.5.3.2. An MEEA signatory may audit the price for any transaction entered into under an MEEA through the CAISO's Settlement and billing process set forth in Section 11 and through data provided to the MEEA signatory as a Market Participant under the CAISO Tariff. Each party will be responsible for its own expenses related to any audit.

**27.5.3.8 Process for Establishing a New IBAA or Modifying an Existing IBAA**

Except under exigent circumstances, the CAISO must follow a consultative process with the applicable Balancing Authority and CAISO Market Participants pursuant to the process further defined in the Business Practice Manuals, to establish a new IBAA or modify an existing IBAA. Changes to an existing IBAA may include among others changes to the modeling of the IBAA's network topology, the specification of the default Resource IDs or the default pricing points. Upon completion of this process and having determined it necessary to establish a new IBAA or modify an existing IBAA, the CAISO will seek FERC approval under Section 205 of the Federal Power Act of the proposed new IBAA or changes to the existing IBAA requirements, at which time the CAISO shall also provide its supportive findings for the establishment of the new IBAA or modification to an existing IBAA.

**27.5.3.8.1 Factors to be Considered in Establishing a New Integrated Balancing Authority Area or Modifying an Existing Integrated Balancing Authority Area**

In establishing a new IBAA or modifying an existing IBAA, the factors that the CAISO will consider shall include, but are not limited to, the following:

(1) The number of Interties between the potential or existing IBAA and the CAISO Balancing Authority Area and the distance between them;

(2) Whether the transmission system(s) within the other Balancing Authority Area runs in parallel to major parts of the CAISO Controlled Grid;

(3) The frequency and magnitude of unscheduled power flows at applicable Interties;

(4) The number of hours where the actual direction of power flows was reversed from scheduled directions;

(5) The availability of information to the CAISO for modeling accuracy; and

(6) The estimated improvement to the CAISO's power flow modeling and Congestion Management processes to be achieved through more accurate modeling of the Balancing Authority Area.

**27.5.3.9 Default Designation of External Resource Locations for Modeling Transactions Between the CAISO Balancing Authority Area and an IBAA**

Prior to the establishment of a new IBAA or a change to an existing IBAA, the CAISO will define and publish default Resource IDs to be used for submitting import and export Bids and for settling import and export Schedules between the CAISO Balancing Authority Area and the potential or existing IBAA. These default Resource IDs will specify in the Master File the default associations of Intertie Scheduling Point Bids and Schedules to supporting individual or aggregate injection or withdrawal locations in the FNM. The CAISO will determine the supporting injection and withdrawal locations to allow the impact of the associated Intertie Scheduling Point Bids and Schedules to be reflected in the CAISO Markets Processes as accurately as possible given the information available to the CAISO. The CAISO's methodology for determining such default Resource IDs, as well as the specific default Resource IDs that have been adopted for the currently established IBAAs, are provided in the Business Practice Manuals. Alternative Resource IDs to be used instead of the default Resource IDs will be created and adopted for use in conjunction with Intertie Scheduling Point Bids and Schedules between the CAISO Balancing Authority Area and the IBAA based on a Market Efficiency Enhancement Agreement.

**27.5.4 Accounting for Changes in Topology in IFM**

The CAISO will incorporate into the FNM information received pursuant to Section 24 for transmission expansion and Section 25 for generation interconnection to account for changes to the CAISO Controlled Grid and other facilities located within the CAISO Balancing Authority Area. This information will be incorporated into the network model data base in which the electrical network model is maintained for use by the State Estimator and which forms the basis for the Base Market Model used by the CAISO Markets. The updated power system network model will be transferred at periodic model update cycle intervals established by the CAISO and incorporated into the {Base Market Model} for use in the CAISO Markets. The Business Practice Manual for managing the Full Network Model will describe the information to be provided by Market Participants, the process by which the CAISO incorporates this information in the

FNM, and operational details of the FNM. If the CAISO becomes aware of a material error or omission in the FNM, it will make a timely correction of the FNM.

### 27.5.5 Load Distribution Factor

The CAISO will maintain a library of system-wide Load Distribution Factors for use in distributing Demand scheduled at the Default LAPs. The system Load Distribution Factors are derived from the State Estimator and are stored in the Load Distribution Factor library, and are updated periodically. For IFM the Load Distribution Factor library uses a similar-day methodology for smoothing the most recent Load Distribution Factors. The similar-day methodology uses data separately for each type of day. More recent days are weighted more heavily in the smoothing calculations. The market application then uses the set of Load Distribution Factors from the library that best represents the Load distribution conditions expected for use in the CAISO Markets Processes. For the RTM, the State Estimator solution is used as a source for determining Load Distribution Factors. The Load Distribution Factor are also maintained for use for Demand scheduled at Custom LAPs. These custom Load Distribution Factors are not generated from the State Estimator and are fixed quantities representing the characteristics of the Custom LAP.

### 27.5.6 Management & Enforcement of Constraints in the CAISO Markets

The CAISO operates the CAISO Markets through the use of a market software system that utilizes various information including the Base Market Model, the State Estimator, submitted Bids including Self-Schedules, Generated Bids, Transmission Constraints, and transmission and generation Outages, including due to Remedial Action Schemes. The market model used in each of the CAISO Markets is derived from the most current Base Market Model available at that time. To create a more relevant time-specific network model for use in each of the CAISO Markets, the CAISO will adjust the Base Market Model to reflect Outages and derates that are known and applicable when the respective CAISO Market will operate, and to compensate for observed discrepancies between actual real-time power flows and flows calculated by the market software. Through this process the CAISO creates the market model to be used in each Day-Ahead Market and each process of the Real-Time Market. The CAISO will manage the enforcement of Transmission Constraints, consistent with good utility practice, to ensure, to the extent possible, that the market model used in each market accurately reflects all the factors that contribute to actual Real-Time flows on the CAISO Controlled Grid and that the CAISO Market results are better

aligned with actual physical conditions on the CAISO Controlled Grid. In operating the CAISO Markets, the CAISO may take the following actions so that, to the extent possible, the CAISO Market solutions are feasible, accurate, and consistent with good utility practice:

(a) The CAISO may enforce, not enforce, or adjust flow-based Transmission Constraints if the CAISO observes that the CAISO Markets produce or may produce results that are inconsistent with observed or reasonably anticipated conditions or infeasible market solutions either because (a) the CAISO reasonably anticipates that the CAISO Market run will identify Congestion that is unlikely to materialize in Real-Time even if the Transmission Constraint were to be ignored in all the markets leading to Real-Time, or (b) the CAISO reasonably anticipates that the CAISO Market will fail to identify Congestion that is likely to appear in the Real-Time. The CAISO does not make such adjustments to intertie scheduling limits.

(b) The CAISO may enforce or not enforce Transmission Constraints if the CAISO has determined that non-enforcement or enforcement, respectively, of such Transmission Constraints may result in the unnecessary pre-commitment and scheduling of use-limited resources.

(c) The CAISO may not enforce Transmission Constraints if it has determined it lacks sufficient visibility to conditions on transmission facilities necessary to reliably ascertain constraint flows required for a feasible, accurate and reliable market solution.

(d) For the duration of a planned or unplanned Outage, the CAISO may create and apply alternative Transmission Constraints that may add to or replace certain originally defined constraints.

(e) The CAISO may adjust Transmission Constraints for the purpose of setting prudent operating margins consistent with good utility practice to ensure reliable operation under anticipated conditions of unpredictable and uncontrollable flow volatility consistent with the requirements of Section 7.

(f) The CAISO may adjust Transmission Constraints for the purpose of reserving internal

transfer capability in the Day-Ahead or Real-Time Markets, based on anticipated conditions on the natural gas delivery system, to reliably serve load in specific geographic regions of the CAISO Balancing Authority Area, or to assure deliverability of Ancillary Services. The CAISO may or may not release such reserved internal transfer capability based on natural gas and electric system conditions, or observed market inefficiencies. Upon determining that an adjustment is necessary, the CAISO will issue a notification specifying the amount of the adjustment.

To the extent that particular Transmission Constraints are not enforced in the operations of the CAISO Markets, the CAISO will operate the CAISO Controlled Grid and manage any Congestion based on available information including the State Estimator solutions and available telemetry to Dispatch resources through Exceptional Dispatch to ensure the CAISO is operating the CAISO Controlled Grid consistent with the requirements of Section 7.

### 27.6 State Estimator

The State Estimator produces a power flow solution based upon the modeled representation of the electrical network and available Real-Time SCADA telemetry. When this solution is applied to the FNM, it provides a reference of system conditions for determining Dispatch Instructions. The State Estimator also provides a reference for Real-Time Load Distribution Factors used to distribute the Real-Time CAISO Forecast of CAISO Demand as well as provide a source of historical data for the LDF library. In lieu of the State Estimator, the CAISO may use the last best State Estimator solution or use telemetry for determining Dispatch Instructions. In all cases, the CAISO shall use the Load Distribution Factors from the Load Distribution Factors library as applicable to the prevailing system and time of use conditions to determine Dispatch Instructions.

### 27.7 Constrained Output Generation

#### 27.7.1 Election of Constrained Output Generator Status

A Scheduling Coordinator on behalf of a Generating Unit eligible for COG status must make an election to have the resource treated as a COG before each calendar year by registering the resource's PMin in the Master File as equal to its PMax less 0.01 MW (PMin = PMax – 0.01 MW) within the timing requirements specified for Master File changes described in the applicable Business Practice Manual. Generating

Units with COG status will be eligible to set LMPs in the IFM and RTM based on their Calculated Energy Bids.

As with all Generating Units that are not Use-Limited Resources, a Scheduling Coordinator on behalf of a COG that is not a Use-Limited Resource must use the Proxy Cost methodology, as provided in Section 30.4, for determining its Default Start-Up Bids and Default Minimum Load Bids. A Scheduling Coordinator on behalf of a COG that is a Use-Limited Resource must elect to use either the Proxy Cost methodology or the Registered Cost methodology, as provided in Section 30.4, for determining its Default Start-Up Bids and Default Minimum Load Bids. A Calculated Energy Bid of a COG that is not a Use-Limited Resource will be calculated based on the Proxy Cost methodology. A Calculated Energy Bid of a COG that is a Use-Limited Resource will be calculated based on its election of the Proxy Cost methodology or the Registered Cost methodology. Whenever a Scheduling Coordinator for a COG submits an Energy Bid into the IFM or RTM, the CAISO will override that Bid and substitute the Calculated Energy Bid if the submitted Bid is different from the Calculated Energy Bid.

**27.7.2 Election to Waive COG Status**

A Scheduling Coordinator on behalf of a Generating Unit eligible for COG status may elect to waive COG status. If such Generating Unit has a non-zero operating range (PMax greater than PMin), it is eligible to participate in the CAISO Markets like any other resource.

**27.7.3 Constrained Output Generators in the IFM**

In the IFM, resources electing COG status are modeled as though they are not constrained and can operate flexibly between zero (0) and their PMax. A COG is eligible to set IFM LMPs based on its Calculated Energy Bid in any Settlement Period in which a portion of its output is needed as a flexible resource to serve Demand. A COG is not eligible for recovery of Minimum Load Costs or BCR in the IFM due to the conversion of its Minimum Load Cost to an Energy Bid and its treatment by the IFM as a flexible resource. A COG is eligible for Start-Up Bid Cost recovery based on its Commitment Period as determined in the IFM, RUC, STUC or RTUC.

**27.7.4 Constrained Output Generators in RUC**

In RUC, any COG that has capacity that did not fully clear in the IFM is treated as constrained, so that the entire capacity of the COG is committed by RUC. Any such RUC commitment would apply to scheduled

capacity in RUC in excess of the higher of: (a) the relevant Day-Ahead Schedule; or (b) the relevant Minimum Load. In the event of a RUC commitment, the COG is not eligible to receive a RUC Award.

### 27.7.5 Constrained Output Generators in the Real-Time Market

A COG that can be started up and complete its Minimum Run Time within a five-hour period can be committed by the STUC. A COG that can be started up within the applicable RTUC run as described in Section 34.3 can be committed by the RTUC. The RTD will dispatch a COG up to its PMax or down to zero (0) to ensure a feasible Real-Time Dispatch. The COG is eligible to set the RTM LMP in any Dispatch Interval in which a portion of its output is needed to serve Demand, not taking into consideration its Minimum Run Time constraint. For the purpose of making this determination and setting the RTM LMP, the CAISO treats a COG as if it were flexible with an infinite Ramp Rate between zero (0) and its PMax, and uses the COG's Calculated Energy Bid. In any Dispatch Interval where none of the output of a COG is needed as a flexible resource to serve Demand, the CAISO shall not dispatch the unit. In circumstances in which the output of the COG is not needed as a flexible resource to serve Demand, but the unit nonetheless is online as a result of a previous commitment or Dispatch Instruction by the CAISO, the COG is eligible for Minimum Load Bid Cost compensation.

## 27.8 Multi-Stage Generating Resources

### 27.8.1 Registration and Qualification

With the exception of Regulatory Must-Take Generation, Scheduling Coordinators responsible for resources that meet the definition of a Multi-Stage Generating Resource based on their Master File registered characteristics must register such resources with the CAISO as Multi-Stage Generating Resources as further discussed in this Section, and must comply with all requirements that apply to such resources specified in the CAISO Tariff. Scheduling Coordinators for Regulatory Must-Take Generation may, but are not required to, register such resources with the CAISO as Multi-Stage Generating Resources. Scheduling Coordinators for resources that do not meet the definition of a Multi-Stage Generating Resource are not permitted to register such resources with the CAISO as Multi-Stage Generating Resources. Scheduling Coordinators must comply with the registration and qualification process described in this Section 27.8.1, in order to effectuate any of the changes described in Section 27.8.3. No less than sixteen (16) days prior to the date that Scheduling Coordinator seeks to have the

resource participate in the CAISO Markets under the new settings or MSG Configuration details, the Scheduling Coordinator must complete and submit to the CAISO the registration form and the resource data template provided by the CAISO for registration and qualification purposes. After the Scheduling Coordinator submits a request for registration of a Generating Unit as a Multi-Stage Generating Resource or a change in the attributes in Section 27.8.3, the CAISO will coordinate with that Scheduling Coordinator to validate that the resource qualifies for the requested status and that all the requisite information has been successfully provided to the CAISO. The resource will be successfully registered and qualified as a Multi-Stage Generating Resource, or the requested changes in the attributes listed in Section 27.8.3 will be successfully registered and qualified as of the date on which the CAISO sends the responsible Scheduling Coordinator a notice that the resource has been successfully qualified as such. In the absence of extenuating circumstances, the ISO will provide such notice on the sixteenth day after the Scheduling Coordinator provides new settings or MSG Configuration details. After the date on which the CAISO has provided such notice, any changes to the items listed in Section 27.8.3 will be subject to the timing and process requirements in this Section 27.8.1 and 27.8.3. The Scheduling Coordinator may modify all other Multi-Stage Generating Resource registered characteristics pursuant to the timing and processing requirements specified elsewhere in this CAISO Tariff, as they may apply. If the CAISO has reason to believe that the resource's operating and technical characteristics are not consistent with the registered and qualified attributes, the CAISO may request that the Scheduling Coordinator provide additional information necessary to support their registered status and, if appropriate, may require that the resource be registered and qualified more consistent with the resource's operating and technical characteristics, including the revocation of its status as a Multi-Stage Generating Resource. Failure to provide such information may be grounds for revocation of Multi-Stage Generating Resource status. Such changes in status or MSG Configuration details would be subject to the registration and qualification requirements in this Section 27.8. Scheduling Coordinators may register the number MSG Configurations as are reasonably appropriate for the resource based on the technical and operating characteristics of the resource, which may not, however, exceed a total of ten MSG Configurations and cannot be fewer than two MSG Configurations. The information requirements specified in Section 27.8.2 will apply.

**27.8.2 Information Requirements**

As part of the registration process described in Section 27.8.1, Scheduling Coordinators for Generating Units registering as Multi-Stage Generating Resources must submit to the CAISO a Transition Matrix, which contains the Transition Costs and operating constraints associated with MSG Transitions. The Scheduling Coordinator may register up to six (6) MSG Configurations without any limitation on the number of transitions between the registered MSG Configurations in the Transition Matrix. If the Scheduling Coordinator registers seven (7) or more MSG Configurations, then the Scheduling Coordinator may only include two (2) eligible transitions between MSG Configurations for upward and downward transitions, respectively, starting from the initial MSG Configuration in the Transition Matrix. For each MSG Configuration, the responsible Scheduling Coordinator shall submit an Operational Ramp Rate and, as applicable, an Operating Reserve Ramp Rate and Regulating Reserves ramp rate, each of which shall have at least one (1) segment and no more than two (2) segments. The Scheduling Coordinator may submit changes to this information consistent with Sections 27.8.1 and 27.8.3, as they may apply.

**27.8.3 Changes in Status and Configurations of Resource**

Scheduling Coordinators may seek modifications to the Multi-Stage Generating Resource attributes listed below consistent with the process and timing requirements specified in Section 27.8.1 and the additional requirements discussed below in this Section 27.8.3:

(1) Registration and qualification of a Generating Unit as a Multi-Stage Generating Resource.

(2) Changes to the MSG Configurations attributes, which include:

a. addition of new MSG Configurations;

b. removal of an existing MSG Configuration;

c. a change in the physical units supporting the MSG Configuration;

d. a change to the MSG Configuration Start Up and Shut Down flags;

e. adding or removing an MSG Transition to the Transition Matrix;

f. a material change in the Transition Times contained in the Master File, which consists of a change that more than doubles the Transition Times or reduces it to less than half; and

g. a material change to the maximum Ramp Rate of the MSG Configuration(s) contained in the Master File, which consists of a change that more than doubles the maximum Ramp Rate or reduces it to less than half.

When transitioning to implement these changes across the midnight hour, for any Real-Time Market run in which the changes specified in this Section 27.8.3 are to take effect within the time horizon of any of the Real-Time Market runs, the CAISO will Schedule, Dispatch, or award resources consistent with either the prior or new status and definitions, as appropriate, and required by any Real-Time conditions regardless of the resource's state scheduled or awarded in the immediately preceding Day-Ahead Market. A Scheduling Coordinator may unregister a Generating Unit from its Multi-Stage Generating Resource status subject to the timing requirements for Master File changes, and such changes are not subject to the timing requirements in Section 27.8.3. Changes to the attributes listed above in this Section may take effect, including the registration of new Multi-Stage Generating Resources, provided Scheduling Coordinators have previously followed the registration process requirements listed in Section 27.8.1. Changes to these attributes may only be made every sixty (60) days after the day on which any such changes have taken effect.

### 27.9 Non-Generator Resources and Pumped-Storage Hydro Unit Constraints

Scheduling Coordinators may elect to provide the CAISO with Non-Generator Resources' and Pumped-Storage Hydro Units' MWh constraints. In such cases, the CAISO will observe MWh constraints in the IFM, RUC, Real-Time Unit Commitment, and FMM as part of the co-optimization except for Non-Generator Resources using Regulation Energy Management. The CAISO will observe MWh constraints in Real-Time Dispatch, including constraints of resources using Regulation Energy Management. Consistent with Section 4.6.11 and in addition to Master File parameters available to Generating Units, Scheduling Coordinators for Non-Generator Resources with physical operating constraints may include in the Master File:

(a) continuous energy limits: minimum and maximum states of charge in MWh values; and

(b) generation capacity limits: minimum and maximum charge and discharge limits in MW.

Consistent with Section 4.6.11 and in addition to Master File parameters available to Generating Units, Scheduling Coordinators for Pumped-Storage Hydro Units with physical operating constraints may

include in the Master File:

(a) generation capacity limits: minimum and maximum pumping and generating limits in MW;

(b) pump minimum up time: minutes a pump must continue pumping;

(c) pump minimum down time: minutes a pump cannot return to pumping after shutting down;

(d) minimum on time: minutes Generating Unit must stay on before shut down or switch to pumping mode;

(e) gen-to-pump minimum down time: minutes after being de-committed from generation mode before able to be dispatched in pumping mode; and

(f) pump-to-gen minimum down time: minutes after being de-committed from pumping mode before able to be dispatched in generation mode.

**27.10 Election to Use Non-Generator Resource Generic Modeling Functionality**

The CAISO employs functionality to model Non-Generator Resources' participation in the CAISO's markets. Resource types other than Non-Generator Resources that have a PMax greater than zero may also elect to use this modeling functionality. As further described in the Business Practice Manual and consistent with the CAISO's Full Network Model database release schedule, Scheduling Coordinators may elect to use Non-Generator Resource Generic Modeling functionality for individual resources or an aggregation of resources. For these resources, the CAISO will not observe costs normally associated with resource management, including but not limited to Start-Up Costs, Minimum Load Costs, or Transition Costs. The CAISO will not observe these resources' MWh constraints. The CAISO's market power mitigation processes, including Local Market Power Mitigation, will apply to resources electing to use Non-Generator Resource Generic Modeling functionality consistent with the provisions of Sections 31.2 and 34.1.5 of the CAISO Tariff. If Bids from a particular resource type are not subject to market power mitigation pursuant to the provisions Sections 31.2 and 34.1.5 of the CAISO Tariff, then use of Non-Generator Resource Generic Modeling functionality will not make Bids from the resource subject to market power mitigation. Resources subject to market power mitigation that elect to use Non-Generator Resource Generic Modeling functionality may use any of the methods under the CAISO's Tariff to establish a Default Energy Bid. Resources electing to use Non-Generator Resource Generic Modeling

functionality are not eligible to be Resource Adequacy Resources.

### 27.11 Natural Gas Constraint

The CAISO may enforce constraints that limit the maximum amount of natural gas that can be burned by natural gas-fired resources in the Southern California Gas Company and San Diego Gas & Electric Company gas regions, based on limitations in applicable gas regions anticipated by the CAISO during specific hours. In the event that such a constraint is binding, the Shadow Price of the constraint will be reflected in the Marginal Cost of Congestion component of the Locational Marginal Prices of only the affected natural gas-fired resources. The Shadow Price of the constraint will not be reflected in the Marginal Cost of Congestion component of the Locational Marginal Prices for purposes of settling cleared Demand, Virtual Bids, or Congestion Revenue Rights. The same Marginal Cost of Congestion used for settling Demand, Virtual Bids, or Congestion Revenue Rights is used for the calculation of the Real-Time Congestion Offset pursuant Section 11.5.4.1.1. The CAISO will allocate any non-zero amounts that are attributable to the price differential between the Marginal Cost of Congestion used for settling a Generating Unit's scheduled or Dispatched amounts at their location and the Marginal Cost of Congestion used for settling Demand, Virtual Bids, or Congestion Revenue Rights pursuant to Section 11.5.4, except that for Day-Ahead settlements the CAISO will allocate the difference through the CRR Balancing Account pursuant to Section 11.2.4.5. The CAISO will provide, through the procedures set forth in Section 6.5.10.1.1, information on whether the CAISO plans to enforce a natural gas constraint in the Day-Ahead Market, and after the Day-Ahead Market is executed, whether it enforced a natural gas constraint in the Day-Ahead Market. In addition, to the extent feasible in advance of the deadline for submitting Bids for the Day-Ahead or Real-Time Market, as applicable, the CAISO will issue a notice through its market notification system indicating its intent to enforce a natural gas constraint along with the affected areas and the magnitude and expected duration of the natural gas constraint.

### 27.12 Operator Imbalance Conformance

#### 27.12.1 Operator Conformance in the Real-Time Market

The CAISO Operator may conform the CAISO Forecast of CAISO Demand prior to executing a Real-Time Market run to obtain a Real-Time Market solution that is feasible and accounts for known system conditions for reliable operations. The EIM Entity operator may conform the EIM Demand forecast prior

to the CAISO executing a Real-Time Market run to obtain a Real-Time Market solution that is feasible and accounts for known system conditions of the respective EIM Entity's Balancing Authority Area for reliable operations. System operators conform the CAISO Forecast of CAISO Demand or EIM Demand through an adjustment of the respective forecast. The CAISO or EIM Entity operators will consider factors such as: load forecast discrepancies; Area Control Error adjustments; Variable Energy Resource deviations; resource outages not entered in the Outage Management System; generator testing; reliability curtailments due to transmission or equipment outages; weather changes; and pumping resource schedule changes. The CAISO and the EIM Entity will log Operator conformances.

**27.12.2 Conformance Limiter in the Real-Time Market**

The CAISO will limit an Operator conformance in the Real-time Market to ensure the conformance does not trigger shortage or surplus pricing for any interval in which there is no shortage or surplus of Energy indicated during the pricing of resources for that interval. The conformance limiter logic will: (1) be based on the conformance and ramping capability shortages or surplus changes between intervals; (2) consider information from current and previous intervals; (3) not require that the conformance is the same direction of the shortages or surpluses of ramp capability; and (4) consider the conformance magnitude in previous intervals and whether the limiter was applied in the corresponding intervals.

**27.13 Aggregate Capability Constraint**

At the request of the Interconnection Customer or Pseudo-Tie Generating Facility, the CAISO may enforce an Aggregate Capability Constraint for Generating Facilities with Co-located Resources that reflects a Generating Facility's maximum and minimum capability or a portion of that capability for purposes of Day-Ahead Market Awards, Real-Time Market Awards, and Real-Time Dispatch as described in the CAISO's Business Practice Manuals. If the combined PMax of Co-located Resources associated with a single Generating Facility would exceed the Interconnection Service Capacity of that Generating Facility, the Interconnection Customer may request that the CAISO enforce an Aggregate Capability Constraint or multiple Aggregate Capability Constraints at the Generating Facility as described in the CAISO's Business Practice Manuals. If the Interconnection Customer requests that the CAISO enforce multiple Aggregate Capability Constraints, the CAISO will enforce an Aggregate Capability Constraint at the Generating Facility level and subordinate Aggregate Capability Constraints at the level of Resource

IDs.

If the Interconnection Customer does not elect an Aggregate Capability Constraint(s), the combined PMax of the Co-located Resources registered in the Master File for that Generating Facility may not exceed the Generating Facility's Interconnection Service Capacity. EIM Participating Resource Scheduling Coordinators also may request that the CAISO enforce an Aggregate Capability Constraint or multiple Aggregate Capability Constraints for Co-located Resources, subject to the prior written approval of the applicable EIM Entity Balancing Authority that enforcing an Aggregate Capability Constraint(s) for Co-located Resources does not create a threat to safety or reliability.

As described in the CAISO's Business Practice Manuals the CAISO may relax enforcement of subordinate Aggregate Capability Constraints in its Real-Time Market prior to relaxing enforcement of the system energy-balance constraint specified in Sections 27.4.3.3.4 to ensure there is sufficient Supply to meet the CAISO Forecast of CAISO Demand.

Notwithstanding Section 34.13, a Generating Facility whose Co-located Resources, including Variable Energy Resources, do not comply with Dispatch Instructions such that their output exceeds the Interconnection Service Capacity of the Generating Facility, will be ineligible for the Aggregate Capability Constraint. In such cases, the CAISO will adjust the PMaxes of those Co-located Resources proportionate to each Generating Unit's capacity such that the sum of the PMax values equals the Interconnection Service Capacity of the Generating Facility, or as requested by the Interconnection Customer so long as the total value does not exceed the Interconnection Service Capacity of the Generating Facility.

Similar to other Generating Facilities with multiple Resource IDs, the CAISO will have no liability with respect to Co-located Resources or their Scheduling Coordinators if Co-located Resources do not comply with Dispatch Instructions and infringe on Interconnection Service Capability used by other Co-located Resources at a Generating Facility.

In the event that Co-located Resources in an EIM Entity Balancing Authority area do not comply with Dispatch Instructions such that their output exceeds the interconnection service capacity for the Co-located Resources, the CAISO will ask the applicable EIM Entity Balancing Authority whether it will revoke its prior approval of enforcing the Aggregate Capability Constraint for such Co-located Resources.

The following resources are not eligible to use the Aggregate Capability Constraint: Multi-Stage Generators, Proxy Demand Response, Pumped Storage Hydro Units, Metered Subsystems, and Use-Limited Resources.

The Pricing Node for the Generating Units, EDAM Resources or EIM Resources subject to an Aggregate Capability Constraint will be their Point of Interconnection.

### 27.14 Participation as a Balancing Authority Area in the EDAM Area

The CAISO will participate as a Balancing Authority Area in the EDAM Area, consistent with requirements of Section 33, subject to the provisions of this Section 27.14.

#### 27.14.1 EDAM Transfer and Congestion Revenue

EDAM Transfer Revenue and EDAM Congestion Revenue distributed to the CAISO Balancing Authority Area in accordance with Section 33.11.1 will be allocated by the CAISO to the applicable Scheduling Coordinators as provided in Section 11.35.2.

#### 27.14.2 EDAM Resource Sufficiency Evaluation

##### 27.14.2.1 EDAM RSE Surcharge and Revenue Allocation

EDAM RSE surcharges or revenue distributed to the CAISO Balancing Authority in accordance with Section 33.11.2 will be allocated by the CAISO to the applicable Scheduling Coordinators as provided in Section 11.35.3.

##### 27.14.2.2 [Not Used]

#### 27.14.3 Net Export Transfer Constraint

The CAISO Balancing Authority Area may enable the configurable EDAM net export transfer constraint set forth in Section 33.31.3 consistent with the process set forth in the Business Practice Manual utilizing the confidence factor provided for in Section 27.14.3.1 and the additional reliability margin provided for in Section 27.14.3.2.

##### 27.14.3.1 Confidence Factor

If there is observed risk of non-performance or non-delivery by Supply overall or from intertie schedules, or if Good Utility Practice or operator judgement otherwise requires, then the CAISO Balancing Authority Area will utilize a tunable confidence factor of less than 100% configurable by hour, as provided in Section 33.31.3.1, and consistent with the process set forth in the Business Practice Manual.

#### 27.14.3.2 Additional Reliability Margin

If there is an observed risk that additional capacity will be needed to respond to reliability conditions, or if Good Utility Practice or operator judgement otherwise requires, then the CAISO will utilize an additional tuneable reliability margin configurable by hour, as provided in Section 33.31.3.2, and consistent with the process set forth in the Business Practice Manual.

### 27.14.4 EDAM Recoverable Revenue

EDAM recoverable revenue for the CAISO Balancing Authority Area will be calculated, allocated and distributed to the applicable Scheduling Coordinators, as provided in Section 26.2.

# 28. Inter-SC Trades

## 28.1 Inter-SC Trades of Energy

### 28.1.1 Purpose

Scheduling Coordinators submit Inter-SC Trades of Energy consistent with the provisions in this Section 28.

### 28.1.2 Availability of Inter-SC Trades of Energy

The CAISO allows Inter-SC Trades of Energy at individual PNodes of Generating Units and unique Aggregated Pricing Nodes of Physical Scheduling Plants within the CAISO Balancing Authority Area and at Aggregated Pricing Nodes that are either defined Trading Hubs or Default LAPs. The CAISO does not allow Inter-SC Trades of Energy at Scheduling Points. The CAISO allows submission of Inter-SC Trades of Energy in the DAM and RTM. Inter-SC Trades of Energy submitted for the DAM are settled at the hourly DAM LMP at the applicable Aggregated Pricing Nodes or PNodes. Inter-SC Trades of Energy submitted in the RTM are settled hourly based on the simple average of the four FMM LMPs at the applicable Aggregated Pricing Nodes or PNodes.

### 28.1.3 Submission of Inter-SC Trades of Energy

A Scheduling Coordinator may submit Inter-SC Trades of Energy that it intends to have settled based on DAM LMPs at any time during the Day-Ahead Inter-SC Trade Period and may submit Inter-SC Trades of Energy for a particular hour that it intends to have settled based on the simple average of the four FMM LMPs during that hour at any time during the RTM Inter-SC Trade Period.

### 28.1.4 Information Requirements

An Inter-SC Trade of Energy must consist of trades from both Scheduling Coordinators and contain the following information: (i) the Scheduling Coordinator ID Code (SCID) of the Scheduling Coordinator from which the Energy is traded; (ii) the SCID of the Scheduling Coordinator to which the Energy is traded; (iii) the location of the Energy trade; (iv) the CAISO Market the trade is to be settled in; (v) the time period over which the bilateral Energy trade will take place, including the start-date and Trading Hour and the end-date and Trading Hour; and (vi) the quantity (MWh) of the Energy traded.

### 28.1.5 General Validation Rules for Inter-SC Trades

For all Inter-SC Trades of Energy the CAISO shall verify that the Scheduling Coordinators for the Inter-SC

Trade of Energy mutually agree on the quantity, location, time period, and CAISO Market (for pricing purposes, i.e., DAM or FMM) for settling the Inter-SC Trade of Energy. Any individual Inter-SC Trade of Energy that is deemed invalid by the CAISO due to inconsistencies between the trading Scheduling Coordinators on these terms will be rejected. The CAISO will notify trading Scheduling Coordinators within a reasonable time if their Inter-SC Trades of Energy fail these general validation rules as described in the Business Practice Manuals.

### 28.1.6 Validation Procedures for Physical Trades

All Inter-SC Trades at PNodes and all Inter-SC Trades of Physical Scheduling Plants at their unique Aggregated Pricing Nodes will be subject to validation procedures as specified in this Section. Physical Trades can occur at any individual Generating Unit's PNode or a Physical Scheduling Plant's Aggregated Pricing Node provided the Physical Trade satisfies the CAISO's Physical Trades validation procedures described herein. The Scheduling Coordinators must demonstrate that the trade is supported (directly or through an Inter-SC Trade of Energy with another Scheduling Coordinator) by a Day-Ahead Schedule or FMM Schedule for a Generating Unit or Physical Scheduling Plant at the same location for the Inter-SC Trade of Energy at a level greater than or equal to the amount of the Inter-SC Trade of Energy. The CAISO's validation procedures for Physical Trades include three components: (1) Physical Trade submittal screening, (2) Physical Trade pre-market validation, and (3) Physical Trade post-market confirmation.

#### 28.1.6.1 Physical Trade Submittal Screening

The CAISO's Physical Trade validation procedures begin upon initial submission of a Physical Trade to the CAISO. The first stage of that process, Physical Trade submittal screening, validates that the submitted Physical Trade does not exceed the PMax of the identified Generating Unit or Physical Scheduling Plant. The CAISO will reject Physical Trades that exceed the PMax and notify the responsible Scheduling Coordinators.

#### 28.1.6.2 Physical Trade Pre-Market Validation

The purpose of the pre-market validation is to determine whether the total MWh quantity of all submitted Physical Trades at a PNode of an individual Generating Unit or the Aggregated Pricing Node of a Physical Scheduling Plant exceeds the resource's Energy Bid MWh. Pre-market validation is performed

on all Physical Trades that pass the submittal screening set forth in Section 28.1.6.1. Scheduling Coordinators are notified within a reasonable time of their Physical Trades status as the CAISO conducts the pre-market validation to indicate, at a minimum, whether the Physical Trade is currently "conditionally valid", "conditionally invalid", or "conditionally modified." These Physical Trade notices are preliminary and subject to change until the final pre-market validation at the close of the relevant Inter-SC Trade Period. A Physical Trade with a "conditionally valid" or "conditionally modified" status may be rendered "conditionally invalid" due to the actions of the Scheduling Coordinators to that Physical Trade or by other trading activities that are linked to the Generating Unit identified for the relevant Physical Trade whenever the quantities specified in the relevant Inter-SC Trades cannot be supported by the underlying Bid. Scheduling Coordinators can use these status notices to make modifications to complete or correct invalid Physical Trades. The CAISO also performs cyclic pre-market validation prior to the close of the relevant Inter-SC Trade Period. Physical Trades that are individually valid are concatenated (daisy chained) with other supporting Physical Trades at the same PNode or Aggregated Pricing Node of the Generating Unit or Physical Scheduling Plant. Once that concatenation is complete, the CAISO will determine whether the concatenated Physical Trades are physically supported by either another Inter-SC Trade of Energy at that same location or the Bid submitted in the relevant CAISO Market on behalf of the resource for that Physical Trade, individually and in the aggregate. If a Physical Trade is not adequately physically supported, the quantities in the Physical Trades of that Scheduling Coordinator and its downstream trading counter-parties are reduced on a pro-rata basis until those Physical Trades are valid. In performing physical pre-market validation of Inter-SC Trades of Energy in the RTM, the CAISO also considers final Inter-SC Trades of Energy for the DAM in determining whether the RTM Physical Trades are physically supported individually or in the aggregate. Specifically, the CAISO determines whether the resource's Bid in the RTM is greater than or equal to the sum of: (1) final Day-Ahead Inter-SC Trades of Energy at that location, (2) the additional Inter-SC Trades of Energy for the RTM at that location and (3) the sum of all upward Day-Ahead Ancillary Services Awards at that location. If the amounts are greater than the resource's submitted Bids in the RTM, the CAISO will adjust down on a prorated basis the RTM Physical Trades. Final Day-Ahead Physical Trades are not adjusted in the RTM pre-market validation. The CAISO does not perform any Settlement on Physical Trade quantities (MWh) that are curtailed during

Physical Trade pre-market validation.

#### 28.1.6.3 Physical Trade Post-Market Confirmation

The CAISO conducts post-market confirmation of Physical Trades that pass pre-market validation in Section 28.1.6.2 after the Market Clearing and the market results are posted to ensure that the Generating Unit or Physical Scheduling Plant has a Schedule that can support all of the Physical Trades. During the post-market confirmation process, the MWh quantity of Physical Trades that passed the CAISO's pre-market validation process may be reduced if the resource supporting the Physical Trades has a Day-Ahead Schedule, HASP Block Intertie Schedule, or HASP Advisory Schedule that is, on average, below the quantity of Physical Trades at that Location. The MWh quantities of Physical Trades that are reduced during the post-market confirmation process are settled at the Existing Zone Generation Trading Hub price for the Existing Zone associated with the resource identified in the Inter-SC Trade of Energy. The portion of Physical Trades that remains intact will be settled at the relevant LMP for the identified PNode for the Generating Unit or Aggregated Pricing Node for the Physical Scheduling Plant.

#### 28.1.6.4 Inter-SC Trades of Energy at Aggregated Pricing Nodes

Inter-SC Trades of Energy at Aggregated Pricing Nodes that are also defined Trading Hubs or Default LAPs are subject to the general validation procedures in Section 28.1.5 but are not subject to the three-stage physical validation procedures for Physical Trades described in Section 28.1.6 above.

### 28.2 Inter-SC Trades of Ancillary Services

Inter-SC Trades of Ancillary Services enable a Scheduling Coordinator to transfer any fixed quantity of Ancillary Services (MW) to another Scheduling Coordinator. An Inter-SC Trade of AS shall consist of a quantity in MWs traded between two Scheduling Coordinators for a specific hour and for a specific Ancillary Service type. The Inter-SC Trade of AS is a financial trade. The CAISO shall charge and credit the two parties of the trade based on the quantity (MW) of the Ancillary Service Obligation traded times the user rate for the Ancillary Service trades for the Trading Hour. Scheduling Coordinators may submit Inter-SC Trades of Ancillary Services for Regulation Up, Regulation Down, Spinning and Non-Spinning Reserves.

#### 28.2.1 Information Requirements

An Inter-SC Trade of Ancillary Services shall contain the following information: (i) the Scheduling

Coordinator ID Code (SCID) for the Scheduling Coordinator from whom the MW amounts of Ancillary Service is traded; (ii) the SCID for the Scheduling Coordinator to whom the MW amounts of AS is traded; (iii) the type of AS being traded; (iv) the time period over which the trade will take place, including the start-date and time and the end-date and time; and the (v) quantity (MW) of the AS to be traded.

### 28.2.2 Validation

The CAISO's validation of Inter-SC Trades of AS will begin upon submission of an Inter-SC Trade of AS. The CAISO shall conduct a final validation for Inter-SC Trades of AS at the end of the RTM Inter-SC Trade Period. The CAISO will validate each submitted Inter-SC Trade of AS to verify that the contents of the submission match the submittal by the counter-party Scheduling Coordinator by type (Regulation Up, Regulation Down, Spinning Reserve and Non-Spinning Reserve), quantity (MW), and time period. The CAISO will inform the submitting Scheduling Coordinators regarding the validity of a submitted trade of an AS and will allow the Scheduling Coordinator to resubmit the entire Inter-SC Trade of AS if it is not accepted. If only one of the two Scheduling Coordinators successfully submits an Inter-SC Trade of AS, the CAISO will notify both Scheduling Coordinators that the Inter-SC Trade of AS for the specific hour does not match the corresponding Inter-SC Trade of AS. If both Scheduling Coordinators successfully submit the Inter-SC Trade of AS, the CAISO will notify the Scheduling Coordinators that their Inter-SC Trade of AS for the specific hour has been accepted. An Inter-SC Trade of Ancillary Services submitted at a later time, but before the deadline for the submission of the trade for the Trading Hour, renders a previously submitted Inter-SC Trade of AS invalid if it applies to the same hour, same type of AS, and the same Scheduling Coordinators to whom and from whom the AS is traded.

### 28.2.3 Submission of Inter-SC Trades of Ancillary Services

Scheduling Coordinators may submit Inter-SC Trades of Ancillary Services at any time during the RTM Inter-SC Trade Period.

## 28.3 Inter-SC Trades of IFM Load Uplift Obligation

Scheduling Coordinators may submit system-wide Inter-SC Trades of IFM Load Uplift Obligations from within the CAISO Balancing Authority Area. Inter-SC Trades of IFM Load Uplift Obligations enable a Scheduling Coordinator to transfer any amount of net IFM Load Uplift Obligation (MW) to another Scheduling Coordinator. An Inter-SC Trade of IFM Load Uplift Obligation shall consist of a quantity in

MWs traded between two Scheduling Coordinators for a specific Trading Hour of the IFM.

### 28.3.1 Information Requirements

An Inter-SC Trade of IFM Load Uplift Obligation shall contain the following information: (i) the Scheduling Coordinator ID Code for the Scheduling Coordinator from whom the MW amounts of IFM Load Uplift Obligation is traded; (ii) the Scheduling Coordinator ID Code for the Scheduling Coordinator to whom the MW amounts of IFM Load Uplift Obligation is traded; (iii) the applicable Location of the Inter-SC Trade of IFM Load Uplift Obligation; (iv) the time period over which the trade will take place, including the start-date and time and the end-date and time; and (v) the quantity (MW) of the IFM Load Uplift Obligation to be traded.

### 28.3.2 Validation

The CAISO's validation of Inter-SC Trades of IFM Load Uplift Obligations will begin upon submission of an Inter-SC Trade of IFM Load Uplift Obligation. The CAISO shall conduct a final validation for Inter-SC Trades of IFM Load Uplift Obligations at the end of the RTM Inter-SC Trade Period. The CAISO will validate each submitted Inter-SC Trade of IFM Load Uplift Obligation to verify that the contents of the submission match the submittal by the counter-party Scheduling Coordinator in terms of quantity (MW), and time period. The CAISO will inform the submitting Scheduling Coordinators regarding the validity of a submitted Inter-SC Trade of IFM Load Uplift Obligation and will allow the Scheduling Coordinator to resubmit the entire Inter-SC Trade of IFM Load Uplift Obligation if it is not accepted. If only one of the two Scheduling Coordinators successfully submits an Inter-SC Trade of IFM Load Uplift Obligation, the CAISO will notify both Scheduling Coordinators that the Inter-SC Trade of IFM Load Uplift Obligation for the specific hour does not match the corresponding Inter-SC Trade of IFM Load Uplift Obligation. If both Scheduling Coordinators successfully submit the Inter-SC Trade of IFM Load Uplift Obligation, the CAISO will notify the Scheduling Coordinators that their Inter-SC Trade of IFM Load Uplift Obligations for the specific hour has been accepted. The CAISO will verify that an Inter-SC Trade of IFM Load Uplift Obligation is between different Scheduling Coordinators that are authorized to participate in the CAISO Markets during the time period covered by the trade and that the Trading Hour and the quantity of the trade must be greater than or equal to zero. An Inter-SC Trade of IFM Load Uplift Obligation submitted at a later time renders a previously submitted Inter-SC Trade of IFM Load Uplift Obligation invalid if it applies

to the same hour and the same Scheduling Coordinators to whom and from whom the net IFM Load Uplift Obligation is traded.

### 28.3.3 Submission of Inter-SC Trades of IFM Load Uplift Obligation

Scheduling Coordinators may submit Inter-SC Trades of IFM Load Uplift Obligations at any time during the RTM Inter-SC Trade Period.

# 29. Energy Imbalance Market

## 29.1 General Provisions.

(a) **Operation of EIM.** Pursuant to Section 29, the CAISO shall expand operation and settlement of the Real-Time Market to provide for the purchase and sale of balancing Energy in any Balancing Authority Area for which the Balancing Authority executes an EIM Entity Agreement with the CAISO. Operation and Settlement of the Real-Time Market in an EIM Entity Balancing Authority Area for which the Balancing Authority executes an EDAM Entity Agreement with the CAISO is supplemented by Section 33.

(b) **EIM Tariff Obligations.** EIM Market Participants shall comply with –

(1) the provisions of Section 29; and

(2) other provisions of the CAISO Tariff that apply to the extent such provisions –

(A) expressly refer to Section 29 or EIM Market Participants;

(B) are cross referenced in Section 29; or

(C) are not limited in applicability to the CAISO Controlled Grid, the CAISO Balancing Authority Area, or CAISO Markets other than the Real-Time Market.

(c) **Inconsistency Between Provisions.** If there is an inconsistency between a provision in Section 29 and another provision of the CAISO Tariff regarding the rights or obligations of EIM Market Participants, except in their capacity as EDAM Market Participants under Section 33, the provision in Section 29 shall prevail to the extent of the inconsistency. If there is an inconsistency between a provision in Section 29 and a provision in Section 33, the provisions of Section 33 will prevail with respect to participation in the Day-Ahead Market and the provisions of Section 29 will prevail with respect to participation in the Real-Time Market, provided that the provisions of both Sections 33 and 29 will be given equal consideration such that the provisions applicable as an EIM Market Participant and EDAM Market Participant may be reconciled where provisions apply to participation in both the Real-Time Market and the Day-Ahead Market.

(d) **Suspension of EIM Entity Participation.**

(1) **Temporary Suspension.** The CAISO may, within 60 days following an EIM Entity Implementation Date for an EIM Entity, and pursuant to the terms of a Market Notice, temporarily suspend the participation of that EIM Entity in the Real-Time Market for a period not to exceed 60 days if market or system operational issues adversely impact any portion of the EIM Area, provided that the ISO may continue operation of the Real-Time Market without the participation of the EIM Entity for a reasonable additional period of time in order to implement a resolution of the market or system operational issues.

(2) **CAISO Termination.** If the CAISO is not able to identify a resolution of the EIM-related market or system operational issues within 60 days after issuance of the Market Notice of temporary suspension of EIM participation by an EIM Entity, the CAISO may, upon issuance of a subsequent Market Notice, terminate participation by the EIM Entity in the Real-Time Market and may extend the suspension of EIM participation by the EIM Entity for a time sufficient to process the termination of the EIM Entity Agreement.

(3) **Reinstatement.**

(A) **After Temporary Suspension.** The CAISO may reinstate EIM operations after a temporary suspension of EIM participation by an EIM Entity by issuing a Market Notice announcing the intended reinstatement no less than 5 days in advance of the reinstatement date.

(B) **After CAISO Termination.** The CAISO may only reinstate EIM operations with respect to an EIM Entity after termination of EIM participation by an EIM Entity pursuant to a filing accepted by FERC.

(4) **EIM Entity Action.** In the event the CAISO issues a Market Notice of the temporary suspension of EIM participation by an EIM Entity, the EIM Entity shall continue to submit EIM Base Schedules and the associated meter data to enable continued operation of the Real-Time Market until the CAISO issues a

subsequent Market Notice either that –

(i) the cause of the temporary suspension has been resolved and the EIM Entity has been reinstated, in which case EIM participation by the EIM Entity shall return to normal; or

(ii) EIM participation by the EIM Entity has been terminated.

(5) **CAISO Action.** In the event the CAISO issues a Market Notice of the temporary suspension of EIM participation by an EIM Entity, the CAISO shall –

(i) prevent EIM Transfers and separate the EIM Entity Balancing Authority Area from operation of the Real-Time Market in the EIM Area in accordance with the provisions of the Business Practice Manual for the Energy Imbalance Market;

(ii) suspend Settlement of Real-Time Market charges with respect to the EIM Entity in accordance with the provisions of the Business Practice Manual for the Energy Imbalance Market; and

(iii) issue a subsequent Market Notice either that (i) the cause of the temporary suspension has been resolved and the EIM Entity has been reinstated, in which case EIM participation by the EIM Entity shall return to normal, or (ii) EIM participation by the EIM Entity has been terminated.

**29.2 EIM Entity and EIM Sub-Entity Access to the Real-Time Market**

(a) **In general.** The CAISO shall –

(1) provide open and non-discriminatory access to the Real-Time Market, including the Energy Imbalance Market, in accordance with the provisions of the CAISO Tariff; and

(2) make available for use in the Real-Time Market the transmission capacity that is available in Real-Time –

(A) on the CAISO Controlled Grid; and

(B) for which an EIM Entity or EIM Sub-Entity provides EIM Transmission Service Information pursuant to Section 29.17.

(b) **Implementation of Access as an EIM Entity.**

(1) **EIM Implementation Agreement.** A Balancing Authority that wishes to become an EIM Entity must first execute an EIM Implementation Agreement with the CAISO that establishes –

(A) the activities the parties must undertake to enable the Balancing Authority to participate in the Real-Time Market;

(B) the EIM Entity Implementation Date;

(C) the implementation fee the Balancing Authority must pay to the CAISO for the start-up costs the CAISO incurs to accommodate the participation of the Balancing Authority in the Real-Time Market as provided in the agreement; and

(D) the obligation of the Balancing Authority to enter into an EIM Entity Agreement governing its participation in the Real-Time Market.

(2) **FERC Approval.** The EIM Entity Implementation Date must be not less than six months and not more than twenty-four months after the date that the EIM Implementation Agreement between the CAISO and the Balancing Authority is accepted by FERC.

(3) **Implementation Period.** The CAISO shall in its discretion determine the EIM Entity Implementation Date based on the complexity and compatibility of the Balancing Authority's transmission and technology systems with the CAISO systems and the planned timing of the CAISO's implementation of software enhancements.

(4) **Market Simulation and Parallel Operations.** The CAISO and the prospective EIM Entity shall engage in –

(A) a market simulation that accounts for the prospective EIM Entity's implementation circumstances sufficient to meet the readiness criteria set forth in Section 29.2(b)(7); and

(B) at least 30 days of parallel operations representing the Energy

Imbalance Market to support the CAISO and the prospective EIM Entity's readiness certification required by section 29.2(b)(6), an adequate period of which must occur prior to the readiness determination required by section 29.2(b)(5).

(5) **Readiness Determination.** No later than 30 days prior to the prospective EIM Entity Implementation Date as established by the EIM Implementation Agreement, the CAISO will determine, in consultation with the prospective EIM Entity, whether the systems and processes of the prospective EIM Entity will be ready for the prospective EIM Entity's participation in the Energy Imbalance Market according to the criteria set forth in Section 29.2(b)(7) as measured by the thresholds specified in the Business Practice Manual for the Energy Imbalance Market, or consistent with any exceptions to thresholds, for certifying the prospective EIM Entity's readiness.

(6) **Readiness Certification.**

(A) **Certification.** The CAISO and the prospective EIM Entity shall each file a market readiness certificate with FERC at least 30 days prior to the EIM Entity Implementation Date in which a senior office of each entity attests –

(i) that the processes and systems of the prospective EIM entity have satisfied or will have satisfied the readiness criteria set forth in Section 29.2(b)(7) as of the EIM Entity Implementation Date;

(ii) to any known issues requiring resolution prior to the EIM Entity Implementation Date in accordance with section 29.2(b)(8);

(iii) to any exceptions from the established thresholds specified in the Business Practice Manuals, and that despite such exceptions the criteria were met or will be met as specified in 29.2(b)(7); and

(iv) that the EIM Entity Implementation Date is conditional on the resolution of the known issues identified in the certificates and

any unforeseen issues that undermine the satisfaction of the readiness criteria set forth in Section 29.2(b)(7).

(B) **Delay or Re-Certification.** If, subsequent to readiness certification pursuant to Section 29.2(b)(6)(A), the CAISO or the prospective EIM Entity determines that it cannot proceed with implementation on the EIM Entity Implementation Date, the CAISO or the prospective EIM Entity will notify FERC of the delay, the reason for the delay, the new EIM Entity Implementation Date if it can be determined, and whether it will need to re-issue a portion or all of the readiness certification.

(7) **Readiness Criteria.**

(A) **Prospective EIM Entity Full Network Model Integration.** The network model data of the prospective EIM Entity is integrated into the Full Network Model such that –

(i) the Load, EIM Internal Intertie and EIM External Interties and Generating Unit definition in the Full Network Model is consistent with the Load, EIM Internal Intertie and EIM External Interties and Generating Unit definition in the prospective EIM Entity network model file that it delivered to the CAISO;

(ii) the SCADA measurements used in the prospective EIM Entity's EMS model match the measurements observed by the CAISO through the CAISO EMS;

(iii) the State Estimator solution is equivalent or superior to the prospective EIM Entity's state estimator solution for its Balancing Authority Area; and

(iv) the physical representation of the prospective EIM Entity network matches the Base Market Model that accounts for non-conforming load, behind-the-meter generation, Pseudo-Ties, and Dynamic Schedules, and third party transmission service

provider and path operator information that the CAISO agrees is used to support EIM Transfers and Real-Time Dispatch in the Energy Imbalance Market, as applicable.

(B) **Operations Training.** Prior to the start of parallel operations as set forth in Section 29.2(b)(4), all operations staff identified by the prospective EIM Entity who will have responsibility for EIM operations, transactions and settlements, have completed –

(i) the introduction to Energy Imbalance Market training module;

(ii) the specific hourly and daily tasks and duties for normal operation training module; and

(iii) the assessment of market results and response to contingencies and abnormal situations training module.

(C) **Forecasting Capability.** The CAISO and, to the extent the prospective EIM Entity will use its own forecasts or is otherwise required to provide forecasting information to the CAISO, the prospective EIM Entity have demonstrated their respective forecasting capability through –

(i) the definition of EIM Demand forecast boundaries based on the conforming and non-conforming Load characteristics, as applicable;

(ii) the accuracy of the CAISO forecast of EIM Demand based on historical actual Load data for the defined EIM Demand forecast boundaries;

(iii) the identification of weather stations locations used in forecasting, as applicable;

(iv) the identification of the source of Variable Energy Resource forecasts pursuant to Section 29.11(j); and

(v) the identification of the source of Hybrid Resource forecasts

pursuant to Section 29.11(j).

(D) **Balanced Schedules.** The prospective EIM Entity's Scheduling Coordinator has demonstrated it has the –

(i) ability to balance EIM Demand and EIM Supply for the prospective EIM Entity's Balancing Authority Area;

(ii) ability to pass the capacity test, as set forth in Section 29.34(l); and

(iii) ability to pass the flexible ramping sufficiency test, as set forth in Section 29.34(m).

(E) **System Readiness and Integration.**

(i) **Readiness.** The prospective EIM Entity and the CAISO have tested the functional and system elements in accordance with functional and system testing documentation posted on the CAISO Website.

(ii) **System Integration.** The prospective EIM Entity and the CAISO have tested system integration testing in accordance with the system integration testing documentation posted on the CAISO Website.

(iii) **Certificates.** The prospective EIM Entity has issued all necessary certificates to its employees that require system access to perform EIM-related job functions.

(F) **Settlements.** The CAISO and the prospective EIM Entity have demonstrated that –

(i) the CAISO Settlement Statements and Invoices match the operational data published to stakeholders or fed into the settlement system and the resulting calculations correspond to the formulas defined in the CAISO Tariff and applicable Business

Practice Manuals during market simulation and parallel operations; and

(ii) the Settlement Statements and Invoices of the prospective EIM Entity allocating charges and credits to its customers accurately reflect system and market data during parallel operations.

(G) **Outage Management System.** The prospective EIM Entity has verified its ability to submit and retrieve accurate and correct outage information to and from the CAISO within the required timelines.

(H) **Communications between the CAISO and the prospective EIM Entity.**

(i) **Messaging.** The process and procedures used for voice and electronic messaging between the prospective EIM Entity and the CAISO are identified and incorporated into the prospective EIM Entity's operating procedures before the start of market simulation specified in Section 29.2(b)(4)(A).

(ii) **Training.** The operations staff identified by the prospective EIM Entity who will have responsibility for EIM operations, transactions and settlements are trained on the relevant Operating Procedures and tools used for EIM related communications before the start of parallel operations specified in Section 29.2(b)(4)(B).

(iii) **Third Party Transmission Service Providers.** Third party transmission service provider and path operator information that the CAISO agrees is used to support EIM Transfers and Real-Time Dispatch is made available by the CAISO to the prospective EIM Entity during parallel operations.

(I) **Market Simulation.**

(i) **Prospective EIM Entity Identification.** The CAISO has established and the prospective EIM Entity has tested all necessary SCIDs and Resource IDs established for the prospective EIM Entity's Balancing Authority Area.

(ii) **Day in the life simulation.** The prospective EIM Entity operations staff identified by the prospective EIM Entity who will have responsibility for EIM grid operations, have completed end-to-end daily market workflow with no critical defects.

(iii) **Structured scenarios simulation.** The prospective EIM Entity operations staff identified by the prospective EIM Entity who will have responsibility for EIM operations, transactions and settlements, have executed and passed all structured scenarios provided by CAISO with all significant issues resolved.

(iv) **Unstructured scenarios simulation.** The prospective EIM Entity operations staff identified by the prospective EIM Entity who will have responsibility for EIM operations, transactions and settlements, have executed and passed all unstructured scenarios provided by the prospective EIM Entity, with significant issues resolved.

(v) **Market results reports.** Market results are appropriate based on inputs, and the prospective EIM Entity and CAISO executive project sponsors approve the results.

(vi) **Market quality review.** The CAISO prices are validated based on input data for parallel operations specified in Section 29.2(b)(4)(B).

(J) **Parallel Operations Plan.** The period of parallel operations specified in

Section 29.2(b)(4)(B) runs consistently and in accordance with the prospective EIM Entity specific parallel operations plan.

(K) **Additional Criteria**

(i) **Execution of Necessary Agreements.** The prospective EIM Entity has complied with Section 29.4(c)(2) and executed any necessary agreements for operating as an EIM Entity, including any non-disclosure agreements required for the exchange of information.

(ii) **Operating Procedures.** Prior to the start of parallel operations pursuant to Section 29.2(b)(4)(B), the CAISO and the prospective EIM Entity have defined, completed, and tested operating procedures for the prospective EIM Entity and its Scheduling Coordinator's participation in the Energy Imbalance Market.

(iii) **Identification of EIM Available Balancing Capacity.** The prospective EIM Entity has identified EIM Resources and non-participating resources that it intends to designate in the EIM Resource Plan as EIM Available Balancing Capacity.

(iv) **Flexible Capacity Requirements.** The CAISO has received and stored all historical data from the prospective EIM Entity necessary and sufficient for the CAISO to perform the flexible ramp requirement, and the CAISO has established flexible capacity requirements for the prospective EIM Entity's Balancing Authority Area and for the combined EIM Area including the prospective EIM Entity.

(v) **Monitoring.** Sufficient and adequate data is available to the CAISO and the Department of Market Monitoring to enable market monitoring as of the Implementation Date.

(8) **Readiness Reporting.** The CAISO shall report on the CAISO Website periodically, but not less than monthly during market simulation pursuant to Section 29.2(b)(4)(A) and not less than twice a month during parallel operations pursuant to Section 29.2(b)(4)(B), on progress towards achieving the readiness criteria in Section 29.2(b)(7), including providing information explaining any exceptions to or deviations from the readiness thresholds granted according to the standards and procedures for granting exceptions or deviations set forth in the Business Practice Manual for the Energy Imbalance Market, and the reasons therefore, and publish such reports on its website in advance of and in support of the certificate to be filed pursuant to Section 29.2(b)(6).

(c) **Access as an EIM Sub-Entity.**

(1) **EIM Sub-Entity Qualification.** An electric utility that wishes to become an EIM Sub-Entity must—

(A) be an electric utility embedded within an EIM Entity Balancing Authority Area and not receive long-term wholesale full requirements services from the EIM Entity;

(B) own a distribution system or transmission facilities directly connected to a transmission system embedded in the EIM Entity Balancing Authority Area for the purpose of providing—

(i) regulated electric service to eligible retail or wholesale customers, or

(ii) serve eligible customers in its capacity as a Local Publicly Owned Electric Utility;

(C) own or control one or more resources for the primary purpose of serving its eligible customers; and

(D) obtain authorization from the EIM Entity in whose Balancing Authority Area the prospective EIM Sub-Entity is located.

(2) **EIM Entity Authorization.** An EIM Entity may elect at its sole discretion whether

or not to authorize participation by an EIM Sub-Entity within its Balancing Authority Area, which may encompass—

(A) no electric utility regardless of whether one or more electric utilities in its Balancing Authority Area meets the qualifications in Section 29.2(c)(1);

(B) all electric utilities that meet the qualifications in Section 29.2(c)(1) and seek to become EIM Sub-Entities; or

(C) some electric utilities that meet the qualifications in Section 29.2(c)(1), and seek to become EIM Sub-Entities, provided the EIM Entity finds that there is a supportive existing and accepted contractual or tariff based practice for imbalance energy accounting within its Balancing Authority Area that distinguishes the EIM Sub-Entity from its other transmission service customers.

(3) **EIM Sub-Entity Implementation Agreement.** An electric utility that has been authorized by the EIM Entity to participate as an EIM Sub-Entity in accordance with 29.2(c)(2) and wishes to become an EIM Sub-Entity must also execute an EIM Sub-Entity Implementation Agreement with the CAISO that establishes—

(A) the electric utility meets the CAISO qualifications for participation as an EIM Sub-Entity in Section 29.2(c)(1);

(B) the EIM Sub-Entity Implementation Date, which—

(i) the CAISO shall in its discretion determine based on the complexity and compatibility of the transmission and technology systems and the planned timing of the CAISO's implementation of software enhancements, and

(ii) must be not less than twelve months and not more than twenty-four months after CAISO confirms that the electric utility meets the CAISO qualifications for participation as an EIM Sub-Entity;

(C) the implementation fee deposit the electric utility must pay to the CAISO for the estimated start-up costs the CAISO will incur to partition the EIM

Sub-Entity from the EIM Entity Balancing Authority Area, subject to true-up based on actual costs incurred in accordance with the EIM Sub-Entity Implementation Agreement;

(D) the obligation of the electric utility to enter into an EIM Sub-Entity Agreement governing its participation in the Real-Time Market; and

(E) the obligation of the EIM Sub-Entity to either execute the EIM Sub-Entity Scheduling Coordinator Agreement, or retain the services of an entity that has executed the EIM Sub-Entity Scheduling Coordinator Agreement.

(4) **EIM Sub-Entity Implementation Activities.** The CAISO and the prospective EIM Sub-Entity will engage in –

(A) project management planning and tracking of all implementation tasks, issues and risks through regular meetings and status reports following a detailed project schedule outlining all the steps leading to the market simulation, parallel operations and participation;

(B) authorization and certification processes associated with execution of the required agreements and any applicable tariff changes necessary for participation;

(C) integration of the network model data with the CAISO's Full Network Model, including connectivity testing and Full Network Model verification prior to market simulation testing;

(D) integration and access to non-production environments for integration and testing of market data exchange and modification of prospective EIM Sub-Entity operating and bid-to-bill systems associated with participation, including system integration, security and functional testing of all impacted systems and processes followed by market simulation according to a CAISO test plan outlining scenarios, a timeline and expected actions prior to testing;

(E) review and approval of information and processes to confirm the Meter Data meets all requirements necessary for the implementation and Settlement of the prospective EIM Sub-Entity, including any associated testing;

(F) training events including computer based training modules for various roles and responsibilities, train-the-trainer courses which include hands-on scenario trainings with application tools, and optional participation in modeling workshops and other tracks as appropriate to prepare for transition to production.

(5) **Readiness Reporting.** The CAISO shall report on the CAISO Website periodically, but not less than once during market simulation on progress towards completing the implementation activities in Section 29.2(c)(4) and once again during parallel operations confirming completion of the implementation activities in Section 29.2(c)(4).

(6) **Readiness Determination.** No later than 10 days prior to the prospective EIM Sub-Entity Implementation Date as established in the EIM Sub-Entity Implementation Agreement, the CAISO will determine, in consultation with the EIM Entity and the prospective EIM Sub-Entity, whether the systems and processes of the EIM Entity and the prospective EIM Sub-Entity will be ready for the prospective EIM Sub-Entity's participation in the Energy Imbalance Market.

**29.3 [Not Used]**

**29.4 Roles and Responsibilities**

(a) **CAISO Balancing Authority Obligations.**

(1) **Reliability Responsibilities.** Nothing in Section 29 shall alter the CAISO's responsibilities under the other sections of the CAISO Tariff, under any agreement not required by Section 29, or under NERC Reliability Standards or any other Applicable Reliability Criteria as the Balancing Authority for the CAISO Balancing Authority Area and the transmission operator for the CAISO Controlled

Grid.

(2) **Operating Responsibilities.** During any interruption of the normal operation of the Real-Time Market, the CAISO as Balancing Authority shall remain responsible for managing the resources in its Balancing Authority Area and the flows on transmission lines internal to the CAISO Balancing Authority Area, including imports and exports, for the duration of the interruption.

(b) **EIM Entity.**

(1) **Balancing Authority Obligations.**

(A) **EIM Entity as Balancing Authority.** An EIM Entity must be a Balancing Authority registered and certified as such under the applicable authorities.

(B) **Reliability Responsibilities.** Nothing in Section 29 shall alter an EIM Entity's responsibilities under NERC Reliability Standards as the Balancing Authority for the EIM Entity Balancing Authority Area and, to the extent applicable, as the transmission operator for transmission facilities within its Balancing Authority Area.

(C) **Operating Responsibilities.** During any interruption of the normal operation of the Real-Time Market, the EIM Entity as Balancing Authority shall remain responsible in accordance with Section 29.7 for managing the resources in its Balancing Authority Area and the flows on internal transmission lines, including imports into and exports out of its Balancing Authority Area, for the duration of the interruption.

(D) **Inadvertent Energy.** An EIM Entity remains responsible for tracking inadvertent Energy and administering the payback of inadvertent Energy for its Balancing Authority Area through processes established by WECC.

(2) **EIM Entity Agreement.** An EIM Entity must execute an EIM Entity Agreement no later than ninety (90) days before the EIM Entity Implementation Date.

(3) **EIM Entity Obligations.** An EIM Entity shall –

(A) perform the obligations of an EIM Entity in accordance with the EIM Entity Agreement, Section 29, and other provisions of the CAISO Tariff that apply to EIM Entities, subject to the limitations specified in Section 29.1(b)(2)(C);

(B) ensure that each EIM Transmission Service Provider in its Balancing Authority Area has provisions in effect in the EIM Transmission Service Provider's transmission tariff, as necessary or applicable, to enable operation of the Real-Time Market in its Balancing Authority Area;

(C) qualify as or secure representation by no more than one EIM Entity Scheduling Coordinator;

(D) review and validate information about available transmission capacity submitted to it by an EIM Transmission Service Provider and transmit such validated information to its EIM Entity Scheduling Coordinator;

(E) provide the CAISO and its EIM Entity Scheduling Coordinator with information regarding the transmission capacity available to the Real-Time Market, including any information regarding Transmission Constraints of which it is aware;

(F) define Load Aggregation Points in its Balancing Authority Area;

(G) determine and inform the CAISO which resource types are eligible to participate in the Real-Time Market as resources and which transmission service providers or holders of transmission rights are EIM Transmission Service Providers; and

(H) inform the CAISO whether or not the EIM Entity intends to utilize the CAISO's Demand Forecast consistent with Section 29.34(d).

(4) **EIM Entity Termination of EIM Participation.**

(A) **EIM Entity Agreement.** An EIM Entity that wishes to terminate

participation in the Real-Time Market must terminate the EIM Entity Agreement pursuant to its terms.

(B) **Notice.** Delivery to the CAISO of a written notice of termination pursuant to the terms of the EIM Entity Agreement shall represent the commitment by the EIM Entity to undertake all necessary preparations to disable the Real-Time Market within the EIM Entity Balancing Authority Area.

(C) **Actions Following Notice.** Upon receipt of such notice, the CAISO shall undertake all necessary preparations to disable the Real-Time Market within the EIM Entity Balancing Authority Area, as outlined in the Business Practice Manual for the Energy Imbalance Market, including issuance of a Market Notice within five Business Days after receipt of such notice and termination of any EIM Sub-Entities within the EIM Entity Balancing Authority Area.

(5) **EIM Entity Corrective Actions.** If the EIM Entity takes corrective action, subject to the provisions of an open access transmission tariff, to address an issue with EIM implementation or EIM operation, or the EIM Entity issues a notice of termination –

(A) the EIM Entity shall take those actions provided in Section 29.1(d)(4) during the implementation of its corrective action; and

(B) the CAISO shall issue a Market Notice in accordance with Section 29.1(d)(1) and take those actions provided in Section 29.1(d)(5) during the implementation of the EIM Entity corrective action.

(c) **EIM Entity Scheduling Coordinator.**

(1) **Certification.** An EIM Entity Scheduling Coordinator must meet or have met the certification requirements in Section 4.5.1 for a Scheduling Coordinator.

(2) **EIM Entity Scheduling Coordinator Agreement.** An EIM Entity Scheduling Coordinator must enter an EIM Entity Scheduling Coordinator Agreement with

the CAISO, which shall satisfy the obligation to enter a Scheduling Coordinator Agreement under Section 4.5.1 with regard to its representation of the EIM Entity.

(3) **Representation.** An EIM Entity Scheduling Coordinator-

(A) may represent a Market Participant other than an EIM Entity, but only if it enters a Scheduling Coordinator Agreement under Section 4.5.1 with regard to such Market Participant;

(B) may not also be an EIM Participating Resource Scheduling Coordinator or a Scheduling Coordinator for a Participating Generator, Participating Load, or Demand Resource Provider, unless the EIM Entity Scheduling Coordinator is a transmission provider subject to the standards of conduct set forth in 18 C.F.R. § 358; and

(C) may represent more than one EIM Entity if it has certified to the CAISO in the manner described in the Business Practice Manual for the Energy Imbalance Market that it has informed each EIM Entity of the multiple representation.

(4) **Obligations.** An EIM Entity Scheduling Coordinator shall-

(A) perform the obligations of an EIM Entity Scheduling Coordinator under the EIM Entity Scheduling Coordinator Agreement and Section 29;

(B) perform the obligations of a Scheduling Coordinator under provisions of the CAISO Tariff described in Section 29.1(b);

(C) register in the manner set forth in the Business Practice Manual for the Energy Imbalance Market all non-participating resources in the Balancing Authority Area of each EIM Entity that it represents and update such information in a timely manner;

(D) verify in the manner set forth in the Business Practice Manual for the Energy Imbalance Market that all EIM Resources within the Balancing Authority Area of each EIM Entity represented by the EIM Entity

Scheduling Coordinator have been registered with the CAISO;

(E) submit the Interchange schedules for the EIM Entity and any EIM Sub-Entity within its Balancing Authority Area with other Balancing Authorities at the defined Interchange scheduling locations, including creating and processing E-Tags in accordance with NERC, North American Energy Standards Board, and WECC standards and business practices for bilateral schedules between Balancing Authority Areas that are arranged no less than 20 minutes in advance of the Dispatch Interval of the Real-Time Market in which the Interchange will occur and that are included in an EIM Resource Plan;

(F) match E-Tags and manage schedule curtailments at the defined Interchange scheduling locations with other Balancing Authorities;

(G) provide EIM Transmission Service Information in accordance with Section 29.17;

(H) settle all financial obligations arising out of the Real-Time Market for the EIM Entity, including financial settlement with non-participating resources and non-participating load within the EIM Entity Balancing Authority Area;

(I) submit EIM Base Schedules, EIM Resource Plans and other required information on behalf of the EIM Entity;

(J) register with the CAISO, consistent with the provisions in the Business Practice Manual for the Energy Imbalance Market, all non-participating resources that the EIM Entity Scheduling Coordinator may designate as EIM Available Balancing Capacity in its EIM Resource Plan; and

(K) create with the CAISO a Default Energy Bid consistent with the rules specified in Section 39.7.1 for all non-participating resources that the EIM Entity Scheduling Coordinator may designate as EIM Available

Balancing Capacity in the EIM Resource Plan.

(5) **Governmental Entities.** Notwithstanding Section 29.4(c)(3)(B), a governmental entity that is an EIM Entity Scheduling Coordinator may also be an EIM Participating Resource Scheduling Coordinator or a Scheduling Coordinator for resources participating in the CAISO Markets if it agrees to comply with standards of conduct equivalent to those set forth in 18 C.F.R. § 358.

(d) **EIM Participating Resources.**

(1) **Eligibility.** The owner or operator of an EIM Resource is eligible to become an EIM Participating Resource if the EIM Resource –

(A) meets the eligibility requirements established by the EIM Entity in whose Balancing Authority Area the resource is located or scheduled or to which it may be dynamically transferred; and

(B) is capable of delivering Energy, Curtailable Demand, Demand Response Services, or similar services within the time specified by Section 29 for the Real-Time Market in which its EIM Participating Resource Scheduling Coordinator will submit Bids.

(2) **EIM Participating Resource Agreement.** An EIM Participating Resource must execute an EIM Participating Resource Agreement.

(3) **Obligations.** An EIM Participating Resource shall –

(A) perform the obligations of an EIM Participating Resource under the EIM Participating Resource Agreement and Section 29;

(B) perform the obligations applicable to Market Participants and resources under the provisions of the CAISO Tariff described in Section 29.1(b);

(C) if it represents a Generating Unit, Load of a Participating Load, Proxy Demand Resource, or other qualified resource, perform the obligations required for the resource under the provisions of the CAISO Tariff described in section 29.1(b); and

(D) comply with all CAISO Tariff requirements associated with resource

registration and the measurement and verification of the associated services to be provided for EIM Resources other than Generating Units or CAISO qualified resources delivering Energy.

(e) **EIM Participating Resource Scheduling Coordinator.**

(1) **Certification.** An EIM Participating Resource Scheduling Coordinator must be either an existing Scheduling Coordinator or must meet or have met the certification requirements in Section 4.5.1 for a Scheduling Coordinator.

(2) **EIM Participating Resource Scheduling Coordinator Agreement.** An EIM Participating Resource Scheduling Coordinator must enter an EIM Participating Resource Scheduling Coordinator Agreement with the CAISO, which shall satisfy the obligation to enter a Scheduling Coordinator Agreement under Section 4.5.1 with regard to its representation of the EIM Participating Resource.

(3) **Representation.** An EIM Participating Resource Scheduling Coordinator-

(A) may represent a Market Participant other than an EIM Participating Resource, but only if it enters a Scheduling Coordinator Agreement under Section 4.5.1 with regard to such Market Participant;

(B) may not also be an EIM Entity Scheduling Coordinator unless the EIM Participating Resource Scheduling Coordinator is a transmission provider subject to the standards of conduct set forth in 18 C.F.R. § 358; and

(C) may represent more than one EIM Participating Resource.

(4) **Obligations.** An EIM Participating Resource Scheduling Coordinator must –

(A) perform the obligations of an EIM Participating Resource Scheduling Coordinator under the EIM Participating Resource Scheduling Coordinator Agreement and Section 29;

(B) perform the obligations of a Scheduling Coordinator under the provisions of the CAISO Tariff described in Section 29.1(b);

(C) ensure that the entity it represents has obtained any transmission service

necessary to participate in the Energy Imbalance Market under the terms of the CAISO Tariff or the tariff of another transmission service provider, as applicable;

(D) register in the manner set forth in the Business Practice Manual for the Energy Imbalance Market all EIM Participating Resources that it represents, provide such information to the EIM Entity Scheduling Coordinator, and update such information with the CAISO in a timely manner.

(5) **Governmental Entities.** Notwithstanding Section 29.4(e)(3)(B), a governmental entity that is an EIM Participating Resource Scheduling Coordinator may also be an EIM Entity Scheduling Coordinator if it agrees to comply with standards of conduct equivalent to those set forth in 18 C.F.R. § 358.

(f) **EIM Sub-Entity.**

(1) **EIM Sub-Entity Agreement.** A prospective EIM Sub-Entity must execute an EIM Sub-Entity Agreement no later than ninety (90) days before its EIM Sub-Entity Implementation Date.

(2) **EIM Sub-Entity Obligations.** An EIM Sub-Entity shall –

(A) perform the obligations of an EIM Sub-Entity in accordance with the EIM Sub-Entity Agreement, Section 29, and other provisions of the CAISO Tariff that apply to EIM Sub-Entities, subject to the limitations specified in Section 29.1(b)(2)(C);

(B) verify that tariff or contractual arrangements with the EIM Entity for the Balancing Authority Area in which it is located, as necessary or applicable, are in place to enable operation of the Real-Time Market in its sub-area;

(C) qualify as or secure representation by no more than one EIM Sub-Entity Scheduling Coordinator;

(D) define the Load Aggregation Point for the EIM Sub-Entity; and

(E) unless prohibited from using its own Demand Forecast by the EIM Entity for its Balancing Authority Area, inform the CAISO whether or not the EIM Sub-Entity intends to use the CAISO's Demand Forecast consistent with Section 29.34(d) and, as applicable, provide the EIM Entity with its Demand Forecast.

(3) **EIM Sub-Entity Termination of Participation.**

(A) **EIM Sub-Entity Agreement.** An EIM Sub-Entity that wishes to terminate participation in the Real-Time Market as an EIM Sub-Entity must terminate the EIM Sub-Entity Agreement pursuant to its terms.

(B) **Notice.** Delivery to the CAISO of a written notice of termination pursuant to the terms of the EIM Sub-Entity Agreement shall represent the commitment by the EIM Sub-Entity to undertake all necessary preparations to disable the EIM Sub-Entity within the EIM Entity Balancing Authority Area.

(C) **Actions Following Notice.** Upon receipt of such notice, the CAISO shall undertake all necessary preparations to disable the EIM Sub-Entity within the EIM Entity Balancing Authority Area and transition responsibility to the EIM Entity, as outlined in the Business Practice Manual for the Energy Imbalance Market.

(g) **EIM Sub-Entity Scheduling Coordinator.**

(1) **Certification.** An EIM Sub-Entity Scheduling Coordinator must meet or have met the certification requirements in Section 4.5.1 for a Scheduling Coordinator.

(2) **EIM Sub-Entity Scheduling Coordinator Agreement.** An EIM Sub-Entity Scheduling Coordinator must enter an EIM Sub-Entity Scheduling Coordinator Agreement with the CAISO, which shall satisfy the obligation to enter a Scheduling Coordinator Agreement under Section 4.5.1 with regard to its representation of the EIM Sub-Entity.

(3) **Representation.** An EIM Sub-Entity Scheduling Coordinator-

(A) may represent a Market Participant other than an EIM Sub-Entity, but only if it enters a Scheduling Coordinator Agreement under Section 4.5.1 with regard to such Market Participant;

(B) may not also be an EIM Participating Resource Scheduling Coordinator or a Scheduling Coordinator for a Participating Generator, Participating Load, or Demand Resource Provider, unless the EIM Sub-Entity Scheduling Coordinator is a transmission provider subject to the standards of conduct set forth in 18 C.F.R. § 358; and

(C) may represent more than one EIM Sub-Entity if it has certified to the CAISO in the manner described in the Business Practice Manual for the Energy Imbalance Market that it has informed each EIM Sub-Entity of the multiple representation.

(4) **Obligations.** An EIM Sub-Entity Scheduling Coordinator shall-

(A) perform the obligations of an EIM Sub-Entity Scheduling Coordinator under the EIM Sub-Entity Scheduling Coordinator Agreement and Section 29;

(B) perform the obligations of a Scheduling Coordinator under provisions of the CAISO Tariff described in Section 29.1(b);

(C) register in the manner set forth in the Business Practice Manual for the Energy Imbalance Market all EIM Sub-Entity non-participating resources that it represents in the EIM Entity Balancing Authority Area and update such information with the CAISO in a timely manner;

(D) verify in the manner set forth in the Business Practice Manual for the Energy Imbalance Market that all Sub-Entity EIM Resources within the EIM Entity Balancing Authority Area represented by the EIM Sub-Entity Scheduling Coordinator have been registered with the CAISO;

(E) update the Full Network Model according to Section 29.17(a) if authorized by the EIM Entity and notice to the EIM Entity is provided;

(F) submit transmission Outages in accordance with Section 29.9(b) if authorized by the EIM Entity;

(G) submit EIM Manual Dispatch instructions for EIM Resources and non-participating resources they represent if authorized by the EIM Entity;

(H) settle all financial obligations arising out of the Real-Time Market for the EIM Sub-Entity, including financial settlement with non-participating resources and non-participating load it represents within the EIM Entity Balancing Authority Area;

(I) submit EIM Base Schedules, EIM Resource Plans and other required information on behalf of the EIM Sub-Entity;

(J) ensure all EIM Resources and Demand within the EIM Sub-Entity area are metered in accordance with Section 29.10;

(K) register with the CAISO, consistent with the provisions in the Business Practice Manual for the Energy Imbalance Market, all non-participating resources that the EIM Entity Scheduling Coordinator may designate as EIM Available Balancing Capacity in its EIM Resource Plan; and

(L) create with the CAISO a Default Energy Bid consistent with the rules specified in Section 39.7.1 for all non-participating resources that the EIM Entity Scheduling Coordinator may designate as EIM Available Balancing Capacity in the EIM Resource Plan.

(5) **Governmental Entities.** Notwithstanding Section 29.4(g)(3)(B), a governmental entity that is an EIM Sub-Entity Scheduling Coordinator may also be an EIM Participating Resource Scheduling Coordinator or a Scheduling Coordinator for resources participating in the CAISO Markets if it agrees to comply with standards of conduct equivalent to those set forth in 18 C.F.R. § 358.

**29.5 [Not Used]**

**29.6 Communications**

(a) **EIM Entity and EIM Sub-Entity.** The EIM Entity or EIM Sub-Entity, as applicable, shall

meet the technical and communication requirements specified in the Business Practice Manual for the Energy Imbalance Market, which shall be based on the Inter-Control Center Communication Protocol and Reliability Standards.

(b) **EIM Communications and OASIS.** Section 6 shall govern communications and information availability regarding the participation of EIM Market Participants in the Real-Time Market except that –

(1) references to internal resources shall be deemed to include EIM Resources;

(2) references in Sections 6.2.2.1 and 6.5.2.1 to the CAISO Controlled Grid and references in Sections 6.5.4.2.2(a) and 6.5.5.1.1 to CAISO Balancing Authority Area shall be deemed references to the EIM Area; and

(3) the provisions of Section 6.3.1 that authorize the CAISO to communicate directly with Generators and Demand Response Providers to ensure System Reliability shall not apply to Generators and Demand Response Providers in the EIM Entity's Balancing Authority Area or pseudo-tied from an external Balancing Authority Area to the EIM Entity Balancing Authority Area.

(c) **Loss of Communications.**

(1) **Procedures.** The CAISO and each EIM Entity, EIM Sub-Entity, EIM Entity Scheduling Coordinator, and EIM Sub-Entity Scheduling Coordinator shall establish procedures to address an interruption of Real-Time Market communications, which shall include steps to be taken to restore communications and address any impact on system or market operations as provided in Section 29.

(2) **Responsibilities.** An EIM Entity or EIM Sub-Entity that loses communication with the CAISO remains responsible for managing its Balancing Authority Area or EIM Sub-Entity area imbalance needs without balancing Energy from the Real-Time Market, and EIM Entities and EIM Sub-Entities shall have communication procedures to address such circumstances.

(d) **Variable Energy Resource Forecast Communications.** If the EIM Participating Resource Scheduling Coordinator for a Variable Energy Resource elects to use an independent forecasting service, it must make data transfer arrangements with the CAISO for the CAISO to receive the forecast in a format and on a schedule set forth in the Business Practice Manual for the Energy Imbalance Market.

(e) **Hybrid Resource Forecast Communications.** If the EIM Participating Resource Scheduling Coordinator for a Hybrid Resource elects to use an independent forecasting service, it must make data transfer arrangements with the CAISO for the CAISO to receive the forecast in a format and on a schedule set forth in the Business Practice Manual for the Energy Imbalance Market.

**29.7 EIM Operations Under Normal and Emergency Conditions.**

(a) **CAISO Controlled Grid Operations.** Section 7 shall not apply to EIM Market Participants in their capacities as such.

(b) **Normal EIM Operations.** The CAISO shall administer the transmission capacity made available to the Real-Time Market to manage Energy imbalances in the EIM Area under normal operations.

(c) **Load Curtailment.** The CAISO will not issue Dispatch Instructions to an EIM Entity Scheduling Coordinator or an EIM Sub-Entity Scheduling Coordinator with respect to Load or Demand that has not been bid into the Real-Time Market.

(d) **Dispatch Instructions for EIM Resources.** The CAISO will not issue Dispatch Instructions to an EIM Participating Resource Scheduling Coordinator with respect to Supply that has not been bid into the Real-Time Market.

(e) **EIM Transfers.** The CAISO will use Transfer System Resources to manage EIM Transfers as aggregate Dynamic Schedules with each EIM Entity Balancing Authority Area, which –

(1) shall not require individual resource E-Tags;

(2) shall not constitute inadvertent Energy;

(3) shall reflect intra-hour incremental EIM Transfers between the CAISO Balancing

Authority Area and each EIM Entity Balancing Authority Area;

(4) shall be updated by the CAISO within 60 minutes after the end of each Operating Hour to include the integrated Energy during the hour for the sum of all EIM Transfers between each Balancing Authority Area in the EIM Area in accordance with WECC business practices for purposes of inadvertent Energy accounting; and

(5) shall be subsequently updated as necessary consistent with the requirements of WECC, NERC, and North American Energy Standards Board standards and business practices.

(f) **Dynamic Imbalance Schedule to Net EIM Transfers.** The CAISO will use Transfer System Resources to –

(1) model changes in the net five-minute scheduled EIM Transfers that result from Real-Time Dispatch as a Dynamic Schedule between the CAISO and EIM Entity for AGC control accuracy; and

(2) calculate the dynamic net scheduled EIM Transfers for the CAISO and each EIM Entity Balancing Authority Area and derive from these dynamic net scheduled EIM Transfers the Dynamic Schedules on EIM Internal Interties for E-Tag purposes.

(g) **EIM Manual Dispatch.**

(1) The EIM Entity may issue an EIM Manual Dispatch to an EIM Resource or a non-participating resource in its Balancing Authority Area, outside of the Market Clearing of the Real-Time Market, when necessary to address reliability or operational issues in the EIM Entity Balancing Authority Area that the CAISO is not able to address through normal economic Dispatch and Congestion Management. The EIM Entity may issue an EIM Manual Dispatch to any EIM Resource or a non-participating resource in its Balancing Authority Area regardless of whether an EIM Sub-Entity Scheduling Coordinator has rights to issue an EIM Manual Dispatch to such EIM Resource or non-participating

resource.

(2) If authorized by the EIM Entity, the EIM Sub-Entity may issue an EIM Manual Dispatch to an EIM Resource or a non-participating resource for which it is registered as the EIM Sub-Entity Scheduling Coordinator when necessary to address reliability or operational issues in its service territory that the CAISO is not able to address through normal economic Dispatch and Congestion Management, provided that such ability by the EIM Sub-Entity shall not prevent the EIM Entity from issuing an EIM Manual Dispatch to any EIM Resource or a non-participating resource in its Balancing Authority Area, and the most recent EIM Manual Dispatch shall take precedence over any prior EIM Manual Dispatch issued to the EIM Resource. Any financial or operational impact on an EIM Sub-Entity resulting from an EIM Manual Dispatch issued by the EIM Entity shall be resolved in accordance with the applicable tariff or contractual arrangements between the EIM Entity and the EIM Sub-Entity.

(h) **EIM Entity and EIM Sub-Entity Actions in Response to an EIM Manual Dispatch.** If the EIM Entity or EIM Sub-Entity issues an EIM Manual Dispatch to address circumstances on its system –

(1) the EIM Entity shall immediately inform the CAISO, as specified in the Business Practice Manual for the Energy Imbalance Market, if the EIM Entity Balancing Authority Area is under manual operation;

(2) the EIM Entity or EIM Sub-Entity shall immediately inform the CAISO of the EIM Manual Dispatch issued to any EIM Resource or non-participating resource by submitting the EIM Manual Dispatch instruction for the affected resource to the CAISO as specified in the Business Practice Manual for the Energy Imbalance Market; and

(3) the EIM Entity or EIM Sub-Entity remains responsible for informing the Reliability Coordinator of the circumstances creating the need for the EIM Manual Dispatch and may enforce Transmission Constraints, as may be required.

(i) **CAISO Actions in Response to Notification of EIM Manual Dispatch.** Upon receipt of notice of an EIM Manual Dispatch, the CAISO shall –

(1) reflect the EIM Manual Dispatch in the Real-Time Market;

(2) disregard an EIM Manual Dispatch in the determination of the Locational Marginal Price; and

(3) treat an EIM Manual Dispatch to an EIM Participating Resource or non-participating resource as FMM or RTD Instructed Imbalance Energy for Settlement.

(j) **EIM Disruption.**

(1) **Declaration.** The CAISO may declare an interruption of EIM Entity participation in the Real-Time Market when in its judgment –

(A) operational circumstances (including a failure of the Real-Time Market operation to produce feasible results in the EIM Area or other CAISO Market Disruption) in the EIM Area have caused or are in danger of causing an abnormal system condition in the CAISO Balancing Authority Area or an EIM Balancing Authority Area that requires immediate action to prevent loss of Load, equipment damage, or tripping system elements that might result in cascading Outages, or to restore system operation to meet Applicable Reliability Criteria; or

(B) communications between the CAISO and EIM Market Participants are disrupted and prevent an EIM Entity, EIM Entity Scheduling Coordinator, EIM Sub-Entity, EIM Sub-Entity Scheduling Coordinator, or EIM Participating Resource Scheduling Coordinator from accessing CAISO systems to submit or receive information.

(2) **CAISO Response to EIM Disruption.** If the CAISO declares an interruption of EIM Entity participation in the Real-Time Market, the CAISO may in its judgment, among other things-

(A) separate the affected EIM Entity Balancing Authority Area from the EIM

Area and maintain the Real-Time Market for other Balancing Authority Areas in the EIM Area by enforcing a net transfer constraint for the affected Balancing Authority Area to separate it from the remainder of the EIM Area;

(B) reduce or suspend EIM Transfers between one or more Balancing Authority Areas in the EIM Area including the CAISO Balancing Authority Area and in accordance with Section 33.7.5 as applicable to EDAM Transfers, and communication and coordination with all impacted EIM Entities to assess and mitigate potential issues within the EIM Area;

(C) instruct one or more EIM Entities to maintain system balance within their Balancing Authority Area without RTM Dispatch; or

(D) in addition or as an alternative, use market results in the Real-Time Market in accordance with Section 7.7.9 or take any of the actions specified in Section 7.7.6 with respect to the Real-Time Market, except that if Section 7.7.6 calls for the use of Day-Ahead Market results, the CAISO will use:

(i) the price specified in the EIM Entity's open access transmission tariff as the LMP;

(ii) the EIM Entity's or EIM Sub-Entity's EIM Base Schedule as the schedule;

(iii) the EIM Bid Adder from the most recent corresponding interval that is available as the EIM Bid Adder; and

(iv) the emissions rate set by the California Air Resources Board for an unspecified source multiplied by the daily Greenhouse Gas Allowance Price.

(3) **EIM Entity Responsibility.** In response to an interruption of EIM Entity participation in the Real-Time Market by the CAISO, all EIM Entities shall follow NERC Reliability Standards applicable to their roles as Balancing Authorities in

an effort to alleviate operational and system conditions and restore routine operations.

(4) **EIM Entity and EIM Sub-Entity Scheduling Coordinator Responsibility.** All EIM Entity Scheduling Coordinators and EIM Sub-Entity Scheduling Coordinators shall promptly inform the CAISO of actions taken by the EIM Entities and EIM Sub-Entities they represent in response to an interruption of EIM Entity or EIM Sub-Entity participation in the Real-Time Market by the CAISO through updates to their EIM Base Schedules, Interchange E-Tags, transmission limit adjustments, or Outage and derate information, as applicable.

(5) **System Restoration.** The CAISO shall reinstate normal operation of the Real-Time Market in the EIM Area at such time as it determines that the conditions that caused the interruption of EIM Entity or EIM Sub-Entity participation in the Real-Time Market have been resolved.

(k) **Congestion Management and Unscheduled Flow.**

(1) **Inability to Resolve Congestion.** The CAISO will provide information to EIM Entities about Congestion that the Real-Time Market cannot resolve.

(2) **Initiation of Unscheduled Flow Procedures.** The CAISO or an EIM Entity may initiate WECC's unscheduled flow mitigation procedure if applicable for conditions in its Balancing Authority Area.

(3) **EIM Entity Action.** When the WECC unscheduled flow mitigation procedure is initiated, each EIM Entity shall adjust its schedules as determined by the WECC procedure and immediately inform the CAISO of the changes, as well as any affected EIM Sub-Entities.

(4) **CAISO Action.** When WECC's unscheduled flow mitigation procedure is initiated, the CAISO shall reflect the affected EIM Market Participant schedules in the Real-Time Market as determined by the WECC procedure, EIM Entity, EIM Sub-Entity, CAISO Operating Procedures, and Business Practice Manuals for the

CAISO Balancing Authority Area and EIM Entity Balancing Authority Areas.

**29.8 [Not Used]**

**29.9 Outages and Critical Contingencies.**

(a) **Applicability of Section 9.** Section 9 shall not apply to EIM Market Participants except as referenced in Section 29.9.

(b) **Transmission Scheduled Outages.**

(1) **Responsibility.** The EIM Entity shall be responsible for performing engineering studies with regard to, and modeling and approving, Outages on transmission facilities for maintenance purposes within the EIM Entity Balancing Authority Area, including making any necessary arrangements for this purpose regarding the transmission capacity made available by an EIM Transmission Service Provider to the Real-Time Market. The EIM Entity may delegate its responsibilities under this Section 29.9(b) to an EIM Sub-Entity within its Balancing Authority Area with regard to transmission facilities for which the EIM Sub-Entity acts as the transmission operator, provided that the EIM Entity shall notify the CAISO of the delegation in accordance with the timelines and procedures in the Business Practice Manual for the Energy Imbalance Market.

(2) **Notice.** The EIM Entity Scheduling Coordinator or, if delegated under Section 29.9(b)(1), the EIM Sub-Entity Scheduling Coordinator shall submit notice of transmission Outages approved by the EIM Entity or EIM Sub-Entity to the CAISO by the means set forth in the Business Practice Manual for the Energy Imbalance Market and at least seven Business Days prior to the planned Outage.

(3) **Notice of Modification.** The EIM Entity Scheduling Coordinator or, if delegated under Section 29.9(b)(1), the EIM Sub-Entity Scheduling Coordinator may submit a notice of modification of an approved transmission Outage and any resulting updates to EIM Intertie limits to the CAISO by the means set forth in the Business Practice Manual for the Energy Imbalance Market and in accordance with the deadlines set forth in Section 9 and Section 29.9.

(4) **Contents of Notice.** The EIM Entity Scheduling Coordinator and EIM Sub-Entity Scheduling Coordinator notices of approved transmission Outages shall include –

(A) the start and finish date for each Outage for maintenance purposes; and

(B) such information other than start and finish date as is required in Section 9.3.6 for transmission operators seeking approval of Outages.

(c) **Generation Maintenance Outages.**

(1) **Responsibility.** The EIM Entity shall be responsible for performing engineering studies with regard to, and modeling and approving, Outages of EIM Resources and non-participating resources for maintenance purposes within the EIM Entity Balancing Authority Area. The EIM Entity may delegate its responsibilities under this Section 29.9(c) to an EIM Sub-Entity within its Balancing Authority Area with regard to EIM Resources and non-participating resources for which the EIM Sub-Entity acts as the EIM Sub-Entity Scheduling Coordinator, provided that the EIM Entity shall notify the CAISO of the delegation in accordance with the timelines and procedures in the Business Practice Manual for the Energy Imbalance Market.

(2) **Notice.** The EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator shall submit notice of Outages of EIM Resources and non-participating resources approved by the EIM Entity or EIM Sub-Entity to the CAISO by the means set forth in the Business Practice Manual for the Energy Imbalance Market and at least seven Business Days prior to the planned Outage.

(3) **Contents of Notice.** The EIM Entity Scheduling Coordinator and EIM Sub-Entity Scheduling Coordinator notices of approved Outages of EIM Resources and non-participating resources shall include-

(A) the start and finish date for each Outage for maintenance purposes; and

(B) such information other than start and finish date as is required in Section 9.3.6 for Operators seeking approval of Generating Unit Outages.

(d) **Actions Regarding Scheduled Outages.**

(1) **CAISO Evaluation of Scheduled Outages.** The CAISO will implement the transmission and Generation Outages approved by the EIM Entity or EIM Sub-Entity through the Day-Ahead Market process and will inform the EIM Entity and EIM Sub-Entity Scheduling Coordinator where applicable of any anticipated overloads.

(2) **EIM Entity and EIM Sub-Entity Action.** Based on the information provided by the CAISO to the EIM Entity Scheduling Coordinator and EIM Sub-Entity Scheduling Coordinator, the EIM Entity and EIM Sub-Entity shall have the opportunity to take action to adjust or cancel Outages as it determines to be necessary.

(3) **Notice to Reliability Coordinator.**

(A) **EIM Entity and EIM Sub-Entity Responsibility.** The EIM Entity and EIM Sub-Entity are responsible for informing the Reliability Coordinator of scheduled Outages.

(B) **CAISO Facilitation.** Upon request of an EIM Entity or EIM Sub-Entity, and without assuming any liability, the CAISO may provide a third party Reliability Coordinator with Outage information submitted to the CAISO by the EIM Entity or EIM Sub-Entity on behalf of the EIM Entity or EIM Sub-Entity.

(e) **Forced Outages.** An EIM Entity Scheduling Coordinator and an EIM Sub-Entity Scheduling Coordinator shall comply with the reporting provisions of Section 9 with regard to Forced Outages of transmission facilities within the EIM Entity Balancing Authority Area or within the EIM Sub-Entity area they represent and an EIM Participating Resource Scheduling Coordinator shall comply with the reporting provisions of Section 9 with regard to Forced Outages of Generating Units it represents as EIM Resources. The applicable provisions of Section 9 as to Forced Outages on transmission facilities and Generating Units include, but are not limited to, Sections 9.3.6.4.1(b), 9.3.6.4.1(c),

9.3.6.4.1(d), 9.3.6.4.2(2), 9.3.6.4.2(3), and 9.3.10.

(f) **Transmission Limits.** An EIM Entity Scheduling Coordinator must notify the CAISO by the means specified in the Business Practice Manual for the Energy Imbalance Market with respect to transmission limits on the transmission capacity made available to the Real-Time Market within the EIM Entity Balancing Authority Area that need to be enforced in the Real-Time Market, including-

(1) physical MVA or MW limits under base case and contingencies;

(2) scheduling limits for EIM Intertie transactions based on E-Tags; and

(3) contractual limits on Transmission Interfaces where the EIM Transmission Service Provider has transmission rights.

**29.10 Metering and Settlement Data.**

(a) **Telemetry Requirements.** The EIM Entity shall ensure that each EIM Resource and non-participating resource in an EIM Entity Balancing Authority Area that is not a Generating Unit or is a Generating Unit with a rated capacity of 10 MW or greater (including each aggregated resource with a total rated capacity of 10 MW or greater) and each EIM Intertie has telemetry meeting the requirements of the Business Practice Manual for the Energy Imbalance Market.

(b) **Metering for Settlement Purposes.** The EIM Entity shall ensure that each EIM Participating Resource and non-participating resource in an EIM Entity Balancing Authority Area becomes either a CAISO Metered Entity or a Scheduling Coordinator Metered Entity and complies with the requirements of Section 10 except as provided in Section 29.10(c). The EIM Sub-Entity will include the EIM Entity on Schedule 3 or 5 of the applicable meter service agreement to give the EIM Entity access to the EIM Sub-Entity Meter Data.

(c) **Exception to Requirements of Section 10.3.9.** In the absence of metering standards set by a Local Regulatory Authority, EIM Participating Resources and non-participating resources in an EIM Entity Balancing Authority Area may qualify as Scheduling Coordinator Metered Entities without the need for third party certification if the CAISO

determines that the applicable metering standards meet or exceed the standards for CAISO Metered Entities.

(d) **Interchange Meter Data.** Metering for Settlement purposes is required for all EIM Interties.

(e) **EIM Energy Imbalance with an External Balancing Authority Area.** For each EIM External Intertie Bid that clears the FMM resulting in a 15-minute EIM External Intertie schedule –

(1) the EIM Entity Scheduling Coordinator must submit to the CAISO the corresponding hourly transmission profile and 15-minute Energy profiles from the respective E-Tags, which must reflect the Point of Receipt and Point of Delivery that was declared in the FMM Bid submittal, at least 20 minutes before the start of the Operating Hour; and

(2) the EIM Entity Scheduling Coordinator must provide an updated Energy profile to the extent required by Section 30.5.7.

**29.11 Settlements and Billing for EIM Market Participants.**

(a) **Applicability.** Section 29.11, rather than Section 11, shall apply to the CAISO Settlement with EIM Entity Scheduling Coordinators, EIM Sub-Entity Scheduling Coordinators, and EIM Participating Resource Scheduling Coordinators, except as otherwise provided, but not to other Scheduling Coordinators. Settlement of the Real-Time Market with EDAM Entity Scheduling Coordinators, EDAM Resource Scheduling Coordinators, and EDAM Load Serving Entity Scheduling Coordinators is also governed by Section 33.11. Settlement under Section 33.11 results in outcomes not produced for EIM Market Participants that are not EDAM Market Participants, including Settlement of Demand within an EDAM Entity Balancing Authority Area, Settlement of Supply from EDAM Resources that would otherwise be settled as non-participating resources in an EIM Entity Balancing Authority Area, sequential netting of Bid Cost Recovery from the RUC to the RTM, and Settlement of transfer revenue associated with an EDAM Transfer limit established in accordance with Section 33.7 and Section 33.18.

(b) **Imbalance Energy.**

(1) **FMM Instructed Imbalance Energy.**

(A) **Calculation.**

(i) **EIM Participating Resources.** The CAISO will calculate an EIM Participating Resource's FMM Instructed Imbalance Energy in the same manner as it calculates FMM Instructed Imbalance Energy under Section 11.5.1.1, except that references to the Day-Ahead Schedule in the relevant Appendix A definitions shall be deemed references to the EIM Base Schedule, unless the EIM Participating Resource is also an EDAM Resource (in which case the Day-Ahead Schedule will be referenced), and that the CAISO will include any Energy from an EIM Manual Dispatch of the EIM Participating Resource in the FMM that is identified by the EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator prior to the start of the FMM.

(ii) **Non-Participating Resources.** The CAISO will calculate the FMM Instructed Imbalance Energy of non-participating resources in an EIM Entity Balancing Authority Area in the same manner as it calculates FMM Instructed Imbalance Energy under Section 11.5.1.1, except that references to the Day-Ahead Schedule in the relevant Appendix A definitions shall be deemed references to the EIM Base Schedule, and that the CAISO will include any Energy from an EIM Manual Dispatch or EIM Auto-Match of the EIM non-participating resource in the FMM that is identified by the EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator prior to the start of the FMM.

(B) **Settlement.** The CAISO will settle –

(i) the FMM Instructed Imbalance Energy with the EIM Participating

Resource Scheduling Coordinator for EIM Participating Resources; and

(ii) with the applicable EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator for non-participating resources in an EIM Entity Balancing Authority Area.

(2) **RTD Instructed Imbalance Energy.**

(A) **Calculation.**

(i) **EIM Participating Resources.** The CAISO will calculate an EIM Participating Resource's RTD Instructed Imbalance Energy in the same manner in which it calculates RTD Instructed Imbalance Energy under Sections 11.5.1.2 and 11.5.5, except that the CAISO will include any Energy from an EIM Manual Dispatch of the EIM Participating Resource in the RTD that is identified by the EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator.

(ii) **Non-Participating Resources.** The CAISO will calculate the RTD Instructed Imbalance Energy of non-participating resources in an EIM Entity Balancing Authority Area in the same manner in which it calculates RTD Instructed Imbalance Energy under Section 11.5.1.2 and 11.5.5, except that the CAISO will include any Energy from an EIM Manual Dispatch or EIM Auto-Match of the EIM non-participating resource in the RTD that is identified by the EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator.

(B) **Settlement.** The CAISO will settle the RTD Instructed Imbalance Energy –

(i) with the EIM Participating Resource Scheduling Coordinator for EIM Participating Resources; and

(ii) with the applicable EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator for non-participating resources in an EIM Entity Balancing Authority Area.

(3) **Uninstructed Imbalance Energy.**

(A) **EIM Participating Resources.**

(i) **Calculation.** For EIM Participating Resources and an EIM Entity Balancing Authority Area's dynamic import/export schedules with external resources, the CAISO will calculate Uninstructed Imbalance Energy in the same manner in which it calculates Uninstructed Imbalance Energy under Section 11.5.2.1.

(ii) **Settlement.** The CAISO will settle the Uninstructed Imbalance Energy with the EIM Participating Resource Scheduling Coordinator, the EIM Entity Scheduling Coordinator, or the EIM Sub-Entity Scheduling Coordinator, as applicable.

(B) **Non-Participating Resources.**

(i) **Calculation.** For non-participating resources in an EIM Entity Balancing Authority Area, the CAISO will calculate Uninstructed Imbalance Energy in accordance with Section 11.5.2, except that the CAISO will treat an EIM Base Schedule as a Day-Ahead Schedule and the CAISO will treat an EIM Manual Dispatch and an EIM Auto-Match as a Dispatch Instruction.

(ii) **Settlement.** The CAISO will settle the Uninstructed Imbalance Energy for non-participating resources in an EIM Entity Balancing Authority Area at the applicable RTD Locational Marginal Price in accordance with Section 11.5.2.1 with the applicable EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator and will treat EIM Entity Balancing Authority Demand in the same manner as the CAISO treats

CAISO Demand under that Section.

(C) **Non-Participating Load.**

(i) **Calculation.** For non-participating Load in an EIM Entity Balancing Authority Area, the CAISO will calculate Uninstructed Imbalance Energy in accordance with Section 11.5.2.2, except that the CAISO will determine deviations based on the EIM Base Load Schedule unless associated with an EDAM Balancing Authority Area (in which case the CAISO will reference the Day-Ahead Schedule).

(ii) **Settlement.** The CAISO will settle Uninstructed Imbalance Energy for non-participating Load in an EIM Entity Balancing Authority Area at the applicable Default LAP Hourly Real-Time Price in accordance with Section 11.5.2.2 with the applicable EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator and will treat EIM Entity Balancing Authority Demand in the same manner as the CAISO treats CAISO Demand under that Section.

(D) **EIM Base Schedules Below PMin.**

(i) **Calculation.** For deviations from an EIM Base Schedule below PMin submitted by an EIM Entity Scheduling Coordinator or an EIM Participating Resource Scheduling Coordinator, the CAISO will calculate Uninstructed Imbalance Energy in accordance with Section 11.5.2 as if the EIM Resource had received a Dispatch Instruction to PMin based upon the submission of an Energy Self-Schedule.

(ii) **Settlement.** The CAISO will settle Uninstructed Imbalance Energy for deviations from an EIM Base Schedule below PMin in an EIM Entity Balancing Authority Area at the applicable RTD

Locational Marginal Price in accordance with Section 11.5.2.1 with the applicable EIM Entity Scheduling Coordinator or EIM Participating Resource Scheduling Coordinator.

(c) **Unaccounted For Energy of EIM Entities.**

(1) **Calculation.** The CAISO will calculate Unaccounted For Energy for each EIM Entity Balancing Authority Area as the difference between metered Demand, and the sum of the metered Supply and the metered values at the interties, adjusted for losses.

(2) **Settlement.**

(A) **Unaccounted for Energy Settlement.** The CAISO will settle Unaccounted For Energy with the applicable EIM Entity Scheduling Coordinator at the applicable Hourly Real-Time LAP price.

(B) **Election Not to Settle Unaccounted for Energy.** Annually, an EIM Entity Scheduling Coordinator that submits metered Demand through Meter Data calculated without End-Use Meters may elect to not settle Unaccounted For Energy through the CAISO Markets, in which case –

(i) the CAISO will apply a zero-percent Transmission Losses factor when calculating the Initial EIM base load schedule per section 29.34(g); and

(ii) the EIM Entity Scheduling Coordinator will apply a zero-percent Transmission Losses factor when calculating their metered Demand.

(d) **Charges for Over- and Under-Scheduling of EIM Entities.**

(1) **Under-Scheduling Charges.**

(A) **Level 1 Charge.** If, during any Trading Hour, the metered Demand within an EIM Entity Balancing Authority Area exceeds the EIM Base Schedule of Supply submitted by the EIM Entity by more than 5% but less than or equal to 10% and by at least 2 MW, the CAISO shall settle

with the applicable EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator for all Uninstructed Imbalance Energy at the relevant Load Aggregation Point at a price that is 125% of the Hourly Real-Time LAP Price.

(B) **Level 2 Charge.** If, during any Trading Hour, the metered Demand within an EIM Entity Balancing Authority Area exceeds the EIM Base Schedule of Supply submitted by the EIM Entity by more than 10% and by at least 2 MW, the CAISO shall settle with the applicable EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator for all Uninstructed Imbalance Energy at the relevant Load Aggregation Point at a price that is 200% of the Hourly Real-Time LAP price.

(2) **Over-Scheduling Charges.**

(A) **Level 1 Charge.** If, during any Trading Hour, the metered Demand within an EIM Entity Balancing Authority Area is less than the EIM Base Schedule of Supply submitted by the EIM Entity by more than 5% but less than or equal to 10% and by at least 2 MW, the CAISO shall settle with the applicable EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator for all Uninstructed Imbalance Energy at the relevant Load Aggregation Point at a price that is 75% of the Hourly Real-Time LAP Price.

(B) **Level 2 Charge.** If, during any Trading Hour, the metered Demand within an EIM Entity Balancing Authority Area is less than the EIM Base Schedule of Supply submitted by the EIM Entity by more than 10% and by at least 2 MW, the CAISO shall settle with the applicable EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator for all Uninstructed Imbalance Energy at the relevant Load Aggregation Point at a price that is 50% of the Hourly Real-Time LAP Price.

(3) **Distribution of Revenues.**

(A) **Apportionment.** The CAISO will calculate the total daily excess revenues received from under-scheduling charges and over-scheduling charges under Section 29.11(d)(1) and (2) and apportion them to Balancing Authority Areas in the EIM Area that were not subject to either under-scheduling or over-scheduling charges during the Trading Day according to metered Demand.

(B) **Allocation.** The CAISO will allocate –

(i) the amounts apportioned to EIM Entity Balancing Authority Areas pursuant to Section 29.11(d)(3)(A) to the applicable EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator; and

(ii) the amounts apportioned to the CAISO Balancing Authority Area pursuant to Section 29.11(d)(3)(A) to Scheduling Coordinators in the CAISO Balancing Authority Area according to metered Demand.

(4) **Exemption.** An EIM Entity will be exempt from under-scheduling and over-scheduling charges under Section 29.11(d)(1) and (2) if it uses the Demand Forecast prepared by the CAISO in its EIM Resource Plan and it approves EIM Base Schedules for its resources within +/- 1% of the CAISO Demand Forecast, as determined according to the Business Practice Manual for the Energy Imbalance Market. This exemption will not apply to an EIM Entity that permits any EIM Sub-Entity located within its Balancing Authority Area to submit its own Demand Forecast.

(e) **Neutrality Accounts.**

(1) **In General.** The CAISO will collect neutrality amounts from EIM Market Participants to recover differences in Real-Time Market payments made and Real-Time Market payments received.

(2) **Real-Time Congestion Offset.** The CAISO will assess EIM Entity Scheduling Coordinators a Real-Time Congestion Offset allocation calculated pursuant to Section 11.5.4.1.2.

(3) **Real-Time Imbalance Energy Offset Allocation.** The CAISO will assess EIM Entity Scheduling Coordinators a Real-Time Imbalance Energy Offset allocation calculated pursuant to Section 11.5.4.1.1.

(4) **Real-Time Marginal Cost of Losses Offset.** The CAISO will allocate the Real-Time Marginal Cost of Losses Offset to EIM Entity Scheduling Coordinators pursuant to Section 11.5.4.1.3.

(5) **Marginal Greenhouse Gas Cost Offset.** The CAISO will allocate the Marginal Greenhouse Gas Cost Offset to a GHG Regulation Area's metered Demand pursuant to Section 11.5.4.1.4.

(6) **EIM Transfer Revenue.** The CAISO will allocate EIM Transfer revenue to EIM Entity Scheduling Coordinators pursuant to Section 11.5.4.1.5.

(7) **Other Neutrality Adjustments.** The CAISO will levy additional charges on or make additional payments to EIM Market Participants as adjustments in accordance with Section 11.14.

(f) **Real-Time Bid Cost Recovery.**

(1) **In General.** The CAISO will provide EIM Participating Resources RTM Bid Cost Recovery. The CAISO will net RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses in accordance with Section 11.8.5 for EIM Participating Resources that are also EDAM Resources.

(2) **Calculation of Real-Time Bid Cost Recovery.** The CAISO will calculate Real-Time Bid Cost Recovery in accordance with Section 11.8.4, except that the CAISO will treat a non-zero EIM Base Schedule of an EIM Participating Resource as an IFM Self-Schedule and the corresponding intervals as IFM self-commitment intervals.

(3) **RTM Energy Bid Cost for Storage Resources**

The CAISO will calculate Real-Time Market Energy Bid Cost for EIM Participating Resources that are storage resources and participate as Non-Generator Resources in accordance with 11.8.4.1.5.1, except that the CAISO will treat references to Day-Ahead Energy Schedules as EIM Base Schedules. The CAISO will not consider Day-Ahead Market Locational Marginal Prices in the calculation of Real-Time Market Energy Bid Costs for EIM Participating Resources that are storage resources and participate as Non-Generator Resources.

(4) **Application of Real-Time Performance Metric.**

The CAISO will adjust the RTM Energy Bid Cost, the RTM Market Revenues, and RTM Minimum Load Costs determined pursuant to Section 29.11(f)(2) by multiplying the Real-Time Performance Metric with those amounts for the applicable Settlement Interval pursuant to the rules specified in Section 11.8.4.4 and its subsections, except that the CAISO will treat an EIM Base Schedule as a Day-Ahead Schedule.

(5) **Allocation of EIM Entity RTM Bid Cost Uplift.**

(A) **Calculation of Charge.** The Net RTM Bid Cost Uplift will be determined for each EIM Entity Balancing Authority Area in accordance with the methodology set forth in Section 11.8.6.

(B) **Settlement.** The CAISO will assess the Net RTM Bid Cost Uplift calculated for each EIM Entity Balancing Authority Area to the applicable EIM Entity Scheduling Coordinator in accordance with Section 11.8.6.6.(ii).

(g) **EIM Sub-Entity Implementation Cost.**

The CAISO will charge electric utilities that enter into an EIM Sub-Entity Implementation Agreement pursuant to Section 29.2(c) a fee to cover the actual costs the CAISO incurs to separate the EIM Sub-Entity from the EIM Entity Balancing Authority Area. The EIM Sub-Entity is responsible for actual costs incurred by the CAISO in conducting

implementation activities.

(1) The EIM Sub-Entity will provide the CAISO a $260,000 deposit for the implementation of the EIM Sub-Entity at the time of the request. The CAISO shall draw from the EIM Sub-Entity's deposit to cover actual costs incurred during implementation. Whenever the implementation costs exceed the deposit(s) received, the CAISO will invoice the EIM Sub-Entity for an additional deposit in $25,000 increments.

(2) Invoices shall be due no later than thirty (30) days after the date of receipt. Any invoice payment past due will accrue interest, per annum, calculated in accordance with 5 C.F.R. 1315.10.

(3) All eligible refunds will be processed following the CAISO's generally accepted accounting practices, including batch deposit refund disbursements. Any deadline for CAISO action will be tolled to the extent the EIM Sub-Entity has not provided the CAISO with the appropriate documents to facilitate the EIM Sub-Entity's refund.

(h) **EIM Initial Fee.** The CAISO will charge Balancing Authority Areas that enter into an EIM Implementation Agreement pursuant to Section 29.2(b) an initial fee to cover a share of the capital and operations and maintenance costs associated with setting up the Real-Time Market to accommodate the participation of the Balancing Authority as an EIM Entity. The fee will be established by the EIM Implementation Agreement entered into pursuant to Section 29.2(b)(1) as accepted by FERC.

(i) **EIM Administrative Charge.**

(1) **In General.** The CAISO will charge EIM Market Participants an EIM Administrative Charge consisting of the real-time portion of the Market Services Charge and the system operations charges described in Section 11.22.2.

(2) **Market Services Charge.** The Market Services Charge shall be the product of the Market Services Charge for each Scheduling Coordinator as calculated according to the formula in Appendix F, Schedule 1, Part A, the real-time market

percentage as calculated in the cost-of-service study according to Appendix F, Schedule 1, Part A, and the sum of Gross FMM Instructed Imbalance Energy (excluding FMM Manual Dispatch Energy) and Gross RTD Instructed Imbalance Energy (excluding RTD Manual Dispatch Energy Standard Ramping Deviation, Ramping Energy Deviation, Residual Imbalance Energy, and Operational Adjustments).

(3) **System Operations Charge.** In 2024 and 2025, the System Operations Charge will be the product of the System Operations Charge for each Scheduling Coordinator, as calculated according to the formula in Appendix F, Schedule 1, Part A, the real-time dispatch percentage as calculated in the cost-of-service study conducted according to Appendix F, Schedule 1, Part A, and the absolute difference between metered energy and the EIM Base Schedules.

(4) **System Operations Real-Time Dispatch Charge.** Beginning in 2026, the System Operations Real-Time Dispatch Charge will be the product of the System Operations Real-Time Dispatch Charge for each Scheduling Coordinator, as calculated according to the formula in Appendix F, Schedule 1, Part A, and the absolute difference between metered energy and the EIM Base Schedules.

(5) **Minimum EIM Administrative Charge.** The CAISO will calculate the minimum EIM Administrative Charge as the product of the sum of the real-time activities associated with Market Services Charge and the real-time activities associated with system operations, as well as –

(A) five percent of the total gross absolute value of Supply of all EIM Market Participants; plus

(B) five percent of the total gross absolute value of Demand of all EIM Market Participants.

(6) **Withdrawing EIM Entity.** If the EIM Entity notifies the CAISO of its intent to terminate participation in the Energy Imbalance Market and requests suspension of the Energy Imbalance Market in its Balancing Authority Area under Section

29.4(b)(4), the CAISO will charge the EIM Entity the minimum EIM Administrative Charge calculated under Section 29.11(i)(4) during the notice period.

(7) **Application of Revenues.** The CAISO will apply revenues received from the EIM Administrative Charge against the costs to be recovered through the Grid Management Charge as described in Appendix F, Schedule 1, Part A.

(8) **EDAM Administrative Charge.** An EIM Market Participant that is also an EDAM Market Participant will pay the EDAM Administrative Charge and will not pay the EIM Administrative Charge.

(j) **Variable Energy Resource and Hybrid Resource Forecast Charge.**

(1) **In General.** The CAISO will charge EIM Entity Scheduling Coordinators, EIM Sub-Entity Scheduling Coordinators, and EIM Participating Resource Scheduling Coordinators a fee for the Variable Energy Resource or Hybrid Resource forecasting services in accordance with Appendix F, Schedule 4.

(2) **Waiver.** The CAISO will waive the Variable Energy Resource or Hybrid Resource forecast charge if an EIM Entity or EIM Sub-Entity has an independent forecast for its Variable Energy Resources or Hybrid Resource and provides the independent forecast to the CAISO.

(k) **Transmission Service.** The CAISO will charge EIM Market Participants for transmission service according to Section 29.26.

(l) **Settlement.** With regard to the CAISO's assessment and payment of charges to, and collection of charges from, EIM Market Participants pursuant to Sections 11 and 29.11, the CAISO shall assess, pay and collect such charges, address disputed invoices, assess, pay and collect Settlement-related fees and charges, including those under Sections 11.21, 11.28, and 11.29, and make any financial adjustments in accordance with the terms and schedule set forth in Section 11.

(m) **Charges Related to RTM Participation of Interties.** In the event that an EIM Entity enables participation in the Real-Time Market on EIM External Interties, the EIM Entity

Scheduling Coordinator shall also be subject to any applicable charges under Sections 11.31 and 11.32.

(n) **EIM Transfers and Settlement for Contingency Reserve Obligations.** The CAISO shall allocate Operating Reserve Obligations to EIM Entity Scheduling Coordinators for EIM Transfers as follows –

(1) EIM Entity Scheduling Coordinators will receive a credit equal to three (3) percent of the hourly MW EIM Transfer into the CAISO Balancing Authority Area multiplied by the hourly user rate for Spinning Reserves and Non-Spinning Reserves, as calculated per Section 11.10.3.3 and 11.10.4.3, respectively; and

(2) EIM Entity Scheduling Coordinators will receive a charge equal to three (3) percent of the hourly MW EIM Transfer out of the CAISO Balancing Authority Area multiplied by the hourly user rate for Spinning Reserves and Non-Spinning Reserves, as calculated per Section 11.10.3.3 and 11.10.4.3, respectively.

(o) **Application of Persistent Deviation Metric.**

The CAISO will modify the Bid Cost Recovery calculations described in Section 29.11(f) and Residual Imbalance Energy payments in Section 11.5.5 as described in Section 11.17, except that the CAISO will treat an EIM Base Schedule as a Day-Ahead Schedule.

(p) **Flexible Ramping Product.** The CAISO will allocate and settle payments and charges for the Flexible Ramping Product according to Section 11.25, where the CAISO will consider EIM Base Schedules of non-participating resources as Self-Schedules.

(q) **EIM Transfer System Resource Settlement Information.** The CAISO will provide EIM Entities with non-binding Settlement information associated with Energy transfer schedule changes from their respective base schedules between EIM Entity Balancing Authority Areas.

(r) **EIM Transfer System Resource Settlement.**

(1) **EIM Transfer System Resource Registration.** The CAISO will provide each EIM Entity with financially binding Settlement of Energy transfer schedule changes from its respective base schedules between EIM Entity Balancing

Authority Areas, unless the EIM Entity Balancing Authority Areas are also EDAM Entity Balancing Authority Areas in which case transfer schedule changes will be referenced from the Day-Ahead Schedule for the EDAM Transfer, and will –

(A) establish for each EIM Entity that shares an EIM Internal Intertie a to/from EIM Transfer System Resource pricing location in their respective EIM Entity Balancing Authority Area;

(B) associate with each to/from EIM Transfer System Resource pricing location, a unique base EIM Transfer System Resource that accounts for Energy transfer schedule changes between EIM Entity Balancing Authority Areas;

(C) require each EIM Entity Scheduling Coordinator to submit EIM Base Schedules and E-Tags that identifies Energy transfer schedule changes at the registered base EIM Transfer System Resource; and

(D) reject EIM Base Schedule changes at the to/from EIM Transfer System Resource pricing location not associated with the registered base EIM Transfer System Resource.

(2) **Settlement for EIM Transfer System Resource Changes.** The CAISO will settle EIM Transfer System Resource changes established pursuant to Section 29.11(r)(1) as –

(A) FMM Instructed Imbalance Energy or RTD Instructed Energy based on the Settlement Interval in which the E-Tag is received, without regard for other Energy types identified in Sections 11.5.1.1 or 11.5.2.2, or as an Operational Adjustment if the E-Tag is received after the end of the Operating Hour for purposes of Energy accounting in accordance with the applicable WECC business practices;

(B) based on the difference between the E-Tag and the EIM Transfer System Resource base schedule;

(C) at the relevant FMM or RTD Locational Marginal Price at each unique

EIM Transfer System Resource pricing location associated with the base EIM Transfer System Resource; and

(D) including any contribution that the base EIM Transfer System Resource might have on the RTM Bid Cost Recovery pursuant to Section 29.11(f).

(s) **EIM Entity Access to EIM Sub-Entity Settlement Information.**

An EIM Entity shall have access to CAISO Settlement Statements and Invoices for all EIM Sub-Entities within the Balancing Authority Area for that EIM Entity.

(t) **Revenue and Surcharges for the Assistance Energy Transfer Product.**

The revenue from assistance Energy transfers paid by a participating Balancing Authority Area in the EIM Area that has elected to receive assistance Energy in accordance with Section 29.34(n)(3), *i.e.*, the EIM Assistance Energy Transfer Surcharge, will be calculated, allocated and distributed as follows—

**(1) Assistance Energy Transfer Surcharge.**

**(A) Calculation.** Other than amounts directly attributable to actions taken in coordination with the Reliability Coordinator, if a Balancing Authority Area in the EIM Area receives an assistance Energy transfer, then the EIM Assistance Energy Transfer Surcharge will apply to the lower of the quantities specified in Section 29.11(t)(1)(A)(i) or (ii):

(i) the higher of the quantity of the failure of the upward capacity test in Section 29.34(l) or the upward flexibility test in Section 29.34(m), or

(ii) the quantity of net EIM Transfers excluding base scheduled transfers as identified on all after-the-fact E-Tags associated with EIM Transfers into the participating Balancing Authority Area.

(a) If the EIM Assistance Energy Transfer Surcharge is applied to the assistance Energy

transfers received by an EIM Entity pursuant to Section 29.11(t)(1)(A)(ii), then the quantity of EIM Transfers subject to the EIM Assistance Energy Transfer Surcharge will be adjusted to reflect the EIM Upward Available Balancing Capacity as a credit.

(b) If the EIM Assistance Energy Transfer Surcharge is applied to the assistance Energy transfers received by the CAISO pursuant to Section 29.11(t)(1)(A)(ii), then the quantity of EIM Transfers subject to the EIM Assistance Energy Transfer Surcharge will be adjusted to reflect the sum of all Regulation Up (adjusted for Regulation non-compliance quantities) within the CAISO Balancing Authority Area as a credit.

**(B) Allocation.** The revenue collected through the EIM Assistance Energy Transfer Surcharge from participating Balancing Authority Areas in the EIM Area that fail the upward capacity test in Section 29.34(l) or the upward flexibility test in Section 29.34(m) will be allocated, pro rata, to all other Balancing Authority Areas in the EIM Area with net EIM Transfers, excluding base scheduled transfers, in the export direction if such Balancing Authority Areas passed the upward capacity test in Section 29.34(l) and the upward flexibility test in Section 29.34(m). A Balancing Authority Area is eligible for a revenue allocation even if it has not elected to receive assistance Energy transfers.

**(C) Distribution.** The revenue collected through the EIM Assistance

Energy Transfer Surcharge will be allocated to the net exporting Balancing Authority Areas in the EIM Area that pass the upward capacity test in Section 29.34(l) and the upward flexibility test in Section 29.34(m) in accordance with Section 29.11(t)(2) will be distributed as follows:

(1) to the EIM Entity Scheduling Coordinators for sub-allocation according to its OATT, or

(2) to the CAISO for sub-allocation to Scheduling Coordinators that provide incremental Energy net of FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, and Uninstructed Imbalance Energy excluding non-Participating Load.

**(2) Assistance Energy Transfer Surcharges.**

**(A)** Any assistance Energy transfer surcharges allocated to the net importing Balancing Authority Areas in the EIM Area that fail the upward capacity test in Section 29.34(l) or the upward flexibility test in Section 29.34(m) will be allocated to the EIM Entity Scheduling Coordinator for sub-allocation according to its OATT. Any assistance Energy transfer charges allocated to the CAISO Balancing Authority Area will be sub-allocated based on Measured Demand, excluding Demand associated with ETC or TOR Self-Schedules for which a RTM Congestion Credit was provided as specified in Section 11.5.7, and excluding Demand associated with ETC, Converted Right, or TOR Self-Schedules for which an IFM Congestion Credit was provided as specified in Section 11.2.1.5; regardless of whether an MSS Operator has elected gross or net Settlement, Scheduling Coordinators for MSS Operators will receive their allocation based on the MSS

Aggregation Net Non-ETC/TOR Measured Demand.

**29.12 Creditworthiness**

(a) **Requirements.** EIM Entity Scheduling Coordinators, EIM Sub-Entity Scheduling Coordinators, and EIM Participating Resource Scheduling Coordinators shall comply with the credit and other requirements of Section 12.

(b) **Credit Default.** In the event of a failure to satisfy the credit or other requirements in Section 12, the consequences specified in Section 12 shall apply to EIM Entity Scheduling Coordinators, EIM Sub-Entity Scheduling Coordinators, and EIM Participating Resource Scheduling Coordinators.

**29.13 Dispute Resolution**

(a) **Invoices.** Confirmation and validation of any dispute associated with the participation of EIM Market Participants in the Real Time Market is subject to Section 11.29.8 and shall be managed through the CAISO's customer inquiry, dispute, and information system and as provided in the Business Practice Manual for the Energy Imbalance Market.

(b) **Other Disputes.** EIM Market Participants shall be subject to dispute resolution pursuant to Section 13.

**29.14 Uncontrollable Forces, Indemnity, Liabilities, and Penalties**

The provisions of Section 14 regarding Uncontrollable Forces, indemnity, liability, and penalties shall apply to the participation of EIM Market Participants in the Real-Time Market.

**29.15 [Not Used]**

**29.16 [Not Used]**

**29.17 EIM Transmission System**

(a) **Information.** Each EIM Entity, and any EIM Sub-Entity authorized by the EIM Entity to perform one or more of the following tasks, shall –

(1) deliver EIM Transmission Service Information to the CAISO regarding the network topology information associated with transmission capacity that it owns, controls, or has a contractual entitlement to that may be used in the Real-Time Market;

(2) deliver EIM Transmission Service Information to the CAISO regarding the network topology information associated with transmission capacity that each other EIM Transmission Service Provider owns, controls, or has a contractual entitlement to within the EIM Entity Balancing Authority Area that may be used in the Real-Time Market;

(3) update the EIM Transmission Service Information no less frequently than the timelines for updates to the Full Network Model as provided in the CAISO Tariff and Business Practice Manual for the Energy Imbalance Market; and

(4) ensure that the EIM Transmission Service Information is accurate and complete.

(b) **Effectiveness.** The EIM Transmission Service Information shall only be used for operation of the CAISO Markets in accordance with the procedures set forth in the Business Practice Manual for the Energy Imbalance Market.

(c) **Availability.** Each EIM Entity and EIM Sub-Entity shall ensure that all EIM Transmission Service Providers in its Balancing Authority Area or EIM Sub-Entity area make available for use in the Real-Time Market transmission capacity that is included in the EIM Transmission Service Information and that is not otherwise encumbered, reserved, scheduled, or being used by its transmission customers or by others.

(d) **Information on Availability.** Each EIM Entity Scheduling Coordinator and EIM Sub-Entity Scheduling Coordinator shall inform the CAISO in the manner and by the deadlines specified in the Business Practice Manual for the Energy Imbalance Market regarding the availability of the transmission capacity identified in the EIM Transmission Service Information for use in the Real-Time Market.

(e) **EIM Transfer Limit.** A Balancing Authority that has entered into an EIM Implementation Agreement to become an EIM Entity shall establish and inform the CAISO of the maximum EIM Transfer limit at least ninety days prior to the EIM Entity Implementation Date in accordance with the Business Practice Manual for the Energy Imbalance Market.

(f) **EIM Transfer Availability.**

(1) **In General.** The ISO will model individual constraints for each EIM Transfer limit

submitted by each EIM Entity that makes transmission available on an EIM Internal Intertie.

(2) **Use of Interchange Transmission Rights.** The EIM Entity Scheduling Coordinator shall determine the EIM Transfer limit made available for use in the Real-Time Market through interchange transmission rights and communicate that limit to the CAISO prior to the start of the next Dispatch Interval in accordance with the procedures and timelines for submission and acceptance in the Business Practice Manual for the Energy Imbalance Market.

(3) **Use of Available Transfer Capability.** The EIM Entity Scheduling Coordinator shall determine the EIM Transfer limit made available to the Real-Time Market through available transfer capability in accordance with its tariff and communicate that limit to the CAISO prior to the start of the next Dispatch Interval in accordance with the procedures and timelines for submission and acceptance in the Business Practice Manual for the Energy Imbalance Market.

(4) **Multiple EIM Transfer Limits.** If there are two or more EIM Entity Balancing Authority Areas that share the same EIM Internal Intertie, the CAISO's Security Constrained Economic Dispatch in the Real-Time Unit Commitment and Real-Time Dispatch will enforce the individual EIM Transfer limit for each EIM Entity Balancing Authority Area while allowing Energy to wheel through the EIM Entity Balancing Authority Areas based on the transmission made available for use in the Real-Time Market.

(5) **EIM Transfers and CAISO Scheduling Points.** EIM Transfers shall compete for Available Transfer Capability at interties that are an EIM Internal Intertie and a CAISO Scheduling Point.

(6) **EIM Transfer Limit Constraints.** The CAISO's Security Constrained Economic Dispatch in the Real-Time Unit Commitment and Real-Time Dispatch shall enforce the EIM Transfer limit and the associated physical limit at each EIM

Internal Intertie.

(7) **EIM Transfer Limits at EDAM Interties.** The CAISO will not re-optimize EDAM Transfer limits established in accordance with Section 33.16, Section 33.17, and Section 33.18 in the Real-Time Market, and will establish separate EIM Transfer limits to represent other transmission capacity from the Day-Ahead Market at each EDAM Internal Intertie.

(g) **EIM Transfer Schedule Cost.**

(1) **In General.** The CAISO's Security Constrained Economic Dispatch in the Fifteen Minute Market and Real-Time Dispatch shall use an EIM Transfer schedule cost associated with EIM Transfers at each EIM Internal Intertie to determine the optimal scheduling path for EIM Transfers, which in all intervals shall be less than $0.01.

(2) **Objectives.** The CAISO shall use the lowest EIM Transfer schedule cost determined based upon the objectives of –

(A) maximizing the use of the transmission capacity made available for EIM Transfers in both the Fifteen-Minute Market and Real-Time Dispatch;

(B) minimizing the number of E-Tags required to comply with the WECC scheduling practices; and

(C) minimizing the impact of outages or curtailments on the E-Tags used to account for EIM Transfers based on historical outage and curtailment data for each EIM Internal Intertie.

(3) **EIM Transfer Schedule Cost Publication.** The CAISO will publish the EIM Transfer schedule cost associated with each EIM Internal Intertie.

(4) **EIM Transfer Schedule Cost Adjustment.** The CAISO may adjust the EIM Transfer schedule costs to maintain the path priorities established by the criteria in Section 29.17(g)(2) when an EIM Entity Balancing Authority Area is added or subtracted from the EIM Area, as seasonal transmission system ratings change, or the transmission system topology changes.

(5) **Locational Marginal Price.** The CAISO will reflect the EIM Transfer schedule cost in the Marginal Cost of Congestion.

**29.18 [Not Used]**

**29.19 [Not Used]**

**29.20 Confidentiality**

The confidentiality provisions of Section 20 shall apply to participation of EIM Market Participants in the Real-Time Market.

**29.21 [Not Used]**

**29.22 Miscellaneous Provisions in Addition to Section 22.**

Section 22 and the additional miscellaneous provisions of Section 29.22 shall apply to the Energy Imbalance Market.

(a) **Tax Liability.** To the extent that the CAISO would incur any tax liability as a result of the participation of EIM Market Participants in the Real-Time Market, as market operator or as central counterparty to Energy Imbalance Market transactions, for example, the CAISO will pass those taxes on to the EIM Entity Scheduling Coordinator for the EIM Entity area where the transactions triggered the tax liability.

(b) **Purchasing Selling Agent.** Neither the CAISO nor the EIM Entity is a "Purchasing Selling Entity" for purposes of E-Tagging or EIM Transfers, nor shall either be listed as a "Purchasing Selling Entity" for purposes of E-Tagging or EIM Transfers.

(c) **Title to Energy.** Title to Energy in the Real-Time Market passes directly from the entity that holds title when the Energy enters the CAISO Controlled Grid or the transmission system of an EIM Transmission Service Provider, whichever is first following Dispatch, to the entity that removes the Energy from the CAISO Controlled Grid or the transmission system of a EIM Transmission Service Provider, whichever last precedes delivery to Load.

**29.23 [Not Used]**

**29.24 [Not Used]**

**29.25 [Not Used]**

**29.26 Transmission Rates and Charges.**

(a) **Transmission Charges for CAISO Facilities.**

(1) **Access Charge.** Transmission service charges for Real-Time Market transactions serving Load within the CAISO Balancing Authority Area that use the CAISO Controlled Grid are governed by Section 26.

(2) **Wheeling Access Charge.** EIM Transfers from the CAISO Controlled Grid to another EIM Entity Balancing Authority Area using the contractual or ownership rights of an EIM Entity shall not constitute Wheeling Out and shall not be subject to the Wheeling Access Charge under Section 26.

(b) **Non-CAISO Facilities.** The determination and charges for transmission service for Real-Time Market transactions on facilities that are part of the contractual or ownership rights made available to the Real-Time Market by an EIM Transmission Service Provider through an EIM Entity or EIM Sub-Entity will be the responsibility of the EIM Entity or EIM Sub-Entity that made the facilities available, except that the EIM Entity or EIM Sub-Entity shall ensure that no EIM Transmission Service Provider imposes a separate charge for EIM Transfers that use its facilities, provided that charges for transmission service in excess of contractual limits shall not be considered a separate charge.

**29.27 CAISO Markets and Processes.**

(a) **In General.** Except as provided in subsection (b) of this section, the provisions of Section 27 that are applicable to the Real-Time Market shall apply to EIM Market Participants.

(b) **Transition Period for New EIM Entities.**

(1) **Transmission Constraint Relaxation.** For a period of six months following the Implementation Date of a new EIM Entity, the provisions of Section 27.4.3.2 and the second sentence of Section 27.4.3.4 shall not apply to constraints that are within Balancing Authority Areas of the new EIM Entity or affect EIM Transfers between the Balancing Authority Areas of the new EIM Entity and any other EIM

Entity that is subject to this subsection (b). For those intervals that experience infeasibilities described in those provisions, the CAISO shall instead determine prices consistent with the provisions of Sections 27, 34, and Appendix C, that would apply in the absence of Section 27.4.3.2 and the second sentence of Section 27.4.3.4.

(2) **Flexible Ramping Product.** For a period of six months following the EIM Entity Implementation Date of a new EIM Entity, when the transmission and/or power balance constraints as specified in Sections 27.4.3.2 and 27.4.3.4, respectively, are relaxed, the CAISO shall set the Flexible Ramping Product parameter for pricing purposes, for the new EIM Entity Balancing Authority Area, at an amount between and including $0 and $0.01.

(3) **Extension of Transition Period Pricing.** Any extensions of the initial six-month transition period, as approved by the Federal Energy Regulatory Commission, are specified below. Sixty days prior to the expiration of the transition period, the CAISO will post on the CAISO website an assessment of whether an extension of the transition period, for up to an additional six months, is needed for the applicable EIM Entity. The CAISO will post an update to such assessment prior to the expiration of the transition period should there be any changes to its posted conclusions.

(A) [reserved]

(4) **Reports.** During the term of the transition period, the CAISO will submit monthly reports with the Commission on the infeasibilities observed in the applicable EIM Entity Balancing Authority Area, the nature of the issues causing the infeasibility

(c) **Automated EIM Mirror.** If the CAISO updates an Interchange E-Tag for a schedule change outside of the Market Clearing of the Real-Time Market for System Resources and Scheduling Points and the associated energy is generated at, wheeled through, or consumed at an EIM Entity Balancing Authority Area, the CAISO will automatically EIM Mirror the schedule change using the relevant EIM Mirror System Resource in

accordance with the procedures specified in the Business Practice Manual for the Energy Imbalance Market.

(d) **Base GDFs for Aggregated EIM Non-Participating Resources.** The CAISO will allow base Generation Distribution Factor submission for aggregate EIM non-participating resources through the submission of EIM Base Schedules and will distribute the base schedule and any imbalances of aggregate EIM non-participating resources using the submitted base GDFs, if available, or otherwise the registered default base GDFs for the resource in the Master File, normalized for Outages and remedies adopted to address the issues identified.

**29.28 Inter-SC Trades**

EIM Entity Scheduling Coordinators, EIM Sub-Entity Scheduling Coordinators, and EIM Participating Resource Scheduling Coordinators may not submit Inter-SC Trades.

**29.29 EIM Relationship to EDAM**

The provisions of this Section 29 apply to EIM Market Participants and EDAM Market Participants, in addition to Section 33, which includes requirements applicable to EDAM Market Participants that are not applicable to EIM Market Participants.

**29.30 Bid and Self-Schedule Submission for CAISO Markets.**

(a) **In General.** The provisions of Section 30 that are applicable to the Real-Time Market, as supplemented by Section 29.30, shall apply to EIM Market Participants.

(b) **Start-Up and Minimum Load.** For the determination of Proxy Start-Up Costs and Proxy Minimum Load Costs, the CAISO will utilize the Market Services Charge and system operations charges described in Section 11.22.2 reflected in the EIM Administrative Charge.

(c) **EIM Available Balancing Capacity Energy Bid Curve for EIM Participating Resources.** For each Trading Hour, the CAISO will apply Energy Bids submitted for EIM Participating Resources, which may be subject to mitigation pursuant to Section 29.39, towards the EIM Available Balancing Capacity as provided in Section 29.30(e).

(d) **EIM Available Balancing Capacity Bids Used for EIM Available Balancing Capacity**

**Served by Non-Participating Resources.** The CAISO will create an Energy Bid Curve based on the Default Energy Bid established by the EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator and the CAISO pursuant to Section 29.4(c)(4)(K) for all non-participating resources that the EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator may identify as EIM Available Balancing Capacity, and will apply such bids to the EIM Available Balancing Capacity as provided in Section 29.30(e).

(e) **Treatment of Energy Bid Curves for EIM Available Balancing Capacity.** For each Trading Hour the CAISO will allocate the categories of the EIM Resource Plan specified in Section 29.34(e)(3)(C) and (D) as follows.

(1) **Upward Capacity.** For upward capacity above the EIM Base Schedule, the CAISO will –

(A) allocate the Spinning and Non-Spinning Reserves down from the upper regulating limit as registered in the Master File, taking into account any PMax rerates; and then

(B) allocate EIM Upward Available Balancing Capacity to the Energy Bid Curve starting at the highest value of the Energy Bid Curve that does not overlap with Spinning or Non-Spinning Reserves.

(2) **Downward Capacity.** For downward capacity below the EIM Base Schedule, the CAISO will allocate EIM Downward Available Balancing Capacity to the Energy Bid Curve starting at its lowest value, taking into account any PMin rerates.

(3) **Remaining Capacity.** The CAISO will use any remaining portion of the Energy Bid Curve after the allocations in Section 29.30(e)(1) and 29.30(e)(2) for Dispatch under any condition, except that for non-participating resources the CAISO will adjust the EIM Upward Available Balancing Capacity and EIM Downward Available Balancing Capacity towards the EIM Base Schedule so that there will not be any remaining capacity for Dispatch.

**29.31 Day-Ahead.**

EIM Entity Scheduling Coordinators, EIM Sub-Entity Scheduling Coordinators and EIM Participating Resource Scheduling Coordinators may not submit Bids in the CAISO's Day-Ahead Market on behalf of EIM Market Participants that they represent in their capacity as an EIM Entity Scheduling Coordinator, EIM Sub-Entity Scheduling Coordinator, or EIM Participating Resource Scheduling Coordinator, unless participation in the Day-Ahead Market is enabled within an EIM Entity Balancing Authority Area in accordance with Section 33, in which case participation in the Day-Ahead Market by EDAM Market Participants is governed by Section 33 and execution of the associated agreement in Appendix B is required to support participation in the Day-Ahead Market .

**29.32 Greenhouse Gas Regulation and GHG Bid Adders.**

**(a) GHG Bid Adders.**

**(1) In General.** EDAM Resource Scheduling Coordinators, EIM Participating Resource Scheduling Coordinators, and Scheduling Coordinators for resources within the CAISO Balancing Authority Area will have an opportunity to recover costs of compliance with GHG regulations adopted by a state jurisdiction that has priced GHG emissions as part of a state GHG reporting and reduction program. The provisions of Section 29.32 pertaining to the GHG Regulation Area of the State of Washington will not take effect until January 1, 2027.

**(2) Bid Adders.** The Fifteen-Minute Market and Real-Time Dispatch will use GHG Bid Adders submitted by EDAM Resource Scheduling Coordinators and EIM Participating Resource Scheduling Coordinators for resources located outside of a specific GHG Regulation Area to optimize the attribution of GHG Transfers into that GHG Regulation Area.

The Fifteen-Minute Market and Real-Time Dispatch will use GHG Bid Adders submitted by EDAM Resource Scheduling Coordinators and EIM Participating Resource Scheduling Coordinators for resources located within the GHG Regulation Area of the State of Washington to optimize the attribution of GHG Transfers into GHG Regulation Areas outside of the State of Washington.

The Fifteen-Minute Market and Real-Time Dispatch will use GHG Bid Adders submitted by EDAM Resource Scheduling Coordinators, EIM Participating Resource Scheduling Coordinators, and Scheduling Coordinators for resources located within the GHG Regulation Area of the State of California to optimize the attribution of GHG Transfers into GHG Regulation Areas outside of the State of California.

For purposes of this Section 29.32, GHG Regulation Areas will reflect the Pricing Nodes of the CAISO Balancing Authority Area, an EDAM Entity Balancing Authority Area or an EIM Entity Balancing Authority Area within the GHG boundary as defined by a state jurisdiction that has priced GHG emissions as part of a state GHG reporting and reduction program. GHG Regulation Areas modeled in the Fifteen-Minute Market and Real-Time Dispatch may include Pricing Nodes in addition to Pricing Nodes for GHG Regulation Areas modeled in the Day Ahead Market, because the EIM Area may include EIM Entity Balancing Authority Areas located within the GHG boundary area as defined by a state jurisdiction that has priced GHG emissions as part of a state GHG reporting and reduction program that are not participating in the Day-Ahead Market.

Scheduling Coordinators, EDAM Resource Scheduling Coordinators and EIM Participating Resource Scheduling Coordinators for resources located inside a specific GHG Regulation Area will not submit GHG Bid Adders to serve Demand within that GHG Regulation Area.

Scheduling Coordinators for resources with Pseudo-Tie arrangements or Dynamic Schedules into the CAISO Balancing Authority Area that register in the Master File that their resources' capacity is associated with serving Demand in the GHG Regulation Area within the State of California will not submit GHG Bid Adders.

EDAM Resource Scheduling Coordinators for resources with Pseudo-Tie arrangements or Dynamic Schedules into an EDAM Entity Balancing Authority Area with Demand in the State of California that register in the Master File that their resources' capacity is associated with serving Demand in the GHG Regulation Area within the State of California will not submit GHG Bid Adders.

EDAM Resource Scheduling Coordinators for resources with Pseudo-Tie arrangements or Dynamic Schedules into an EDAM Balancing Authority Area with Demand in the State of Washington that register in the Master File that their resources' capacity is associated with serving Demand in the GHG Regulation Area within the State of Washington will not submit GHG Bid Adders.

EIM Participating Resource Scheduling Coordinators for resources with Pseudo-Tie arrangements or Dynamic Schedules into an EIM Balancing Authority Area with Demand in the State of California that register in the Master File that their resources' capacity is associated with serving Demand in the GHG Regulation Area within the State of California will not submit GHG Bid Adders.

EIM Participating Resource Scheduling Coordinators for resources with Pseudo-Tie arrangements or Dynamic Schedules into an EIM Balancing Authority Area with Demand in the State of Washington that register in the Master File that their resources' capacity is associated with serving Demand in the GHG Regulation Area within the State of Washington will not submit GHG Bid Adders.

**(A) Bid Submission.**

EDAM Resource Scheduling Coordinators for resources located outside of a GHG Regulation Area may submit a separate GHG Bid Adder as an hourly Bid component specific to each GHG Regulation Area.

EIM Participating Resource Scheduling Coordinators for resources located outside of a GHG Regulation Area may submit a separate GHG Bid Adder as an hourly Bid component specific to each GHG Regulation Area.

Scheduling Coordinators for resources located within the GHG Regulation Area of the State of California may submit a GHG Bid Adder as an hourly Bid component for the GHG Regulation Area outside of the State of California.

Scheduling Coordinators for resources located within the GHG Regulation Area of the State of Washington may submit a GHG Bid Adder as an hourly Bid component for the GHG Regulation Area outside of the State of Washington.

GHG Bid Adders will consist of a price and MW quantity. The price included in the EIM Bid Adder will not be less than $0/MWh and not greater than 110% of the resource's GHG maximum compliance cost as determined in accordance with Section 29.32(a)(3).

**(B) Default Treatment.** If a resource located outside of a specific GHG Regulation Area does not have a GHG Bid Adder, the Fifteen-Minute Market and Real-Time Dispatch will not select the resource for attribution into that GHG Regulation Area.

**(3) Determination of EIM Maximum GHG Bid Adder.**

The CAISO will calculate maximum daily GHG Bid Adders for each EDAM Resource, each EIM Resource, and each resource located within the CAISO Balancing Authority Area in relation to GHG Regulation Areas, as applicable, based on the resource's highest average heat rate on its heat rate curve, the applicable Greenhouse Gas Allowance Price, and the resource's applicable emission rate. The CAISO will perform this calculation in accordance with the provisions of the applicable Business Practice Manual. The CAISO will also provide for an option to negotiate a maximum daily GHG Bid Adder for each GHG Regulation Area in accordance with the provisions of the applicable Business Practice Manual.

**(4) GHG Bid Adder Price.** The price included in the GHG Bid Adder will not be less than $0/MWh. The sum of the GHG Bid Adder price and the Energy Bid price may not exceed the Soft Energy Bid Cap unless the sum of a resource's relevant maximum daily GHG Bid Adder and Default Energy Bid as adjusted pursuant to Section 30.11 exceeds the Soft Energy Bid Cap. In this case, the sum of a resource's GHG Bid Adder and Energy Bid price may not exceed the sum of the relevant maximum daily GHG Bid Adder and the resource's Default Energy Bid or the Hard Energy Bid Cap, whichever is lower.

**(b) Consideration of GHG Bid Adders in Market Clearing.**

**(1) Dispatch of Resources with Nonzero GHG Bid Adders.**

The CAISO's Security Constrained Economic Dispatch in the Fifteen-Minute Market and Real-Time Dispatch will take into account GHG Bid Adders in selecting Energy produced by EDAM Resources located outside of a specific GHG Regulation Area up to the associated MW quantity included in the GHG Bid Adder to serve Demand within that GHG Regulation Area.

The CAISO's Security Constrained Economic Dispatch in the Fifteen-Minute Market and Real-Time Dispatch will take into account GHG Bid Adders in selecting Energy produced by resources located within the GHG Regulation Area of the State of California up to the associated MW quantity included in the GHG Bid Adder to serve Demand in the GHG Regulation Area outside the State of California.

The CAISO's Security Constrained Economic Dispatch in the Fifteen-Minute Market and Real-Time Dispatch will take into account GHG Bid Adders in selecting Energy produced by resources located within the GHG Regulation Area of the State of Washington up to the associated MW quantity included in the GHG Bid Adder to serve Demand in the GHG Regulation Area outside the State of Washington.

The CAISO's Security Constrained Economic Dispatch in the Fifteen-Minute Market and Real-Time Dispatch will not consider GHG Bid Adders when selecting EDAM Resource Facilities, EIM Resources, or resources located within the CAISO Balancing Authority Area to serve Demand outside of GHG Regulation Areas.

**(2) Maximum GHG MW Attribution Quantity.** The Fifteen-Minute Market and Real-Time Dispatch will limit the total GHG attribution to an EDAM Resource Facility located outside GHG Regulation Areas to serve Demand in GHG Regulation Areas to a value equal to the lower of (i) the MW value in the EDAM Resource's GHG Bid Adder, (ii) the EDAM Resource's upper Economic Bid minus the EDAM Resource Facility's Day-Ahead Energy Schedule plus the EDAM Resource Facility's total Day-Ahead Market GHG attribution, considering any applicable derates and Ancillary Services capacity reservations, for the relevant Operating Hour, or (iii) the EDAM Resource Facility's Real-Time Market Energy Schedule.

The Fifteen-Minute Market and Real-Time Dispatch will limit the maximum GHG Bid Adder MW quantity of an EIM Participating Resource located outside GHG Regulation Areas to a value equal to the lower of (i) the MW value in the EIM Participating Resource's GHG Bid Adder; (ii) the EIM Participating Resource's dispatchable Bid range between the EIM Participating Resource's EIM Base Schedule and the EIM Participating Resource's effective upper Economic Bid, considering any applicable derates and Ancillary Services capacity reservations, for the relevant Operating Hour, or (iii) the EIM Participating Resource's Real-Time Market Energy Schedule.

The Fifteen-Minute Market and Real-Time Dispatch will limit the maximum GHG Bid Adder MW quantity of a resource located within the CAISO Balancing Authority Area to serve Demand in a GHG Regulation Area outside of the State of California to a value equal to the lower of (i) the MW value in the resource's

GHG Bid Adder; (ii) the resource's upper Economic Bid minus the resources's Day-Ahead Energy Schedule plus the EDAM Resource's total Day-Ahead Market GHG attribution, considering any applicable derates and Ancillary Services capacity reservations, for the relevant Operating Hour, or (iii) the resource's Real-Time Market Energy Schedule.

**(3) Dispatch of EIM Participating Resources Bid Adders of Zero.** The CAISO's Security Constrained Economic Dispatch in the Fifteen-Minute Market and Real-Time Dispatch will not dispatch resources located outside a GHG Regulation Area for delivery into that GHG Regulation Area if the MW quantity included in the GHG Bid Adder is zero.

**(c) GHG Marginal Cost**.

The CAISO's Security Constrained Economic Dispatch in the Fifteen-Minute Market and Real-Time Dispatch will take into account Energy Bids and GHG Bids, optimally select resources located outside of a GHG Regulation Area to support GHG Transfers into a GHG Regulation Area until the total MW of GHG Transfers into the respective GHG Regulation Area is fully allocated. The Shadow Price of this allocation constraint is the Marginal GHG Cost for the respective GHG Regulation Area.

**(d) Compensation.**

EIM Resource Scheduling Coordinators and EDAM Resource Scheduling Coordinators will receive GHG settlements pursuant to Section 11. When the Real-Time Market attributes a resource located outside of a GHG Regulation Area to support a GHG Transfer to serve Demand in a GHG Regulation Area, the applicable Scheduling Coordinator for the resource will receive a payment equaling the product of the GHG Transfer to the GHG Regulation Area attributed to the resource in the Real-Time Market at the applicable Real-Time Market Marginal GHG Cost for that GHG Regulation Area.

**29.32.1 GHG Net Export Constraint**

The CAISO's Security Constrained Economic Dispatch in the Fifteen-Minute Market and Real-Time Dispatch will apply a net export constraint for EDAM Entity and EIM Entity

Balancing Authority Areas that do not overlap with a GHG Regulation Area. This constraint will limit the aggregate attribution of EDAM Resource Facilities within a specific EDAM Entity Balancing Authority Area or EIM Participating Resources within an EIM Entity Balancing Authority Area such that the aggregate attribution does not exceed the net exports from that Balancing Authority Area. This constraint will also limit the aggregate attribution of resources within a specific GHG Regulation Area to serve Demand in another GHG Regulation Area such that the attribution may not exceed the net exports from these resources' native Balancing Authority Areas. This constraint will not restrict the Real-Time Market from attributing capacity located outside of a specific GHG Regulation Area obligated to serve Demand within that GHG Regulation Area that is registered with the CAISO in accordance with the applicable Business Practice Manual. The CAISO will not enforce this constraint for any Balancing Authority Area in the EIM Area and during any Real-Time Market interval in which the CAISO Balancing Authority Area, an EDAM Entity Balancing Authority Area, or an EIM Entity Balancing Authority Area with Demand in a GHG Regulation Area is deficient in the upward direction for purposes of the capacity or flexibility tests described Section 29.34.

**29.32.2 Data Availability**

**(a) Notification.** The CAISO will notify an EDAM Resource Scheduling Coordinator of the portion of the FMM Energy Schedule and the portion of the RTD Energy Dispatch that support a GHG Transfer to serve Demand in a GHG Regulation Area as part of the Real-Time Market results publication.

The CAISO will notify an EIM Participating Resource Scheduling Coordinator of the portion of the FMM Energy Schedule and the portion of the RTD Energy Dispatch that support a GHG Transfer to serve Demand in a GHG Regulation Area as part of the Real-Time Market results publication.

The CAISO will notify the Scheduling Coordinator for a resource located in the CAISO Balancing Authority Area of the portion of the resource's FMM Energy Schedule and the

portion of the RTD Energy Dispatch that support a GHG Transfer to serve Demand in a GHG Regulation Area as part of the Real-Time Market results publication.

**(b) Disclosure.** The CAISO may disclose information related to GHG Transfers to a Government Authority, so long as such information does not disclose confidential information of any individual Market Participant.

**29.33 [Not Used]**

**29.34 EIM Operations**

(a) **In General.** Section 34, as supplemented by provisions in Section 29.34, will govern the operation of the Real-Time Market within the EIM Area. Operation of the Real-Time Market within the EDAM Area is further supplemented by Section 33, which produces outcomes that satisfy or modify certain requirements otherwise applicable to EIM Market Participants, including a Day-Ahead Schedule instead of a submitted EIM Base Schedule and an initial EIM Base Load Schedule, pools of Balancing Authority Areas for purposes of the EIM Resource Sufficiency Evaluation, and Energy transfers between Balancing Authority Areas with equal scheduling priority to Demand.

(b) **Applicability.** EIM Entity Scheduling Coordinators, EIM Sub-Entity Scheduling Coordinators, and EIM Participating Resource Scheduling Coordinators will submit EIM Base Schedules and other necessary information to the CAISO for use in the Real-Time Market pursuant to Section 29.34 and not pursuant to Section 34.

(c) **Submission Deadlines.** If an EIM Entity Scheduling Coordinator, EIM Sub-Entity Scheduling Coordinator, or EIM Participating Resource Scheduling Coordinator fails to submit an EIM Base Schedule according to the timelines established in this Section 29.34, the CAISO will not accept the EIM Base Schedule or use it in the Real-Time Market.

(d) **Demand Forecast.**

(1) **In General.** In accordance with procedures set forth in the Business Practice Manual for the Energy Imbalance Market, the CAISO shall develop short-term and mid-term Demand Forecasts by Demand Forecast zone within each EIM

Entity Balancing Authority Area, separately from the CAISO Balancing Authority Area, and, as needed for the EDAM Upward Pool or EDAM Downward Pool.

(2) **Short Term Forecast.** The CAISO's short-term Demand Forecast for an EIM Entity Balancing Authority Area shall produce a value every five minutes for the duration of the CAISO's Dispatch horizon, which has five-minute granularity and extends several Dispatch Intervals.

(3) **Mid-Term Forecast.** The CAISO's mid-term Demand Forecast for an EIM Entity Balancing Authority Area shall produce hourly values for the next hour through the next 7 days.

(4) **EIM Entity Scheduling Coordinator Demand Forecast.**

(A) **In General.** An EIM Entity Scheduling Coordinator, and if permitted by the EIM Entity for its Balancing Authority Area, an EIM Sub-Entity Scheduling Coordinator, may opt to provide a non-binding EIM Entity Demand Forecast, net of behind-the-meter Generation that is not registered as an EIM Resource, as part of the hourly EIM Base Schedules.

(B) **Timing and Scope.** The EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator must provide any such Demand Forecasts by 10:00 a.m. for the next 7 days.

(C) **Updates.** The EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator must update any such Demand Forecast for each Operating Hour and the following 6 to 10 hours and submit the update to the CAISO no later than 75 minutes prior to the start of that Operating Hour, as part of its hourly EIM Base Schedule submission.

(D) **Effect on Bid Requirement.** If the EIM Entity Demand Forecast or EIM Sub-Entity Demand Forecast is less than the CAISO Demand Forecast, then the EIM Entity's or EIM Sub-Entity's EIM Resource Plan must include sufficient Bids to cover the difference in Demand Forecasts.

(5) **Posting.** Between 6:00 p.m. of the seventh day prior to the start of the Operating Day and 6:00 p.m. of the day prior to the Operating Day, the CAISO shall post and update hourly Demand Forecasts by Demand Forecast zone.

(e) **EIM Resource Plan.**

(1) **In General.** By 10:00 a.m. of the day preceding the Operating Day, the EIM Entity Scheduling Coordinators and, if permitted by the EIM Entity, EIM Sub-Entity Scheduling Coordinators on behalf of non-participating resources and EIM Participating Resource Scheduling Coordinators on behalf of EIM Participating Resources, must submit all applicable components of the EIM Resource Plan as set forth in Section 29.34(e)(3).

(2) **Scope.** The EIM Resource Plan components must cover a seven day horizon (with hourly detail for each resource) beginning with the Operating Day.

(3) **Contents.** The EIM Resource Plan shall comprise –

(A) EIM Base Schedules of EIM Entities, EIM Sub-Entities as applicable, and EIM Participating Resources;

(B) Energy Bids (applicable to EIM Participating Resources only);

(C) EIM Upward Available Balancing Capacity;

(D) EIM Downward Available Balancing Capacity;

(E) EIM Reserves to Meet NERC/WECC Contingency Reserves Requirements; and

(F) if the EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator is not relying on the CAISO's Demand Forecast, a Demand Forecast.

(4) **Contents of EIM Base Schedules.** EIM Base Schedules of EIM Entities and EIM Sub-Entities must include hourly-level Demand Forecasts for EIM Demand, hourly-level schedules for resources, including any hourly-level schedules below PMin that the EIM Entity seeks an accounting for, and, for EIM Entities only, hourly-level scheduled Interchanges.

(5) **Adjustment Prior to Submission of Real-Time EIM Base Schedules.** The EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator may adjust the components of the EIM Resource Plan prior to the submission of Real-Time EIM Base Schedules up to 75 minutes before the Operating Hour.

(f) **Real-Time EIM Base Schedules.**

(1) **In General.**

(A) **Initial Submission.** EIM Entity Scheduling Coordinators, EIM Sub-Entity Scheduling Coordinators, EIM Participating Resource Scheduling Coordinators, and non-participating resources in the EIM Entity Balancing Authority Area that wish to submit real-time hourly EIM Base Schedules, or, with regard to non-participating resources, wish to submit EIM Base Schedule information pursuant to Section 29.34(f)(4), must submit such schedules or other information consistent with the requirements of the Business Practice Manual for the Energy Imbalance Market and at least 75 minutes before the start of the Operating Hour.

(B) **Interim Revisions.** EIM Entity Scheduling Coordinators, EIM Sub-Entity Scheduling Coordinators, EIM Participating Resource Scheduling Coordinators, and non-participating resources in the EIM Entity Balancing Authority Area may revise hourly Real-Time EIM Base Schedules, or, with regard to non-participating resources, revise EIM Base Schedule information submitted pursuant to Section 29.34(f)(4), meeting the requirements of the Business Practice Manual for the Energy Imbalance Market at or before 55 minutes before the start of the Operating Hour.

(C) **Final Revision.** EIM Entity Scheduling Coordinators may further revise hourly Real-Time EIM Base Schedules, including EIM Base Schedules for EIM Sub-Entities and EIM Participating Resources, at or before 40 minutes before the start of the Operating Hour, provided that any

financial or operational impact resulting from such EIM Base Schedule changes for an EIM Sub-Entity shall be resolved in accordance with the applicable tariff or contractual arrangements between the EIM Entity and the EIM Sub-Entity.

(2) **EIM Base Schedule for EIM Participating Resources.** The EIM Base Schedule for each EIM Participating Resource must be within the Economic Bid range of the submitted Energy Bids for each Operating Hour for EIM Resources, which the CAISO will make available to the EIM Entity without price information, provided that an EIM Participating Resource Scheduling Coordinator may also include Energy below PMin in an EIM Base Schedule.

(3) **EIM Base Schedule for Imports and Exports.** EIM Base Schedules must –

(A) disaggregate Day-Ahead import/export schedules between the EIM Entity Balancing Authority Area and the CAISO Balancing Authority Area;

(B) identify the relevant EIM Interties for imports and exports to an EIM Entity Balancing Authority Area from Balancing Authority Areas other than the CAISO Balancing Authority Area; and

(C) include approved, pending, and adjusted E-Tags for imports and exports.

(4) **EIM Base Schedule Aggregation.** In response to a request by an EIM Entity Scheduling Coordinator or an EIM Sub-Entity Scheduling Coordinator, the CAISO will establish an electronic interface by which non-participating resources, Loads, and other customers of the EIM Entity or EIM Sub-Entity may submit EIM Base Schedule information to the EIM Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator and to the CAISO.

(g) **Initial EIM Base Load Schedule.** The CAISO will derive an initial EIM Base Load Schedule for each EIM Entity and EIM Sub-Entity from the Demand Forecasts used for the EIM Entity Balancing Authority Area and EIM Sub-Entity area, estimated Transmission Losses, and an assumed Load distribution, pursuant to the methodology set forth in the Business Practice Manual for the Energy Imbalance Market.

(h) **Energy Bids.** EIM Participating Resource Scheduling Coordinators may submit Energy Bids in accordance with the timelines, processes, and requirements applicable to other resources submitting Energy Bids under Section 34.

(i) **Interchange Schedules with Other Balancing Authorities.**

(1) **In General.** EIM Entity Scheduling Coordinators must submit Interchange Schedules with other Balancing Authority Areas at the relevant EIM Interties and must update these Interchange Schedules with any adjustments, when applicable, as part of the hourly EIM Resource Plan revision.

(2) **Economic Bidding of EIM Intertie Transactions.** An EIM Participating Resource Scheduling Coordinator may bid a transaction at an EIM External Intertie into the FMM if the EIM Entity supports economic bidding of EIM External Intertie transactions and the relevant transmission service providers or path operators support 15-minute scheduling at the EIM External Intertie under FERC Order No. 764.

(j) **CAISO Validation and Feasibility Test.** The CAISO Markets systems will validate the initial EIM Resource Plan by 1:00 p.m. on the day before the Operating Day, and within 15 minutes of the submission of EIM Base Schedules or adjustments to EIM Base Schedules, the CAISO will validate the EIM Resource Plan and notify the EIM Entity Scheduling Coordinator-

(1) if the EIM Resource Plan is not balanced;

(2) if the EIM Resource Plan provides insufficient Flexible Ramping Product capacity to meet requirements determined pursuant to Section 29.34(m); and

(3) if the CAISO anticipates Congestion based on the submitted EIM Resource Plans.

(k) **EIM Resource Sufficiency Evaluation – Balancing Test.**

(1) **EIM Base Schedule Adjustment.** If, after the final opportunity for the EIM Entity to revise hourly Real-Time EIM Base Schedules according to Section

29.34(f)(1)(c), Supply in the EIM Base Schedules does not balance the Demand Forecast, the CAISO will adjust the Demand in the EIM Base Schedule to equal Supply.

(2) **EIM Base Schedule Balancing Test.** The EIM Base Schedules of Supply included in the EIM Resource Plan must balance the Demand Forecast for each EIM Entity Balancing Authority Area.

(A) An EIM Entity Balancing Authority Area will be balanced if the sum of Supply from the EIM Base Schedules, including Interchange with other Balancing Authority Areas, is within one percent above or below the total Demand Forecast that the EIM Entity Scheduling Coordinator has decided to use for the associated EIM Entity Balancing Authority Area.

(B) An EIM Entity Balancing Authority Area will be out of balance if the sum of Supply from the EIM Base Schedules, including Interchange with other Balancing Authority Areas, is more or less than one percent above or below the total Demand Forecast the EIM Entity Scheduling Coordinator has decided to use for the associated EIM Entity Balancing Authority Area.

(C) If an EIM Entity Scheduling Coordinator elects to use the CAISO Demand Forecast and is not balanced as determined in Section 29.34(k)(2)(B) or the EIM Entity Scheduling Coordinator elects to use their own demand forecast, then the EIM Entity Balancing Authority Area will be assessed for over-scheduling or under-scheduling charges pursuant to Section 29.11(d)(3).

(D) A Balancing Authority Area in the EIM Area that is not subject to the balancing test in this Section 29.34(k) will not be eligible for revenue apportionment and allocation pursuant to Section 29.11(d)(3).

(l) **EIM Resource Sufficiency Evaluation – Capacity Test.**

(1) **Requirement.**

The Supply, as applicable and as detailed in Business Practice Manuals, included in—

(A) the EIM Resource Plan must meet the Demand Forecast for each EIM Entity Balancing Authority Area, and

(B) the RUC Schedules, the HASP Advisory Schedules and HASP Intertie Block Schedules or the FMM Schedules must meet the Demand Forecast for the CAISO Balancing Authority Area.

(2) **Supply and Demand Forecast.** Conditions and actions in the Real-Time Market will affect what Supply will be counted and what Demand Forecast will be referenced in the capacity test performed in accordance with this Section 29.34(l) and, in some cases as noted below, both this capacity test and the flexibility test performed in accordance with Section 29.34(m).

(A) For purposes of this Section 29.34(l) and also for purposes of Section 29.34(m) with respect to Sections 29.34(l)(2)(A)(iii) and 29.34(l)(2)(A)(iv), Supply counted in the capacity test will also include—

(i) a Short Start Unit with a Bid in the RTM through the upcoming hour that is offline in the last fifteen minute interval before the hour under evaluation provided the Short Start Unit has remaining Start-Ups in the day including the hour under evaluation;

(ii) a Multi-Stage Generating Resource configuration that can reach another configuration within the timeframe for it to be counted as available in accordance with Section 29.34(l)(1)(A)(i), provided the resource has remaining in-state transitions to that MSG Configuration in the day including the hour under evaluation;

(iii) a Multi-Stage Generating Resource transitioning between MSG Configurations or a Short Start Unit moving through a Forbidden Operating Region in the hour under evaluation, in both the

capacity test and the flexibility test performed in accordance with Section 29.34(m) ; or

(iv) a Non-Generator Resource or storage device maximum and minimum output in the hour under evaluation based upon its State of Charge as monitored by the CAISO in the last fifteen minute interval before the hour under evaluation, and its Bids to charge or discharge Energy in the hour under evaluation, in both the capacity test and the flexibility test performed in accordance with Section 29.34(m).

(B) For purposes of this Section 29.34(l) and also for purposes of Section 29.34(m) with respect to Section 29.34(l)(2)(B)(iii), Supply counted in the capacity test will not include—

(i) a Short Start Unit with a Bid in the RTM which received a Start-Up Instruction before the hour under evaluation and has failed to initiate Start-Up;

(ii) a Short Start Unit that is on Outage during the hour under evaluation or has returned from an Outage but is unable to Start-Up within the hour under evaluation; or

(iii) an Import Bid or Export Bid for delivery to or export from the CAISO Balancing Authority Area lacking a transmission profile in a submitted E-Tag supporting its Interchange Schedule at the time the final binding capacity test and flexibility test for the CAISO Balancing Authority Area are performed in accordance with Section 29.34(m).

(C) Supply from a resource counted in accordance with Section 29.34(l)(2)(A)(i) may be adjusted by the CAISO in accordance with the timelines and procedures provided in the Business Practice Manual for the Energy Imbalance Market to address significant overcounting of

Supply available to the Real-Time Market, provided that the overcounting has been identified, supported with analysis and documented by the CAISO.

(D) Demand response under a demand response program administered in an EIM Entity Balancing Authority Area that does not otherwise qualify as an EIM Resource, *i.e.*, count as Supply, may be accounted for through a corresponding EIM Entity adjustment to their Demand Forecast, which will then be referenced in the capacity test performed in accordance with this Section 29.34(l), the flexibility test performed in accordance with Section 29.34(m), and the balancing test performed in accordance with Section 29.34(k), provided the EIM Entity submits an attestation to the CAISO in accordance with the procedures and timelines in the Business Practice Manual for the Energy Imbalance Market that certifies adjustments made to its Demand Forecast will correspond to expected increases or reductions in demand provided by the demand response.

(3) **Insufficient Supply.** An EIM Resource Plan or the CAISO equivalent, as applicable and as detailed in Business Practice Manuals, shall be deemed to have insufficient Supply to pass the capacity test if—

(A) the sum of EIM Base Schedules of Supply and the sum of the incremental or decremental offers in the Energy Bid range from EIM Participating Resources above or below their EIM Base Schedule, including Interchange with other Balancing Authority Areas, is not sufficient to meet the total Demand Forecast that the EIM Entity Scheduling Coordinator has decided to use for the associated EIM Entity Balancing Authority Area, and

(B) the sum of Supply and the sum of the incremental or decremental offers in the Energy Bid range above or below the RUC Schedules, the HASP Advisory Schedules and HASP Intertie Block Schedules or the FMM

Schedules is not sufficient to meet the total Demand Forecast for the CAISO Balancing Authority Area, provided that the benefit of the exclusion of the export schedules which may be curtailed in accordance with Section 34.12.4(a) or 34.12.4(b) will be reflected in the upward capacity test results for the CAISO Balancing Authority Area.

(m) **Individual EIM Resource Sufficiency Evaluation – Flexibility Test.**

(1) **Review.**

(A) **Individual EIM Entity Balancing Authority Areas.** The CAISO will review the EIM Resource Plan for an EIM Entity Balancing Authority Area pursuant to the process set forth in the Business Practice Manual for the Energy Imbalance Market and verify that it has sufficient Bids for Ramping capability, accounting for Sections 29.34(l)(2)(A)(iii), 29.34(l)(2)(A)(iv), 29.34(l)(2)(B)(iv) and 29.34(l)(2)(D), to meet the EIM Entity Balancing Authority Area upward and downward Ramping requirements within a one percent or one MW tolerance, as adjusted pursuant to Sections 29.34(m)(2), (3), and (7).

(B) **CAISO Balancing Authority Area.** The CAISO will review the RUC Schedules, the HASP Advisory Schedules and HASP Intertie Block Schedules or the FMM Schedules in the CAISO Balancing Authority Area pursuant to the process set forth in the Business Practice Manual for the Energy Imbalance Market and verify that it has sufficient Bids for Ramping capability, accounting for Sections 29.34(l)(2)(A)(iii), 29.34(l)(2)(A)(iv) and 29.34(l)(2)(B)(iv), to meet the CAISO Balancing Authority Area upward and downward Ramping requirements within a one percent or one MW tolerance, as adjusted pursuant to Sections 29.34(m)(2), (3), and (7), provided that the benefit of the exclusion of export schedules which may be curtailed in accordance with Section 34.12.4(a) or 34.12.4(b) will be reflected in the results of the upward

flexibility test for the CAISO Balancing Authority Area.

(C) **EIM Resource Sufficiency Evaluation for the Balancing Authority Areas in the EDAM Area**. Consistent with Section 33.31.1.4, the CAISO will evaluate resource sufficiency of the Balancing Authority Areas in the EDAM Area solely pursuant to this Section 29.34(m). The CAISO will consider all Day-Ahead Market awards for Energy, Imbalance Reserves, and Reliability Capacity as supply prior to testing an individual Balancing Authority Area in the EDAM Area for EIM resource sufficiency. The CAISO will evaluate the EDAM Upward Pool to verify that it has sufficient Bids and Ramping capability to meet the Upward Uncertainty Requirement for the EDAM Upward Pool within a one percent or one MW tolerance, as adjusted pursuant to Sections 29.34(m)(2)-(5). The CAISO will evaluate the EDAM Downward Pool to verify that it has sufficient Bids and Ramping capability to meet the Downward Uncertainty Requirement for the EDAM Downward Pool within a one percent or one MW tolerance, as adjusted pursuant to Sections 29.34(m)(2)-(5). A Balancing Authority in the EDAM Area not included in the EDAM Upward Pool or EDAM Downward Pool will be evaluated in the same manner as an individual EIM Balancing Authority Area.

(D) **Power Balance Constraint and Load Conformance Considerations.** The CAISO, pursuant to the process set forth in the Business Practice Manual for the Energy Imbalance Market, will consider the quantity of any power balance constraint relaxation in the Real-Time Market solution, while excluding from consideration any constraint relaxation due to Load conformance in the Real-Time Market solution, in the determination of whether sufficient Bids for Ramping capability are available to meet the upward and downward Ramping requirements in accordance with this Section 29.34(m)(1).

(2) **Determination of Diversity Benefits.** The CAISO will calculate separately the upward and downward EIM Diversity Benefits as the difference between the sum of the upward and downward Uncertainty Requirements for all Balancing Authority Areas in the EIM Area, and the Uncertainty Requirement for the EIM Area. The Diversity Benefits for a Balancing Authority Area in the EDAM Area is its proportional amount of the difference between the sum of each Balancing Authority Area's individual Imbalance Reserve requirement and the EDAM Area Imbalance Reserve requirements, with the CAISO calculating the Imbalance Reserve requirements for each Balancing Authority Area independently and for the EDAM Area as a whole.

(3) **Effects of Diversity Benefits for EIM Entities that Are Not Balancing Authorities in the EDAM Area.** For each Balancing Authority Area in the EIM Area that is not a Balancing Authority Area in the EDAM Area, the CAISO will reduce the upward and downward Uncertainty Requirements by the Balancing Authority Area's pro rata share of the upward and downward EIM Diversity Benefit in the EIM Area as may be limited by –

(A) the available net import EIM Transfer capability into that Balancing Authority Area in the case of an upward Uncertainty Requirement; and

(B) the available net export EIM Transfer capability from that Balancing Authority Area in the case of a downward Uncertainty Requirement.

(4) **Effect of Diversity Benefit for Balancing Authority Areas that Are Within the Pool of EDAM Balancing Authority Areas.** For each Balancing Authority Area that is included in the pool of Balancing Authority Areas in the EDAM Area as provided in Section 33.31.1.4, the EIM RSE will hold a portion of the Diversity Benefit from allocation and reflect this quantity as additional global procurement of Imbalance Reserves for the EDAM Area as provided in the Business Practice Manuals for purposes of the EIM RSE. If the pool of Balancing Authority Areas in the EDAM Area is subdivided for purposes of accepting the assistance Energy

transfer product as provided in Section 29.34(n)(3)(C), each sub-pool will carry with it and leverage the Diversity Benefit of the entities within the sub-pool.

(5) **Effect of Diversity Benefit for Balancing Authority Areas in the EDAM Area that Are not Within the Pool of EDAM Balancing Authority Areas.** The EIM RSE will consider the effects of dynamic transfers from the members of the EDAM Upward Pool and EDAM Downward Pool to the Balancing Authority Area not included in the pool as provided in Section 33.31.1.4, pursuant to the procedures the Business Practice Manuals.

(6) **Determination of Flexible Ramping Sufficiency Credit.** The CAISO will calculate for each Balancing Authority Area in the EIM Area, the upward flexible Ramping sufficiency credit as the outgoing EIM Transfer from that area and the downward flexible Ramping sufficiency credit as the incoming EIM transfer into that area.

(7) **Effect of Flexible Ramping Sufficiency Credit.** The CAISO will reduce the upward Uncertainty Requirement of a Balancing Authority Area in the EIM Area by its upward flexible Ramping sufficiency credit, and will reduce the downward Uncertainty Requirement of a Balancing Authority Area in the EIM Area by its downward flexible Ramping sufficiency credit.

(n) **Effect of EIM Resource Capacity or Flexibility Insufficiency.**

(1) **Insufficient Capacity.** If, after the final opportunity for the EIM Entity to revise hourly Real-Time EIM Base Schedules as provided in Section 29.34(f)(1)(c), the EIM Resource Plan or the CAISO equivalent has insufficient Supply as determined according to Section 29.34(l)-

(A) the CAISO will not include the EIM Entity Balancing Authority Area or the CAISO Balancing Authority Area in the Uncertainty Requirement for the group of Balancing Authority Areas that passes both the capacity test and flexibility tests in the upward and downward directions, as applicable; and

(B) the CAISO will hold the EIM Transfer limit into or from the EIM Entity Balancing Authority Area or the CAISO Balancing Authority Area, as specified in Section 29.34(n)(2), at the less restrictive of the value for the last 15-minute interval with sufficient Supply balance or the hourly Real-Time EIM Base Schedule corresponding to the 15-minute interval with insufficient Supply as described in the business practice manual.

(C) To facilitate procurement of the Flexible Ramping Product and determination of the Uncertainty Requirement in the manner provided by Section 44.2.4 within the existing RTUC processes and along the time intervals for RTUC runs set forth in Section 34.3.1 and further explained in the Business Practice Manual for Market Operations, and solely for the purpose of this subsection 29.34(n)(1), the final opportunity for the EIM Entity to revise hourly Real-Time EIM Base Schedules for the first fifteen-minute interval of each hour will be that provided in Section 29.34(f)(1)(B) and the final opportunity for the EIM Entity to revise hourly Real-Time EIM Base Schedules to allow for procurement of the Flexible Ramping Product for the remaining intervals of each hour will be that provided in Section 29.34(f)(1)(C).

(2) **Insufficient Flexible Ramping Capacity.** If, after the final opportunity for the EIM Entity to revise hourly Real-Time EIM Base Schedules or the CAISO equivalent as provided in Section 29.34(f)(1)(c), the CAISO determines-

(A) that an EIM Entity Balancing Authority Area or the CAISO Balancing Authority Area has insufficient upward Ramping capacity according to Section 29.34(m), the CAISO will take the actions described in Section 29.34(n)(1)(A) and (B) in the upward and into the EIM Entity BAA or CAISO BAA direction; and

(B) that an EIM Entity Balancing Authority Area or the CAISO Balancing Authority Area has insufficient downward Ramping capacity according to

Section 29.34(m), the CAISO will take the actions described in Section 29.34(n)(1)(A) and (B) in the downward and from the EIM Entity BAA or CAISO BAA direction.

(C) To facilitate procurement of the Flexible Ramping Product and determination of the Uncertainty Requirement in the manner provided by Section 44.2.4 within the existing RTUC processes and along the time intervals for RTUC runs set forth in Section 34.3.1 and further explained in the Business Practice Manual for Market Operations, and solely for the purpose of this subsection 29.34(n)(2), the final opportunity for the EIM Entity to revise hourly Real-Time EIM Base Schedules for the first fifteen-minute interval of each hour will be that provided in Section 29.34(f)(1)(B) and the final opportunity for the EIM Entity to revise hourly Real-Time EIM Base Schedules to allow for procurement of the Flexible Ramping Product for the remaining intervals of each hour will be that provided in Section 29.34(f)(1)(C).

**(3) Assistance Energy Transfers.**

**(A) In General.** A Balancing Authority Area in the EIM Area may obtain assistance Energy transfers into its Balancing Authority Area if its Scheduling Coordinator has elected to accept automatically incremental EIM Transfer imports and pay the associated EIM Assistance Energy Transfer Surcharge following the failure of the upward capacity test in Section 29.34(l) or the upward flexibility test in Section 29.34(m) in accordance with the timelines and procedures included in the Business Practice Manual for the Energy Imbalance Market. Consistent with the requirements in the Business Practice Manual, the CAISO will send a market notification prior to the CAISO Balancing Authority Area accepting assistance Energy transfers as provided in this section.

**(B) Assistance Energy Transfer Product.** If a participating Balancing

Authority Area in the EIM Area has opted-in to receive assistance Energy transfers consistent with the process requirements set forth in the Business Practice Manuals and the participating Balancing Authority Area fails the upward capacity test in Section 29.34(l) or the upward flexibility test in Section 29.34(m) then—

(i) the Balancing Authority Area will not be subject to the capacity test or flexibility test failure consequences for EIM Transfers in Section 29.34(n);

(ii) the Balancing Authority Area will pay the EIM Assistance Energy Transfer Surcharge according to Section 29.11(t).

(C) **Access to the Assistance Energy Transfer Product for pooled Balancing Authority Areas within the EDAM Area.** A Balancing Authority Area in the EDAM Area that is pooled together with other Balancing Authority Areas within the EDAM Area as part of the EDAM Upward Pool or EDAM Downward Pool pursuant to Section 33.31.1.4 may elect to receive assistance Energy transfers. If the Balancing Authority Areas in the EDAM Area that are pooled together for purposes of the EIM RSE do not uniformly elect to receive assistance Energy transfers, then the EDAM Upward Pool will be subdivided into two sub-pools: those Balancing Authority Areas in the EDAM Area that elect to receive assistance Energy transfers and those Balancing Authority Areas in the EDAM Area that do not elect to receive assistance Energy transfers. If the EDAM Upward Pool, or its sub-pool as applicable, elects to receive assistance Energy transfers and fails the upward flexibility test in Section 29.34(m) then:

(i) The EDAM Upward Pool, or its sub-pool as applicable, will not be subject to the failure consequences of Section 29.34(n)(1)(B) or Section 29.34(n)(2)(B); and

(ii) the EDAM Upward Pool, or sub-pool as applicable, will receive an assistance Energy transfer and will be assessed the EIM Assistance Energy Transfer Surcharge according to Section 29.11(t), with any revenue or Surcharges distributed to the EDAM Upward Pool to be allocated *pro-rata* to the members of the EDAM Upward Pool, or sub-pool as applicable, that received the assistance Energy transfers.

(o) **Transmission Constraint Relaxation.** If an EIM Entity Scheduling Coordinator's approved EIM Resource Plan does not have sufficient Bids to resolve Congestion, the CAISO will relax the relevant Transmission Constraints in the Market Clearing and the EIM Entity will become responsible for managing its congested Transmission Constraints through other means, and the CAISO will determine prices for Congestion consistent with Transmission Constraint relaxation parameters established in the Business Practice Manual for the Energy Imbalance Market until the Transmission Constraint is no longer binding in the Real-Time Market.

(p) **Operating Reserves.**

(1) **Schedules.**

(A) **EIM Entity Responsibility.** Each EIM Entity is responsible for its contingency reserves, or share of such contingency reserves under the terms of a reserve sharing group agreement, and it and the reserve sharing group are responsible for deploying operating reserves, including regulating reserves, in conformance with NERC and WECC requirements.

(B) **EIM Entity Scheduling Coordinator Responsibility.** The EIM Entity Scheduling Coordinator shall –

(i) include any Energy deployed from reserves in the hourly EIM Base Schedules, if time permits, in which case they will be settled in the Real-Time Market;

(ii) otherwise include the Energy deployed from reserves as EIM

Manual Dispatches, if time does not permit;

(iii) immediately inform the CAISO of events requiring Dispatch of operating reserves and resource EIM Base Schedule adjustments in response to contingencies;

(iv) if a resource's actual response differs from the resource EIM Base Schedule adjustment, provide a resource EIM Base Schedule update showing the actual resources dispatched during the event by no later than 1:00 a.m. seven days after the Operating Day in which the event occurred; and

(v) inform the CAISO of the amount of resource capacity that is reserved for contingency reserve responsibility by either ensuring that an Energy Bid for the resource is below the maximum operating limit of the resource or reducing the maximum operating limit of the resource.

(C) **CAISO Actions.**

(i) **Prior to Update.** Until the CAISO receives resource operating limit updates from an EIM Entity Scheduling Coordinator, the CAISO will continue to send Dispatch Instructions based upon pre-event operating limits.

(ii) **After Update.** After EIM Base Schedule updates are received and Dispatches in the Real-Time Market reflect the updated Self-Schedules and operating limits, the CAISO shall account for the Dispatches in the net scheduled Interchange values that it provides to EIM Entity Scheduling Coordinators.

(2) **Updates to Data for Reserve Sharing Event.**

(A) **Responsibilities.** Immediately following a reserve sharing event impacting the EIM Entity Balancing Authority Area-

(i) the EIM Entity must submit information regarding the assistance

provided, including impacts to Balancing Authority Area Load schedules for each participant involved in the reserve sharing event; and

(ii) the EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator must submit to the CAISO EIM Manual Dispatch instructions for resources in the EIM Entity Balancing Authority Area deployed in response to the reserve sharing event, pursuant to the reserve sharing group's criteria.

(B) **Offsets.** Until 1:00 a.m. seven days following the reserve sharing event impacting the EIM Entity Balancing Authority Area, the EIM Entity may offset the Load schedules created by the reserve sharing event by entering resource to Load schedules, reflecting generation resources actually utilized to assist in the event.

(q) **Variable Energy Resources and Hybrid Resources.** Provisions of Section 34 specifically applicable to Variable Energy Resources and Eligible Intermittent Resources appear in Sections 34.1.3, 34.1.6, 34.2.2, 34.5.1. 34.13.2. Provisions of Section 34 specifically applicable to Hybrid Resources appear in Section 34.1.6.3. The CAISO shall provide EIM Entities with access to review the forecast of all Variable Energy Resources in its Balancing Authority Area as outlined in the Business Practice Manual for the Energy Imbalance Market.

(r) **Use of EIM Available Balancing Capacity.**

(1) **In General.** The CAISO will use EIM Available Balancing Capacity identified in the EIM Resource Plan to address power balance constraint infeasibilities in the EIM Balancing Authority Area for which the EIM Available Balancing Capacity is designated by the responsible EIM Entity Scheduling Coordinator, while simultaneously participating in Congestion Management.

(2) **EIM Resource Sufficiency Evaluations.** The CAISO will not apply the EIM Available Balancing Capacity towards its evaluation of the resource sufficiency

tests specified in Section 29.34(k), (l), and (m).

(3) **Real-Time Market Scheduling Run.** In each interval of the Real-Time Market, the CAISO will use the EIM Available Balancing Capacity in the run of the market optimization used to establish scheduling priorities by-

(A) adding a penalty price factor to EIM Available Balancing Capacity Energy Bid prices so that the EIM Available Balancing Capacity is dispatched to address power balance violations, after Effective Economic Bids submitted for EIM Participating Resources in the respective EIM Balancing Authority Area not associated with the EIM Available Balancing Capacity have cleared, while respecting the economic merit order of the EIM Available Balancing Capacity Energy Bid prices;

(B) enforce a constraint that prevents the release of EIM Upward Available Balancing Capacity in excess of the difference between the EIM Entity's demand and the supply of Effective Economic Bids cleared within the applicable EIM Balancing Authority Area, minus the import transfer into that EIM Balancing Authority Area; and

(C) enforce a constraint that prevents the release of EIM Downward Available Balancing Capacity in excess of the difference between the supply of Effective Economic Bids cleared within the applicable EIM Balancing Authority Area and the EIM Entity's demand, minus the export transfer out of that EIM Balancing Authority Area.

(4) **Real-Time Market Pricing Run.** For each interval of the Real-Time Market, in the run of the market optimization used to set binding schedules and prices, the CAISO will –

(A) use the EIM Available Balancing Capacity released in the run of the market optimization to establish scheduling priorities based on the Energy Bid Curves for EIM Participating Resources and non-participating

resources created pursuant to Sections 29.30(c) and (d), respectively;

(B) change the Demand Forecast for the EIM Balancing Authority Area by a small tolerance to allow for price determination;

(C) clear the Real-Time Market and establish prices based on the pricing parameters in Sections 27.4.3.2 and 27.4.3.4, if the amount of EIM Available Balancing Capacity released in the scheduling run is not sufficient to clear the potential infeasibility identified in the scheduling run.

(s) **EIM Auto-Match.**

(1) **Designation.** An EIM Entity may submit a designation to the Master File of EIM non-participating resources, up to the number specified in the Business Practice Manual, in its Balancing Authority Area to automatically match import/export schedule changes outside of the Market Clearing of the Real-Time Market because of changes to E-Tags at one or more designated EIM Interties or Scheduling Points, up to the number designated in the Business Practice Manual for the Energy Imbalance Market.

(2) **Duration of Designation.** Any designation under paragraph (1) of this subsection shall remain in effect until the EIM Entity notifies the CAISO that it is terminating the designation by a submission to the Master File.

(3) **CAISO Actions in Response to Intertie Schedule Change.** If an EIM Entity designates a non-participating resource under paragraph (1) of this subsection, the CAISO, upon identification of an associated EIM Intertie or Scheduling Point schedule change outside of the Market Clearing of the Real-Time Market, shall –

(A) reflect a matching schedule change to the EIM non-participating resource in the Real-Time Market using the EIM Auto-Match feature; and

(B) omit the EIM Intertie or Scheduling Point schedule change from the historical intertie schedule over/under-scheduling histogram for the

determination of additional capacity test requirements for relevant EIM Balancing Authority Area(s) under Sections 29.34(l)(4)(B) and 29.34(m)(6)(ii) that are registered for EIM Auto-Match in accordance with the procedures specified in the Business Practice Manual for the Energy Imbalance Market.

**29.35 Market Validation and Price Correction**

Market validation and price correction for the Energy Imbalance Market shall be governed by Section 35, except that, for a period not to exceed 90 days after an EIM Entity Implementation Date, the time allowed for the CAISO's correction of Real-Time Market prices shall be 10 Business Days.

**29.36 [Not Used]**

**29.37 Rules of Conduct**

All EIM Market Participants shall be subject to the provisions of Section 37 except for Section 37.2.

**29.38 Market Monitoring**

The CAISO Department of Market Monitoring shall provide market monitoring services for the participation of EIM Market Participants in the Real-Time Market, including –

(a) monitoring markets administered by the CAISO for actual or potential ineffective market rules, market abuses, market power, violations of FERC or CAISO Market rules prohibiting provision of false information, or market manipulation;

(b) coordinating with CAISO business units that review and monitor the performance and quality of the CAISO Markets;

(c) providing recommendations about potential market design flaws or ineffective market rules to the CAISO and FERC; and

(d) referring a matter to FERC if the Department of Market Monitoring determines there is sufficient credible evidence that a violation of FERC or CAISO Market rules has occurred.

**29.39 EIM Market Power Mitigation.**

(a) **EIM Market Power Mitigation Procedure.** The CAISO shall apply the Real-Time Local Market Power Mitigation procedure in Section 39.7 to the Energy Imbalance Market, including EIM Transfer constraints into an EIM Entity Balancing Authority Area on an EIM

Internal Intertie, except as provided in Section 29.39. In relation to power balance constraints within the EDAM Area and EIM Area, the Marginal Energy Cost in the CAISO Balancing Authority Area will reflect a competitive marginal energy price. For this purpose, when an EDAM Balancing Authority Area's or EIM Balancing Authority Area's Marginal Energy Cost is greater than CAISO Balancing Authority Area's Marginal Energy Cost, then Real-Time Local Market Power Mitigation process will apply the competitive path assessment. If non-competitive conditions exist, the Real-Time Local Market Power Mitigation process will treat the differential between the Marginal Energy Cost in the CAISO Balancing Authority Area and the Marginal Energy Cost in the EDAM Balancing Authority Area or EIM Balancing Authority Area similar to the non-competitive component of the Marginal Cost of Congestion in CAISO's Local Market Power Mitigation process and will subject resources' Bids to mitigation procedures.

(b) **Competitive Path Assessment.** The CAISO shall conduct the competitive path assessment to determine for each EDAM Balancing Authority Area and EIM Entity Balancing Authority Area whether a path is competitive or non-competitive, consistent with Section 39.7.2, except that –

(1) EDAM Resource Scheduling Coordinators and EIM Participating Resource Scheduling Coordinators shall submit information required by the CAISO to perform the competitive path assessment;

(2) the competitive path assessment shall not exclude EDAM Resources or EIM Participating Resources from the test used to determine the competitiveness of Transmission Constraints on the basis that they may be net buyers of Energy in the Real-Time Market; and

(3) the CAISO may establish different Reference Buses for each Balancing Authority Area, which need not be within the Balancing Authority Area, for calculating the LMP decomposition which is used to trigger Bid mitigation, based on the topology of each Balancing Authority Area and consideration of the bus at which the Marginal Cost of Congestion component of Locational Marginal Prices is least

influenced by market power.

(c) **Locational Marginal Price Decomposition.** The CAISO shall perform the Locational Marginal Price decomposition within each EDAM Entity Balancing Authority Area and EIM Entity Balancing Authority Area using the results of the competitive path assessment and the Congestion pricing results of the pre-market run to determine which resources may have local market power due to Congestion on a non-competitive Transmission Constraint, consistent with Section 34.2.3 and 39.7.

(d) **Default Energy Bids.** The CAISO shall use the methods and standards set forth in Section 39.7 to determine Default Energy Bids for EDAM Resources and EIM Participating Resources, except that the CAISO will use the Market Services Charge and system operations charges described in Section 33.11.6 reflected in the EDAM Administrative Charge or Section 11.22.2 reflected in the EIM Administrative Charge, as applicable.

**29.40 [Not Used]**

**29.41 [Not Used]**

**29.42 [Not Used]**

**29.43 [Not Used]**

**29.44 Flexible Ramping Product**

The CAISO will procure flexible ramping product for the Energy Imbalance Market as set forth in Section 44, except that the CAISO will consider the EIM Base Schedules of non-participating resources as Self-Schedules for the calculation of Flexible Ramping Product requirements.

## 30. Bid and Self-Schedule Submission for all CAISO Markets

### 30.1 Bids, Including Self-Schedules

Scheduling Coordinators shall submit Bids to participate in the CAISO Markets, as well as any Self-Schedules, ETC Self-Schedules, TOR Self-Schedules, or Self-Provided Ancillary Services. Bidding rules for each type of resource are contained in this Section 30 and additional specifications regarding bidding practices are contained in the Business Practice Manuals posted on the CAISO Website. Bids will consist of various components described in this Section 30 through which the Scheduling Coordinator provides information regarding the parameters and conditions pursuant to which the Bid may be optimized by the CAISO Markets.

#### 30.1.1 Day-Ahead Market

Bids submitted in the DAM apply to the twenty-four (24) hours of the next Trading Day (23 or 25 hours on the Daylight Savings transition days) and are used in both the IFM and RUC. Bids must be received by Market Close for the Day-Ahead Market. The Bids shall include information for each of the twenty-four (24) Settlement Periods of the Trading Day. Failure to provide the information within the stated time frame shall result in the Bids being declared invalid by the CAISO. Scheduling Coordinators may submit Bids for the DAM as early as seven (7) days ahead of the targeted Trading Day.

#### 30.1.2 Real-Time Market

Economic Bids and Self-Schedules submitted in the RTM apply to a single Trading Hour and are used for all market processes of the RTM. The CAISO will require Scheduling Coordinators to honor their Day-Ahead Ancillary Services Awards when submitting Ancillary Services Bids in the RTM. Bids for Regulation Up, Regulation Down, Spinning Reserve, and Non-Spinning Reserve service for each Settlement Period must be received at least seventy-five minutes prior to the commencement of that Settlement Period. The Bids shall include information for only the relevant Settlement Period. Failure to provide the information within the stated timeframe shall result in the Bids being declared invalid and rejected by the CAISO.

### 30.2 Bid Types

There are four types of Bids: Energy Bids (which include Virtual Bids), Ancillary Services Bids, Imbalance Reserves Bids, and RUC Availability Bids. Energy Bids that are not Virtual Bids, and Ancillary Services Bids can be submitted as either an Economic Bid or a Self-Schedule. All other bid types must be submitted as Economic Bids. Economic Bids specify prices for MW amounts of capacity or MWh amounts of Energy. Self-Schedules do not have any prices associated for MW or MWh. Energy Bids, including both Economic Bids and Self-Schedules (where Self-Schedules are otherwise permitted), may be either Supply Bids, Demand Bids, Virtual Supply Bids, or Virtual Demand Bids. Ancillary Services Bids, RUC Availability Bids, and Imbalance Reserves Bids are Supply Bids only. Ancillary Services may be self-provided by providing a Submission to Self-Provide an Ancillary Service and having that submission accepted by the CAISO. Rules for submitting the four types of Bids vary by the type of resource to which the Bid applies as described in Section 30.5 and as further required in each CAISO Markets process as specified in Sections 31, 33, and 34.

**30.3 [Not Used]**

**30.4 Default Start-Up Bids, Default Minimum Load Bids, and Default Transition Bids**

**30.4.1 Generally**

The CAISO will calculate Default Commitment Cost Bids using the Proxy Cost methodology for all resources, except for:

(a) Non-Resource-Specific Resources and Non-Generating Resources; or

(b) a resource that is qualified by the CAISO as a Use-Limited Resource and the resource has fewer than twelve (12) consecutive months of fifteen-minute LMPs for Energy at the resource's PNode or Aggregated PNode, in which case the resource's Default Commitment Cost Bids will be determined as Registered Costs under the Registered Cost methodology pursuant to Section 30.4.7.

**30.4.2 Transition of Use-Limited Resources to Proxy Costs**

Scheduling Coordinators on behalf of Use-Limited Resources with fewer than 12 months of data can elect to use the Registered Cost methodology and remain on that methodology for a two-month period once 12 months of pricing data is collected, while the Scheduling Coordinator and the CAISO are going through the process of determining what Opportunity Costs, if any, apply to the Use-Limited Resource. Once this

process concludes, all such Use-Limited Resources must be subject to the Proxy Cost methodology. For Use-Limited Resources eligible for the Registered Cost methodology, Scheduling Coordinators may elect on a thirty (30) day basis to use either the Proxy Cost methodology or the Registered Cost methodology for calculating their Default Start-Up Bids and Default Minimum Load Bids to be used for those resources in the CAISO Markets Processes, as well as for Default Transition Bids in the case of Multi-Stage Generating Resources. The elections are independent as to Default Start-Up Bids and Default Minimum Load Bids; that is, a Scheduling Coordinator for such a Use-Limited Resource may elect to use either the Proxy Cost methodology or the Registered Cost methodology for Default Start-Up Bids and may make a different election for Default Minimum Load Bids. However, in the case of Multi-Stage Generating Resources, the Scheduling Coordinator must make the same election (Proxy Cost methodology or Registered Cost methodology) for Default Transition Bids as it makes for Default Start-Up Bids. If a Scheduling Coordinator has not made an election, the CAISO will assume the Proxy Cost methodology as the default.

### 30.4.3 Scheduling Coordinator Reference Level Change Requests

The CAISO will verify Reference Level Change Requests for changes to Default Start-Up Bids and Default Minimum Load Bids as described in Section 30.11.

### 30.4.4 Default Commitment Cost Bids

#### 30.4.4.1 Using Proxy Cost Methodology

For resources under the Proxy Cost methodology, the CAISO will calculate a resource's Default Commitment Cost Bids as the applicable Proxy Cost multiplied by the Commitment Cost Multiplier.

#### 30.4.4.2 Use-Limited Resources

For Use-Limited Resources using the Proxy Cost methodology, the CAISO will calculate a resource's Default Commitment Cost Bids as the applicable Proxy Cost multiplied by Commitment Cost Multiplier plus the Start-Up Opportunity Cost, Transition Opportunity Cost, or Minimum Load Opportunity Cost as applicable.

#### 30.4.4.3 Registered Costs

For Use-Limited Resources using the Registered Cost methodology, the CAISO will use the Registered Costs as registered in the Master File as the Default Commitment Cost Bids.

#### 30.4.4.4 Insufficient Information

In the event that the Scheduling Coordinator for a resource (other than a Multi-Stage Generating Resource or a Multi-Stage Generating Resource in its lowest configuration in which it can be started) does not provide sufficient data for the CAISO to determine the resource's Default Commitment Cost Bids or one or more components of the resource's Default Commitment Cost Bids, the CAISO will assume that the resource's Default Commitment Cost Bids, or the indeterminable component(s) of the resource's Default Commitment Cost Bids, are zero. In the event that the Scheduling Coordinator for a Multi-Stage Generating Resource does not provide such data for an MSG Configuration beyond its lowest configuration in which it can be started, Section 30.4.5.3 applies.

#### 30.4.4.5 Resources with Greenhouse Gas Compliance Obligations

For each resource registered with the California Air Resources Board or the Washington Department of Ecology as having a greenhouse gas compliance obligation, the information provided to the CAISO by the Scheduling Coordinator must be consistent with the information submitted to the California Air Resources Board or the Washington Department of Ecology.

#### 30.4.4.6 Maximum Default Minimum Load Bid

In no case shall a Default Minimum Load Bid exceed the Minimum Load Cost Hard Cap.

### 30.4.5 Proxy Cost Methodology

The CAISO will calculate Proxy Costs as described in this Section 30.4.5.

#### 30.4.5.1 Natural Gas-Fired Resources

For each natural gas-fired resource, the CAISO will calculate a resource's Proxy Costs based on the resource's actual unit-specific performance parameters and applicable gas prices as described below.

(a) **Fuel Input.** The CAISO will calculate Proxy Costs using formulaic natural gas cost values adjusted for fuel-cost variation, based on the natural gas price calculated pursuant to Section 39.7.1.1.1.3, and consistent with the requirements specified below.

(b) **Proxy Start-Up Cost.** Proxy Start-Up Costs will also include:

(i) a Variable Start-Up Operations and Maintenance Adder as provided in Section 30.4.5.4;

(ii) a greenhouse gas cost adder for each resource located within the CAISO

Balancing Authority Area or an EIM Entity Balancing Authority Area within California or Washington, and registered with the California Air Resources Board or the Washington Department of Ecology as having a greenhouse gas compliance obligation, which is calculated for each Start-Up as the product of the resource's fuel requirement per Start-Up, the greenhouse gas emissions rate authorized by the California Air Resources Board or the Washington Department of Ecology, and the applicable Greenhouse Gas Allowance Price;

(iii) the rates for the Market Services Charge and System Operations Charge multiplied by the shortest Start-Up Time listed for the resource in the Master File, multiplied by the PMin of the resource as registered in the Master File, multiplied by 0.5; and

(iv) the cost of auxiliary power calculated using the unit-specific MWh quantity of auxiliary power used for Start-Up multiplied by a resource-specific electricity price.

(c) **Proxy Cost Minimum Load Costs.** Proxy Cost Minimum Load Costs will also include:

(i) a Variable Energy Operations and Maintenance Adder as provided in Section 30.4.5.4;

(ii) a Variable Minimum Load Operations and Maintenance Adders as provided in Section 30.4.5.4.

(iii) a greenhouse gas cost adder for each resource located within the CAISO Balancing Authority Area or an EIM Entity Balancing Authority Area within California or Washington, and registered with the California Air Resources Board or the Washington Department of Ecology as having a greenhouse gas compliance obligation, which is calculated for each run-hour as the product of the resource's fuel requirement at Minimum Load as registered in the Master File, the greenhouse gas emissions rate authorized by the California Air Resources Board or the Washington Department of Ecology, and the applicable Greenhouse Gas Allowance Price;

(iv) the rates for the Market Services Charge and System Operations Charge multiplied by the PMin of the resource as registered in the Master File; and

(iv) the Bid Segment Fee.

(d) **Proxy Transition Costs.** For each Multi-Stage Generating Resource under the Proxy Cost methodology, the CAISO will calculate the Proxy Transition Costs utilized for each feasible transition from a given MSG Configuration to a higher MSG Configuration based on the difference between the Proxy Start-Up Costs for the higher MSG Configuration, and the Proxy Start-Up Costs for the lower MSG Configuration, as those costs are determined in accordance with the Proxy Start-Up Cost calculation methodology set forth in Section 30.4.5. If the result of this calculation is negative for any transition between two MSG Configurations, then the associated Proxy Transition Cost shall be zero.

**30.4.5.2 Non-Natural Gas-Fired Resources**

For each non-natural gas-fired resource, the CAISO shall calculate the Proxy Start-Up Cost and Proxy Minimum Load Cost values under the Proxy Cost methodology as specified below.

(a) **Fuel Input.** The Scheduling Coordinator for the resource will provide the fuel or fuel-equivalent input costs, which the CAISO will maintain in the Master File, pursuant to Section 39.7.1.1.1.2.

(b) **Proxy Start-Up Costs.** Proxy Start-Up Costs will also include, if applicable:

(i) a Variable Start-Up Operations and Maintenance Adder as provided in Section 30.4.5.4;

(ii) greenhouse gas allowance costs for each resource located within the CAISO Balancing Authority Area or an EIM Entity Balancing Authority Area within California or Washington, and registered with the California Air Resources Board or the Washington Department of Ecology as having a greenhouse gas compliance obligation, as provided to the CAISO by the Scheduling Coordinator;

(iii) the rates for the Market Services Charge and System Operations Charge multiplied by the shortest Start-Up Time listed for the resource in the Master File, multiplied by the PMin of the resource as registered in the Master File, multiplied

by 0.5.

(c) **Proxy Minimum Load Costs.** Proxy Minimum Load Costs will also include, if applicable:

(i) A Variable Energy Operation and Maintenance Adder as provided in Section 30.4.5.4 multiplied by the PMin of the resource or MSG Configuration of the resource as registered in the Master File;

(ii) a Variable Minimum Load Operations and Maintenance Adder as provided in Section 30.4.5.4;

(iii) greenhouse gas allowance costs for each resource located within the CAISO Balancing Authority Area or an EIM Entity Balancing Authority Area within California or Washington, and registered with the California Air Resources Board or the Washington Department of Ecology as having a greenhouse gas compliance obligation, as provided to the CAISO by the Scheduling Coordinator;

(iv) the rates for the Market Services Charge and System Operations Charge multiplied by the PMin of the resource as registered in the Master File; and

(v) the Bid Segment Fee.

(d) **Proxy Transition Costs.** For each Multi-Stage Generating Resource under the Proxy Cost methodology, the CAISO will calculate the Proxy Transition Costs utilized for each feasible transition from a given MSG Configuration to a higher MSG Configuration based on the difference between the Proxy Start-Up Costs for the higher MSG Configuration, and the Proxy Start-Up Costs for the lower MSG Configuration, as those costs are determined in accordance with the Proxy Start-Up Cost calculation methodology set forth in Section 30.4.5. If the result of this calculation is negative for any transition between two MSG Configurations, then the associated Proxy Transition Cost shall be zero.

**30.4.5.3 Multi-Stage Generating Resources**

**30.4.5.3.1 Application of Proxy Costs**

For Multi-Stage Generating Resources under the Proxy Cost methodology, the CAISO will apply the Proxy Cost methodology to all the MSG Configurations. The Proxy Costs for Multi-Stage Generating Resources will be calculated for each specific MSG Configuration, including for each MSG Configuration

that cannot be directly started.

#### 30.4.5.3.2 Insufficient Information

Notwithstanding the rules set forth in Sections 30.4.5.1 and 30.4.5.2, to the extent that a Scheduling Coordinator for a Multi-Stage Generating Resource, other than in its lowest configuration in which the Multi-Stage Generating Resource can be started, does not provide sufficient data for the CAISO to determine a component of the Proxy Start-Up Costs or Proxy Minimum Load Costs for a particular MSG Configuration, the CAISO will, if feasible, use the value for that component associated with the next-lowest MSG Configuration.

### 30.4.5.4 Variable Operations and Maintenance Adders

#### 30.4.5.4.1 Generally

Each resource that satisfies the applicable fuel source and technology requirements set forth in Section 30.4.5.4.2 will receive the default Variable Operations and Maintenance Adders specified thereunder. The Scheduling Coordinator for any resource may choose to negotiate with the CAISO pursuant to Section 30.4.5.4.3 for negotiated Variable Operations and Maintenance Adders that supersede or replace any default Variable Operations and Maintenance Adders the resource may receive. Variable Operations and Maintenance Adders are subject to renegotiation pursuant to Section 30.4.5.4.4 and to informational filings pursuant to Section 30.4.5.4.5.

#### 30.4.5.4.2 Default Variable Operations and Maintenance Adders

The default Variable Start-Up Operations and Maintenance Adder for a frame combustion turbine resource will equal $61.89 per start per MW multiplied by the PMax of the resource or MSG Configuration of the resource.

The default Variable Minimum Load Operations and Maintenance Adder will vary by fuel source or technology as follows: (1) for a natural gas-fired combined cycle resource, the adder will equal $2.07 per run-hour per MW multiplied by the PMax of the resource or MSG Configuration of the resource; (2) for an aeroderivative combustion turbine resource, the adder will equal $5.20 per run-hour per MW multiplied by the PMax of the resource or MSG Configuration of the resource; and (3) for a hydroelectric resource, the adder will equal $0.77 per run-hour per MW multiplied by the PMax of the resource or MSG Configuration of the resource.

The default Variable Energy Operations and Maintenance Adder will vary by fuel source or technology as follows: (1) nuclear $1.28/MWh; (2) coal $3.19/MWh; (3) wind $0.33/MWh; (4) natural gas-fired combined cycle units $0.70/MWh; (5) steam units $0.39/MWh; (6) geothermal $1.38/MWh; (7) landfill gas $1.44/MWh; (8) frame combustion turbines $1.15/MWh; (9) aeroderivative combustion turbines $2.55/MWh; (10) reciprocating internal combustion engines $1.31/MWh; and (11) biomass $1.96/MWh.

**30.4.5.4.3 Negotiated Variable Operations and Maintenance Adders**

**30.4.5.4.3.1 Principles**

The CAISO will negotiate resource-specific and MSG Configuration-specific Variable Operations and Maintenance Adders with a Scheduling Coordinator based on the following principles:

(a) Any operations costs proposed for inclusion in the Variable Operations and Maintenance Adders must be variable operations costs, meaning the costs of consumables and other costs that vary directly with electrical production (i.e., Start-Up/Shut-Down, run-hours, or electricity output) of a resource. Variable operations costs exclude maintenance costs, auxiliary power costs, Greenhouse Gas Allowance Prices, fuel costs, grid management charges, Opportunity Costs, and other excluded costs set forth in the Business Practice Manual.

(b) Any maintenance costs proposed for inclusion in the Variable Operations and Maintenance Adders must be variable maintenance costs, meaning the costs associated with the repair, overhaul, replacement, or inspection of a resource that meet the following conditions:

(i) The costs must vary with the electrical production (i.e., Start-Up/Shut-Down, run-hours, or electricity output) of the resource.

(ii) The costs should reflect future maintenance costs that are expected to be incurred within the service life of a major component of plant or equipment.

(iii) The costs should be consistent with Good Utility Practice.

(iv) The costs should not effect a substantial betterment of the resource.

(v) If the item is a replacement, it cannot be a replacement of an existing major component of plant or equipment.

#### 30.4.5.4.3.2 CAISO Process

Scheduling Coordinators may submit updated resource-specific and MSG Configuration-specific information for purposes of seeking a change to any negotiated Variable Operations and Maintenance Adder, no sooner than thirty (30) Business Days after a negotiated Variable Operations and Maintenance Adder has been determined. The CAISO will evaluate the information provided by Scheduling Coordinators, and may require Scheduling Coordinators to provide additional information, to enable the CAISO to determine reasonable negotiated Variable Operations and Maintenance Adders or to conduct audits of negotiated Variable Operations and Maintenance Adders. Within fifteen (15) Business Days of receipt of the information or any requested additional information, the CAISO will notify the Scheduling Coordinator in writing whether it has sufficient and accurate information to determine reasonable negotiated Variable Operations and Maintenance Adders to be included in the calculations for the Proxy Start-Up Cost, Proxy Minimum Load Cost, and/or Default Energy Bid under the Variable Cost Option. Within ten (10) Business Days after providing written notification to the Scheduling Coordinator that the information is sufficient and accurate, the CAISO will determine the reasonable negotiated Variable Operations and Maintenance Adders to be included in the Proxy Start-Up Costs, Proxy Minimum Load Costs, and/or Default Energy Bids under the Variable Cost Option, and will so inform the Scheduling Coordinator in writing.

In the event of a dispute regarding the sufficiency or accuracy of the information provided by the Scheduling Coordinator, the CAISO and the Scheduling Coordinator will enter a period of good-faith negotiations that terminates sixty (60) days after the date the dispute began. If the CAISO and the Scheduling Coordinator resolve the dispute during the 60-day negotiation period, within ten (10) Business Days of such agreement, the CAISO will determine the reasonable negotiated Variable Operations and Maintenance Adders and will provide the adders to the Scheduling Coordinator in writing. If the CAISO and the Scheduling Coordinator fail to agree upon the sufficiency or accuracy of the information during the 60-day negotiation period, the Scheduling Coordinator has the right to petition FERC to resolve the dispute as to the sufficiency or accuracy of its information.

In the event of a dispute regarding the CAISO's determination of Variable Operations and Maintenance Adders, the CAISO and the Scheduling Coordinator will enter a period of good-faith negotiations that

terminates sixty (60) days after the date the dispute began. If the CAISO and the Scheduling Coordinator resolve the dispute during the 60-day negotiation period, the agreed-upon negotiated Variable Operations and Maintenance Adders will be effective as of the third Business Day following the resolution date.

#### 30.4.5.4.3.3 FERC Process

If the CAISO and the Scheduling Coordinator fail to agree on the Variable Operations and Maintenance Adders for the Proxy Start-Up Costs, Proxy Minimum Load Costs, and/or Default Energy Bids under the Variable Cost Option following the 60-day negotiation period, the Scheduling Coordinator has the right to file proposed values and supporting information for the adders with FERC pursuant to Section 205 of the Federal Power Act.

#### 30.4.5.4.3.4 Interim Variable Operations and Maintenance Adders Pending Dispute Resolution

In the event of a dispute regarding the reasonableness of the Variable Operations and Maintenance Adders determined by the CAISO, but not a dispute regarding the sufficiency or accuracy of the information provided by the Scheduling Coordinator, the CAISO will determine reasonable interim Variable Operations and Maintenance Adders until the adders are determined by agreement between the CAISO and the Scheduling Coordinator or by FERC. Any subsequent agreement or FERC order determining the Variable Operations and Maintenance Adders will be reflected in an adjustment to the interim Variable Operations and Maintenance Adders in the next applicable Settlement Statement.

#### 30.4.5.4.4 Renegotiation of Variable Operations and Maintenance Adders

The CAISO may require the renegotiation of any negotiated or interim Variable Operations and Maintenance Adders established pursuant to Section 30.4.5.4.3 that have become outdated, are possibly erroneous, or for which the Scheduling Coordinator has changed. In the renegotiation process, the CAISO may review and propose modifications to such Variable Operations and Maintenance Adders, and may require the Scheduling Coordinator to provide updated information to support their continuation.

#### 30.4.5.4.5 Informational Filings

The CAISO shall make an informational filing with FERC of any default Variable Operations and Maintenance Adders established pursuant to Section 30.4.5.4.2 and any negotiated or interim Variable Operations and Maintenance Adders established pursuant to Section 30.4.5.4.3, no later than seven (7) days after the end of the month for which the Variable Operations and Maintenance Adders were

established.

### 30.4.6 Use Limited Resources

#### 30.4.6.1 Registration and Validation Process

A Scheduling Coordinator seeking to obtain Use-Limited Resource status for resource(s) will follow the registration and validation process set forth in this CAISO Tariff and the Business Practice Manual. The registration and validation process requires each Scheduling Coordinator to demonstrate on an annual basis that the resource has one or more limits that meet the Use-Limited Resource criteria as set forth in Section 30.4.6.1.1 and the Business Practice Manual, and allows each Scheduling Coordinator to seek to recover Opportunity Costs for Use-Limited Resources by making the demonstration set forth in Section 30.4.6.1.2.

##### 30.4.6.1.1 Use-Limited Resource Criteria

In order for a resource to be considered a Use-Limited Resource, a Scheduling Coordinator must provide sufficient documentation demonstrating that the resource has one or more limits that meet all three of the following criteria:

(1) The resource has one or more limitations affecting its number of starts, its number of run-hours, or its Energy output due to (a) design considerations, (b) environmental restrictions, or (c) qualifying contractual limitations;

(2) The CAISO Market Process used to dispatch the resource cannot recognize the resource's limitation(s); and

(3) The resource's ability to select hours of operation is not dependent on an energy source outside of the resource's control being available during such hours but the resource's usage needs to be rationed.

Design considerations that satisfy the requirements of this Section are those resulting from physical equipment limitations. A non-exhaustive list of such physical equipment limitations includes restrictions documented in original equipment manufacturer recommendations or bulletins, or limiting equipment such as storage capability for hydroelectric generating resources. Other design considerations that satisfy the requirements of this Section are those resulting from performance criteria for Demand Response Resources established pursuant to programs or contracts approved by Local Regulatory Authorities.

Environmental restrictions that satisfy the requirements of this Section are those imposed by regulatory bodies, legislation, or courts. A non-exhaustive list of such environmental restrictions includes limits on emissions, water use restrictions, run-hour limitations in operating permits or other environmental limits that directly or indirectly limit starts, run hours, or MWh limits, but excludes restrictions with soft caps that allow the resource to increase production above the soft caps through the purchase of additional compliance instruments. Qualifying contractual limitations that satisfy the requirements of this Section are those contained in long-term contracts that: (i) were reviewed and approved by a Local Regulatory Authority on or before January 1, 2015, or were pending approval by a Local Regulatory Authority on or before January 1, 2015 and were later approved; and (ii) were evaluated by the Local Regulatory Authority for the overall cost-benefit of those contracts taking into consideration the overall benefits and burdens, including the limitations on such resources' numbers of starts, numbers of run-hours, or Energy output. Contracts limits that provide for higher payments when start-up, run-hour, or Energy output thresholds are exceeded are not qualifying contractual limitations. Effective April 1, 2022, no contractual limitations will constitute qualifying contractual limitations that satisfy the requirements of this Section. Pursuant to a process set forth in the Business Practice Manual, the CAISO will review the limits and the supporting documentation provided by the Scheduling Coordinator as well as any translation of indirect limits to determine whether the Scheduling Coordinator has made the required showing under this Section. Any dispute regarding the CAISO's determination will be subject to the generally applicable CAISO ADR Procedures set forth in Section 13, which apply except where a CAISO Tariff provision expressly provides for a different means of resolving disputes.

The following types of resources are not eligible to register as Use-Limited Resources: Reliability Demand Response Resources, Regulatory Must-Take Generation, where 100% of the capacity is regulatory must-take, Combined Heat and Power Resources where 100% of the capacity is dedicated to a host industrial process, and Variable Energy Resources.

**30.4.6.1.2 Establishing Opportunity Cost Adders**

A Scheduling Coordinator for a Use-Limited Resource that elects the Proxy Cost methodology may seek to establish Opportunity Cost adders for any limitation(s) that meet all three (3) of the following criteria:

(1) Satisfy the requirements of Section 30.4.6.1.1;

(2) Apply for period(s) longer than the time horizon considered in the applicable Day-Ahead Market process; and

(3) Can be reflected in a monthly, annual, and/or rolling twelve (12) month period.

The CAISO will review the documentation provided by the Scheduling Coordinator and determine whether the CAISO can calculate an Opportunity Cost pursuant to the methodology set forth in Section 30.4.6.2 using the Opportunity Cost calculator, or whether the Opportunity Cost for the limitation must instead be established pursuant to the negotiation process set forth in Section 30.4.6.3. Resources with limits that can be modelled using the Opportunity Cost calculator, are not eligible for a negotiated Opportunity Cost. Any Opportunity Cost formula rate resulting from either through the calculated or negotiated process, will remain in place unless and until the formula rate is modified or terminated by the CAISO. Opportunity Costs determined pursuant to a formula rate will remain in place until updated pursuant to Section 30.4.6.2.1 or Section 30.4.6.3 to reflect any changes in input values to the formula rate. Any Opportunity Cost bid adder will not be available until the first day of the month following the effective date of this tariff section.

A Scheduling Coordinator may submit documentation, either to establish a new limitation or to modify an existing limitation, in which case the Scheduling Coordinator can request reconsideration that may result in a new formula rate. In addition, Scheduling Coordinators must demonstrate on an annual basis that the resource has one or more limits that meet the Use-Limited Resource criteria as required pursuant to Section 30.4.6.1. In accordance with Section 39.7.1.3.2.2, the CAISO will make informational filings with FERC of any new, modified, or terminated Opportunity Cost formula rate developed pursuant to Section 30.4.6.2 or negotiated pursuant to Section 30.4.6.3.

A Use-Limited Resource to the extent it has a limitation that satisfies the requirements of Section 30.4.6.1 but applies for a period less than or equal to the time horizon considered in the Day-Ahead Market, is not eligible for an Opportunity Cost for any limitation.

**30.4.6.2 Calculation of Opportunity Cost Adders**

**30.4.6.2.1 Calculation Schedule**

The CAISO will calculate, and will update the most recent calculations of, Start-Up Opportunity Costs for each validated limitation on a Use-Limited Resource's number of starts, Minimum Load Opportunity Costs

for each validated limitation on a Use-Limited Resource's number of run-hours, and Variable Energy Opportunity Costs for each validated limitation on a Use-Limited Resource's Energy output for which the Scheduling Coordinator has made the required showing under Section 30.4.6.1.2. Such calculations or updated calculations will actually be used to set the adder for each validated limitation that can be reflected in a monthly or a rolling twelve (12) month period and will be advisory for each validated limitation that can be reflected in an annual period. The CAISO plans to perform the calculations and updated calculations once a month. It is possible that circumstances may prevent the CAISO from performing the calculations on a monthly basis, in which case the CAISO will prioritize the workload based on Opportunity Costs most likely to need updating. The CAISO will provide the results of the calculations or updated calculations for a Use-Limited Resource to its Scheduling Coordinator.

In the event that the CAISO is unable to perform such calculations or updated calculations for all Use-Limited Resources, the CAISO will give priority to performing such calculations or updated calculations for those Use-Limited Resources that are currently on pace to reach their maximum allowed numbers of starts, maximum allowed numbers of run-hours, or maximum allowed Energy output more quickly than the most recent calculations of Opportunity Costs indicated. To the extent that the CAISO is unable to perform such calculations or updated calculations for a Use-Limited Resource, the CAISO will utilize the most recently calculated or updated Opportunity Costs that have been set or are advisory for the Use-Limited Resource.

#### 30.4.6.2.2 Methodology for Opportunity Cost Calculator

For the Opportunity Cost calculator developed by the CAISO, each calculation of Opportunity Costs will equal the estimated profits foregone if the Use-Limited Resource had one fewer unit of starts, run-hours, or Energy output, whichever is applicable, in the future time period of the validated limitation. With regard to each validated limitation of the Use-Limited Resource, the calculation will take into account a margin set forth in the Business Practice Manual. The calculation will also take into account the effect of any validated limitation on a Use-Limited Resource's number of starts, number of run-hours, or Energy output in the monthly and annual and/or rolling twelve month periods. For MSG Transitions, the Opportunity Cost for each transition will be derivative of the number of Start-Ups required for the MSG Resource to achieve a specific MSG Configuration.

The CAISO will calculate the estimated profits for each validated limitation over the future time period of the limitation based on the following estimated inputs: (a) the forecasted hourly average of fifteen-minute LMPs for Energy at the Use-Limited Resource's PNode or Aggregated PNode multiplied by (b) the optimal hourly dispatch of the Use-Limited Resource, minus (c) the estimated monthly Proxy Start-Up Cost of the Use-Limited Resource, minus (d) the estimated monthly Proxy Minimum Load Cost of the Use-Limited Resource, minus (e) the estimated monthly variable Energy cost of the Use-Limited Resource multiplied by the difference between (f) the optimal hourly commitment and dispatch of the Use-Limited Resource and (g) the PMin of the Use-Limited Resource, minus (h) the estimated monthly Transition Cost of the Use-Limited Resource.

The CAISO will calculate input (a) listed above by executing the following steps in the order shown below:

(1) For each future hour, calculate an hourly implied heat rate at each applicable PNode or Aggregated PNode for a Use-Limited Resource based on the hourly average of the fifteen-minute Real-Time LMPs (reflecting the gas price index used in the Real-Time Market calculated pursuant to Section 39.7.1.1.1.3) from the same hour of the previous year, the Greenhouse Gas Allowance Price, calculated pursuant to Section 39.7.1.1.1.4, from the same day of the previous year, and the gas price index of the applicable fuel region from the same day of the previous year.

(2) For each future month, calculate a monthly future implied heat rate based on the applicable wholesale future power price of the applicable electric pricing hub as published by Intercontinental Exchange, the most recent Greenhouse Gas Allowance Price calculated pursuant to Section 39.7.1.1.1.4, and the natural gas future commodity price of the applicable fuel region. The CAISO determines the natural gas futures commodity price by fuel region averaging available prices from the following vendors: Intercontinental Exchange, Natural Gas Intelligence, and SNL Energy/BTU's Daily Gas Wire.

(3) For each future month, calculate a monthly historical implied heat rate based on the wholesale historic power price of the applicable electric pricing hub as published by Intercontinental Exchange for the same month of the previous year, the average

Greenhouse Gas Allowance Price calculated pursuant to Section 39.7.1.1.1.4 for the same month of the previous year, and the average natural gas commodity price, reflecting the gas price index used in the Real-Time Market calculated pursuant to Section 39.7.1.1.1.3, of the applicable fuel region for the same month of the previous year.

(4) For each future month, calculate a monthly power price conversion factor as the ratio of the future implied heat rate calculated under (2) above and the historical implied heat rate calculated under (3) above.

(5) For each future hour, scale the hourly implied heat rate calculated under (1) above by the power price conversion factor calculated under (4) above.

(6) For each future hour, calculate the LMPs by applying the gas price index of the future month and the most recent Greenhouse Gas Allowance Price calculated pursuant to Section 39.7.1.1.1.4 to the scaled implied heat rates calculated under (5) above.

For a Use-Limited Resource that has twelve (12) or fewer months of LMP data at its PNode or Aggregated PNode, the CAISO will calculate input (a) listed above using LMP data from a comparable PNode or Aggregated PNode.

Additional detail regarding the calculation of Opportunity Costs is provided in the Business Practice Manual. Any dispute regarding the calculation of Opportunity Costs will be subject to the CAISO ADR Procedures set forth in Section 13.

**30.4.6.3 Negotiation of Opportunity Costs**

If, after receipt of the documentation required pursuant to Section 30.4.6.1.2, the CAISO determines that it cannot rely on the Opportunity Cost calculator to calculate Opportunity Costs for an eligible limitation pursuant to Section 30.4.6.2, the CAISO will establish the Opportunity Costs for the limitation pursuant to this Section. Upon making this determination, the CAISO will notify the Scheduling Coordinator for the resource and request that the Scheduling Coordinator provide the CAISO with a proposed methodology for determining Start-Up Opportunity Costs, Minimum Load Opportunity Costs, and/or Variable Energy Opportunity Costs for the limitation along with documentation supporting the methodology, and a proposed schedule for the CAISO to update such Opportunity Cost(s) under the methodology. The

CAISO will either approve the submitted Opportunity Cost methodology or enter into good-faith negotiations with the Scheduling Coordinator to establish an agreed-upon Opportunity Cost methodology and the schedule for updating the Opportunity Costs under the methodology.

If the CAISO and the Scheduling Coordinator enter into good-faith negotiations, the negotiation period will be a minimum of sixty (60) days following the provision of all required documentation by the Scheduling Coordinator. Following the 60-day period, the parties can agree to continue good-faith negotiations or the Scheduling Coordinator can exercise its right to file with FERC as described below. In the event that the CAISO and the Scheduling Coordinator are unable to agree upon negotiated Opportunity Costs before the negotiation period terminates, the CAISO may propose reasonable interim Opportunity Cost value(s) that will apply to the Use-Limited Resource until the CAISO and the Scheduling Coordinator agree upon negotiated Opportunity Costs. The Scheduling Coordinator may accept or reject the proposed interim Opportunity Cost value(s). If the Scheduling Coordinator rejects the proposed interim Opportunity Cost value(s), the Use-Limited Resource will not receive Opportunity Costs unless and until the CAISO and the Scheduling Coordinator agree upon negotiated Opportunity Costs, or such costs are established by an order issued by FERC. In the event that the negotiation period terminates without the CAISO and the Scheduling Coordinator reaching agreement upon negotiated Opportunity Costs, and the Scheduling Coordinator declines to continue negotiations, the Scheduling Coordinator may file proposed Opportunity Costs and supporting documentation with FERC pursuant to Section 205 of the Federal Power Act. Any updates to the negotiated Opportunity Costs adders established pursuant to this Section will consist solely of updates to the Opportunity Cost values themselves, and shall not affect the methodology for establishing those values. Any change in methodology would require the Scheduling Coordinator to initiate a new request pursuant to Section 30.4.6.1.2.

**30.4.7 Registered Cost Methodology**

Under the Registered Cost methodology, the Scheduling Coordinator for a Use-Limited Resource that is eligible for Opportunity Costs and either (i) does not have at least twelve (12) consecutive months of fifteen-minute LMPs for Energy at the Use-Limited Resource's PNode or Aggregated PNode; or (ii) has at least twelve (12) consecutive months of such LMPs but has not yet reached the start of the second month after the end of the twelfth consecutive month of having such LMPs, may register values of its choosing

for Default Start-Up Bids and/or Default Minimum Load Bids in the Master File subject to the maximum limit specified in Section 39.6.1.6. A Scheduling Coordinator for a Multi-Stage Generating Resource that is a Use-Limited Resource registering Default Start-Up Bids must also register Default Transition Bids for each feasible MSG Transition, subject to the maximum limit specified in Section 39.6.1.7. For a Use-Limited Resource to be eligible for the Registered Cost methodology there must be sufficient information in the Master File to calculate the value pursuant to the Proxy Cost methodology, which will be used to validate the specific value registered using the Registered Cost methodology. Any such values will be fixed for a minimum of thirty (30) days in the Master File unless:

(a) the resource's costs for any such value, as calculated pursuant to the Proxy Cost methodology, exceed the value registered using the Registered Cost methodology, in which case the Scheduling Coordinator may elect to switch to the Proxy Cost methodology for the balance of any thirty (30)-day period, except as set forth in Section 30.4.7; or

(b) any cost registered in the Master File exceeds the maximum limit specified in Section 39.6.1.6 or Section 39.6.1.7 after this minimum thirty (30)-day period, in which case the value will be lowered to the maximum limit specified in Section 39.6.1.6 or Section 39.6.1.7.

If a Multi-Stage Generating Resource elects to use the Registered Cost methodology, that election will apply to all the MSG Configurations for that resource. The cap for the Registered Cost values for each MSG Configuration will be based on the Proxy Cost values calculated for each MSG Configuration, including for each MSG Configuration that cannot be directly started, which are also subject to the maximum limits specified in Sections 39.6.1.6 and 39.6.1.7.

## 30.5 Bidding Rules

### 30.5.1 General Bidding Rules

(a) All Bids submitted by Scheduling Coordinators to the DAM for the following Trading Day shall be submitted at or prior to 10:00 a.m. on the day preceding the Trading Day, but no sooner than seven (7) days prior to the Trading Day. All Energy and Ancillary Services Bids of each Scheduling Coordinator submitted to the RTM for the following Trading Day

shall be submitted starting from the time of publication of DAM results for the Trading Day, and ending seventy-five (75) minutes prior to each applicable Trading Hour in the RTM. Scheduling Coordinators may submit only one set of Bids to the RTM for a given Trading Hour, which the CAISO uses for all Real-Time Market processes.

(b) Bid prices submitted by a Scheduling Coordinator for Energy accepted and cleared in the IFM and scheduled in the Day-Ahead Schedule may be increased or decreased in the RTM . Bid prices for Energy submitted but not scheduled in the Day-Ahead Schedule may be increased or decreased in the RTM. Incremental Bid prices for Energy associated with Day-Ahead AS or RUC Awards in Bids submitted to the RTM may be revised.

(c) A Scheduling Coordinator may submit in the Real-Time Market new daily Start-Up Bids, Minimum Load Bids, and Transition Bids for resources and MSG Configurations for which the Scheduling Coordinator previously submitted such Bids in the Day-Ahead Market, except for: (1) Trading Hours in which a resource or MSG Configuration has received a Day-Ahead Schedule or has received a Start-Up Instruction in RUC; and (2) Trading Hours that span the Minimum Run Time of the resource or MSG Configuration after the CAISO has committed the resource or the Scheduling Coordinator has self-committed the resource in the RTM.

(d) Scheduling Coordinators may revise ETC Self-Schedules for Supply in the RTM to the extent such a change is consistent with TRTC Instructions provided to the CAISO by the Participating TO in accordance with Section 16.

(e) Scheduling Coordinators may revise TOR Self-Schedules for Supply only in the HASP to the extent such a change is consistent with TRTC Instructions provided to the CAISO by the Non-Participating TO in accordance with Section 17. Energy associated with awarded Ancillary Services capacity cannot be offered in the Real-Time Market separate and apart from the awarded Ancillary Services capacity.

(f) Scheduling Coordinators may submit Energy Bids, AS Bids and RUC Bids in the DAM that are different for each Trading Hour of the Trading Day.

(g) Bids for Energy or capacity that are submitted to one CAISO Market, but are not accepted in that market are no longer a binding commitment and Scheduling Coordinators may submit Bids in a subsequent CAISO Market at a different price.

(h) The CAISO shall be entitled to take all reasonable measures to verify that Scheduling Coordinators meet the technical and financial criteria set forth in Section 4.5.1 and the accuracy of information submitted to the CAISO pursuant to this Section 30.

(i) In order to retain the priorities specified in Section 31.4 and 34.12 for scheduled amounts in the Day-Ahead Schedule associated with ETC and TOR Self-Schedules or Self-Schedules associated with Regulatory Must-Take Generation, a Scheduling Coordinator must submit to the Real-Time Market ETC or TOR Self-Schedules, or Self-Schedules associated with Regulatory Must-Take Generation, at or below the Day-Ahead Schedule quantities associated with the scheduled ETC, TOR, or Regulatory Must-Take Generation Self-Schedules. If the Scheduling Coordinator fails to submit such Real-Time Market ETC, TOR, or Regulatory Must-Take Generation Self-Schedules, the defined scheduling priorities of the ETC, TOR, or Regulatory Must-Take Generation Day-Ahead Schedule quantities may be subject to adjustment in the HASP and the Real-Time Market as further provided in Sections 31.4 and 34.12 in order to meet operating conditions.

(j) For Multi-Stage Generating Resources that receive a Day-Ahead Schedule, RUC Award, or Ancillary Services Award, the Scheduling Coordinator must submit an Energy Bid in the Real-Time Market for the same Trading Hour(s). If the Scheduling Coordinator submits an Economic Bid for such Trading Hour(s), the Economic Bid must be for either: the same MSG Configuration scheduled or awarded in the Integrated Forward Market, or the MSG Configuration committed in RUC. If the Scheduling Coordinator submits a Self-Schedule in the Real-Time Market for such Trading Hour(s), then the Energy Self-Schedule may be submitted in any registered MSG Configuration, including the MSG Configuration awarded in the Day-Ahead Market, that can support the awarded Ancillary Services (as further required by Section 8).

(k) Scheduling Coordinators for Multi-Stage Generating Resources may submit into the

Real-Time Market bids from up to six (6) MSG Configurations in addition to the MSG Configuration scheduled or awarded in the Integrated Forward Market and Residual Unit Commitment, provided that the MSG Transitions between the MSG Configurations bid into the Real-Time Market are feasible and the transition from the previous Trading Hour are also feasible.

(l) For the Trading Hours that Multi-Stage Generating Resources do not have a CAISO Schedule or award from a prior CAISO Market run, the Scheduling Coordinator can submit up to six (6) MSG Configurations into the RTM.

(m) A Scheduling Coordinator cannot submit a Bid to the CAISO Markets for a MSG Configuration into which the Multi-Stage Generating Resource cannot transition due to lack of Bids for the specific Multi-Stage Generating Resource in other MSG Configurations that are required for the requisite MSG Transition.

(n) In order for Multi-Stage Generating Resource to meet any Resource Adequacy must-offer obligations, the responsible Scheduling Coordinator must submit either an Economic Bid or Self-Schedule for at least one MSG Configuration into the Day-Ahead Market and Real-Time Market that is capable of fulfilling that Resource Adequacy obligation, as feasible. The Economic Bid shall cover the entire capacity range between the maximum bid-in Energy MW and the higher of Self-Scheduled Energy MW and the Multi-Stage Generating Resource plant-level PMin as registered in the Master File.

(o) For any given Trading Hour, a Scheduling Coordinator may submit Self-Schedules and/or Submissions to Self-Provide Ancillary Services in only one MSG Configuration for each Generating Unit.

(p) In any given Trading Hour in which a Scheduling Coordinator has submitted a Self-Schedule for a Multi-Stage Generating Resource, the Scheduling Coordinator may also submit Bids for other MSG Configurations provided that they concurrently submit Bids that enable the applicable CAISO Market to transition the Multi-Stage Generating Resource to other MSG Configurations.

(q) If in any given Trading Hour the Multi-Stage Generating Resource was awarded

Regulation or Operating Reserves in the IFM, any Self-Schedules or Submissions to Self-Provide Ancillary Services the Scheduling Coordinator submits for that Multi-Stage Generating Resource in the RTM must be for the same MSG Configuration for which Regulation or Operating Reserve is Awarded in IFM for that Multi-Stage Generating Resource in that given Trading Hour.

(r) If a Multi-Stage Generating Resource has received a binding RUC Start-Up Instruction as provided in Section 31, any Self-Schedule or Submission to Self-Provide Ancillary Services in the RTM must be in the same MSG Configuration committed in RUC.

(s) If in any given Trading Hour the Multi-Stage Generating Resource is scheduled for Energy in the IFM, any Self-Schedules the Scheduling Coordinator submits for that Multi-Stage Generating Resource in the RTM must be for the same MSG Configuration for which Energy is scheduled in IFM for that Multi-Stage Generating Resource in that given Trading Hour.

(t) For a Multi-Stage Generating Resource, the Bid(s) submitted for the resource's configuration(s) shall collectively cover the entire capacity range between the maximum bid-in Energy MW and the higher of the Self-Scheduled Energy MW and the Multi-Stage Generating Resource plant-level PMin as registered in the Master File. This rule shall apply separately to the Day-Ahead Market and the Real-Time Market.

(u) A Scheduling Coordinator may submit a Self-Schedule Hourly Block for the RTM as an import to or an export from the CAISO Balancing Authority Area and may also submit Self-Scheduled Hourly Blocks for Ancillary Services imports. Such a Bid shall be for the same MWh quantity for each of the four (4) fifteen (15)-minute intervals that make up the applicable Trading Hour.

(v) A Scheduling Coordinator may submit a Variable Energy Resource Self-Schedule for the RTM can be submitted from a Variable Energy Resource. A Scheduling Coordinator can use either the CAISO forecast for Expected Energy in the RTM or can provide its own forecast for Expected Energy pursuant to the requirements specified in Section 4.8.2. The Scheduling Coordinator must indicate in the Master File whether it is using its own

forecast or the CAISO forecast for its resource in support of the Variable Energy Self-Schedule. The Scheduling Coordinator is not required to include the same MWh quantity for each of the four (4) fifteen (15)-minute intervals that make up the applicable Trading Hour for the Variable Energy Resource Self-Schedule include. If an external Variable Energy Resource that is not using a forecast of its output provided by the CAISO submits a Variable Energy Resource Self-Schedule and the Expected Energy is not delivered in the FMM, the Scheduling Coordinator for the Variable Energy Resource will be subject to the Under/Over Delivery Charge as described in Section 11.31. Scheduling Coordinators for Dynamically Scheduled Variable Energy Resources that provide the CAISO with a two (2)-hour rolling forecast with five (5)-minute granularity can submit Variable Energy Resource Self-Schedules.

(w) Scheduling Coordinators can submit Economic Hourly Block Bids to be considered in the HASP and to be accepted as binding Schedules with the same MWh award for each of the four (4) FMM intervals. Scheduling Coordinator can also submit Economic Hourly Block Bids for Ancillary Services. As specified in Section 11, a cleared Economic Hourly Block Bid is not eligible for Bid Cost Recovery.

(x) Scheduling Coordinators can submit Economic Hourly Block Bids with Intra-Hour Option. If accepted in the HASP, such a Bid creates a binding schedule with same MWh awards for each of the four (4) FMM intervals. After that, the RTM can optimize such schedules for economic reasons once through an FMM during the Trading Hour. As specified in Section 11, a cleared Economic Hourly Block Bid with Intra-Hour Option is not eligible for Bid Cost Recovery.

(y) A Scheduling Coordinator submitting Bids to the RTM is not required to submit a Self-Schedule Hourly Block, a Variable Energy Resource Self-Schedule, an Economic Hourly Block Bid, or an Economic Hourly Block Bid with Intra-Hour Option, and may instead choose to participate in the RTM through Economic Bids or Self-Schedules.

(z) [Not Used]

(aa) A Scheduling Coordinator for a CAISO Balancing Authority Area resource will indicate

through a resource parameter as prescribed in the Business Practice Manual that it has sold capacity to an out-of-balancing authority area Load Serving Entity, and no CAISO Load Serving Entity has a right to such capacity. If the Scheduling Coordinator does not indicate this status, the resource cannot be a designated resource for an export Self-Schedule at Scheduling Points backed by non-Resource Adequacy Capacity. The CAISO will notify a Scheduling Coordinator hourly, to the extent practicable, that its resource, which is flagged to support an export, is designated by another entity to support export Self-Schedules at Scheduling Points backed by non-Resource Adequacy Capacity. Upon receiving the notice, the Scheduling Coordinator for the designated resource shall notify the CAISO if it does not have a contractual commitment to support such export Self-Schedule or does not have a reasonable expectation to be available to support the export Self Schedule. The Scheduling Coordinator for the designated resource and the Scheduling Coordinator for the export Self-Schedule shall designate a resource to support such export only if the resource is expected to have sufficient available capacity to support the export quantity throughout the entire hour. For Variable Energy Resources, this requirement can only be satisfied if the resource's forecasted output for each of the applicable four (4) fifteen (15) minute intervals in the applicable hour for which a bid has been submitted, based on the most recent forecast for that hour, is for Generation that is equal to or greater than the Self Schedule export quantity. The designated capacity must be the deliverable capacity of a resource with Full Capacity Deliverability Status, Partial Capacity Deliverability Status, or Interim Deliverability Status that is shown on the CAISO's NQC list.

(bb) In addition to meeting any obligations applicable to Resource Adequacy Resources, a Scheduling Coordinator for a resource supporting Self-Schedules of exports at Scheduling Points backed by non-Resource Adequacy Capacity shall submit a RUC Availability Bid for RCU for a quantity equal to or greater than the quantity of the export.

(cc) The Scheduling Coordinator for the resource shall offer Energy Bids into the Real-Time Market to support Self-Schedules of exports at Scheduling Points backed by non-

Resource Adequacy Capacity.

(dd) The positive difference in quantity between the higher of a designated resource's Day-Ahead Schedule or a designated resource's RUC Schedule and the Day-Ahead Schedule of the corresponding Self-Schedule at a Scheduling Point backed by non-Resource Adequacy Capacity cannot back additional exports at a Scheduling Point backed by non-Resource Adequacy Capacity scheduled in the Real-Time Market.

(ee) A Scheduling Coordinator shall not schedule an import Self-Schedule to support an export Self-Schedule of exports at Scheduling Points explicitly sourced by non-Resource Adequacy Capacity. The transaction is properly scheduled as a Wheeling Through transaction as described in section 30.5.4.

### 30.5.2 Supply Bids

#### 30.5.2.1 Common Elements for Supply Bids

In addition to the resource-specific Bid requirements of this Section, all Supply Bids must contain the following components: Scheduling Coordinator ID Code; Resource Location or Resource ID, as appropriate; MSG Configuration ID, as applicable; PNode or Aggregated Pricing Node as applicable; Energy Bid Curve, as applicable; Self-Schedule component; Ancillary Services Bid; RUC Availability Bid as applicable; Imbalance Reserves Bid as applicable; the CAISO Market to which the Bid applies; Trading Day to which the Bid applies; Priority Type (if any), and a Transaction ID as created by the CAISO. Supply Bids offered in the CAISO Markets must be monotonically increasing. Energy Bids in the RTM must also contain a Bid for Ancillary Services to the extent the resource is certified and capable of providing Ancillary Service in the RTM up to the registered certified capacity for that Ancillary Service less any Day-Ahead Ancillary Services Awards.

Scheduling Coordinators must submit the applicable Supply Bid components, including Self-Schedules, for the submitted MSG Configuration.

Scheduling Coordinators submitting Bids for Scheduling Points must adhere to the E-Tagging requirements outlined in Section 30.5.7.

#### 30.5.2.2 Supply Bids for Participating Generators

In addition to the common elements listed in Section 30.5.2.1, Supply Bids for Participating Generators

shall contain the following components as applicable: Start-Up Bid, Minimum Load Bid, Ramp Rate, Minimum and Maximum Operating Limits; Energy Limit, Regulatory Must-Take/Must-Run Generation; Contingency Flag; and Contract Reference Number (if any). Scheduling Coordinators submitting these Bid components for a Multi-Stage Generating Resource must do so for the submitted MSG Configuration. Scheduling quantities that a Scheduling Coordinator schedules as Regulatory Must-Take Generation for a CHP Resource shall be limited to the quantity necessary in any hour to meet the reasonably anticipated industrial host's thermal requirements and shall not exceed any established RMTMax values. The CHP Resource owner or operator shall provide its Scheduling Coordinator with the Regulatory Must-Take Generation values and is solely responsible for the accuracy of the information. The Scheduling Coordinator for the CHP Resource will schedule the quantities consistent with information provided subject to any contract rights between the CHP Resource Generating Unit owner or operator and its counter-party to any power purchase agreement regarding curtailment or dispatchability of the CHP Resource. If the CHP Resource Generating Unit has a power purchase agreement and its counter-party is not the Scheduling Coordinator for the resource, the parties to the agreement share the responsibility for ensuring that the Scheduling Coordinator schedules the resource consistent with contractual rights of the counter-parties. A Scheduling Coordinator for a Physical Scheduling Plant or a System Unit may include Generation Distribution Factors as part of its Supply Bid. If the Scheduling Coordinator has not submitted the Generation Distribution Factors applicable for the Bid, the CAISO will use default Generation Distribution Factors stored in the Master File. All Generation Distribution Factors used by the CAISO will be normalized based on Outage data that is available to the automated market systems. A Multi-Stage Generating Resource and its MSG Configurations are registered under a single Resource ID and Scheduling Coordinator for the Multi-Stage Generating Resource must submit all Bids for the resource's MSG Configurations under the same Resource ID. For a Multi-Stage Generating Resources Scheduling Coordinators may submit bid curves for up to ten individual MSG Configurations of their Multi-Stage Generating Resources into the Day-Ahead Market and up to three individual MSG Configurations into the Real-Time Market. Scheduling Coordinators for Multi-Stage Generating Resources must submit a single Operational Ramp Rate for each MSG Configuration for which it submits a supply Bid either in the Day-Ahead Market or Real-Time Market. For Multi-Stage Generating Resources the Scheduling

Coordinator may submit the Transition Times, which cannot be greater than the maximum Transition Time registered in the Master File. To the extent the Scheduling Coordinator does not submit the Transition Time that is a registered feasible transition the CAISO will use the registered maximum Transition Time for that MSG Transition for the specific Multi-Stage Generating Resource.

#### 30.5.2.3 Supply Bids for Participating Loads, Including Pumped-Storage Hydro Units and Aggregated Participating Loads

In addition to the common elements listed in Section 30.5.2.1, Scheduling Coordinators submitting Supply Bids for Participating Loads, which includes Pumping Load or Pumped-Storage Hydro Units, may include the following components: Pumping Level (MW), Minimum Load Bid (Generation mode only of a Pumped-Storage Hydro Unit), Load Distribution Factor, Ramp Rate, Energy Limit, Pumping Cost, and Pump Shut-Down Costs. If no values for Pumping Cost or Pump Shut-Down Costs are submitted, the CAISO will generate these Bid components based on values in the Master File. Scheduling Coordinators may only submit Supply Bids for Aggregated Participating Loads by using a Generating Unit or Physical Scheduling Plant Resource ID for the Demand reduction capacity represented by the Aggregated Participating Load as set forth in a Business Practice Manual. The CAISO will use Generation Distribution Factors provided by the Scheduling Coordinator for the Aggregated Participating Load.

#### 30.5.2.4 Supply Bids for System Resources

In addition to the common elements listed in Section 30.5.2.1, Supply Bids for Resource-Specific System Resources shall also contain Start-Up Bids and Minimum Load Bids. Resource-Specific System Resources are subject to the Proxy Cost methodology or the Registered Cost methodology for Default Start-Up Bids and Default Minimum Load Bids as provided in Section 30.4, and Transaction ID as created by the CAISO. Other System Resources are not eligible to recover Start-Up Costs and Minimum Load Costs. Resource-Specific System Resources are eligible to participate in the Day-Ahead Market on an equivalent basis as Generating Units and are not obligated to participate in RUC or the RTM if the resource did not receive a Day-Ahead Schedule unless the resource is a Resource Adequacy Resource. A Scheduling Coordinator for a Non-Resource-Specific System Resource that is a Resource Adequacy Resource or that supports a renewable portfolio standard transaction and that has met the registration requirements set forth in the CAISO's Business Practice Manual may submit a Bid at an CAISO BAA

EDAM Transfer location, if the Scheduling Coordinator does not the know the source of Non-Resource-Specific System Resource at time of Day-Ahead Market Bid submission or the source is otherwise outside of the EDAM Area. If the Resource-Specific System Resource is a Resource Adequacy Resource, the Scheduling Coordinator for the resource is obligated to make it available to the CAISO Market as prescribed by Section 40.6. Dynamic Resource-Specific System Resources are also eligible to participate in the RTM on an equivalent basis as Generating Units. The quantity (in MWh) of Energy categorized as Interruptible Imports (non-firm imports) can only be submitted through Self-Schedules in the Day-Ahead Market and cannot be incrementally increased in the RTM. Bids submitted to the Day-Ahead Market for ELS Resources will be applicable for two days after they have been submitted and cannot be changed the day after they have been submitted. Bids for System Resources that exceed the Soft Energy Bid Cap are subject to the rules in Sections 30.7.12, as applicable.

#### 30.5.2.4.1 Intertie Block Bids

Intertie Block Bids must contain the same energy Bid price for all hours of the period for which the Intertie Block Bid is submitted. Intertie Block Bids may only be submitted in the DAM.

### 30.5.2.5 Supply Bids for Metered Subsystems

Consistent with the bidding rules specified in this Section 30.5, Scheduling Coordinators that represent MSS Operators may submit Bids, including Self-Schedules and Submissions to Self-Provide an Ancillary Service, to the DAM. All Bids to supply Energy by MSS Operators must identify each Generating Unit on an individual unit basis. The CAISO will not accept aggregated Generation Bids without complying with the requirements of Section 4.9.12 of the CAISO Tariff. All Scheduling Coordinators that represent MSS Operators must submit Demand Bids at the relevant MSS LAP. Scheduling Coordinators that represent MSS Operators must comply with Section 4.9 of the CAISO Tariff. For an MSS that elects Load following, the MSS Operator shall also self-schedule or bid Supply to match the Demand Forecast. All Bids for MSSs must identify each Generating Unit on an individual unit basis or a System Unit. For an MSS that elects Load following consistent with Section 4.9.13.2, the Scheduling Coordinator for the MSS Operator must include the following additional information with its Bids: the Generating Unit(s) that are Load following; the range of the Generating Unit(s) being reserved for Load following; whether the quantity of Load following capacity is either up or down; and, if there are multiple Generating Units in the MSS, the

priority list or distribution factors among the Generating Units. The CAISO will not dispatch the resource within the range declared as Load following capacity, leaving that capacity entirely available for the MSS to dispatch. The CAISO uses this information in the IFM runs and the RUC to simulate MSS Load following. The Scheduling Coordinator for the MSS Operator may change these characteristics through the Bid submission process in the RTM.

If the Load following resource is also an RMR Unit, the MSS Operator must not specify the RMR Contract Capacity specified in the RMR Contract as Load following up or down capacity to allow the CAISO to access such capacity for RMR Dispatch.

#### 30.5.2.6 Supply Bids for Distributed Energy Resource Aggregations

In addition to the common elements listed in Section 30.5.2.1, Supply Bids for Distributed Energy Resource Aggregations will contain the following components as applicable: Generation Distribution Factors, Ramp Rate, Minimum and Maximum Operating Limits; Energy Limit, and Contingency Flag. If the Scheduling Coordinator does not submit the Generation Distribution Factors for the Bid, the CAISO will use default Generation Distribution Factors registered in Master File. The CAISO will apply a net benefits test to determine a threshold Market Clearing Price for Demand Response Providers and Distributed Energy Resource Aggregations that include Distributed Curtailment Resources. The CAISO will not accept Bids from Distributed Energy Resource Aggregations that include Distributed Curtailment Resources for Energy below this threshold Market Clearing Price in the CAISO Markets.

#### 30.5.2.7 Ancillary Service Bids

There are four distinct Ancillary Services: Regulation Up, Regulation Down, Spinning Reserve and Non-Spinning Reserve. A resource shall be eligible to provide Ancillary Service if it has complied with the CAISO's certification and testing requirements as contained in Appendix K and the CAISO's Operating Procedures. Scheduling Coordinators may use Dynamic System Resources to Self-Provide Ancillary Services as specified in Section 8. All System Resources, including Dynamic System Resources and Non-Dynamic System Resources, will be charged the Shadow Price as prescribed in Section 11.10, for any awarded Ancillary Services. A Scheduling Coordinator may submit Ancillary Services Bids for Regulation Up, Regulation Down, Spinning Reserve, and Non-Spinning Reserve for the same capacity by providing a separate price in $/MW per hour as desired for each Ancillary Service. The Bid for each

Ancillary Services is a single Bid segment. Only resources certified by the CAISO as capable of providing Ancillary Services are eligible to provide Ancillary Services and submit Ancillary Services Bids. In addition to the common elements listed in Section 30.5.2.1, all Ancillary Services Bid components of a Supply Bid must contain the following: (1) the type of Ancillary Service for which a Bid is being submitted; (2) Ramp Rate (Operating Reserve Ramp Rate and Regulation Ramp Rate, if applicable); and (3) Distribution Curve for Physical Scheduling Plant or System Unit. A Scheduling Coordinator may only submit an Ancillary Services Bid or Submission to Self-Provide an Ancillary Service for Multi-Stage Generating Resources for the Ancillary Service for which the specific MSG Configurations are certified. For any such certified MSG Configurations the Scheduling Coordinator may submit only one Operating Reserve Ramp Rate and Regulation Ramp Rate. An Ancillary Services Bid or Submission to Self-Provide an Ancillary Service submitted to the Day-Ahead Market when submitted to the Day-Ahead Market may be, but is not required to be, accompanied by an Energy Bid that covers the capacity offered for the Ancillary Service. Notwithstanding any other provision, Scheduling Coordinators for storage resources participating as Non-Generator Resources must submit accompanying Energy Bids in the Real-Time Market that cover at least half the capacity awarded for Ancillary Services from the Day-Ahead Market. Such covering Energy Bids must be the opposite direction of the Ancillary Service; namely, Bids to charge must accompany capacity awarded for Regulation Up, Spinning Reserve, and Non-Spinning Reserve; and Bids to discharge must accompany capacity awarded for Regulation Down. If a Scheduling Coordinator's Submission to Self-Provide an Ancillary Service is qualified as specified in Section 8.6, the Scheduling Coordinator must submit an Energy Bid that covers the self-provided capacity prior to the close of the Real-Time Market for the day immediately following the Day-Ahead Market in which the Ancillary Service Bid was submitted. Except as provided below, the Self-Schedule for Energy need not include a Self-Schedule for Energy from the resource that will be self-providing the Ancillary Service. If a Scheduling Coordinator is self-providing an Ancillary Service from a Short Start Unit, no Self-Schedule for Energy for that resource is required. If a Scheduling Coordinator proposes to self-provide Spinning Reserve, the Scheduling Coordinator is obligated to submit a Self-Schedule for Energy for that particular resource, unless as discussed above the particular resource is a Short Start Unit. When submitting Ancillary Service Bids in the Real-Time Market, Scheduling Coordinators for resources that either have

been awarded or self-provide Spinning Reserve or Non-Spinning Reserve capacity in the Day-Ahead Market must submit an Energy Bid for at least the awarded or self-provided Spinning Reserve or Non-Spinning Reserve capacity, otherwise the CAISO will apply the Bid validation rules described in Section 30.7.6.1.

As provided in Section 30.5.2.6.4, a Submission to Self-Provide an Ancillary Service shall contain all of the requirements of a Bid for Ancillary Services with the exception of Ancillary Service Bid price information. In addition, Scheduling Coordinators must comply with the Ancillary Services requirements of Section 8. Scheduling Coordinators submitting Self-Schedule Hourly Blocks for Ancillary Services Bids for the Real-Time Market must also submit an Energy Bid for the associated Ancillary Services Bid under the same Resource ID, otherwise the bid validation rules in Section 30.7.6.1 will apply to cover any portion of the Ancillary Services Bid not accompanied by an Energy Bid. As described in Section 34.2.3, if the resource submits a Self-Scheduled Hourly Block, the CAISO will only use the Ancillary Services Bid in the RTM optimization and will not use the associated Energy Bid for the same Resource ID to schedule Energy from the Non-Dynamic System Resource in the RTM. Scheduling Coordinators must also comply with the bidding rules associated with the must offer requirements for Ancillary Services specified in Section 40.6.

#### 30.5.2.7.1 Regulation Up or Regulation Down Bid Information

In the case of Regulation Up or Regulation Down, the Ancillary Services Bid or submission to self-provide must also contain: (a) the upward and downward range of generating capacity over which the resource is willing to provide Regulation in ten (10) minutes; (b) the Bid price of the capacity reservation, stated separately for Regulation Up and Regulation Down ($/MW); and (c) the Bid price ($) of the Mileage stated separately for Regulation Up and Regulation Down. For submissions to self-provide Regulation Up or Regulation Down, the price for the capacity reservation shall be $0/MWh and the price for Mileage shall be $0. In the case of Regulation Up or Regulation Down from Dynamic System Resources, the Ancillary Services Bid must also contain the Contract Reference Number, if applicable. Scheduling Coordinators may include inter-temporal opportunity costs in their Regulation capacity bids, but these inter-temporal opportunity costs must be verifiable. Ancillary Services Bids submitted to the Day-Ahead or Real-Time Market for Regulation need not be accompanied by an Energy Supply Bid that covers the Ancillary

Services capacity being offered. A Regulation Down Bid will be erased unless there is an Energy Supply Bid or Energy Self-Schedule at a level that would permit the resource to provide Regulation Down to its lower Regulation Limit. A submission to self-provide Regulation Down will be erased unless there is an Energy Self-Schedule at a level that would permit the resource to provide Regulation Down to its lower Regulation Limit. A Regulation Up Bid will be erased unless there is an Energy Supply Bid or Energy Self-Schedule at a level that would permit the resource to provide Regulation Up within its Regulation Limit. A submission to self-provide Regulation Up will be erased unless there is an Energy Self-Schedule at a level that would permit the resource to provide Regulation Up within its Regulation Limit.

#### 30.5.2.7.2 Spinning Reserve Capacity Bid Information

In the case of Spinning Reserve capacity, the Ancillary Services Bid must also contain: (a) MW of additional capability synchronized to the system, immediately responsive to system frequency, and available within ten (10) minutes; (b) Bid price of capacity reservation, and (c) an indication whether the capacity reserved would be available to supply imbalance energy only in the event of the occurrence of an unplanned Outage, a Contingency or an imminent or actual System Emergency (Contingency Flag). In the case of Spinning Reserve capacity from System Resources, the Ancillary Services Bid must also contain: (a) Schedule ID (NERC ID number); and (b) a Contract Reference Number, if applicable. Ancillary Services Bids and Submissions to Self-Provide an Ancillary Services submitted to the Real-Time Market for Spinning Reserves must also submit an Energy Bid that covers the Ancillary Services capacity being offered into the Real-Time Market.

#### 30.5.2.7.3 Non-Spinning Reserve Capacity

In the case of Non-Spinning Reserve, the Ancillary Service Bid must also contain: (a) the MW capability available within ten (10) minutes; (b) the Bid price of the capacity reservation; (c) time of synchronization following notification (minutes); and (d) an indication whether the capacity reserved would be available to supply imbalance energy only in the event of the occurrence of an unplanned Outage, a Contingency or an imminent or actual System Emergency (Contingency Flag). In the case of Non-Spinning Reserve Capacity from System Resources, the Ancillary Services Bid must also contain: (a) Schedule ID (NERC ID number); and (b) a Contract Reference Number, if applicable. In the case of Non-Spinning Reserve

Capacity from Participating Load within the CAISO Balancing Authority Area, the Ancillary Service Bid must also contain: (a) a Load identification name and Location Code; (b) Demand reduction available within ten (10) minutes; (c) time to interruption following notification (minutes); and (d) maximum allowable curtailment duration (hour). In the case of Aggregated Participating Load, and Proxy Demand Resources, Scheduling Coordinators must submit Bids using a Generating Unit, Physical Scheduling Plant Resource ID, or Resource ID for the Proxy Demand Resource for the Demand reduction capacity of the Aggregated Participating Load through a Bid to provide Non-Spinning Reserve or a Submission to Self-Provide an Ancillary Service for Non-Spinning Reserve. Ancillary Services Bids and Submissions to Self-Provide an Ancillary Services submitted to the Real-Time Market for Non-Spinning Reserves must also submit an Energy Bid that covers the Ancillary Services capacity being offered into the Real-Time Market.

**30.5.2.7.4 Additional Rules for Self-Provided Ancillary Services**

Scheduling Coordinators electing to self-provide Ancillary Services shall supply the information referred to in this Section 30.5 in relation to each Ancillary Service to be self-provided, excluding the capacity price information, but including the name of the trading Scheduling Coordinator in the case of Inter-Scheduling Coordinator Ancillary Service Trades. The portion of the Energy Bid that corresponds to the high end of the resource's operating range, shall be allocated to any awarded or Self-Provided Ancillary Services in the following order from higher to lower capacity: (a) Regulation Up; (b) Spinning Reserve; and (c) Non-Spinning Reserve. For resources providing Regulation Up, the upper regulating limit shall be used if it is lower than the highest operating limit. The remaining portion of the Energy Bid (i.e. that portion not associated with capacity committed to provide Ancillary Services) shall constitute a Bid to provide Energy.

**30.5.2.8 RUC Availability Bids**

Scheduling Coordinators may submit RUC Availability Bids to seek a RUC Award. Scheduling Coordinators submit separate RUC Availability Bids for RCU and RCD. For Multi-Stage Generating Resources, the RUC Availability Bids shall be submitted at the MSG Configuration. The RUC Availability Bid is a MW quantity in $/MW per hour. The quantity of a RUC Availability Bid for RCU or RCD cannot exceed the lower of the following two values: (1) the resource's 60-minute ramp capability; or (2) the Upper Economic Limit. In the case of Non-Generator Resources, however, the quantity of a RUC Availability Bid for RCU or RCD cannot exceed the lower of: (1) the resource's 60-minute ramp capability;

or (2) the difference between the Upper Economic Limit and the Lower Economic Limit. The value for the $/MW per hour component of the Bid must be between 0 and 250.

Resources offering Economic Bids for Energy to the IFM must submit a RUC Availability Bid for RCU at a quantity no less than the quantity of the Economic Bid for Energy.

**30.5.2.9 Imbalance Reserves Bids**

Scheduling Coordinators may submit Imbalance Reserves Bids to seek an Imbalance Reserves Award. Scheduling Coordinators submit separate Imbalance Reserves Bids for IRU and IRD. For Multi-Stage Generating Resources, the Imbalance Reserves Bids shall be submitted at the MSG Configuration level. The Imbalance Reserves component is MW-quantity in $/MW per hour. The value for the $/MW per hour component of the Bid must be between 0 and 55.

**30.5.3 Demand Bids**

Each Scheduling Coordinator representing Demand, including Non-Participating Load and Aggregated Participating Load, shall submit Bids indicating the hourly quantity of Energy in MWh that it intends to purchase in the IFM for each Trading Hour of the Trading Day. Scheduling Coordinators must submit Demand Bids, including Self Schedules, for CAISO Demand at Load Aggregation Points except as provided in Section 30.5.3.2.

**30.5.3.1 Demand Bids Components**

Demand Bids must have the following components: Scheduling Coordinator ID Code; a Demand Bid curve that is a monotonically decreasing staircase function of no more than ten (10) segments defined by eleven (11) ordered pairs of MW and $/MWh; Location Code for the LAP, Custom LAP or PNode, as applicable; and hourly scheduled MWh within the range of the Bid curve, including any zero values, for each Settlement Period of the Trading Day.

**30.5.3.2 Exceptions to Requirement for Submission of Demand Bids and Settlement at the LAP**

The following are exceptions to the requirement that Demand Bids be submitted and settled at the LAP:

(a) ETC or TOR Self-Schedules submitted consistent with the submitted TRTC Instructions;

(b) Participating Load and Aggregated Participating Load Bids for Supply and Demand may

be submitted and settled at a PNode or Custom LAP, as appropriate; and

(c) Export Bids are submitted and settled at Scheduling Points, which do not constitute a LAP.

### 30.5.4 Wheeling Through Transactions

A Wheeling Through transaction consists of an Export Bid and an Import Bid with the same Wheeling reference (a unique identifier for each Wheeling Through transaction). If the Wheeling reference does not match at the time the relevant market closes, the Wheeling Through transaction will be erased; this includes any Economic Bid or Self-Schedule for the resource for that Trading Hour. Wheeling Through transactions with matching Wheeling references will be kept balanced in the IFM and RTM; that is, to the extent an Export Bid or Import Economic Bid or Self-Schedule specify different quantities, only that matching quantity will clear the CAISO Markets.

### 30.5.5 Scheduling Sourcing/Sinking in Same Balancing Authority Area

#### 30.5.5.1 Prohibition

A Scheduling Coordinator is prohibited from submitting Bids that result in a Schedule(s) being awarded to that single Scheduling Coordinator that has an associated E-Tag reflecting a source and sink in the same Balancing Authority Area. A Schedule or Schedules resulting from Bids submitted in violation of this Section 30.5.5.1 will be settled according to Section 11.2.4.7 and Section 11.33.

#### 30.5.5.2 Exceptions to Prohibition

Bids that otherwise would be prohibited under Section 30.5.5.1 are permitted, and the resulting Schedule(s) will not be settled according to Section 11.2.4.7 and Section 11.33, if any of the following four conditions cause the associated E-Tag to have a source and sink in the same Balancing Authority Area.

(a) The Schedule(s) includes a transmission segment on a DC Intertie.

(b) The Schedule(s) involves a Pseudo-Tie generating unit delivering energy from its Native Balancing Authority Area to an Attaining Balancing Authority Area.

(c) The Schedule(s) are used either to: (i) serve Load that temporarily has become isolated from the CAISO Balancing Authority Area because of an Outage; or (ii) deliver Power from a Generating Unit that temporarily has become isolated from the CAISO Balancing Authority Area because of an Outage.

(d) The Schedule(s) involve a Wheeling Through transaction that the Scheduling Coordinator can demonstrate was used to serve load located outside the transmission and Distribution System of a Participating TO.

Provided, however, that if the circumstances leading to one of the above four conditions being met were excluded from consideration and the resulting hypothetical Schedule(s) could have an associated E-Tag reflecting a source and sink in the same Balancing Authority Area, then the Schedule(s) will be settled according to Section 11.2.4.7 and Section 11.33.

### 30.5.6 Non-Generator Resource Bids

Scheduling Coordinators must ensure that Non-Generator Resource Bids or Bids from resources using Non-Generator Resource Generic Modeling functionality contain the Bid components specified in this Section 30.5 based on how the resource is then participating in the CAISO Markets, namely, whether it is providing Supply, Demand, and/or Ancillary Services Bids. Scheduling Coordinators representing Non-Generator Resources using Regulation Energy Management must submit Bids compliant with the requirements of Section 8.4.1.2.

#### 30.5.6.1 State of Charge Bid Components

In addition to the Bid components listed in this Section 30.5, Scheduling Coordinators representing Non-Generator Resources may submit Bids including the State of Charge for the Day-Ahead Market to indicate the forecasted starting physical position of the Non-Generator Resource. In the Real-Time Markets, Scheduling Coordinators representing Non-Generator Resources may submit Bids including end-of-hour state-of-charge parameters as MWh ranges or specific MWh values. Where Scheduling Coordinators seek a state-of-charge range, they may submit a minimum and maximum MWh target. Where Scheduling Coordinators seek a specific state-of-charge value, they may submit equal minimum and maximum MWh targets. The CAISO will use reasonable efforts to commit, schedule, and dispatch Non-Generator Resources to meet their end-of-hour state-of-charge targets or ranges. Scheduling Coordinators may not submit MWh targets that (i) exceed their Master File energy or capacity limits; (ii) exceed their State of Charge limits; (iii) include a minimum MWh target greater than the maximum MWh target; (iv) conflict with RA Capacity obligations; or (v) preclude meeting an Ancillary Service Award, Schedule, or Obligation. Where Scheduling Coordinators elect to submit end-of-hour state-of-charge

targets, the CAISO RTM optimization processes will give them precedence over other Bid components, including without limitation, the Energy Bid Curve and Ancillary Services Bid. Where Scheduling Coordinators elect to submit end-of-hour state-of-charge parameters, the Non-Generator Resources will be ineligible for Bid Cost Recovery pursuant to Section 11.6.6. Scheduling Coordinators representing Non-Generator Resources using Regulation Energy Management may not include end-of-hour state-of-charge parameters.

**30.5.6.2 Hybrid Resource Bids**

In addition to the Bid components listed in this Section 30.5, Scheduling Coordinators representing Hybrid Resources will submit Hybrid Dynamic Limits representing Hybrid Resources' upper economic limit and lower economic limit in each Real-Time Market five-minute Trading Interval for a rolling six-hour look-ahead period. These limits will reflect the range of the Hybrid Resource's Economic Bids or Self-Schedules. Hybrid Dynamic Limits should reflect resource availability based on operating capabilities such as State of Charge and forecasted output from the variable component of a Hybrid Resource. Scheduling Coordinators may also use Hybrid Dynamic Limits to manage onsite charging of an energy storage component of a Hybrid Resource.

The CAISO will use reasonable efforts to issue Real-Time Market Schedules that respect Hybrid Dynamic Limits. Scheduling Coordinators may not submit Hybrid Dynamic Limits in the Day-Ahead Market.

**30.5.6.3 Co-Located Charging Constraints**

For an Aggregate Capability Constraint, the Interconnection Customer for Co-Located Resources may designate to the CAISO which storage resource will include Charging Constraints in its Bids. The Charging Constraint will apply to all storage resources under the Aggregate Capability Constraint. Charging Constraints will reflect an election not to charge beyond the output of the co-located Variable Energy Resource(s) in a given hour. When a Scheduling Coordinator for a Co-Located storage resource includes a Charging Constraint in its Bid, the CAISO will not issue (a) Day-Ahead Schedules for Energy less than the negative value of the co-located Variable Energy Resource's Day-Ahead Schedules; or (b) FMM Schedules or RTD Schedules for Energy that are less than the negative value of the co-located Variable Energy Resources' Dispatch Operating Targets, in the same Operating Intervals in the designated hour. Charging Constraints will not apply in Operating Intervals where the storage resources

receive an Ancillary Service Award to provide Regulation, where the storage resources elect to use Regulation Energy Management, or where the CAISO must issue an Exceptional Dispatch pursuant to Section 34.11.

### 30.5.7 E-Tag Rules and Treatment of Intertie Schedules

In addition to complying with all generally applicable E-Tagging requirements, Scheduling Coordinators receiving a HASP Block Intertie Schedule or HASP Advisory Schedule must submit an E-Tag (or set of E-Tags) in support of the HASP Schedule that passes CAISO E-Tag validation procedures. Such Scheduling Coordinators are also are subject to the FMM Schedule consequences specified in this Section 30.5.7.

#### 30.5.7.1 FMM E-Tag Submission Timing Cut-Offs

For the purposes of this section 30.5.7, the CAISO enforces the following FMM E-Tag submission timing cut-offs for Intertie Bids:

(a) Forty minutes prior to the Trading Hour (T-40) for the first FMM interval of the Trading Hour.

(b) Twenty-five minutes prior to the Trading Hour (T-25) for the second FMM interval of the Trading Hour.

(c) Twenty minutes prior to the Trading Hour (T-20) for the third and fourth FMM interval of the Trading Hour.

#### 30.5.7.2 Upper Limit on FMM Schedules

The RTUC does not award FMM Schedules that exceed the lowest of the:

1. Quantity of the HASP Block Intertie Schedule or HASP Advisory Schedule ADS recognizes the Scheduling Coordinator as accepting for the period covered by the FMM interval.
2. Transmission profile of the E-Tag at the FMM E-Tag submission timing cut-off for the FMM interval.
3. Energy profile of the E-Tag at the FMM E-Tag submission timing cut-off for the FMM interval.

#### 30.5.7.3 Intra-Hour Schedule Changes for HASP Advisory Schedules

The FMM may provide an intra-hour Schedule change to a resource with a HASP Advisory Schedule. The MW level to which the FMM can provide such a change above the HASP Advisory Schedule is limited by the quantity of the transmission profile submitted by the FMM E-Tag submission timing cut-off

for the relevant FMM interval.

The CAISO may increment or decrement the Energy profile on behalf of the Scheduling Coordinator to correspond to the intra-hour redispatch. Absent extenuating circumstances, the CAISO automatically makes such updates. In performing this service for a Scheduling Coordinator, the CAISO does not assume any responsibility for compliance with any E-Tag requirements or obligations to which the Scheduling Coordinator is subject. The Scheduling Coordinator is responsible for reviewing any potential updates to the Energy profile to review the updates and ensure they appropriately reflect the FMM schedule. The changed energy profile will apply for the balance of the operating hour unless it is subsequently changed by a further updated energy profile.

**30.5.7.4 CAISO Adjustments to Energy Profile for Reliability**

The CAISO may modify the Energy profile for any Intertie Schedule due to reliability-related curtailments.

**30.5.8 Demand Bids, Export Bids, Virtual Bids, and Bids for Non-Resource-Specific System Resources Above the Soft Energy Bid Cap**

**30.5.8.1 Day-Ahead Market.**

Scheduling Coordinators may submit Demand Bids, Export Bids, Virtual Bids, and Bids for Non-Resource-Specific System Resources above the Soft Energy Bid Cap, not to exceed the Hard Energy Bid Cap, for any Trading Hour of the DAM in which the CAISO has accepted a Bid with an Energy Bid price that exceeds the Soft Energy Bid Cap pursuant to Section 30.7.12, or the Maximum Import Bid Price exceeds the Soft Energy Bid Cap.

**30.5.8.2 Real-Time Market**.

Scheduling Coordinators may submit Export Bids and Bids for Non-Resource-Specific System Resources above the Soft Energy Bid Cap, not to exceed the Hard Energy Bid Cap, for any Trading Hour of the Real-Time Market in which

(a) The conditions in Section 30.5.8.1 applied to the same Trading Hour of the Day-Ahead Market; or

(b)

(1) The CAISO has accepted a Bid for the applicable Trading Hour of the Real-Time Market with an Energy Bid price that exceeds the Soft Energy Bid Cap pursuant

to Section 30.7.12, not including Bids from Reliability Demand Response Resources, or

(2) the Maximum Import Bid Price exceeds the Soft Energy Bid Cap.

**30.5.9 GHG Bid Adders**

Scheduling Coordinators for resources located within a GHG Regulation Area may submit GHG Bid Adders to serve Demand within another GHG Regulation Area in accordance with Sections 29.32 and 33.32.

**30.6 Bidding and Scheduling of PDRs and RDRRs**

**30.6.1 Bidding and Scheduling of PDRs**

Unless otherwise specified in the CAISO Tariff and applicable Business Practice Manuals, and subject to Section 30.6.3, the CAISO will treat Bids for Energy and Ancillary Services on behalf of Proxy Demand Resources like Bids for Energy and Ancillary Services on behalf of other types of supply resources. The CAISO will only accept the following types of Bids from Proxy Demand Resources:

(i) Economic Bids for Energy or Ancillary Services;

(ii) submissions to Self-Provide Ancillary Services;

(iii) submissions of Energy Self-Schedules from Proxy Demand Resources that have provided Submissions to Self-Provide Ancillary Services;

(iv) submissions of Energy Self-Schedules in the Real-Time Market up to the Proxy Demand Resource's Day-Ahead Market Schedule in the same Trading Hour;

(v) RUC Availability Bids; and

(vi) Imbalance Reserves Bids.

A Scheduling Coordinator for a Demand Response Provider representing a Proxy Demand Resource may Self-Provide Ancillary Services for which it is certified. The Demand Response Provider's Demand Response Services for Proxy Demand Resources will be bid separately and independently from the LSE's underlying Demand Bid.

**30.6.1.1 Bidding and Scheduling of PDRs in the Real-Time Market**

Pursuant to Section 4.13.3, Scheduling Coordinators for Proxy Demand Resources may submit Economic Bids for Energy and Ancillary Services in the Real-Time Markets. Pursuant to Section 30.5.1(s),

Scheduling Coordinators for Proxy Demand Resources may submit Economic Hourly Block Bids to be considered in the HASP, and to be accepted as binding Schedules with the same MWh award for each of the four FMM intervals. A cleared Economic Hourly Block Bid is not eligible for Bid Cost Recovery. Scheduling Coordinators for Proxy Demand Resources may not submit Economic Hourly Block Bids with an Intra-Hour Option.

#### 30.6.1.2 Bidding and Scheduling of Proxy Demand Resources using the Load-Shift Methodology

Scheduling Coordinators for Proxy Demand Resources using the load-shift methodology described in Section 4.13.4.7 will submit separate Economic Bids for the curtailment Resource ID and the consumption Resource ID that comprise the Proxy Demand Resource. The CAISO will use reasonable efforts to optimize both Resource IDs to avoid sending conflicting Schedules.

The CAISO will only accept the following types of Bids for the curtailment Resource ID:

(i) Economic Bids for Energy or Ancillary Services;

(ii) submissions to Self-Provide Ancillary Services;

(iii) submissions of Energy Self-Schedules where the curtailment Resource ID has provided Submissions to Self-Provide Ancillary Services;

(iv) submissions of Energy Self-Schedules in the Real-Time Market up to curtailment Resource ID's Day-Ahead Market Schedule in the same Trading Hour; and

(v) RUC Availability Bids; and

(vi) Imbalance Reserves Bids.

All Economic Bids for Energy for the curtailment Resource ID must be above the Market Clearing Prices established in Section 30.6.3. For the consumption Resource ID, the CAISO will only accept Economic Bids for Energy and submissions of Energy Self-Schedules in the Real-Time Market up to its Day-Ahead Market Schedule in the same Trading Hour. All Economic Bids for the consumption Resources must be below $0/MWh.

### 30.6.2 Bidding and Scheduling of RDRRs

Unless otherwise specified in the CAISO Tariff and applicable Business Practice Manuals, and subject to Section 30.6.3, the CAISO will treat Bids for Energy on behalf of Reliability Demand Response Resources like Bids for Energy on behalf of other types of supply resources. The CAISO will only accept Economic Bids for Energy from Reliability Demand Response Resources. A Scheduling Coordinator for a Demand Response Provider representing a Reliability Demand Response Resource may submit Economic Energy Bids for the Reliability Demand Response Resource only in the Day-Ahead Market and in the Real-Time Market, but may not submit Energy Self-Schedules for the Reliability Demand Response Resource, may not Self-Provide Ancillary Services from the Reliability Demand Response Resource, and may not submit RUC Availability Bids, Ancillary Service Bids for the Reliability Demand Response Resource, or Imbalance Reserves Bids. The Demand Response Provider's Demand Response Services for Reliability Demand Response Resources will be bid separately and independently from the LSE's underlying Demand Bid.

#### 30.6.2.1 Bidding and Scheduling of RDRRs in the Real-Time Market

Pursuant to Section 4.13.3, Scheduling Coordinators for Reliability Demand Response Resources may submit Economic Bids for Energy in the Real-Time Markets. Scheduling Coordinators for Reliability Demand Response Resources may submit Economic Hourly Block Bids to be considered in the HASP, and to be accepted as binding Schedules with the same MWh award for each of the four FMM intervals. A cleared Economic Hourly Block Bid is not eligible for Bid Cost Recovery. Scheduling Coordinators for Reliability Demand Response Resources may not submit Economic Hourly Block Bids with an Intra-Hour Option.

##### 30.6.2.1.1 Limitations on Obligation to Bid in the Real-Time Market

Within each Reliability Demand Response Services Term, any capacity of a Reliability Demand Response Resource that remains uncommitted after the Day-Ahead Market shall be bid in the Real-Time Market in order to be available to provide Demand Response Services in Real-Time until such time as the Reliability Demand Response Resource has reached the RDRR Availability Limit for the Reliability Demand Response Services Term. Within each Reliability Demand Response Services Term, any capacity of a Reliability Demand Response Resource that remains uncommitted after the Day-Ahead Market may be (but is not required to be) bid in the Real-Time Market in order to be available to provide

Demand Response Services in Real-Time after the Reliability Demand Response Resource has reached the RDRR Availability Limit during the Reliability Demand Response Services Term.

**30.6.2.1.2 Real-Time Dispatch Options**

For purposes of bidding and scheduling in the Real-Time Market, each Scheduling Coordinator for a Demand Response Provider representing a Reliability Demand Response Resource shall select either the Marginal Real-Time Dispatch Option or the Discrete Real-Time Dispatch Option prior to the start of the initial Reliability Demand Response Services Term applicable to the Reliability Demand Response Resource. The selection for each Reliability Demand Response Resource shall remain in effect until such time as the Scheduling Coordinator for the Reliability Demand Response Resource chooses to change its selection from the Marginal Real-Time Dispatch Option to the Discrete Real-Time Dispatch Option or vice versa, in which case the change in selection shall go into effect at the start of the next Reliability Demand Response Services Term applicable to the Reliability Demand Response Resource. A Reliability Demand Response Resource that is subject to either the Marginal Real-Time Dispatch Option or the Discrete Real-Time Dispatch Option shall have a Default Minimum Load Bids of zero (0) dollars. To promote feasible dispatches, the CAISO will set the Minimum Load of Reliability Demand Response Resources using the Discrete Real-Time Dispatch Option at an administrative value just below the upper economic limit of its Real-Time Bid. The CAISO will add to the Reliability Demand Response Resource's Minimum Load Bid a cost based on the product of this value and its Real-Time Bid price.

**30.6.2.1.2.1 Marginal Real-Time Dispatch Option**

A Reliability Demand Response Resource that is subject to the Marginal Real-Time Dispatch Option:

(a) May submit either a single-segment Bid or a multi-segment Bid in the Real-Time Market that must be at least ninety-five percent (95%) of the applicable Soft Energy Bid Cap.

(b) When (1) the CAISO has accepted a Bid for the applicable Trading Hour of the Real-Time Market with an Energy Bid price that exceeds the Soft Energy Bid Cap pursuant to Section 30.7.12, or (2) the Maximum Import Bid Price exceeds the Soft Energy Bid Cap, may submit either a single-segment Bid or a multi-segment Bid in the Real-Time Market that must be at least ninety-five percent (95%) of the applicable Hard Energy Bid Cap, not to exceed the Hard Energy Bid Cap.

In any instance where the Scheduling Coordinator for a Reliability Demand Response Resource has submitted a Real-Time Market Bid and the Soft Energy Bid Cap changes for the same Trading Hour, the Scheduling Coordinator should submit a revised Bid by Market Close. Where the Scheduling Coordinator does not submit a revised Bid, the CAISO will automatically adjust the Bid after Market Close, maintaining the percentage of the bid cap originally submitted by the Scheduling Coordinator, not to exceed the Hard Energy Bid Cap.

(c) Shall be dispatched as a marginal resource if it is dispatched by the CAISO. For the purpose of making this determination and setting the Locational Marginal Price, the CAISO treats a Reliability Demand Response Resource as if it were flexible with an infinite Ramp Rate between zero (0) and its PMax.

**30.6.2.1.2.2 Discrete Real-Time Dispatch Option**

A Reliability Demand Response Resource that is subject to the Discrete Real-Time Dispatch Option:

(a) May submit only a single-segment Bid in the Real-Time Market that must be at least ninety-five percent (95%) of the applicable Soft Energy Bid Cap.

(b) When (1) the CAISO has accepted a Bid for the applicable Trading Hour of the Real-Time Market with an Energy Bid price that exceeds the Soft Energy Bid Cap pursuant to Section 30.7.12, or (2) the Maximum Import Bid Price exceeds the Soft Energy Bid Cap, may submit only a single-segment Bid in the Real-Time Market that must be at least ninety-five percent (95%) of the applicable Hard Energy Bid Cap, not to exceed the Hard Energy Bid Cap.

In any instance where the Scheduling Coordinator for a Reliability Demand Response Resource has submitted a Real-Time Market Bid and the Soft Energy Bid Cap changes for the same Trading Hour, the Scheduling Coordinator should submit a revised Bid by Market Close. Where the Scheduling Coordinator does not submit a revised Bid, the CAISO will automatically adjust the Bid after Market Close, maintaining the percentage of the bid cap originally submitted by the Scheduling Coordinator, not to exceed the Hard Energy Bid Cap.

(c) Shall be dispatched as a discrete (non-marginal) resource if it is dispatched by the CAISO.

### 30.6.3 Net Benefits Test for PDRs or PDRRs

In accordance with Section 11.6, the CAISO will apply a net benefits test to determine a threshold Market Clearing Price for Proxy Demand Resources and Reliability Demand Response Resources. The CAISO will not accept Proxy Demand Resource or Reliability Demand Response Resource Bids for Energy below this threshold Market Clearing Price in the CAISO Markets.

#### 30.6.3.1 Supply Curve Used in Applying the Net Benefits Test

The CAISO will generate one (1) on-peak supply curve and one (1) off-peak supply curve for each month that depicts the system-wide aggregated power supplies at different offer prices in the CAISO Markets within that month. The CAISO will generate these two supply curves for each month, using the following sequential methodology:

(i) The CAISO will collect supply curve data for the month that is twelve (12) months prior to the month for which the CAISO is generating the supply curves (the reference month), using all mitigated Bids in the Real-Time Market from any Generating Unit that is either committed or uncommitted and excluding Import Bids and Export Bids.

(ii) The CAISO will adjust the supply curve data to reflect differences in resource availability and fuel prices between the target month and the reference month. Significant changes in resource availability will be determined using the averages of the hourly supply curves over the entire reference month, with the supply quantities being averaged for every price level. Significant changes in fuel prices will be determined using the simple average of the relevant fuel indices as specified in the Business Practice Manual. For every supply quantity, the corresponding price will be scaled using a scaling factor defined as the forward gas price for the Trading Month divided by the historical average gas price for the reference month. These adjustments will result in two representative supply curves for the target month, one (1) on-peak and one (1) off-peak.

(iii) The CAISO will smooth the representative supply curves to twice differentiable using an exponential form function and applying a price window that is likely to contain the

threshold Market Clearing Price. The price window may need to be adjusted in the process until the smoothed supply curves fit the representative supply curves closely. Using the smoothed supply curves, the CAISO will determine a candidate threshold Market Clearing Price for the on-peak and a threshold Market Clearing Price for the off-peak corresponding to the point on each supply curve beyond which (i) the product of the amount of supplied Power (prior to the dispatch of Proxy Demand Resources) and the reduction in Market Clearing Price that results from the dispatch of Proxy Demand Resources exceeds (ii) the product of the Market Clearing Price (prior to the dispatch of Proxy Demand Resources) and the reduction in the amount of supplied Power that results from the dispatch of Proxy Demand Resources. If the candidate threshold Market Clearing Price is outside the corresponding price window being used, the price window needs to be adjusted and this process will be repeated until the price window contains the candidate threshold Market Clearing Price and thus makes it the final threshold Market Clearing Price. If multiple candidate threshold Market Clearing Prices exist, the candidate threshold Market Clearing Price that is concave on the supply curve (a supply function of price) will be the final threshold Market Clearing Price.

#### 30.6.3.2 Information Posted on CAISO Website

The net benefits test will be posted on the CAISO website, along with supporting documentation and the threshold Market Clearing Prices that were in effect in the previous twelve (12) months, and any updated supply curve analysis. The CAISO will post the threshold Market Clearing Prices determined for each month on the CAISO Website by the fifteenth (15th) day of the immediately preceding month.

### 30.7 Bid Validation

The CAISO shall validate submitted Bids pursuant to the procedures set forth in this Section 30.7 and the rules set forth in the Business Practice Manuals.

#### 30.7.1 Scheduling Coordinator Access

Each Scheduling Coordinator will be provided access to the CAISO's secure communication system to submit, modify and cancel Bids prior to the close of both the DAM and RTM, as specified in Section 30.5.1. The CAISO shall provide information regarding submitted Bids including, but not be limited to, the following: (i) notification of acceptance; (ii) notification of validation; (iii) notification of rejection; (iv)

notification of status; (v) notification of submission error(s); and (vi) default modification or generation of Bids, including as further provided below, if any, on behalf of Scheduling Coordinators.

### 30.7.2 Timing of CAISO Validation

Once a Bid is submitted to the CAISO Markets, the Bid is available for validation, which is conducted in multiple steps. Clean Bids will be generated after Market Close.

### 30.7.3 Day-Ahead Market Validation

#### 30.7.3.1 Validation Prior to Market Close and Master File Update

The CAISO conducts Bid validation in three steps:

**Step 1:** The CAISO will validate all Bids after submission of the Bid for content validation which determines that the Bid adheres to the structural rules required of all Bids as further described in the Business Practices Manuals. If the Bid fails any of the content level rules the CAISO shall assign it a rejected status and the Scheduling Coordinator must correct and resubmit the Bid.

**Step 2:** After the Bids are successfully validated for content, but prior to the Market Close of the DAM, the Bids will continue through the second level of validation rules to verify that the Bid adheres to the applicable CAISO Market rules and if applicable, limits based on Master File data. If the Bid fails any level two validation rules, the CAISO shall assign the Bid as invalid and the Scheduling Coordinator must either correct or resubmit the Bid.

**Step 3:** If the Bid successfully passes validation in Step 2, it will continue through the third level of validation where the Bid will be analyzed based on its contents to identify any missing Bid components that must be present for the Bid to be valid consistent with the market rules contained in Article III of this CAISO Tariff and as reflected in the Business Practice Manuals. At this stage the Bid will either be automatically modified for correctness and assigned a status of conditionally modified or modified, or if it can be accepted as is, the Bid will be assigned a status of conditionally valid, or valid. A Bid will be automatically modified and assigned a status of modified or conditionally modified Bid, whenever the CAISO inserts or modifies a Bid component. The CAISO will insert or modify a Bid component (1) whenever a Self-Schedule quantity is less than the lowest quantity specified as an Economic Bid for either an Energy Bid or Demand Bid, in which case the CAISO extends the Self-Schedule to cover the gap; (2) whenever a Scheduling

Coordinator submits a RUC Availability Bid for RCU for less than the quantity of the Economic Bid for Energy, as specified in Section 30.5.2.8, in which case the Generated Bid quantity is the lower of the RUC Award eligibility under Section 31.5.5.3 or the Energy Bid range of the Energy Bid Curve and the Generated Bid price is the price included in the RUC Availability Bid for RCU, or at the Default Availability Bid if the Scheduling Coordinator did not submit any such Bid; and (3) as specified in Section 40.6.8 for Resource Adequacy Resources; (4) as specified in Section 31.5.1.5 for RUC Availability Bids for RCU for exports and Eligible Intermittent Resources; (5) as specified in Section 41.5.1 for RMR Resources; and (6) if an RMR Resource fails to submit a RUC Availability Bid for RCU as specified in Section 31.5.1.2, in which case the quantity of the Generated Bid is at the required quantity and the price of the generated bid is at the price included in the RUC Availability Bid for RCU, or at the Default Availability Bid if the Scheduling Coordinator did not submit any such Bid.

Throughout the Bid evaluation process, the Scheduling Coordinator shall have the ability to view the Bid and may choose to cancel the Bid, modify and re-submit the Bid, or leave the modified, conditionally modified or valid, conditionally valid Bid as is to be processed in the designated CAISO Market. These validation rules apply to Bids submitted on behalf of Use Limited Resources. The purpose of the validation rules is not to increase the amount of capacity that a Use Limited Resource has offered into the CAISO Markets.

#### 30.7.3.2 Master File Data Update

Except as otherwise prescribed in this tariff, once a day the Master File data is updated with changes to the Master File that were submitted between at least five (5) and up to eleven (11) Business Days in advance, after which all conditional Bids must be re-validated prior to the trading period when the Bid will take effect. After this re-validation takes place, the status of all conditionally modified and conditionally valid Bids may be changed to modified or valid, if the Bid period is for the next relevant DAM.

#### 30.7.3.3 Validation Prior to Market Close and After Master File Update

Prior to the Market Close of the DAM, after the Master File data has been updated, all Bids must be re-validated using the same process as described in Section 30.7.3.1 to produce either valid Bids or modified Bids. Throughout this process the Scheduling Coordinator shall have the ability to view the Bid

and may choose to re-submit (at which point the Bid would undergo the Bid validation process described in this Section 30.7 again), cancel, or modify the Bid. Valid or modified Bids that are not re-submitted or cancelled become Clean Bids after the Market Close of the DAM. Modified Bids for Resource Adequacy Resources will reflect the full amount of the resource's Resource Adequacy Capacity.

#### 30.7.3.4 Validation After Market Close

To the extent that a Scheduling Coordinator fails to enter a Bid for a resource that is required to submit a Bid in the full range of available capacity consistent with the bidding provisions of Section 30 or the Resource Adequacy provisions of Section 40, the CAISO will create a Bid for the Scheduling Coordinator, which is referred to as the Generated Bid. This does not apply to Load-following MSSs. The Generated Bid will be created only after the Market Close for the DAM and will be based on data registered in the Master File, and, if applicable, published natural gas pricing data and published pricing data for greenhouse gas allowances. The Generated Bid components will be calculated as set forth in Sections 30 and 40.6.8. The Scheduling Coordinator may view Generated Bids, but may not modify such Bids, unless the CAISO has approved a Reference Level Change Request for the resource's Default Energy Bid. The CAISO will provide notice to the Scheduling Coordinator of the use of a Generated Bid prior to Market Clearing of the IFM. In addition, validation of export priority pursuant to Sections 31.4 and 34.12.1 and Wheeling Through transactions pursuant to Section 30.5.4 occur after the Market Close for the DAM.

#### 30.7.3.5 Bid Validation Rules for Multi-Stage Generating Resources

If a Scheduling Coordinator does not submit a Bid in the Day-Ahead Market or Real-Time Market for a Multi-Stage Generating Resource with a Resource Adequacy must-offer obligation at a MSG Configuration that can meet the applicable Resource Adequacy must-offer obligation, the CAISO will create a Generated Bid for the default Resource Adequacy MSG Configuration. If the Multi-Stage Generating Resource is not capable of Start-Up in the default Resource Adequacy MSG Configuration, then the ISO will, based on feasibility of transitions, create a Generated Bid for every MSG Configuration that has a minimum output below the MW level of the Resource Adequacy must-offer obligation, which will cover the operating range from its minimum output to the minimum of its maximum output and the

MW level of the Resource Adequacy must-offer obligation. In the event that the Scheduling Coordinator does not submit a Bid in compliance with section 30.5.1(p), the CAISO will create a Generated Bid for all of the capacity not bid into the CAISO Market between the maximum bid-in Energy MW and the higher of Self-Scheduled Energy MW and the Multi-Stage Generating Resource plant-level PMin. If the Scheduling Coordinator submits a Bid for the Multi-Stage Generating Resource, the CAISO will create this Generated Bid for the registered MSG Configurations before the Market Close, and if it does not submit such a Bid the CAISO will create this Generated Bid after the Market Close. Any Generated Bid created by the CAISO for the default Resource Adequacy MSG Configuration will be in addition to the MSG Configurations bid into the Real-Time Market by the responsible Scheduling Coordinator. If the Scheduling Coordinator submits a Bid in the Day-Ahead Market or Real-Time Market for a MSG Configuration that is not the default Resource Adequacy MSG Configuration and that does not cover the full amount of the resource's Resource Adequacy requirements, the CAISO will create a Generated Bid for the full Resource Adequacy Capacity. Before the market closes, if a Scheduling Coordinator submits a Bid in the Day-Ahead Market or Real-Time Market for the default Resource Adequacy MSG Configuration of a Multi-Stage Generating Resource that only meets part of the resource's Resource Adequacy must-offer obligation, the CAISO will extend the last segment of the Energy Bid curve in the submitted Bid for the Multi-Stage Generating Resource up to the Multi-Stage Generating Resource's Resource Adequacy must-offer obligation. After the market closes, to the extent that no Bid is submitted into the Real-Time Market for a Multi-Stage Generating Resource scheduled in the Integrated Forward Market as required in Section 30.5 the CAISO will create a Self-Schedule for MSG Configuration equal to the Day-Ahead Schedule for that resource for the MSG Configuration scheduled in the IFM. To the extent a Multi-Stage Generating Resource is awarded Operating Reserves in the Day-Ahead Market and no Economic Energy Bids is submitted for that resource in the Real-Time Market, the CAISO will insert Proxy Energy Bid in the MSG Configuration that was awarded in the Day-Ahead Market to cover the awarded Operating Reserves. The CAISO will validate that the combination of the Day-Ahead Ancillary Services Awards and Submissions to Self-Provide Ancillary Services are feasible with respect to the physical operating characteristics of the applicable MSG Configuration. The CAISO will reject Ancillary Services Bids or Submissions to Self-Provide Ancillary Services for MSG Configurations that are not

certified to provide Ancillary Services. For any given Multi-Stage Generating Resource, for any given CAISO Market and Trading Hour if one MSG Configuration's Bid fails the bid validation process, all other Bids for all other MSG Configurations are also invalidated.

#### 30.7.3.6 Additional Bid Validation Rules for Virtual Bids

In addition to the validation rules described in Section 30.7.3.1, Virtual Bids will be subject to the following additional validation rules.

##### 30.7.3.6.1 Scheduling Coordinator Validation

The CAISO will validate that the SCID associated with a Virtual Bid is submitted from a Scheduling Coordinator authorized to submit Virtual Bids and that the Virtual Bid is submitted at an Eligible PNode or Eligible Aggregated PNode. The CAISO will reject Virtual Bids that do not satisfy these requirements.

##### 30.7.3.6.2 Credit Requirement

Virtual Bids must satisfy the credit requirements of Section 12.8. The Scheduling Coordinator will be notified if Virtual Bids fail to satisfy the credit requirements. If the Scheduling Coordinator fails to resubmit Virtual Bids that satisfy the credit requirements or to provide adequate additional Financial Security, the CAISO will reject the Scheduling Coordinator's Virtual Bids on a last-in, first-out basis.

##### 30.7.3.6.3 Position Limits

For each Convergence Bidding Entity, the CAISO will reject all Virtual Bids submitted by its Scheduling Coordinator at any Eligible PNode or Eligible Aggregated PNode (other than a Default LAP or Trading Hub) that exceed the position limits specified in this Section 30.7.3.6.3. If the Scheduling Coordinator uses multiple SCIDs on behalf of a Convergence Bidding Entity, the position limits will apply to the sum of those Virtual Bids submitted at the Eligible PNode or Eligible Aggregated PNode (other than a Default LAP or Trading Hub). The CAISO will perform all position limit calculations based on the highest Virtual Bid segment MW point submitted in the Virtual Bid Curve. The CAISO will not net Virtual Supply Bids and Virtual Demand Bids in performing the position limit calculations. The affected Scheduling Coordinator will be provided notice that position limits have been violated. If the Scheduling Coordinator does not resubmit Virtual Bids within the position limits, the CAISO will reject Virtual Bids for all hours at each Eligible PNode and Eligible Aggregated PNode (other than a Default LAP or Trading Hub) where the position limits are violated. Position limits only apply to Eligible PNodes or Eligible Aggregated PNodes

(other than Default LAPs or Trading Hubs).

#### 30.7.3.6.3.1 Position Limits at Eligible PNodes and Eligible Aggregated PNodes

For an Eligible PNode associated with a single physical supply resource, the CAISO will publish a locational limit that will be equal to the PMax of the physical supply resource. For an Eligible PNode or Eligible Aggregated PNode (other than a Default LAP or Trading Hub) associated with more than one physical supply resource, the CAISO will publish a locational limit that will be equal to the sum of the PMaxes of the physical supply resources. For an Eligible PNode associated with a single physical demand resource, the CAISO will publish a locational limit that will be equal to the forecast of the maximum MW consumption of the physical demand resource. For an Eligible PNode or Eligible Aggregated PNode (other than a Default LAP or Trading Hub) associated with more than one physical demand resource, the CAISO will publish a locational limit that will be equal to the forecast of the maximum MW consumption of the physical demand resources. The percentages used to calculate the position limits for each Convergence Bidding Entity at Eligible PNodes and Eligible Aggregated PNodes (other than Default LAPs or Trading Hubs) will be the following percentages of the published locational limits:

(a) Position limits of ten (10) percent will apply during the time period beginning as of the effective date of this tariff provision through the last day of the eighth month following the effective date of this tariff provision.

(b) Position limits of fifty (50) percent will apply during the time period beginning as of the first day of the ninth month following the effective date of this tariff provision through the last day of the twelfth month following the effective date of this tariff provision.

(c) Position limits will cease to apply beginning on the first day of the month as of the first anniversary of the effective date of this tariff provision.

The CAISO will enforce the position limits for Eligible PNodes and Eligible Aggregated PNodes (other than Default LAPs or Trading Hubs) at the time of Virtual Bid submission. It is possible for the enforcement of position limits on a later-submitted Virtual Bid to cause a previously approved Virtual Bid to be rejected, if both of those Virtual Bids are submitted by a Scheduling Coordinator on behalf of the same Convergence Bidding Entity at the same Eligible PNode or Eligible Aggregated PNode (other than

a Default LAP or Trading Hub). The CAISO will timely publish the locational limits for Eligible PNodes and Eligible Aggregated PNodes (other than Default LAPs or Trading Hubs).

**30.7.3.6.3.2 [Not Used]**

**30.7.4 RTM Validation**

RTM Bids will include the same validation process implemented in the DAM with the following additional rules. The CAISO will not validate the Bid before and again after the Master File Data update. RTM Bids are only validated based on the current Master File Data on the relevant Trading Day.

The CAISO will insert a Generated Bid or extend an Energy Bid or Self-Schedule in the RTM to cover any Day-Ahead Schedule, RUC Award, or Imbalance Reserves Award in the absence of the required Self-Schedule or Economic Bid components, or to fill in any gaps between any Self-Schedule Bid and any Economic Bid components to cover a Day-Ahead Schedule, RUC Award, or Imbalance Reserves Award. To the extent that an Energy Bid to the HASP/RTM is not accompanied by an Ancillary Services Bid, the CAISO will insert a Spinning Reserve and Non-Spinning Reserve Ancillary Services Bid at $ 0/MW for any certified Operating Reserve capacity. The CAISO also will generate a Self-Schedule Bid for any Generating Unit that has a Day-Ahead Schedule but has not submitted Bids in HASP/RTM, up to the quantity in the Day-Ahead Schedule.

**30.7.5 Validation of ETC Self-Schedules**

ETC Self-Schedules shall be validated pursuant to the procedures set forth in Section 16.6.

**30.7.6 Validation and Treatment of Ancillary Services Bids**

**30.7.6.1 Validation of Ancillary Services Bids**

Throughout the validation process described in Section 30.7, the CAISO will verify that each Ancillary Services Bid conforms to the content, format and syntax specified for the relevant Ancillary Service. If the Ancillary Services Bid does not so conform, the CAISO will send a notification to the Scheduling Coordinator notifying the Scheduling Coordinator of the errors in the Bids as described in Section 30.7. When the Bids are submitted, a technical validation will be performed to verify that the bid quantity of Regulation, Spinning Reserve, or Non-Spinning Reserve does not exceed the certified Ancillary Services capacity for Regulation, or Operating Reserves on the Generating Units, System Units, Participating Loads, Proxy Demand Resources, and external imports/exports bid. The Scheduling Coordinator will be

notified within a reasonable time of any validation errors. For each error detected, an error message will be generated by the CAISO in the Scheduling Coordinator's notification screen, which will specify the nature of the error. The Scheduling Coordinator can then look at the notification messages to review the detailed list of errors, make changes, and resubmit if it is still within the CAISO's timing requirements. The Scheduling Coordinator is also notified of successful validation. If a resource is awarded or has qualified Self-Provided Ancillary Services in the Day-Ahead Market, the following rules will apply: (1): if no Energy Self-Schedule is submitted to support a Submission to Self-Provide an Ancillary Service for Regulation, the Submission to Self-Provide an Ancillary Service will be invalidated: (2) if no Energy Supply Bid is submitted to cover the awarded or Self- Provided Ancillary Services for Spinning Reserve or Non-Spinning Reserve by the Market Close of the RTM, the CAISO will generate or extend an Energy Supply Bid as necessary to cover the awarded or Self-Provided Ancillary Services capacity using the registered values in the Master File and relevant fuel prices as described in the Business Practice Manuals for use in the RTM and IFM. If an AS Bid or Submission to Self-Provide an AS is submitted in the Real-Time Market for Spinning Reserve or Non-Spinning Reserve without an accompanying Energy Supply Bid at all, the AS Bid or Submission to Self-Provide an Ancillary Service will be erased. If an AS Bid is submitted in the Real-Time Market for Spinning Reserve and Non-Spinning Reserve with only a partial Energy Supply Bid for the AS capacity, the CAISO will generate an Energy Supply Bid for the uncovered portions. If a Submission to Self-Provide an Ancillary Service is submitted in the Real-Time Market for Spinning Reserve and Non-Spinning Reserve with only a partial Energy Supply Bid for the AS capacity bid in, the CAISO will not generate or extend an Energy Supply Bid for the uncovered portions. For Generating Units with certified Regulation capacity, if there no Bid for Regulation in the Real-Time Market, but there is a Day-Ahead award for Regulation Up or Regulation Down or a submission to self-provide Regulation Up or Regulation Down, respectively, the CAISO will generate a Regulation Up or Regulation Down Bid at the default Ancillary Service Bid price of $0 up to the certified Regulation capacity for the Generating Unit minus any Regulation awarded or self-provided in the Day- Ahead. If there is a Bid for Regulation Up or Regulation Down in the Real-Time Market, the CAISO will increase the respective Bid up to the certified Regulation capacity for the Generating Unit minus any Regulation awarded or self-provided in the Day-Ahead. If a Self-Schedule amount is greater than the Regulation Limit for Regulation Up, the Regulation

Up Bid will be erased.

Notwithstanding any of the provisions of Section 30.7.6.1 set forth above, the CAISO will not insert or extend any Bid for Regulation Up or Regulation Down for a Use-Limited Resource of a Load Following MSS Operator. The CAISO will not insert a Spinning Reserve and Non-Spinning Reserve Ancillary Service Bid at $0 in the Real-Time Market for any certified Operating Reserve capacity of a resource unless that resource submits an Energy Supply Bid but fails to submit an Ancillary Service Bid in the Real-Time Market.

**30.7.6.2 Treatment of Ancillary Services Bids**

When Scheduling Coordinators bid into the Regulation Up, Regulation Down, Spinning Reserve, and Non-Spinning Reserve markets, they may submit Bids for the same capacity into as many of these markets as desired at the same time by providing the appropriate Bid information to the CAISO. The CAISO optimization will evaluate AS Bids simultaneously with Energy Bids. A Scheduling Coordinator may specify that its Bid applies only in the markets it desires. A Scheduling Coordinator shall also have the ability to specify different capacity prices for the Spinning Reserve, Non-Spinning Reserve, and Regulation markets. A Scheduling Coordinator providing one or more Regulation Up, Regulation Down, Spinning Reserve or Non-Spinning Reserve services may not change the identification of the Generating Units or Proxy Demand Resources offered in the Day-Ahead Market or in the Real-Time Market for such services unless specifically approved by the CAISO (except with respect to System Units, if any, in which case Scheduling Coordinators are required to identify and disclose the resource specific information for all Generating Units, Participating Loads, and Proxy Demand Resources constituting the System Unit for which Bids and Submissions to Self-Provide Ancillary Services are submitted into the CAISO's Day-Ahead Market and Real-Time Market).

The following principles will apply in the treatment of Ancillary Services Bids in the CAISO Markets:

(a) not differentiate between bidders for Ancillary Services and Energy other than through cost, price, effectiveness, and capability to provide the Ancillary Service or Energy, and the required locational mix of Ancillary Services;

(b) select the bidders with most cost effective Bids for Ancillary Service capacity which meet

its technical requirements, including location and operating capability to minimize the costs to users of the CAISO Controlled Grid;

(c) evaluate the Day-Ahead Bids over the twenty-four (24) Settlement Periods of the following Trading Day along with Energy, taking into account Transmission Constraints and AS Regional Limits;

(d) evaluate Import Bids along with Bids from internal resources (which includes Pseudo-Ties of Generating Units to the CAISO Balancing Authority Area);

(e) establish Real-Time Ancillary Service Awards through the FMM from imports and resources internal to the CAISO Balancing Authority Area (which includes Pseudo-Ties of Generating Units to the CAISO Balancing Authority Area) at fifteen (15) minutes intervals to the hour of operation; and

(f) procure sufficient Ancillary Services in the Day-Ahead and Real-Time Markets to meet its forecasted requirements.

**30.7.7 Format and Validation of Operational Ramp Rates**

The submitted Operational Ramp Rate expressed in megawatts per minute (MW/min) as a function of the operating level, expressed in megawatts (MW), must be a staircase function with up to four segments. There is no monotonicity requirement for the Operational Ramp Rate. The submitted Operational Ramp Rate shall be validated as follows:

(a) The range of the submitted Operational Ramp Rate must cover the entire capacity of the resource, from the minimum to the maximum operating capacity, as registered in the Master File for the relevant resource.

(b) The operating level entries must match exactly (in number, sequence, and value) the corresponding minimum and maximum Operational Ramp Rate breakpoints, as registered in the Master File for the relevant resource.

(c) If a Scheduling Coordinator does not submit an Operational Ramp Rate for a generating unit for a day, the CAISO shall use the maximum Ramp Rate for each operating range

set forth in the Master File as the Ramp Rate for that unit for that same operating range for the Trading Day.

(d) The last Ramp Rate entry shall be equal to the previous Ramp Rate entry and represent the maximum operating capacity of the resource as registered in the Master File. The resulting Operational Ramp Rate segments must lie between the minimum and maximum Operational Ramp Rates, as registered in the Master File.

(e) The submitted Operational Ramp Rate must be the same for each hour of the Trading Day, i.e., the Operational Ramp Rate submitted for a given Trading Hour must be the same with the one(s) submitted earlier for previous Trading Hours in the same Trading Day.

(f) Outages that affect the submitted Operational Ramp Rate must be due to physical constraints, reported in the CAISO's outage management system pursuant to Section 9 and are subject to CAISO approval. All approved changes to the submitted Operational Ramp Rate will be used in determination of Dispatch Instructions for the shorter period of the balance of the Trading Day or duration of reported Outage.

(g) Operational Ramp Rate derates in the CAISO's outage management system pursuant to Section 9 may be declared for any operational segment established in the Master File. Ramping capability through Forbidden Operating Regions are not affected by derates entered in the CAISO's outage management system pursuant to Section 9.

(h) The amount of change in Ramp Rates from one operating range to a subsequent operating range must not exceed a 10 to 1 ratio, and any Ramp Rate change in excess will be adjusted to achieve the 10 to 1 ratio. This adjustment will also include the implicit ramp rate in the Forbidden Operating Region.

(i) For all CAISO Dispatch Instructions of Reliability Must-Run Units the Operational Ramp Rate will be the Ramp Rate declared in the Reliability Must Run Contract Schedule A.

**30.7.8 Format and Validation of Start-Up and Shut-Down Times**

For a Generating Unit or a Resource-Specific System Resource, the submitted Start-Up Time expressed in minutes (min) as a function of down time expressed in minutes (min) must be a staircase function with

up to three (3) segments defined by a set of one (1) to four (4) down time and Start-Up Time pairs. The Start-Up Time is the time required to start the resource if it is offline longer than the corresponding down time. The CAISO shall model Start-Up Times for Multi-Stage Generating Resource at the MSG Configuration level and Transition Times are validated based on the Transition Matrix submitted as provided in Section 27.8. The last segment will represent the time to start the unit from a cold start and will extend to infinity. The submitted Start-Up Time function shall be validated as follows:

(a) The first down time must be zero (0) minutes.

(b) The down time entries must match exactly (in number, sequence, and value) the corresponding down time breakpoints of the maximum Start-Up Time function, as registered in the Master File for the relevant resource.

(c) The Start-Up Time for each segment must not exceed the Start-Up Time of the corresponding segment of the maximum Start-Up Time function, as registered in the Master File for the relevant resource.

(d) The Start-Up Time function must be strictly monotonically increasing, i.e., the Start-Up Time must increase as down time increases.

For Participating Load and for a Proxy Demand Resource or Reliability Demand Response Resource, a single Shut-Down time in minutes is the time required for the resource to Shut-Down after receiving a Dispatch Instruction. For Multi-Stage Generating Resources, the Scheduling Coordinator must provide Start-Up Bids for each MSG Configuration into which the resource can be started.

**30.7.9 Format and Validation of Start-Up Bids and Shut-Down Costs**

For a Generating Unit or a Resource-Specific System Resource, the submitted Start-Up Bid expressed in dollars ($) as a function of down time expressed in minutes must be a staircase function with up to three (3) segments defined by a set of one (1) to four (4) down time and Start-Up Bid pairs. The Start-Up Bid is the cost incurred to start the resource if it is offline longer than the corresponding down time. The last segment of the Start-Up Bid will represent the cost to start the resource from cold Start-Up and will extend to infinity. The CAISO will validate the submitted Start-Up Bid as follows:

(a) The first down time must be zero (0) minutes.

(b) The down time entries must match exactly (in number, sequence, and value) the

corresponding down time breakpoints of the Start-Up Time information, as registered in the Master File.

(c) The Start-Up Cost for each segment must be non-negative.

(d) The Start-Up Cost Curve must be strictly monotonically increasing non-negative staircase curves (*i.e.,* the Start-Up Cost must increase as down time increases), up to three (3) segments, which represent a function of Start-Up Cost versus down time.

(e) If the Proxy Cost methodology pursuant to Section 30.4.5 applies to the resource, the Scheduling Coordinator for that resource may submit a daily Start-Up Bid for which the included Start-Up Costs must be non-negative and may be less than or equal to the resource's Default Start-Up Bid.

(f) For a resource that is eligible and has elected to use the Registered Cost methodology pursuant to Section 30.4.7, if a Start-Up Cost value is submitted in a Start-Up Bid, the CAISO will override that submitted Start-Up Cost with the Registered Cost reflected in the Master File.

(g) If no Start-Up Cost is submitted in a Bid, the CAISO will insert the Proxy Start-Up Cost plus the applicable Start-Up Opportunity Cost, or the Master File Registered Cost based on the methodology elected pursuant to Section 30.4. If the resource has an approved Reference Level Change Request and if no Start-Up Cost is submitted in a Bid, the CAISO will insert the revised Reference Level Start-Up Cost.

(h) The Start-Up Bid for a Reliability Demand Response Resource shall be zero (0).

(i) For Participating Loads and Proxy Demand Resources, a single Shut-Down Cost in dollars ($) is the cost incurred to Shut-Down the resource after receiving a Dispatch Instruction. The submitted Shut-Down Cost must be non-negative.

(j) For Multi-Stage Generating Resources, for any MSG Configuration for which a Bid is submitted, the Scheduling Coordinator must provide the Start-Up Bid for each MSG Configuration into which the resource can be started.

**30.7.10 Format and Validation of Minimum Load Bids**

**30.7.10.1 In General**

Scheduling Coordinators may submit a Minimum Load Bid for a Generating Unit or a Resource-Specific System Resource, Participating Load, Reliability Demand response Resource, or Proxy Demand Resource, expressed in dollars per hour ($/hr) representing the cost incurred for operating the unit at Minimum Load as registered in the Master File or as modified pursuant to Section 30.7.10.2. The CAISO will validate the Minimum Load Bids as follows:

(a) The submitted Minimum Load Cost must be non-negative. If the Proxy Cost methodology pursuant to Section 30.4.5 applies to the resource, the Scheduling Coordinator for that resource may submit a daily Bid for the Minimum Load Bid that must be non-negative and may be less than or equal to the Default Minimum Load Bid.

(b) For a resource that is eligible and has elected to use the Registered Cost methodology pursuant to Section 30.4.7, any submitted Minimum Load Cost must be equal to the Minimum Load Cost as registered in the Master File.

(c) If no Minimum Load Cost is submitted in a Bid, the CAISO will insert the Proxy Minimum Load Cost plus the applicable Minimum Load Opportunity Cost, or the Master File Registered Cost based on the methodology elected pursuant to Section 30.4. If the resource has an approved Reference Level Change Request and if no Minimum Load Cost is submitted in a Bid, the CAISO will insert the applicable Revised Default Commitment Cost Bid.

**30.7.10.2 Adjustments to Minimum Load Costs Due to Increases in Minimum Load**

For Generating Units or Resource-Specific System Resources for which the responsible Scheduling Coordinator has temporarily increased their Minimum Load through the CAISO's outage management system as specified in Section 9.3.3, regardless of the election made pursuant to Section 30.4, the CAISO will add to the Minimum Load Costs submitted by the Scheduling Coordinator the cost of the incremental Minimum Load determined as the product of the resource's applicable Default Energy Bid and the corresponding MWs between the resource's original Minimum Load as registered in the Master File and the Minimum Load increased pursuant to Section 9.3.3. The CAISO will use the adjusted Minimum Load Cost in the clearing of the applicable CAISO Markets as well as for Settlement purposes as described in Section 11. For Multi-Stage Generating Resources, the adjustments to Minimum Load

Cost will be made at the MSG Configuration level.

**30.7.10.3 [Not Used]**

**30.7.11 Format and Validation of Transition Bids**

The Scheduling Coordinators may submit Transition Bids for a Multi-Stage Generating Resource that must meet the following requirements:

(a) The Transition Bids are non-negative.

(b) For resources under the Proxy Cost methodology, Transition Bids must be less than or equal to the Default Transition Bids calculated under the Proxy Cost methodology.

(c) For resources under the Registered Cost methodology, Transition Bids must equal the Default Transition Bids as registered in the Master File.

(d) If no Transition Cost is submitted in a Transition Bid, the CAISO will insert the Proxy Transition Cost plus the applicable Transition Opportunity Cost, or as registered in the Master File, based on the elected methodology pursuant to Section 30.4. If the resource has an approved Reference Level Change Request and if no Transition Cost is submitted in a Bid, the CAISO will insert the difference between the applicable Revised Default Commitment Cost Bid (*i.e.*, revised Default Start-Up Bid) for the higher MSG Configuration minus the applicable Start-Up Opportunity Cost for the higher MSG configuration and the revised applicable Revised Default Commitment Cost Bid (*i.e.*, revised Default Start-Up Cost Bid) for the lower MSG Configuration minus the applicable Start-Up Opportunity Cost for the lower MSG configuration, plus the applicable transition Opportunity Cost. If the result of this calculation is negative for any transition between two MSG Configurations, then the Transition Cost shall be zero.

**30.7.12 Validation of Bids in Excess of Soft Energy Bid Cap, Hard Energy Bid Cap, or Minimum Load Cost Hard Cap**

**30.7.12.1 Generally**

Except as otherwise stated in this Section 30.7.12, the validation rules in this Section 30.7.12 apply to all Energy Bids and Minimum Load Bids submitted by Scheduling Coordinators. The provisions of Sections 30.7.12.1 through 30.7.12.4 do not apply to Virtual Bids and Energy Bids submitted for Non-Resource-

Specific System Resources; the provisions of Section 30.7.12.5 apply to Virtual Bids and Energy Bids submitted for Non-Resource-Specific System Resources. The CAISO will allow Bids for Non-Resource-Specific System Resources that are Resource Adequacy Resources and that exceed the Soft Energy Bid Cap subject to the Bid price screens described in Section 30.7.12.5.1. The CAISO will allow Virtual Bids, Export Bids, Demand Bids, and Bids for Non-Resource-Specific System Resources that are not Resource Adequacy Resources and that exceed the Soft Energy Bid Cap subject to the rules specified in Section 30.7.12.5.2. The CAISO will reject Virtual Bids, Export Bids, Demand Bids, and Bids for Non-Resource-Specific System Resources that exceed the Hard Energy Bid Cap.

**30.7.12.2 Energy Bids that Exceed the Soft Energy Bid Cap**

In addition to all other Bid validation rules that apply to Energy Bids, if a Scheduling Coordinator submits an Energy Bid price that exceeds the Soft Energy Bid Cap, the CAISO will modify the Energy Bid price for purposes of clearing the relevant CAISO Market Process to the higher of the Soft Energy Bid Cap or the resource's Default Energy Bid, including when the Default Energy Bid is modified pursuant to a Reference Level Change Request pursuant to Section 30.11 or when the Default Energy Bid would rise above the Soft Energy Bid Cap based upon its general calculation. Energy Bids for storage resources may exceed the Soft Energy Bid Cap pursuant to Section 30.7.12.6.

**30.7.12.3 Energy Bids that Exceed the Hard Energy Bid Cap and Minimum Load Bids that Exceed the Minimum Load Cost Hard Cap**

All Energy Bid prices and Minimum Load Bid prices used in the CAISO Market Processes shall not exceed the Hard Energy Bid Cap or the Minimum Load Cost Hard Cap, respectively.

**30.7.12.4 After-Market Cost Recovery**

For any Energy Bid, except for Energy Bids for Non-Resource-Specific System Resources, Virtual Bids, Export Bids, Demand Bids, or Minimum Load Bid price submitted above the Energy Bid price or the Minimum Load Bid price the CAISO uses in the CAISO Market Processes, the Scheduling Coordinators may be eligible for after-market cost recovery pursuant to Section 30.12.

**30.7.12.5 Virtual Bids, Export Bids, Demand Bids, and Bids for Non-Resource-Specific System Resources**

#### 30.7.12.5.1 Bids for Non-Resource-Specific System Resources that are Resource Adequacy Resources

The CAISO will reduce Bids for Non-Resource-Specific System Resources that are Resource Adequacy Resources that exceed the Maximum Import Bid Price to the greater of the Soft Energy Bid Cap, the Maximum Import Bid Price, or the highest-priced Energy Bid from a Resource-Specific System Resource that the CAISO has accepted for the applicable Trading Hour pursuant to Section 30.7.12.2.

#### 30.7.12.5.2 Virtual Bids, Export Bids, Demand Bids, and Bids for Non-Resource-Specific System Resources that are not Resource Adequacy Resources

The CAISO will accept Virtual Bids, Export Bids, Demand Bids, and Bids for Non-Resource-Specific System Resources that are not Resource Adequacy Resources that exceed the Soft Energy Bid consistent with the conditions specified in Section 30.5.8. The CAISO will not accept Export Bids, Demand Bids, Virtual Bids, or Bids for Non-Resource-Specific System Resources that are not Resource Adequacy Resources that exceed the Hard Energy Bid Cap.

#### 30.7.12.5.3 Maximum Import Bid Price

The CAISO calculates hourly Maximum Import Bid Prices for the Day-Ahead Market and Real-Time Market, separately, including for on-peak and off-peak hours. The CAISO calculates the Maximum Import Bid Price as 110 percent of the greater of the published bilateral electric index prices for the Mid-Columbia or Palo Verde trading hub locations, multiplied by an hourly shaping ratio. As detailed in the CAISO Business Practice Manual, the CAISO calculates the hourly shaping ratio for each hour by dividing the Day-Ahead Market Marginal Energy Cost for the CAISO Balancing Authority Area in that hour of a previous representative Trading Day by the average Day-Ahead Market Marginal Energy Cost for the CAISO Balancing Authority Area in all on-peak hours of the same previous representative Trading Day. If for any given Trading Hour the CAISO cannot calculate the Maximum Import Bid Price, the applicable Maximum Import Bid Price will be the most recently available calculated Maximum Import Bid Price.

### 30.7.12.6 Energy Storage Bids

For energy storage resources using the Non-Generator Resource model, the CAISO will allow Energy Bids that exceed the Soft Energy Bid Cap subject to the Bid price screens described here. This Section 30.7.12.6 does not apply to Hybrid Resources. Notwithstanding any other provision, the CAISO will reject Energy Bids that exceed the Hard Energy Bid Cap. In the Real-Time Market, the CAISO will accept

Energy Bids from Scheduling Coordinators for storage resources using the Non-Generator Resource model up to the higher of (a) the fourth-highest calculated hourly value of the Maximum Import Bid Price for that Trading Day in the applicable CAISO Market Process; (b) the highest-priced Energy Bid from a resource subject to a Default Energy Bid that the CAISO has accepted for the applicable Trading Hour pursuant to Section 30.7.12.2, excluding without limitation Virtual Bids, Export Bids, Demand Bids, and Bids for Non-Resource-Specific System Resources; and (c) the resource's Default Energy Bid if it uses the Variable Cost Option, LMP Option, or the Negotiated Rate Option. The CAISO will reduce Bids for storage resources that exceed (a), (b), and (c) to the maximum permissible value. In the Day-Ahead Market, the CAISO will accept Energy Bids from Scheduling Coordinators for storage resources using the Non-Generator Resource model up to the resource's Default Energy Bid if it uses the Variable Cost Option, LMP Option, or the Negotiated Rate Option.

### 30.8 Bids on Out-of-Service Paths at Scheduling Points Prohibited

Scheduling Coordinators shall not submit any Bids or ETC Self-Schedules at Scheduling Points using a transmission path for any Settlement Period for which the Total Transfer Capability for that path is zero (0) MW. The CAISO shall reject Bids or ETC Self-Schedules submitted at Scheduling Points where the Total Transfer Capability on the transmission path is zero (0) MW. If the Total Transfer Capability of a transmission path at the relevant Scheduling Point is reduced to zero (0) after Day-Ahead Schedules have been issued, then, if time permits, the CAISO shall direct the responsible Scheduling Coordinators to reduce all MWh associated with the Bids on such zero-rated transmission paths to zero (0) in the RTM. As necessary to comply with Applicable Reliability Criteria, the CAISO shall reduce any non-zero (0) RTM Bids across zero-rated transmission paths to zero after the Market Close for the RTM.

### 30.9 Virtual Bids

Virtual Bids are Energy Bids that may be submitted only in the Day-Ahead Market, at Eligible PNodes or Eligible Aggregated PNodes where virtual bidding is permitted, by Scheduling Coordinators representing Convergence Bidding Entities. Virtual Bids are either Virtual Supply Bids or Virtual Demand Bids. A Virtual Bid submitted in the Day-Ahead Market and cleared in the IFM represents a commitment to liquidate a Day-Ahead award in the Real-Time Market at the price determined for the applicable Eligible PNode or Eligible Aggregated PNode as set forth in Section 11.3. For each SCID associated with a

Convergence Bidding Entity, there may be only one Virtual Supply Bid and one Virtual Demand Bid per each Eligible PNode or Eligible Aggregated PNode in the Day-Ahead Market. The minimum size of a segment of a Virtual Bid is one (1) MW.

### 30.9.1 Virtual Bid Components

Each Virtual Bid must have the following components: an indicator that identifies the Virtual Bid as a Virtual Supply Bid or a Virtual Demand Bid; Scheduling Coordinator ID Code; Eligible PNode or Eligible Aggregated PNode as applicable; Virtual Bid Curve; and the Trading Hour or Trading Day to which the Virtual Bid applies. Virtual Bids do not include Start-Up Costs or Minimum Load Costs.

## 30.10 Use of AC Solution and Nodal MW Constraints

The CAISO will achieve an alternating current (AC) solution in the Day-Ahead Market to the extent practicable. If and when it is impracticable to achieve an AC power flow solution without the initial enforcement of nodal MW limit constraints, the CAISO will apply nodal MW constraints to Eligible PNodes (except for Eligible PNodes established for Interties, which are addressed through the process described in Section 31.8). The CAISO will determine whether to apply such nodal MW constraints as follows:

(i) The CAISO will calculate a MW limit for each Eligible PNode other than an Eligible PNode established for an Intertie. For an Eligible PNode associated with physical supply resource, the MW limit will be equal to a factor multiplied by the PMax of the physical supply resource. For an Eligible PNode associated with a physical demand resource, the MW limit will be equal to a factor multiplied by the nodal load forecast of the Eligible PNode calculated as the MW portion of the System Demand Forecast that is distributed to the Eligible PNode according to the corresponding system Load Distribution Factor associated with the Eligible PNode. The factors used in these calculations will be determined in accordance with a process set forth in the Business Practice Manuals.

(ii) For each of the Eligible PNodes or group of Eligible PNodes, the CAISO will calculate the percentage by which the sum of the MW amounts of all Energy Supply Bids, Demand Bids, and Virtual Bids exceeds the MW limit calculated pursuant to Section 30.10(i).

(iii) Starting with the Eligible PNodes or group of Eligible PNodes at which the MW limits

would be exceeded by the largest percentages, and working in descending order of the Eligible PNodes or group of Eligible PNodes that would exceed their MW limits ranked by the extent to which the corresponding MW limits would be exceeded, the CAISO will apply the MW limits to all Energy Supply Bids, Demand Bids, and Virtual Bids at the applicable Eligible PNodes or group of Eligible PNodes and run iterations of the IFM until the CAISO Markets can achieve an AC solution. The application of the MW limit will be enforced by means of a MW limit constraint on the sum of the nodal Energy Supply Bids, Demand Bids, and Virtual Bids as well as the portions of the aggregate Energy Supply Bids, Demand Bids, and Virtual Bids that are applicable to the Eligible PNodes or group of Eligible PNodes. The MW limit constraints will be enforced in the IFM optimization engine to curtail the Bids at the Eligible PNodes or group of Eligible PNodes that have been identified as candidates for causing AC convergence issues. The IFM optimization engine will use the economic criteria based on Bid prices and effectiveness of Bids to mitigate the violation of the MW limit at the Eligible PNode or group of Eligible PNodes.

### 30.11 Adjustments to Reference Levels Prior to CAISO Market Processes

The CAISO will adjust Reference Levels prior to executing the applicable CAISO Market Processes as described in this Section 30.11.

#### 30.11.1 Reasonableness Thresholds

The CAISO will calculate the Reasonableness Thresholds for the purpose of evaluating increases to Reference Levels pursuant to this Section 30.11.1.

##### 30.11.1.1 General Applicability

The CAISO will calculate the Reasonableness Thresholds for all resources except for Non-Resource-Specific System Resources. The CAISO will calculate Reasonableness Thresholds for evaluating Reference Level Change Requests for Bids from resources, other than Hydro Default Energy Bids and Virtual Bids. For resources for which the CAISO does not calculate Default Energy Bids, the CAISO will set the Reasonableness Threshold at the Soft Energy Bid Cap. The Reasonableness Threshold for Default Energy Bid or Default Minimum Load Bid adjustments shall not exceed the Hard Energy Bid Cap or Minimum Load Cost Hard Cap, respectively.

#### 30.11.1.2 Calculations

##### 30.11.1.2.1 Natural Gas-Fired Resources

For natural gas-fired resources, the CAISO will calculate the Reasonableness Threshold to equal the Proxy Cost-based Default Start-Up Bid, the Proxy Cost-based Default Minimum Load Bid, or the Variable Cost-based Default Energy Bid calculated for the specific resource, where the natural gas commodity price component determined pursuant to Section 39.7.1.1.1.3 is multiplied by: (i) one hundred twenty-five percent (125%) for days without a published daily gas price index consistent with the rules in Section 39.7.1.1.1.3, unless the CAISO has updated the natural gas commodity price used to calculate the Reasonableness Threshold pursuant to Section 30.11.1.3, in which case the CAISO will use one hundred ten percent (110%); or (ii) one hundred ten percent (110%) for all other days. Provided, however, that the CAISO will set the Reasonableness Threshold for a specific resource to its Reference Level when it accepts a manual Reference Level Change Request as provided in Section 30.11.5.

##### 30.11.1.2.2 Non-Natural Gas-Fired Resources

For non-natural gas-fired resources, the CAISO will calculate the Reasonableness Threshold to equal the Proxy Cost-based Default Start-Up Bid, the Proxy Cost-based Default Minimum Load Bid, or the Variable Cost-based Default Energy Bid, with the fuel or fuel-equivalent cost component of that calculation registered in the Master File being multiplied by one hundred ten percent (110%).

#### 30.11.1.3 CAISO Updates for the Real-Time Market

After the deadline for the submissions of manual Reference Level Change Requests specified in Section 30.11.4.2, the CAISO will review the same-day gas price information on trades occurring on the Intercontinental Exchange and will review the same-day gas price information submitted in the manual Reference Level Change Requests applicable for each commodity gas region, to determine whether the same-day gas prices are ten percent (10%) greater than the gas price index the CAISO previously used to calculate the Reasonableness Thresholds.

(a) If the CAISO determines that the representative same-day gas prices are ten percent (10%) greater than the gas price index the CAISO previously used to calculate the Reasonableness Thresholds, the CAISO will:

(i) use the higher of the volume-weighted average price of same-day gas trades

occurring on the Intercontinental Exchange and the volume-weighted average of all relevant verified manual Reference Level Change Requests to update the Reasonableness Thresholds for all resources within the applicable fuel region(s); and

(ii) automatically recalculate all Hydro Default Energy Bids in the applicable fuel regions.

(b) The CAISO will implement the changes to the Reasonableness Thresholds in the next available Real-Time Market interval as soon as practicable. Any updates the CAISO makes to Reasonableness Thresholds through this process will apply to the Real-Time Market throughout the remainder of the Trading Day.

**30.11.1.4 CAISO Adjustments for Persistent Conditions**

The CAISO may adjust the Reasonableness Thresholds for a specific resource in the event of a resource's actual fuel or fuel-equivalent costs, observed by the CAISO in the after-CAISO Market Processes review pursuant to Section 30.12, are systematically greater than the gas price indices or fuel-equivalent costs used by the CAISO in calculating the resource's corresponding Reference Levels.

**30.11.2 Reference Level Change Requests**

**30.11.2.1 Applicability**

A Scheduling Coordinator may submit a Reference Level Change Request for Default Start-Up Bids, Default Minimum Load Bids, and Default Energy Bids, as applicable. Scheduling Coordinators may not submit Reference Level Change Requests for Bids by Non-Resource-Specific System Resources. Resources under the Registered Cost methodology are not eligible for Reference Level Change Requests for Default Minimum Load Bids or Default Start-Up Bids. Scheduling Coordinators may not submit Reference Level Change Requests to recover costs associated with gas company imbalance penalties.

**30.11.2.2 Requirements**

All Reference Level Change Requests must be based on the Scheduling Coordinator's reasonable expectation that its daily actual fuel costs or fuel-equivalent costs for a given Trading Day will exceed the costs used by the CAISO to calculate the resource's Reference Levels, and must reflect reasonable and

prudent procurement practices. All Reference Level Change Requests must be calculated using actual or expected fuel costs or fuel-equivalent costs supported by Documentation of Contemporaneously Available Information.

#### 30.11.2.3 Energy Bids Above the Soft Energy Bid Cap

Except for Energy Bids permitted under Section 30.7, a Scheduling Coordinator whose Default Energy Bid does not exceed the Soft Energy Bid Cap and that intends to submit an Energy Bid that exceeds the Soft Energy Bid Cap must submit a Reference Level Change Request. The CAISO will further verify Energy Bids in excess of the Soft Energy Bid Cap pursuant to the applicable rules in Section 30.7.

### 30.11.3 Automated Reference Level Change Requests

#### 30.11.3.1 Applicability

Scheduling Coordinators may submit automated Reference Level Change Requests. The CAISO will evaluate automated Reference Level Change Requests prior to the time the applicable CAISO Market Process is executed based on the Reasonableness Thresholds the CAISO calculates for each resource as specified in Section 30.11.1. The Scheduling Coordinator shall not submit a Reference Level Change Request for the purpose of inflating its Default Energy Bids or Default Commitment Cost Bids beyond what these values would be if calculated based on its actual or expected costs, without applying the Default Energy Bid Multiplier or Commitment Cost Multiplier. Scheduling Coordinators shall not submit an automated Reference Level Change Request that is supported by the same Documentation of Contemporaneously Available Information submitted with a manual Reference Level Change Request that the CAISO previously denied. The CAISO shall not accept automated Reference Level Change Requests for Hydro Default Energy Bids.

#### 30.11.3.2 Requirements

Scheduling Coordinators must calculate the Reference Levels amounts included in their Reference Level Change Requests using the same methodology used to calculate the Proxy Cost-based Default Start-Up Bid, (without applying the Commitment Cost Multiplier), the Proxy Cost-based Default Minimum Load Bid (without applying the Commitment Cost Multiplier), and the Variable Cost-based Default Energy Bid (without applying the Default Energy Bid Multiplier).

#### 30.11.3.3 Contemporaneously Available Supporting Documentation

Although the Scheduling Coordinator does not submit Documentation of Contemporaneously Available Information when it submits an automated Reference Level Change Request, the Scheduling Coordinator must retain the Documentation of Contemporaneously Available Information. The CAISO may request the Scheduling Coordinator to provide the CAISO with Documentation of Contemporaneously Available Information pursuant to Section 30.11.3.4.

**30.11.3.4 Evaluation of Automated Reference Level Change Requests**

If the Reference Level change submitted by the Scheduling Coordinator for a resource in the automated Reference Level Change Request is equal to or less than the applicable Reasonableness Threshold for the resource, the CAISO will approve the Revised Default Commitment Cost Bid and Revised Default Energy Bid. If the Reference Level change submitted by the Scheduling Coordinator for a resource in the automated Reference Level Change Request process exceeds the applicable Reasonableness Threshold for the resource, the CAISO will approve the revised Reference Level to equal the resource's Reasonableness Threshold.

**30.11.3.5 CAISO Audit of Automated Reference Level Change Requests**

(a) **Audit Process**. The CAISO may audit a Scheduling Coordinator that submits an automated Reference Level Change Request at any time and may request the Scheduling Coordinator to provide the CAISO with its cost calculations and Documentation of Contemporaneously Available Information. In response to a CAISO audit request for information related to the audit, the Scheduling Coordinator must respond with the requested information within five (5) Business Days of the CAISO's request. The CAISO will evaluate the submitted information and determine whether it supports the Scheduling Coordinator's automated Reference Level Change Request within ten (10) Business Days of receipt of the Scheduling Coordinator's cost calculations and Documentation of Contemporaneously Available Information.

(b) In the event the CAISO determines the submitted information does not support the Reference Level Change Request, the Scheduling Coordinator may request CAISO ADR Procedures as specified in Section 13 of the CAISO Tariff within five (5) Business Days of the CAISO's response. If the Scheduling Coordinator requests CAISO ADR

Procedures, the Scheduling Coordinator will not be permitted to submit automated Reference Level Change Requests for the affected resource as specified in Section 30.11.3.4(c) while the CAISO ADR Procedures are pending. If the CAISO ADR Procedures confirm that the Documentation of Contemporaneously Available Information did not support the Scheduling Coordinator's automated Reference Level Change Request, the Scheduling Coordinator will be prohibited from submitting automated Reference Level Change Requests until the time period specified in Section 30.11.3.4(c) has elapsed.

(c) **Consequence for Failure to Comply with CAISO Requirements**. If the CAISO determines that the Documentation of Contemporaneously Available Information submitted by the Scheduling Coordinator does not support a conclusion that the Scheduling Coordinator's actual or expected fuel costs, or fuel-equivalent costs, for a resource as calculated in Section 30.11.2.2 were higher than those the CAISO used to determine the resource's Reference Levels:

(1) The CAISO shall prohibit the Scheduling Coordinator from making any automated Reference Level Change Requests for the affected resource for sixty (60) days from the time the CAISO informs the Scheduling Coordinator that it did not submit Documentation of Contemporaneously Available Information that supports the Scheduling Coordinator's automated Reference Level Change Request.

(2) Any subsequent determination that the Scheduling Coordinator did not submit Documentation of Contemporaneously Available Information that supports its automated Reference Level Change Request will result in the CAISO prohibiting the Scheduling Coordinator from making any automated Reference Level Change Requests for the affected resource for one hundred eighty (180) days from the time the CAISO informs the Scheduling Coordinator of the subsequent failure to submit Documentation of Contemporaneously Available Information that supports its automated Reference Level Change Request.

### 30.11.4 Manual Reference Level Change Requests

#### 30.11.4.1 Applicability

Scheduling Coordinators may request a manual Reference Level Change Request when the Scheduling Coordinator's actual or expected fuel costs or fuel-equivalent costs exceed the fuel or fuel-equivalent costs the CAISO used to calculate a resource's Reference Level by the greater of ten percent (10%) or $0.50/MMBTU, as applicable. The Scheduling Coordinator may submit a manual Reference Level Change Request for:

(a) Default Energy Bids, Default Start-Up Bids, and Default Minimum Load Bids for natural gas-fired resources; and

(b) Default Energy Bids for non-natural gas-fired resources.

#### 30.11.4.2 Requirements

Scheduling Coordinators must submit any manual Reference Level Change Requests by 8:00 a.m. of the Business Day on which the applicable CAISO Market is executed. Scheduling Coordinators must submit in their manual Reference Level Change Requests their actual or expected fuel costs that they request the CAISO to validate and to be used to calculate their resource's Reference Levels. For gas-fired resources, the Scheduling Coordinator must submit the gas fuel cost only and not include the gas transportation cost. Upon submission of a manual Reference Level Change Request, the Scheduling Coordinator must submit Documentation of Contemporaneously Available Information that shows that its resource's actual or expected fuel costs or fuel-equivalent costs exceed the fuel or fuel-equivalent costs used to calculate the resource's Reference Level.

#### 30.11.4.3 Evaluation of Manual Reference Level Change Requests

The CAISO will evaluate requested fuel costs submitted in the manual Reference Level Change Requests based on information submitted by the Scheduling Coordinator and any other available evidence of current costs that applies to the Reference Level Change Request: (1) as practicable prior to the execution of the applicable Day-Ahead Market; and (2) as soon as practicable after submission of the manual Reference Level Change Request for the Real-Time Market. This evaluation will consist of whether the submitted information supports a change in the Reference Level. If the fuel cost submitted in the manual Reference Level Change Request is accepted, the CAISO will recalculate the Reference

Level using the accepted actual or expected fuel costs (without applying the Commitment Cost Multiplier or the Default Energy Bid Multiplier). The CAISO will apply the Revised Default Commitment Cost Bid and Revised Default Energy Bid for use in the CAISO Market Processes and for Settlement purposes as specified in Section 30.11.5. If the CAISO does not accept the submitted actual or expected fuel costs, the CAISO will make no changes to the Reference Level.

**30.11.5 Application of Revised Reference Level**

For the Day-Ahead Market, the Revised Default Commitment Cost Bids and Revised Default Energy Bid will apply to the applicable Trading Day of the Day-Ahead Market. For the Real-Time Market, the Revised Default Commitment Cost Bids and Revised Default Energy Bid will apply from the Real-Time Market Trading Hour for which it is practicable for the CAISO to apply the change until the last Trading Hour of the Trading Day for which the Reference Level Change Request was specified. The CAISO will not update the applicable Reasonableness Threshold when it accepts an automated Reference Level Change Request. The CAISO will update a resource's applicable Reasonableness Threshold to equal the resource's Reference Level when it accepts a manual Reference Level Change Request. The Scheduling Coordinator may submit an application for after-CAISO Market Process adjustments pursuant to Section 30.12 for any costs not verified through the automated Reference Level Change Request process or that were rejected through the manual Reference Level Change Request process. A Multi-Stage Generating Resource cannot submit a Reference Level Change Request for its Proxy Transition Costs but the CAISO will recalculate the Proxy Transition Costs if a Scheduling Coordinator revises the Start-Up Bids that initially were the basis of calculating the Proxy Transition Cost.

**30.11.6 Hydro Default Energy Bids**

In the event a Scheduling Coordinator that controls both a hydro resource and a natural gas-fired resource in the same gas fuel region submits a manual Reference Level Change Request for both the hydro resource's Hydro Default Energy Bid and the natural gas-fired resource's Reference Level, and the CAISO accepts the manual Reference Level Change Request for the natural gas-fired resource, the CAISO may also update the natural gas price used in the calculation of a hydro resource's Hydro Default Energy Bid when the CAISO adjusts the gas price used in the Reasonableness Thresholds for the entire gas fuel region in which the hydro resource is located pursuant to Section 30.11.1.

## 30.12 After-CAISO Market Process Cost Recovery

### 30.12.1 Applicability

Scheduling Coordinators may request an additional uplift payment to cover a resource's actual fuel costs or fuel-equivalent costs associated with Start-Up Bid Costs, Minimum Load Bid Costs, Transition Bid Costs, and Energy Bid Costs used in the Bid Cost Recovery mechanism, and that are for:

(a) amounts in a Reference Level Change Request presented to the CAISO pursuant to Section 30.11 that the CAISO did not approve; or

(b) amounts in a Reference Level Change Request for a Default Energy Bid or Default Minimum Load Bid that exceeds the Hard Energy Bid Cap or the Minimum Load Cost Hard Cap, respectively.

Scheduling Coordinators may not request additional uplift payments under this Section 30.12to cover costs: (1) associated with gas company imbalance penalties; or (2) that were not specifically included in a Reference Level Change Request.

### 30.12.2 Notice

The Scheduling Coordinator must notify the CAISO within thirty (30) Business Days after the applicable Trading Day whether it will:

(a) request a CAISO evaluation of its costs, pursuant to Section 30.12.4; or

(b) submit a filing to FERC to recover its costs pursuant to Section 30.12.5.

For purposes of part (b), in cases where the scheduling coordinator did not first make a request under Section 30.12.4, the applicable Trading Day is the Trading Day for which additional uplift has been requested. In cases where the Scheduling Coordinator first makes a request to the CAISO under Section 30.12.4 but the CAISO informed the Scheduling Coordinator it is not eligible to recover its fuel costs through Section 30.12.4 or that the CAISO was unable to verify the costs, then the applicable Trading Day is the Trading Day on which the CAISO informed the Scheduling Coordinator of its ineligibility or the CAISO's inability to verify the costs, respectively.

A Scheduling Coordinator is not eligible to receive an additional uplift payment under this Section 30.12 if it fails to provide notice within this 30-Business Day period.

### 30.12.3 Supporting Documentation

For requests under Section 30.12.4 and Section 30.12.5, Scheduling Coordinators must submit supporting documentation to the CAISO or FERC, respectively, that demonstrates that submitted costs represent actually procured daily fuel costs or fuel-equivalent costs for a given Trading Day that exceed the fuel costs or fuel-equivalent costs the CAISO used to calculate the resource's Reference Levels. These fuel costs or fuel-equivalent costs must be reasonable and reflect prudent procurement practices. Permissible supporting documents include invoices for fuel purchased, or other appropriate documentation demonstrating fuel costs or fuel-equivalent costs actually incurred that exceed the fuel costs or fuel-equivalent costs the CAISO used to calculate the resource's Reference Levels for the applicable Trading Days.

**30.12.4 CAISO After-Market Evaluation of Fuel Costs**

**30.12.4.1 Process**

If the Scheduling Coordinator requests that the CAISO evaluate the costs specified in Section 30.12.1 based on the documentation specified in Section 30.12.3, then within sixty (60) Business Days after the Trading Day for which the Scheduling Coordinator provides notice to the CAISO per this Section 30.12.4, the CAISO will:

(a) provide the Scheduling Coordinator with a written explanation of any effect that events or circumstances in the CAISO Markets and fuel market conditions may have had on the resource's inability to recover the costs on the applicable Trading Day; and

(b) notify the Scheduling Coordinator whether the costs are eligible for evaluation pursuant to this Section 30.12.4.

**30.12.4.2 CAISO Evaluation**

In evaluating a request submitted by a Scheduling Coordinator, the CAISO will verify that the submitted costs represent actual incurred fuel costs or fuel-equivalent costs, and that these costs are reasonable and reflect prudent procurement practices.

**30.12.4.3 [Not Used]**

**30.12.4.4 CAISO Inability to Verify Costs**

If the CAISO is unable to verify within the sixty (60) Business Day period that the resource's incurred costs are eligible for recovery pursuant to this Section 30.12.4, then the Scheduling Coordinator may

submit a filing to FERC under Section 30.12.5 to recover costs.

**30.12.4.5 Ineligibility**

If the CAISO determines the resource is ineligible to recover its fuel-related costs through this Section 30.12.4, then the Scheduling Coordinator may submit a filing to FERC under Section 30.12.5 to recover costs.

**30.12.5 FERC Fuel Cost Recovery Filings**

**30.12.5.1 Process**

A Scheduling Coordinator may request that FERC evaluate the costs specified in Section 30.12.1 based on the documentation specified in Section 30.12.3.

If the Scheduling Coordinator makes such request without having first made a request pursuant to Section 30.12.4, then the Scheduling Coordinator has ninety (90) Business Days after the applicable Trading Day to submit its filing for fuel cost recovery to FERC.

If the Scheduling Coordinator first makes a request to the CAISO under Section 30.12.4 but the CAISO informed the Scheduling Coordinator it is not eligible to recover its fuel costs through Section 30.12.4 or that the CAISO was unable to verify the costs, then the Scheduling Coordinator has ninety (90) Business Days after being informed of its ineligibility or the CAISO's inability to verify the costs, respectively, to submit its filing for fuel cost recovery to FERC.

A Scheduling Coordinator is not eligible to receive an additional uplift payment under this Section 30.12 if it fails to file with FERC within the applicable 90-Business-Day period.

**30.12.5.2 [Not Used]**

**30.12.6 Allowable Recovery and Settlement**

If the CAISO (per section 30.12.4) or FERC (per section 30.12.5) validate that the Scheduling Coordinator did not recover through the Bid Cost Recovery mechanism the actual incurred fuel costs or fuel-equivalent costs specified in Section 30.12.1, then the CAISO will resettle Bid Cost Recovery and Exceptional Dispatch for the resource using Bid Costs and Default Energy Bids, as applicable, that are revised to reflect the validated fuel costs or fuel-equivalent costs. The validated costs are not recoverable outside of Bid Cost Recovery and any validated costs that are not otherwise recognized in Bid Cost Recovery will not be part of an uplift payment under this Section 30.12. The CAISO effectuates the

resettlement by issuing Recalculation Settlement Statement(s) within the normal Recalculation Settlement Statements timelines specified in Section 11.29 or by issuing an Unscheduled Directed Recalculation Settlement Statement if the normal timelines have elapsed.

Provided, however, the increase in Bid Cost Recovery payment for a Trading Day cannot exceed the difference between the Bid Cost Recovery payment for the resource based on the validated costs and the maximum Bid Cost Recovery payment the Scheduling Coordinator could have received using the fuel and fuel-equivalent costs in place for market bidding processes on the Trading Day.

## 31. Day-Ahead Market

The DAM consists of the following functions performed in sequence: Bid submission and validation, the IFM MPM, IFM, RUC MPM, and RUC.

Scheduling Coordinators may submit Energy Bids, Ancillary Services Bids, RUC Availability Bids, and Imbalance Reserves Bids for an applicable Trading Day. The CAISO issues Schedules for all Supply and Demand, including Participating Load, Reliability Demand Response Resources, and Proxy Demand Resources, pursuant to their Bids as provided in this Section 31. The CAISO also issues RUC Awards and Imbalance Reserves Awards to Scheduling Coordinators pursuant to their RUC Availability Bids and Imbalance Reserves Bids, respectively, as provided in this Section 31.

### 31.1 Bid Submission and Validation in the Day-Ahead Market

Bids, including Self-Schedules and Ancillary Services Bids, and Submissions to Self-Provide an Ancillary Service shall be submitted pursuant to the submission rules specified in Section 30. There is a single Bid submission in which Scheduling Coordinators' Bids are used for purposes of the DAM, which includes the IFM MPM, the IFM, the RUC MPM, and RUC. Scheduling Coordinators may submit Bids for the DAM as early as seven (7) days prior to the applicable Trading Day up to Market Close of the DAM for the applicable Trading Day. The CAISO will validate all Bids submitted to the DAM pursuant to the procedures set forth in Section 30.7. Scheduling Coordinators must submit Bids for participation in the IFM for Resource Adequacy Capacity as required in Section 40.

### 31.2 IFM MPM Process

After the Market Close of the DAM, the CAISO has validated the Bids pursuant to Section 30.7, and after the CAISO conducts the EDAM RSE, the CAISO performs the IFM MPM process, which is a single market run that occurs prior to the IFM Market Clearing run. The IFM MPM process determines, pursuant to Section 31.2.3, which Energy Bids need to be mitigated to the applicable Default Energy Bids and which Imbalance Reserves Bids for IRU need to be mitigated to the IRU Default Availability Bid in the IFM. For Maximum Net Dependable Capacity of Legacy RMR Units, Energy Bids will be mitigated to the RMR Proxy Bids pursuant to Section 31.2.3. The IFM MPM process optimizes resources to meet Demand reflected in Demand Bids, including Export Bids and Virtual Demand Bids, targets procurement of one hundred (100) percent of Imbalance Reserves requirements based on Bids submitted to the DAM,

and procures one hundred (100) percent of Ancillary Services requirements based on Supply Bids submitted to the DAM. Virtual Bids and Bids from Demand Response Resources, Participating Load, and Hybrid Resources are considered in the MPM process, but are not subject to Bid mitigation. Energy storage resources whose PMax is less than five (5) MW are considered in the MPM process, but not subject to Bid mitigation. Bids from Participating Load resources that are not subject to Bid mitigation will also be considered in the IFM MPM process. The mitigated or unmitigated Bids and RMR Proxy Bids identified in the IFM MPM process for all resources that cleared in the IFM MPM are then passed to the IFM. The CAISO performs the IFM MPM process for the IFM for the twenty-four (24) hours of the targeted Trading Day.

**31.2.1 Determining Competitive and Non-Competitive Congestion Components in the IFM**

The IFM MPM process enforces all Transmission Constraints that are expected to be enforced in the relevant market, in the base case of meeting Demand and in the separate cases of modeling the dispatch of Energy from all capacity awarded IRU and IRD, and produces dispatch levels for all resources with submitted Bids and LMPs for all Locations. Bid mitigation is determined by decomposing the Congestion component of each LMP determined in the IFM MPM process into competitive Congestion and non-competitive Congestion components. The non-competitive Congestion component of each LMP is calculated as the sum of the product of the shift factor and the Shadow Price for all non-competitive Transmission Constraints. The non-competitive Congestion component of an LMP can be based on a Transmission Constraint deemed non-competitive in the base case of meeting Demand or in the separate case of modeling the dispatch for Energy of all capacity awarded IRU. The Reference Bus used in the MPM process will be either: (1) the Midway 500kV bus if Path 26 flow is from north to south; or (2) the Vincent 500kV bus if Path 26 flow is from south to north. The treatment of a particular Transmission Constraint as competitive or non-competitive for purposes of the IFM MPM process is determined pursuant to Section 39.7.2.

**31.2.2 [Not Used]**

**31.2.3 IFM Bid Mitigation**

**31.2.3.1 Mitigation of Energy Bids**

If the non-competitive Congestion component of an LMP calculated in an MPM process is greater than zero (0), then any resource at that Location that is dispatched in that MPM process is subject to Local Market Power Mitigation. Bids on behalf of any such resource, to the extent that they exceed the Competitive LMP plus the Competitive LMP Parameter at the resource's Location for the DAM or RTM process interval for which the MPM process applies, will be mitigated to the higher of the resource's Default Energy Bid (or RMR Proxy Bid for Legacy RMR Units), as specified in Section 39, or the Competitive LMP plus the Competitive LMP Parameter at the resource's Location for the DAM and RTM process interval for which the MPM process applies. To the extent a Multi-Stage Generating Resource is dispatched in the MPM process and the non-competitive Congestion component of the LMP calculated at the Multi-Stage Generating Resource's Location is greater than zero, for purposes of mitigation, all the MSG Configurations will be mitigated similarly and the CAISO will evaluate all submitted Energy Bids for all MSG Configurations based on the relevant Default Energy Bids for the applicable MSG Configuration. The CAISO will calculate the Default Energy Bids for Multi-Stage Generating Resources by submitted MSG Configuration. Any market Bids equal to or less than the Competitive LMP plus the Competitive LMP Parameter will be retained in the DAM and RTM process.

#### 31.2.3.2 Mitigation of Bids for IRU

The CAISO applies Local Market Power Mitigation to Imbalance Reserves Bid for IRU if the resource for which that Bid was submitted could provide counter-flow to a Transmission Constraint deemed non-competitive pursuant to Section 39.7.2.2(B)(a) in the case of modeling the dispatch for Energy of the capacity awarded IRU. To the extent a Bid for IRU is subject to Local Market Power Mitigation and exceeds the Competitive Locational IRU Price plus the Competitive LMP Parameter, the CAISO mitigates the Bid to the higher of the: (i) resource's IRU Default Availability Bid; or (ii) Competitive Locational IRU Price plus the Competitive LMP Parameter.

### 31.3 Integrated Forward Market

After the IFM MPM and prior to RUC, the CAISO shall perform the IFM. The IFM (1) performs Unit Commitment and Congestion Management (2) clears mitigated or unmitigated Bids for Energy and Imbalance Reserves cleared in the MPM as well as Bids for Energy and Imbalance Reserves that were not cleared in the MPM process against bid-in Demand, taking into account transmission limits and

honoring technical and inter-temporal operating constraints, such as Minimum Run Times (3) and procures Ancillary Services to meet one hundred (100) percent of the Ancillary Services requirements based on the CAISO Forecast of BAA Demand for the CAISO. The IFM utilizes a set of integrated programs that: (1) determine Day-Ahead Schedules, Imbalance Reserves Awards, and AS Awards, and related LMPs and ASMPs; and (2) optimally commits resources that are bid in to the DAM. The IFM utilizes a SCUC algorithm that optimizes Start-Up Costs, Minimum Load Costs as modified pursuant to Section 30.7.10.2, if applicable, Transition Costs, and Energy Bids along with any Bids for Ancillary Services or Imbalance Reserves as well as Self-Schedules submitted by Scheduling Coordinators. The IFM selects the optimal MSG Configuration from a maximum of ten MSG Configurations of each Multi-Stage Generating Resource as mutually exclusive resources. If a Scheduling Coordinator submits a Self-Schedule or a Submission to Self-Provide Ancillary Services for a given MSG Configuration in a given Trading Hour, the IFM will consider the Start-Up Cost, Minimum Load Cost as modified pursuant to Section 30.7.10.2, if applicable, and Transition Cost associated with any Economic Bids for other MSG Configurations as incremental costs between the other MSG Configurations and the self-scheduled MSG Configuration. In such cases, incremental costs are the additional costs incurred to transition or operate in an MSG Configuration in addition to the costs associated with the self-scheduled MSG Configuration. The IFM also provides for the optimal management of Use-Limited Resources. The ELS Resources committed through the ELC Process conducted two days before the day the IFM process is conducted for the next Trading Day as described in Section 31.7 are binding.

### 31.3.1 Market Clearing and Price Determination

#### 31.3.1.1 Integrated Forward Market Output

The IFM produces: (1) a set of hourly Day-Ahead Schedules, Imbalance Reserves Awards, AS Awards, and AS Schedules for all participating Scheduling Coordinators that cover each Trading Hour of the next Trading Day; and (2) the hourly LMPs for Energy and Imbalance Reserves and the ASMPs for Ancillary Services to be used for settlement of the IFM. For a Multi-Stage Generating Resource, the IFM produces a Day-Ahead Schedule for no more than one MSG Configuration per Trading Hour. In addition, the IFM

will produce the MSG Transition and the MSG Configuration indicators for the Multi-Stage Generating Resource, which would establish the expected MSG Configuration in which the Multi-Stage Generating Resource will operate. During a transition, the committed MSG Configuration is considered to be the "from" MSG Configuration. The CAISO will publish the LMPs at each PNode as calculated in the IFM. In determining Day-Ahead Schedules, Imbalance Reserves Awards, AS Awards, and AS Schedules the IFM optimization will minimize total Bid Costs based on submitted and mitigated Bids while respecting the operating characteristics of resources, the operating limits of transmission facilities, and a set of scheduling priorities that are described in Section 31.4. In performing its optimization, the IFM first tries to complete its required functions utilizing Effective Economic Bids without adjusting Self-Schedules, and skips Ineffective Economic Bids and adjusts Self-Schedules only if it is not possible to balance Supply and Demand and manage Congestion in an operationally prudent manner with available Effective Economic Bids. The process and criteria by which the IFM adjusts Self-Schedules and other Non-priced Quantities are described in Sections 27.4.3, 31.3.1.3 and 31.4. The Day-Ahead Schedules are binding commitments, including the commitment to Start-Up, if necessary, to comply with the Day-Ahead Schedules. The CAISO will not issue separate Start-Up Instructions for Day-Ahead commitments. A resource's status, however, can be modified as a result of additional market processes occurring in the RTM.

#### 31.3.1.2 Treatment of Ancillary Services Bids in IFM

In clearing the IFM, the CAISO co-optimizes awards from Energy Bids, Imbalance Reserves Bids, and Ancillary Services Bids. To the extent that capacity subject to an Ancillary Services Bid submitted in the Day-Ahead Market is not associated with an Energy Bid or Imbalance Reserves Bid, there is no co-optimization, and therefore, no opportunity cost associated with that resource for that Bid for the purposes of calculating the Ancillary Services Marginal Price as specified in Section 27.1.2.2. The capacity that will be considered when co-optimizing the procurement of Energy, Imbalance Reserves, and Ancillary Services from Bids in the IFM will consider capacity up to the total capacity of the resource as reflected in the Ancillary Services Bid as derated through the CAISO's outage management system pursuant to Section 9, if at all. In the case of Regulation, the capacity that will be considered is the lower of the capacity of the resource offered in the Ancillary Services Bid or the upper Regulation limit of the highest

Regulating Range as contained in the Master File. For any Trading Hour within the period in which the Multi-Stage Generating Resource is transitioning from one MSG Configuration to another, the IFM will not award Ancillary Services and any Submission to Self-Provide Ancillary Services will be disqualified. Any Ancillary Services Awards in the IFM to Multi-Stage Generating Resources will carry through to the Real-Time Market in the same MSG Configuration that the Multi-Stage Generating Resource is awarded in the IFM.

#### 31.3.1.3 Reduction of Self-Scheduled LAP Demand

In the IFM, to the extent the market software cannot resolve a non-competitive Transmission Constraint utilizing Effective Economic Bids such that self-scheduled Load at the LAP level would otherwise be reduced to relieve the Transmission Constraint, the CAISO Market software will adjust Non-Priced Quantities in accordance with the process and criteria described in Section 27.4.3. For this purpose the priority sequence, starting with the first type of Non-Priced Quantity to be adjusted, will be:

(a) Schedule the Energy from Self-Provided Ancillary Service Bids from capacity that is obligated to offer an Energy Bid under a must-offer obligation such as from an RMR Resource or a Resource Adequacy Resource. Consistent with Section 8.6.2, the CAISO Market software could also utilize the Energy from Self-Provided Ancillary Service Bids from capacity that is not under a must-offer obligation such as from an RMR Resource or a Resource Adequacy Resource, to the extent the Scheduling Coordinator has submitted an Energy Bid for such capacity. The associated Energy Bid prices will be those resulting from the MPM process.

(b) Relax the constraint consistent with Section 27.4.3.1, and establish prices consistent with Section 27.4.3.2. No constraints, including Transmission Constraints, on Interties with adjacent Balancing Authority Areas will be relaxed in this procedure.

#### 31.3.1.4 Eligibility to Set the Day-Ahead LMP

All Generating Units, Participating Loads, non-Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources, System Resources, System Units, or Constrained Output Generators subject to the provisions in Section 27.7, with Bids, including Generated Bids, that are unconstrained due to Ramp Rates, MSG Transitions, Forbidden Operating Regions, or other temporal constraints are eligible

to set the LMP, provided that (a) the Schedule for the Generating Unit or Resource-Specific System Resource is between its Minimum Operating Limit and the highest MW value in its Economic Bid or Generated Bid; or (b) the Schedule for the Participating Load, non-Participating Load, Proxy Demand Resources, Reliability Demand Response Resources, Non-Resource-Specific System Resource, or System Unit is between zero (0) MW and the highest MW value in its Economic Bid or Generated Bid. If (a) a resource's Schedule is constrained by its Minimum Operating Limit or the highest MW value in its Economic Bid or Generated Bid; (b) the CAISO enforces a resource-specific constraint on the resource due to an RMR Dispatch of a Legacy RMR Unit or Exceptional Dispatch; (c) the resource is constrained by a boundary of a Forbidden Operating Region or is Ramping through a Forbidden Operating Region; or (d) the resource's full Ramping capability is constraining its inter-hour change in Schedule, the resource cannot be marginal and thus is not eligible to set the LMP. Resources identified as MSS Load following resources are not eligible to set the LMP. A Constrained Output Generator will be eligible to set the hourly LMP if any portion of its Energy is necessary to serve Demand.

#### 31.3.1.5 Treatment of Imbalance Reserves Bids in IFM

In considering Imbalance Reserves Bids in the IFM, the CAISO applies the following rules.

##### 31.3.1.5.1 Eligible Resource Types

The CAISO only considers Imbalance Reserves Bids from Generating Units, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources, System Units, System Resources with a Resource ID defined in the CAISO Master File, and Physical Scheduling Plants.

##### 31.3.1.5.2 Fifteen-Minute Dispatchability and Start-up

The CAISO disregards Imbalance Reserves Bids submitted for a resource that is not 15-minute dispatchable.

The CAISO disregards Imbalance Reserves Bids submitted for a resource that otherwise would be Off during the relevant period unless it has a Start-Up Time of 15 minutes or less.

##### 31.3.1.5.3 Energy Bid Submission Requirement

The CAISO only considers Imbalance Reserves Bids to the extent the resource submitted an Energy Bid in the Day-Ahead Market with Economic Bids for a quantity no less than the quantity of Imbalance Reserves Bid.

#### 31.3.1.5.4 Ramp Capability as Limitation on Imbalance Reserves Awards

The CAISO disregards an Imbalance Reserves Bid to the extent it exceeds the resource's maximum 30-minute ramp capability as determined by the ramp rate defined in the CAISO Master File for the operating range covered by the Bid.

#### 31.3.1.5.5 Simultaneous Bids and Awards for IRU and IRD

A Scheduling Coordinator may offer Bids for both IRU and IRD on distinct portions of capacity for the same interval for the same resource. The CAISO may award the resource both IRU and IRD based on those Bids if it is feasible to provide both.

### 31.3.1.6 Imbalance Reserves Procurement

Subject to the procurement curve described in Section 31.3.1.6.1, the CAISO procures Imbalance Reserves to meet the Imbalance Reserves Requirement for each hour and creates separate Locational IRU Prices and Locational IRD Prices at each Node based on that procurement.

#### 31.3.1.6.1 Establishing the Imbalance Reserves Requirement

As further described in the Business Practice Manual, the CAISO sets each Balancing Authority Area's Upward Imbalance Reserves Requirement and Downward Imbalance Reserves Requirement to capture the anticipated levels of upward and downward Net Load Forecast deviations between the Day-Ahead Market and the Fifteen-Minute Market, respectively, within a specified confidence interval. The CAISO sets these values based on: (a) analysis of the differences between the load, wind, and solar forecasts utilized in the Day-Ahead Market and those used in the Fifteen-Minute Market, corresponding to the same time intervals; (b) production forecasts for EIRs in each Balancing Authority Area; and (c) the CAISO Forecast of BAA Demand. For each Balancing Authority Area participating in the Day-Ahead Market, the CAISO reduces the Balancing Authority Area's hourly Imbalance Reserves Requirement by its proportional allocation of the Diversity Benefit for EDAM.

#### 31.3.1.6.2 Procurement Curve

In each run of the IFM, the CAISO procures IRU and IRD for each Balancing Authority Area participating in the Day-Ahead Market to meet their Upward Imbalance Reserves Requirement and Downward Imbalance Reserves Requirement, respectively, subject to a procurement curve. The procurement curves for IRU and IRD are calculated based on separate statistical analysis of the Upward Imbalance Reserve

Requirement and Downward Imbalance Reserve Requirement for each EDAM Entity Balancing Authority Area to ensure the total cost of Imbalance Reserves Awards for IRU or IRD does not exceed the expected cost of violating Operating Reserve requirements. Provided, however, the upper bound of the procurement curve for both IRU and IRD is $55 per MWh.

#### 31.3.1.6.3 Imbalance Reserves Deliverability and Nodal Procurement

##### 31.3.1.6.3.1 Nodal Procurement of Imbalance Reserves Awards

The CAISO optimizes procurement of Imbalance Reserves Awards such that, in the event modeled uncertainty arises fully for either the upward or downward directions, the Energy that would be dispatched from resource capacity corresponding to the Imbalance Reserves Awards, as adjusted by the applicable Deployment Factor, would not result in flows exceeding Transmission Constraints and scheduling limits, including EDAM Transfer limits, on categories of transmission facilities identified in the Business Practice Manual. In revising the Business Practice Manual to establish or update either the Deployment Factor or the categories of transmission facilities, the CAISO will consider the trade-off between the: (a) operational benefit of clearing reliably deliverable Imbalance Reserves; and (b) economic implications from imposing deliverability requirements on Imbalance Reserves procurement. In considering this trade-off, the CAISO will evaluate considerations such as the anticipated or observed impact of the Deployment Factor or identified transmission facilities on the: (1) deliverability of Energy procured from awarded Imbalance Reserves; (2) Marginal Cost of Congestion for Energy; (3) Locational IRU Prices and Locational IRD Prices; (4) performance of the IFM optimization, including solution time and solution quality; (5) need to manually intervene in RUC or engage in other out-of-market action; and (6) effect of other factors whose magnitude of impact on the basic trade-off is unforeseen on the effective date of this Section 31.3.1.6.3.1.

##### 31.3.1.6.3.2 Nodal Distribution of Requirements

The CAISO distributes the Upward Imbalance Reserves Requirement and Downward Imbalance Reserves Requirement to the Demand and Variable Energy Resources Locations within each Balancing Authority Area participating in the Day-Ahead Market based on distribution factors derived from historical and/or forecasted information that reflect the relative contributions of Demand and Variable Energy Resources to the overall Imbalance Reserves Requirements.

#### 31.3.1.6.4 Congestion Revenue from Procuring Imbalance Reserves

As further specified in the Business Practice Manual, the CAISO separately calculates Energy Congestion revenue displaced from meeting the Upward Imbalance Reserves Requirements and the Downward Imbalance Reserves Requirements as follows.

The CAISO calculates the Energy Congestion revenue displaced from meeting the Upward Imbalance Reserves Requirement by calculating for each resource for each Transmission Constraint binding in the case of modeling uncertainty in the upward direction the sum of the product of the: IRU award; Deployment Factor; Shift Factor from the resource location to the binding Transmission Constraint; and Shadow Price of the Transmission Constraint.

The CAISO calculates the Energy Congestion revenue displaced from meeting the Downward Imbalance Reserves Requirement by calculating for each resource for each Transmission Constraint binding in the case of modeling uncertainty in the downward direction the sum of the product of: IRD award; Deployment Factor; Shift Factor from the resource location to the binding Transmission Constraint; and Shadow Price of the Transmission Constraint.

#### 31.3.1.6.5 Accounting for State of Charge in Awarding Ancillary Services and Imbalance Reserves to Non-Generator Resources

The IFM only awards an Ancillary Services Schedule or Imbalance Reserves Award to a storage resource using the Non-Generator Resource model to the extent its modeled State of Charge, as determined by a methodology defined in the Business Practice Manual, can support such schedule or award.

### 31.3.2 Congestion and Transmission Losses Cost Determination

Except for those transactions exempt from such charges as specified in Section 11.2.1.5, Scheduling Coordinators will be responsible for MCC and MCL as specified in Section 27.1. The CAISO will determine the Marginal Losses surplus it has collected and will allocate such revenues to Scheduling Coordinators as described in Section 11.2.1.6.

### 31.3.3 Metered Subsystems

In clearing the IFM, the CAISO will not enforce Transmission Constraints within each MSS. The Full Network Model (FNM) includes a full model of MSS transmission networks used for power flow calculations and Transmission Constraint management in the IFM and RTM. Transmission Constraints

(i.e. circuit ratings, thermal ratings, etc.) within the MSS, or at its boundaries, that are modeled in the FNM shall be monitored but not enforced in the operation of the CAISO Markets. If overloads are observed in the forward markets that are internal to the MSS or at the MSS boundaries and are attributable to MSS operations, the CAISO shall communicate such events to the Scheduling Coordinator for the MSS and coordinate any manual Re-dispatch required in Real-Time. If, independent of the CAISO, the Scheduling Coordinator for the MSS is unable to resolve Congestion internal to the MSS or at the MSS boundaries in Real-Time, the CAISO will use Exceptional Dispatch Instructions on resources that have been bid into the HASP and RTM to resolve the Congestion. Such costs will be allocated pursuant to the provisions specified in Section 11.5.6.2.5.2. The CAISO and MSS Operator shall develop specific procedures for each MSS to determine how Transmission Constraints will be handled. Costs associated with internal Congestion and Transmission Losses in the MSS will be the responsibility of the MSS Operator. The Scheduling Coordinator for the MSS shall be responsible for payment of Marginal Losses for transactions at any points of interconnection between the MSS and the CAISO Controlled Grid, and for the delivery of Energy to the MSS or from the MSS in accordance with the CAISO Tariff. For MSS Operators that elect Load following, the CAISO shall exclude the effect of Transmission Losses in the relevant MSS in the CAISO's calculation of loss sensitivity factors used to calculate LMPs.

### 31.3.4 RTM Bidding Obligations from Imbalance Reserves Awards

An Imbalance Reserves Award for an hour obligates the Scheduling Coordinator for the resource receiving the award to submit Economic Bids for Energy to the Real-Time Market for the full range of awarded Imbalance Reserves.

The portion of the resource's Day-Ahead Schedule for Energy below a IRD award may be Self-Scheduled in the Real-Time Market.

The Scheduling Coordinator for a resource receiving an Imbalance Reserves Award in an hour cannot submit a Self-Schedule for Energy in the Real-Time Market for a quantity in excess of its Day-Ahead Schedule for Energy minus any awards for IRD and RCD.

By forty minutes prior to the applicable Trading Hour, a System Resource receiving an Imbalance Reserves Award that has not submitted an E-Tag (or set of E-Tags) that passes CAISO E-Tag validation procedures, with the quantity (or sum of quantities) of the transmission profile no less than the sum of the

Imbalance Reserves Award and any Day-Ahead Schedule for Energy will result in the CAISO deeming the untagged portion of the Imbalance Reserves Award unavailable for purposes of Section 11.2.1.8.

### 31.4 CAISO Market Adjustments to Non-Priced Quantities in the IFM

All Self-Schedules are respected by SCUC to the maximum extent possible and are protected from curtailment in the Congestion Management process to the extent that there are Effective Economic Bids that can relieve Congestion. If all Effective Economic Bids in the IFM are exhausted, resource Self-Schedules between the resource's Minimum Load as defined in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and the first Energy level of the first Energy Bid point will be subject to adjustments by the CAISO Market optimization based on the scheduling priorities listed below. This functionality of the optimization software is implemented through the setting of scheduling parameters as described in Section 27.4.3 and specified in Section 27.4.3.1 and the Business Practice Manuals. Through this process, imports and exports may be reduced to zero, Demand Bids may be reduced to zero, Price Taker Demand (LAP load) may be reduced, and Generation may be reduced to a lower operating limit (or Regulation Limit) (or to a lower Regulation Limit plus any qualified Regulation Down award or Self-Provided Ancillary Services, if applicable). Any Self-Schedules below the Minimum Load level are treated as fixed Self-Schedules and are not subject to these adjustments for Congestion Management. The provisions of this section shall apply only to the extent they do not conflict with any MSS Agreement. In accordance with Section 27.4.3.5, the resources submitted in valid TOR, ETC or Converted Rights Self-Schedules shall not be adjusted in the IFM in response to an insufficiency of Effective Economic Bids. Thus the adjustment sequence for the IFM from highest priority (last to be adjusted) to lowest priority (first to be adjusted), is as follows:

| **Scheduling Run Priority** | **Scheduling Run Parameters Under Soft Energy Bid Cap (27.4.3.2)** | **Scheduling Run Parameters Under Hard Energy Bid Cap (27.4.3.3)** |
|---|---|---|
| Reliability Must Run (RMR) Generation pre-dispatch reduction | -$6000 | -$12000 |
| Day-Ahead TOR Self-Schedules reduction (balanced demand and supply reduction) | $5,900 (demand)/ -$5,900 (supply) | $11800 (demand)/ -$11800 (supply) |
| Day-Ahead ETC and Converted Rights Self-Schedules reduction; different ETC priority levels will be observed based upon global ETC priorities provided to the CAISO by the Responsible PTOs | $5100 to $5900 (demand)/ -$5100 to -$5900 (supply) | $10200 to $11800 (demand)/ -$10200 to -$11800 (supply) |
| Internal Transmission Constraint relaxation for | $5000 | $10000 |

| | | |
|---|---|---|
| the IFM pursuant to Section 27.4.3.1 | | |
| The export Self-Schedule of a Priority Wheeling Through; Self-Schedules of CAISO Demand reduction subject to Section 31.3.1.3; exports explicitly identified in a Resource Adequacy Plan to be served by Resource Adequacy Capacity explicitly identified and linked in a Supply Plan to the exports; and Self-Schedules of exports at Scheduling Points explicitly sourced by non-Resource Adequacy Capacity | $1800 | $3600 |
| Self-Schedules of exports at Scheduling Points not explicitly sourced by non-Resource Adequacy Capacity, except those exports explicitly identified in a Resource Adequacy Plan to be served by Resource Adequacy Capacity explicitly identified and linked in a Supply Plan to the exports as set forth in Section 31.4(d), and the export Self-Schedule of a non-Priority Wheeling Through | $1050 | $2100 |
| Day-Ahead Regulatory Must-Run Generation and Regulatory Must-Take Generation reduction | -$1350 | -$2700 |
| Other Self-Schedules of Supply reduction, and the import Self-Schedule of a Priority Wheeling Through | -$1100 | -$2200 |
| The import Self-Schedule of a non-Priority Wheeling Through | $0 | $0 |

### 31.4.1 Temporary Changes to Scheduling Run Parameter Values

If the CAISO determines it is necessary to modify the scheduling run parameter values in sections 31.4, 34.12.1, or 34.12.2 to address market solutions that do not align with scheduling priorities or avoid operational or reliability problems the resolution of which would otherwise require recurring operator intervention outside normal scheduling and market procedures, it may temporarily modify the value for a period up to ninety days. If circumstances reasonably allow, CAISO will consult with CAISO's Market Monitoring Unit before implementing such modification. In all circumstances, the CAISO will (i) consult with those entities as soon as reasonably possible after implementing a temporary modification, and (ii) notify Market Participants within one business day after the change of any temporary modification and explain the reasons for the change.

This section does not authorize the CAISO to change the scheduling run parameter values in a manner that changes the relative scheduling run priorities specified in sections 31.4, 34.12.1, and 34.12.2.

## 31.5 Residual Unit Commitment

The CAISO shall perform the RUC process after the IFM. As further specified in this Section 31.5, RUC

procures RUC Capacity, which includes Reliability Capacity Up and Reliability Capacity Down, to address mismatches between the CAISO Forecast of BAA Demand and the physical capacity committed in the IFM.

RUC Capacity is selected by a SCUC optimization that uses the same Base Market Model used in the IFM adjusted as described in Section 27.5.1 and 27.5.6 to help ensure the deliverability of Energy from the RUC Capacity. That optimization procures RUC Capacity by Node and creates separate RUC Prices for RCU and RCD by Node. In the case of Multi-Stage Generating Resources, the RUC will optimize Transition Costs in addition to the Start-Up and Minimum Load Costs. If a Scheduling Coordinator submits a Self-Schedule or a Submission to Self-Provide Ancillary Services for a given MSG Configuration in a given Trading Hour, the RUC will consider the Start-Up Cost, Minimum Load Cost, and Transition Cost associated with any Economic Bids for other MSG Configurations as incremental costs between the other MSG Configurations and the self-scheduled MSG Configuration. In such cases, incremental costs are the additional costs incurred to transition or operate in an MSG Configuration in addition to the costs associated with the self-scheduled MSG Configuration.

### 31.5.1 RUC Participation

#### 31.5.1.1 Capacity Eligible for RUC Participation

Scheduling Coordinators may make capacity available for participation in RUC by submitting a RUC Availability Bid, provided the Scheduling Coordinator has also submitted an Energy Bid (other than a Virtual Bid) for such capacity into the IFM. As part of the Bid validation procedures specified in Section 30.7.3, the CAISO disregards RUC Availability Bids from capacity that is not accompanied in the IFM by an Energy Bid that is not a Virtual Bid. Virtual Bids are not eligible to participate in RUC. Non-Participating Load and Reliability Demand Response Resources are not eligible to participate in RUC. RUC participation is required for Resource Adequacy Capacity. System Resources with a Resource ID defined in the CAISO Master File are eligible to participate in RUC and will be considered on an hourly basis; that is, RUC will not observe any multi-hour block constraints. A Long Start Unit is eligible to participate in RUC to the extent it has submitted an Energy Bid to the Day-Ahead Market above PMin. In RUC the CAISO may commit a Multi-Stage Generating Resource with a Resource Adequacy must-offer obligation at any MSG Configuration with capacity equal to or greater than the MSG Configuration

committed in the Integrated Forward Market. RUC will observe the Energy Limits that may have been submitted in conjunction with Energy Bids to the IFM. Legacy RMR Unit capacity will be considered in RUC in accordance with Section 31.5.1.3. MSS resources may participate in RUC in accordance with Section 31.5.2.3. COG resources are accounted for in RUC, but may not submit or be paid RUC Availability Payments. The ELS Resources committed through the ELC Process conducted two days before the day the RUC process is conducted for the next Trading Day as described in Section 31.7 are binding.

#### 31.5.1.2 RUC Availability Bids

With the exception of capacity from Eligible Intermittent Resources, Scheduling Coordinators may only submit RUC Availability Bids for capacity (above the Minimum Load as registered in the Master File) for which they are also submitting an Economic Energy Bid (other than a Virtual Bid) to participate in the IFM. A Scheduling Coordinator representing an Eligible Intermittent Resource must submit RUC Availability Bids for RCU at a quantity equal to their forecasted output based on the forecast referenced in Section 4.8.2.1. An RMR Resource must submit a RUC Availability Bid for RCU in an amount that is the lowest of the resource's: (1) 60-minute ramp capability; (2) Upper Economic Limit; or (3) full RMR Capacity.

#### 31.5.1.3 Legacy RMR Treatment

If a Legacy RMR Unit is determined to have a generation requirement for any Trading Hour of the next day, either by the MPM process or by the CAISO through a Manual RMR Dispatch, and if any portion of the generation requirement has not been cleared in the IFM, the entire portion of the generation requirement will be represented as a Legacy RMR Generation Self-Schedule in the RUC.

#### 31.5.1.4 Eligibility to Set the RUC Price

All resources that are eligible for RUC participation as described in Section 31.5.1.1 with RUC Bids, other than resources with RUC Capacity resulting from RUC Availability Bids inserted pursuant to Section 31.5.1.5, that are unconstrained due to Ramp Rates or other temporal constraints, including MSG Transitions, are eligible to set the RUC Price, provided the Schedule for the eligible resource other than a Generating Unit or Resource-Specific System Resource is between zero (0) MW and the highest MW value in its Economic Bid or Generated Bid. If (a) a resource's Schedule is constrained by its Minimum Operating Limit or the highest MW value in its Economic Bid or Generated Bid, (b) the CAISO enforces a

resource-specific constraint on the resource due to an RMR Dispatch Notice or Exceptional Dispatch or (c) the resource's full Ramping capability is constraining its inter-hour change in Schedule, the resource cannot be marginal and thus is not eligible to set the RUC Price. Resources identified as MSS Load following resources are not eligible to set the RUC Price.

#### 31.5.1.5 RCU Bid Insertion for Exports and Eligible Intermittent Resources

The CAISO inserts RUC Availability Bids for RCU: (a) if an Economic Bid to export Energy is awarded in the IFM and is not accompanied by a RUC Availability Bid for RCU of at least the same quantity as the Economic Bid for Energy; (b) for Self-Schedules of exports not explicitly sourced by non-Resource Adequacy Capacity awarded in the IFM; and (c) for a Scheduling Coordinator representing an Eligible Intermittent Resource that fails to submit a RUC Availability Bid for RCU as required by Section 31.5.1.2. For parts (a) and (b), the quantity of the inserted Bid is the quantity of the Day-Ahead Schedule for Energy and the price of the inserted Bid is formulated to maintain the merit order of the resource's Energy Bid in the IFM. For part (c), the quantity of the inserted Bid is the quantity not covered by a RUC Availability Bid for RCU as required by Section 31.5.1.2 and the price of the inserted Bid is at the price included in the RUC Availability Bid for RCU or, if the Scheduling Coordinator did not submit any such Bid, at a price above the Default Availability Bid and below the RUC power balance constraint penalty price parameter specified in the Business Practice Manual.

### 31.5.2 [Not Used]

#### 31.5.2.1 [Not Used]

#### 31.5.2.2 [Not Used]

#### 31.5.2.2.1 [Not Used]

#### 31.5.2.2.2 [Not Used]

#### 31.5.2.3 [Not Used]

### 31.5.3 RUC Procurement Target

Subject to Sections 31.5.3.1 and 31.5.4, the RUC Procurement Target for each Balancing Authority Area participating in the Day-Ahead Market is based on the relationship between the CAISO Forecast of BAA Demand for that BAA and the Supply cleared in the IFM for that Trading Hour (excluding Virtual Supply).

If the CAISO Forecast of BAA Demand exceeds the Supply cleared in the IFM for a Trading Hour (excluding Virtual Supply), then the RUC Procurement Target for that Balancing Authority Area is RCU in the amount of the excess Demand.

If the Supply (excluding Virtual Supply) cleared in the IFM for a Trading Hour exceeds the CAISO Forecast of BAA Demand, then the RUC Procurement Target for that Balancing Authority Area is RCD in the amount of the excess Supply.

If the Supply (excluding Virtual Supply) cleared in the IFM for a Trading Hour equals the CAISO Forecast of BAA Demand, then the RUC Procurement Target for that Balancing Authority Area is zero RCU and zero RCD.

The adjustments listed in Sections 31.5.3.1 to 31.5.3.1.6 will be made to the CAISO Forecast of BAA Demand to account for the conditions as provided therein. The RUC Procurement Target setting procedure is designed to meet the requirements of reliable grid operation without unnecessary over-procurement of RUC Capacity or over-commitment of resources. Additional detail on the process for setting the RUC Procurement Target is specified in the Business Practice Manuals.

**31.5.3.1 CAISO Operator Review & Adjustment**

The CAISO Operator reviews the CAISO Forecast of BAA Demand and all calculated adjustments as provided in Sections 31.5.3.1.1 through 31.5.3.1.6. The CAISO Operator may accept, modify, or reject such adjustments based on Good Utility Practice. If the CAISO Operator determines it must modify the CAISO Forecast of BAA Demand, the CAISO Operator shall log sufficient information as to reason, Operating Hour, and specific modification(s) made to the CAISO Forecast of BAA Demand.

**31.5.3.1.1 RUC Net Short Conditions**

The CAISO Operator may conform the CAISO Forecast of BAA Demand in the event the CAISO Operator has determined that additional capacity may need to be procured in RUC to meet anticipated Real-Time system conditions. The CAISO Operator will consider factors such as: CAISO Forecast of BAA Demand error; weather pattern that is expected to continue or change within the next Trading Day; generator outage resulting in different Supply availability than was bid into the Day-Ahead Market; fire that threatens transmission lines and/or corridors; the expectation that the amount of Generation committed in the IFM will not be sufficient to meet the anticipated Demand; and Reliability Coordinator next-day analysis of

system conditions.

**31.5.3.1.2 Demand Response Adjustments.**

The CAISO may adjust the CAISO Forecast of CAISO Demand to account for Demand response that is clearly communicated to the CAISO as certain to be curtailed for the next Trading Day. Such adjustments may be made only for the two following types of Demand response: (1) Demand response triggered by a staged System Emergency event; and (2) Demand response that is triggered by a price or an event known in advance.

**31.5.3.1.3 [Not Used]**

**31.5.3.1.4 Eligible Intermittent Resource Adjustment**

Scheduling Coordinators for Eligible Intermittent Resources may submit Bids, including Self-Schedules, in the Day-Ahead Market and the quantity ultimately scheduled from Eligible Intermittent Resources may differ from the CAISO forecasted deliveries from the Eligible Intermittent Resources. The CAISO may adjust the forecasted Demand either up or down for such differences by RUC Zone in which the Eligible Intermittent Resource resides. If the EIR's expected output participating in the Day-Ahead Market, as reflected in the EIR's Bid, including a Self-Schedule, or lack thereof, is less than CAISO's forecast of the EIR, the CAISO may make a Supply-side adjustment to the resource's expected output by using the CAISO's forecast of the EIR. If on the other hand, the EIR's expected output participating in the Day-Ahead Market, as reflected in the EIR's Bid, including a Self-Schedule, or lack thereof, is greater than the CAISO's forecast of the EIR, the CAISO may make a Demand side adjustment to the RUC Zone Demand equal to the difference between the EIR's Day-Ahead Schedule and the CAISO forecasted quantity.

**31.5.3.1.5 Real-Time Expected Incremental Supply Self-Schedule Adjustment**

In order to avoid over procurement of RUC, the CAISO may, using a similar-day approach, estimate the RTM Self-Schedules for resources that usually submit RTM Self-Schedules that are greater than their Day-Ahead Schedules. The CAISO Operator may set the length of the Self-Schedule moving average window. Initially this moving average window shall be set by default to seven (7) days; in which case the weekday estimate is based on the average of five (5) most recent weekdays and the weekend estimate is based on the average of the two (2) most recent weekend days. To the extent weather conditions differ significantly from the historical days, additional adjustment may be necessary. After determining the

estimate of Real-Time Self-Schedules, using a similar day forecasting approach, the CAISO may adjust the CAISO Forecast of BAA Demand of a RUC Zone based on the forecasted quantity changes in Supply as a result of Self-Schedules submitted in the RTM. This adjustment for forecasted Real-Time Self-Schedules may result in positive or negative adjustments. Demand adjustments to the CAISO Forecast of BAA Demand result when there is a net forecast decrease in Real-Time Self-Schedule Supply relative to the Day-Ahead Schedule Supply. Supply adjustments to the individual resources occur when there is a net forecast increase in Real-Time Self-Schedule Supply relative to the Day-Ahead Schedule Supply of the individual resource.

#### 31.5.3.1.6 Day-Ahead Ancillary Service Procurement Deficiency Adjustment

While the CAISO intends to procure one hundred percent (100%) of its forecasted Operating Reserve requirement in the IFM based on the CAISO Forecast of BAA Demand as specified in Section 8.3.1, the CAISO may make adjustments to the CAISO Forecast of BAA Demand used in RUC to ensure sufficient capacity is available or resources committed in cases that the CAISO is unable to procure one hundred percent (100%) of its forecasted Operating Reserve requirement in the IFM; provided, however, that the CAISO shall not procure specific Ancillary Services products in RUC, nor will the RUC optimization consider AS-related performance requirements of available capacity.

### 31.5.3.2 RUC Zones

#### 31.5.3.2.1 Use of RUC Zones

The CAISO shall adjust the CAISO Forecast of BAA Demand by RUC Zone for the conditions described in Sections 31.5.3.2 through 31.5.3.6. If any adjustments are made throughout the affected RUC Zone, such adjustments will be made consistent with the subset of system LDFs for the Nodes that define the RUC Zone(s). The CAISO will adjust the CAISO Forecast of BAA Demand of each affected RUC Zone, preserving the LDFs within each RUC Zone, but the relative weighting of the LDFs across the system will deviate from the original LDFs.

#### 31.5.3.2.2 Designation of RUC Zones

The CAISO shall define RUC Zones as areas that represent UDC or MSS Service Areas, Local Capacity Areas, or any other collection of Nodes. RUC Zones will be designated by the CAISO as necessary and to the extent that the CAISO has developed sufficient data on historical Demand in a BAA and weather

conditions to allow it to perform Demand Forecasts. Once the CAISO has established RUC zones, the mapping of RUC Zones to Nodes shall be static data and shall be maintained in the Master File. The CAISO may add new Nodes to a RUC Zone if new Nodes are added to the FNM. The status of each RUC Zone shall remain active for as long as the CAISO maintains regional forecasting capabilities, but once a RUC Zone is designated the CAISO will only adjust the CAISO Forecast of BAA Demand as necessary to address RUC procurement constraints and not as a normal course for all CAISO Market functions. The actual RUC Zones used by the CAISO in its operation of RUC are posted on the CAISO Website.

### 31.5.4 RUC Procurement Constraints

In addition to the resource constraints and Transmission Constraints employed by SCUC as discussed in Section 27.4.1, the CAISO shall employ the following constraints in RUC:

(a) To ensure that sufficient RUC Capacity is procured to meet the CAISO Forecast of BAA Demand, the CAISO will enforce the power balance between the total Supply, which includes Day-Ahead Schedules and RUC Capacity, and the total Demand, which includes the CAISO Forecast of BAA Demand and IFM export Schedules. The CAISO may adjust the CAISO Forecast of BAA Demand to increase the RUC procurement target if there is AS Bid insufficiency in the IFM.

### 31.5.5 Selection and Commitment of RUC Capacity

Capacity that is not already scheduled in the IFM may be selected as RUC Capacity to meet a RUC Procurement Target.

#### 31.5.5.1 Nodal Procurement and Deliverability of Reliability Capacity

RUC optimizes procurement of Reliability Capacity such that, in the event the Real-Time Market awards the incremental or decremental Energy Bids corresponding to the Reliability Capacity Awards, the dispatch of Energy from the Reliability Capacity in the market would not result in flows exceeding Transmission Constraints and scheduling limits, including EDAM Transfer limits.

The RUC optimization distributes an EDAM Entity's RUC procurement target to the Demand Locations within each EDAM Entity based on distribution factors derived from historical and/or forecasted information that reflect the relative contributions of Demand to the RUC procurement targets.

#### 31.5.5.2 The RUC Optimization

The RUC optimization will select RUC Capacity and produce nodal RUC Prices by minimizing total Bid cost based on RUC Availability Bids and Start-Up, Minimum Load Bids and Transition Costs. RUC will not consider Start-Up, Minimum Load Bids, or Transition Costs for resources already committed in the IFM. The CAISO will only issue RUC Start-Up Instructions to resources committed in RUC that must receive a Start-Up Instruction in the Day-Ahead in order to be available to meet Real-Time Demand. RUC Schedules will be provided to Scheduling Coordinators even if a RUC Start-Up Instruction is not issued at that time. RUC shall not Shut Down resources scheduled through the IFM but RUC may commit a Multi-Stage Generating Resource to a lower MSG Configuration. If the RUC process cannot find a feasible solution given the resources committed in the IFM, the RUC process will adjust constraints as described in Section 31.5.4 to arrive at a feasible solution that accommodates all the resources committed in the IFM.

#### 31.5.5.3 Limitations on RUC Awards

A RUC Award to a specific resource only can consist of RCU or RCD, and not both. RUC shall not Shut Down resources scheduled through the IFM. RUC shall not provide a RUC Award to a Multi-Stage Generating Resource that would require it to make an infeasible transition from the MSG Configuration applicable to its Day-Ahead Schedule to the MSG Configuration applicable to meeting the requirements of the potential RUC Award.

The RUC optimization applies a constraint such that the sum of awards for Energy, Ancillary Services, Imbalance Reserves, and Reliability Capacity is feasible given the resource's capacity, operating and economic limitations.

The RUC optimization only awards a RUC Award to a storage resource using the Non-Generator Resource model to the extent its modeled State of Charge can support such schedule or award.

### 31.5.6 Eligibility for RUC Compensation

All RUC Capacity is eligible for the RUC Availability Payment except for: (i) RMR Capacity from RMR Resources; (ii) RUC Capacity resulting from RUC Availability Bids for exports inserted pursuant to Section 31.5.1.5; and (iii) RUC Capacity that corresponds to the resource's Minimum Load, which is compensated through the Bid Cost Recovery as described in Section 11.8. Resources not committed in the IFM that

are committed in RUC, including Condition 1 Legacy RMR Units that were not designated for RMR Dispatches and Resource Adequacy Resources, are also eligible for RUC Cost Compensation, which includes Start-Up, Transition Costs, and Minimum Load Cost compensation, and Bid Cost Recovery, subject to the resource actually following its Dispatch Instructions as verified by the CAISO pursuant to procedures set forth in the Business Practice Manuals.

**31.5.7 Rescission of Payments for RUC Capacity**

If capacity committed in RUC provided from a Generating Unit, Participating Load, Proxy Demand Resource, System Unit or System Resource is Undispatchable Capacity during the relevant Settlement Interval, then the CAISO rescinds the payments as described in this Section 31.5.7 and settled in accordance with Section 11.2.2.2. If the CAISO determines that non-compliance of a Participating Load, Proxy Demand Resource, Generating Unit, System Unit or System Resource with an Operating Instruction or Dispatch Instruction from the CAISO, or with any other applicable technical standard under the CAISO Tariff, causes or exacerbates system conditions for which the WECC imposes a penalty on the CAISO, then the Scheduling Coordinator of such Participating Load, Proxy Demand Resource, Generating Unit, System Unit or System Resource shall be assigned that portion of the WECC penalty which the CAISO reasonably determines is attributable to such non-compliance, in addition to any other penalties or sanctions applicable under the CAISO Tariff. The rescission of payments in this Section 31.5.7 shall not apply to a capacity payment for any particular RUC Capacity if the RUC Availability Payment is less than or equal to zero (0).

**31.5.8 RTM Bidding Obligations from RUC Awards**

A RUC Availability Award in an hour obligates the Scheduling Coordinator for the resource receiving the award to submit Economic Bids to the Real-Time Market for the full range of awarded Reliability Capacity. The portion of the resource's Day-Ahead Schedule for Energy below a RCD award may be Self-Scheduled in the Real-Time Market.

A resource receiving a RUC Availability Award in an hour cannot submit a Self-Schedule for Energy in the Real-Time Market for a quantity in excess of its Day-Ahead Schedule for Energy minus any awards for IRD and RCD.

Resources receiving a RUC Availability Award for RCU for which their Scheduling Coordinator has submitted an Energy Bid in the Day-Ahead Market to export outside the EDAM Area must provide a decremental Energy Bid to dispatch down the export schedule in the FMM if needed.

By forty minutes prior to the applicable Trading Hour, the Scheduling Coordinator for a System Resource receiving a RUC Award must submit an E-Tag (or set of E-Tags) that passes CAISO E-Tag validation procedures, with the quantity (or sum of quantities) of the transmission profile no less than the sum of the RUC Award and any Day-Ahead Schedule for Energy. Failure to meet this deadline results in the CAISO deeming the entire quantity of the RUC Award as Undispatchable Capacity for RUC for purposes of Section 11.2.2.2.1.

### 31.6 Timing of Day-Ahead Scheduling

#### 31.6.1 Criteria for Temporary Waiver of Timing Requirements

The CAISO may at its sole discretion implement any temporary variation or waiver of the timing requirements of this Section 31 and Section 6.5.3 (including the omission of any step) if any of the following criteria are met:

(i) such waiver or variation of timing requirements is reasonably necessary to preserve System Reliability, prevent an imminent or threatened System Emergency or to retain Operational Control over the CAISO Controlled Grid during an actual System Emergency.

(ii) because of error or delay, the CAISO requires additional time to fulfill its responsibilities;

(iii) problems with data or the processing of data cause a delay in receiving or issuing Bids or publishing information on the CAISO's secure communication system;

(iv) problems with telecommunications or computing infrastructure cause a delay in receiving or issuing Day-Ahead Schedules or publishing information on the CAISO's secure communication system; or

(v) additional time is needed to allow for the submission of Bids in the event that the conditions specified in Section 30.5.8 change prior to the Market Close, and may require the resubmission of Bids consistent with the changed bidding requirements.

#### 31.6.2 Information to be Published on Secure Communication System

If the CAISO temporarily implements a waiver or variation of such timing requirements, the CAISO will

publish the following information on the CAISO's secure communication system as soon as practicable:

(i) the exact timing requirements affected;

(ii) details of any substituted timing requirements;

(iii) an estimate of the period for which this waiver or variation will apply; and

(iv) reasons for the temporary waiver or variation.

### 31.6.3 Conditions Permitting CAISO to Abort Day-Ahead Market

If, despite the variation of any time requirement or the omission of any step, the CAISO either fails to receive sufficient Bids or fails to clear the Day-Ahead Market, the CAISO may abort the Day-Ahead Market and require all Bids to be submitted in the RTM.

### 31.6.4 [Not Used]

## 31.7 Extremely Long-Start Commitment Process

The CAISO shall perform the Extremely Long-Start Commitment Process (ELC Process) after the regular DAM results are posted. ELS Resources are flagged in the Master File and are the only resources eligible to be committed in the ELC Process. Each day after the DAM results are posted, the CAISO shall conduct the ELC Process to determine commitment of ELS Resources to be available to the CAISO Markets in the second day out. The CAISO will use the latest CAISO Forecast of CAISO Demand available to the CAISO for the Trading Day two days ahead of the current day that the ELC Process is executed. For commitment purposes for a resource whose Start-Up Time would exceed the definition of an ELS Resource based on the resource's initial condition and cooling time, the CAISO will consider DAM Bids from ELS Resources as Bids for the Trading Day two days ahead of the current day that the ELC Process is executed. The CAISO Operator shall use its operator judgment consistent with Good Utility Practice to determine whether ELS Resources for the second day in the 48-hour time period should be committed. The ELC Process does not dispatch Energy for the 48-hour time period and therefore the commitment instructions will not include megawatts schedules greater than the Minimum Load. ELS Resources receiving a commitment instruction are obligated to resubmit the same Bid in the next day's Day-Ahead Market. The CAISO Commitment Period or Self-Commitment Period determination for the ELS Resources depends on the DAM results and the Clean Bids and Generated Bids, following the same rules that apply to other resources. All Commitment Intervals for the ELS Resources will be classified as

CAISO Commitment Periods, unless there is a Self-Schedule or Self-Provided AS for that interval.

## 31.8 Constraints Enforced at Interties

### 31.8.1 Scheduling Constraints

Within the IFM and RTM optimizations, the CAISO enforces a constraint at each CAISO Intertie such that physical imports net of physical exports must be less than or equal to the scheduling limit at the Scheduling Point in the applicable direction. The CAISO incorporates the Shadow Price of this IFM constraint into the CAISO Market runs used to establish LMPs for both physical and virtual awards. Within the RUC process, the CAISO enforces a constraint at each Intertie such that physical imports net of physical exports must be less than or equal to the scheduling limit at the Scheduling Point in the applicable direction. Through this RUC constraint the CAISO determines what Day-Ahead Schedules can have an E-Tag submitted Day-Ahead. Day-Ahead Schedules precluded from submitting an E-Tag in the Day-Ahead on this basis are exempt from the charges described in Section 11.32.

### 31.8.2 Physical Flow Constraints

The CAISO may enforce a physical flow constraint limit at each internal and Intertie location in the IFM taking into account the total power flow contributions, which include internal schedules, which can be physical or virtual, import/export schedules, and the CAISO's estimates of unscheduled flow at the Interties. The physical flow constraint limit at each Intertie is less than or equal to the Transmission Constraints, including Nomograms and Contingencies, affecting the Intertie. At each Intertie the scheduling and physical flow constraint limits may differ. In the RUC and RTM processes, the same physical flow constraint limit is applied and internal schedules and import/export schedules, which can only be physical, are considered along with the CAISO's estimates of unscheduled flow at the Interties. The CAISO will not enforce physical flow constraints at Interties for which the CAISO (1) is subject to contractual arrangements that provide for the management of unscheduled flows using other procedures; (2) has determined it cannot enforce the power flow constraints due to modeling inaccuracies, including inaccuracies in available data; or (3) has otherwise determined that enforcing the power flow constraints could result in adverse reliability impacts.

## 31.9 RUC MPM Process

After the IFM and prior to RUC, the CAISO performs the RUC MPM.

### 31.9.1 Determining Competitive and Non-Competitive Congestion Components in RUC

The RUC MPM process produces potential RUC Availability Awards by enforcing all Transmission Constraints that are expected to be enforced in procuring Reliability Capacity to meet the CAISO Forecast of BAA Demand, with that forecast distributed to Demand Locations based on Load Distribution Factors, and based on unmitigated RUC Availability Bids. The RUC MPM uses as the Reference Bus either: (1) the Midway 500kV bus if Path 26 flow is from north to south; or (2) the Vincent 500kV bus if Path 26 flow is from south to north. The treatment of a particular Transmission Constraint as competitive or non-competitive for purposes of the RUC MPM process is determined pursuant to Section 39.7.2.

### 31.9.2 RUC Bid Mitigation

The CAISO applies Local Market Power Mitigation to Bids for RCU if the resource for which that Bid was submitted could provide counter-flow to a Transmission Constraint deemed non-competitive pursuant to the methodology outlined in Section 39.7.2.2(B)(a) in the case of modeling the dispatch of Energy from the capacity corresponding to RCU Awards. To the extent a Bid for RCU is subject to Local Market Power Mitigation and exceeds the Competitive RCU LMP plus the Competitive LMP Parameter, the CAISO mitigates the Bid to the higher of the: (i) resource's RCU Default Availability Bid; or (ii) Competitive RUC Price for RCU plus the Competitive LMP Parameter.

The CAISO does not mitigate RUC Availability Bids for RCD and does not mitigate RUC Availability Bids for RCU submitted on behalf of imports from outside the EDAM Area.

**32. [Not Used]**

## 33. Extended Day-Ahead Market

Pursuant to Section 33, the CAISO will expand operation and Settlement of the Day-Ahead Market in an EIM Entity Balancing Authority Area for which the Balancing Authority executes an EDAM Addendum to EIM Entity Agreement with the CAISO.

### 33.1 General Provisions

Section 1 will apply to EDAM Market Participants in addition to the provisions in this Section 33.1, unless limited in their application by this Section 33.1.

Participation in, operation of, and Settlement of the Extended Day-Ahead Market will be subject to the provisions of Section 33, and to all other provisions of the CAISO Tariff to the extent those provisions are applicable to the Extended Day-Ahead Market. The provisions of Section 33 will apply only to the Extended Day-Ahead Market.

EDAM Market Participants must comply with the provisions of Section 33, and other applicable provisions of the CAISO Tariff to the extent such provisions:

(a) expressly refer to Section 33 or EDAM Market Participants,

(b) are cross-referenced in Section 33, or

(c) are not limited in applicability to the CAISO Controlled Grid, the CAISO Balancing Authority Area, or CAISO Markets other than the Day-Ahead Market or Real-Time Market.

If there is an inconsistency between a provision in Section 33 and another provision of the CAISO Tariff regarding the rights or obligations of EDAM Market Participants, except in their capacity as EIM Market Participants under Section 29, the provisions in Section 33 will prevail to the extent of the inconsistency. If there is an inconsistency between a provision in Section 33 and a provision in Section 29, the provisions of Section 33 will prevail with respect to participation in the Day-Ahead Market and the provisions of Section 29 will prevail with respect to participation in the Real-Time Market, provided that the provisions of both Sections 33 and 29 will be given equal consideration such that the provisions applicable as an EDAM Market Participant and EIM Market Participant may be reconciled where provisions apply to participation in both the Day-Ahead Market and the Real-Time Market.

#### 33.1.1 Suspension of EDAM Entity Participation

The CAISO may, within 60 days following an EDAM Entity Implementation Date for an EDAM

Entity, and pursuant to the terms of a Market Notice, temporarily suspend the participation of that EDAM Entity in the Day-Ahead Market within the EDAM Entity Balancing Authority Area for a period not to exceed 60 days if market or system operational issues adversely impact any portion of the EDAM Area, provided that the CAISO may continue operation of the Day-Ahead Market in the rest of the EDAM Area without the participation of the EDAM Entity for a reasonable additional period of time in order to implement a resolution of the market or system operational issues.

If the CAISO is not able to identify a resolution of the EDAM-related market or system operational issues within 60 days after issuance of the Market Notice of temporary suspension of EDAM participation by an EDAM Entity, the CAISO may, upon issuance of a subsequent Market Notice, terminate participation by the EDAM Entity in the Day-Ahead Market and may extend the suspension of EDAM participation by the EDAM Entity for a time sufficient to process the termination of the EDAM Addendum to EIM Entity Agreement. The CAISO may reinstate EDAM operations after a temporary suspension of EDAM participation by an EDAM Entity by issuing a Market Notice announcing the intended reinstatement no less than 5 days in advance of the reinstatement date.

**33.1.1.1 EDAM Entity Action.**

In the event the CAISO issues a Market Notice of the temporary suspension of EDAM participation by an EDAM Entity, the EDAM Entity will either (a) undertake manual operation of its Balancing Authority Area without reliance on the Day-Ahead Market or (b) continue to submit EDAM Bids, forecast information, and the associated Meter Data to enable continued operation of the Day-Ahead Market until the CAISO issues a subsequent Market Notice either that (i) the cause of the temporary suspension has been resolved and the EDAM Entity has been reinstated, in which case EDAM participation by the EDAM Entity will return to normal, or (ii) EDAM participation by the EDAM Entity has been terminated.

In the event the CAISO issues a Market Notice of the temporary suspension of EDAM participation by an EDAM Entity, the EDAM Entity will either (a) not continue participation

as an EIM Entity if its Balancing Authority Area is under manual operation or (b) continue participation as an EIM Entity unless otherwise directed in accordance with Section 29.1(d), specifically to submit EIM Base Schedules and the associated Meter Data to enable continued operation of the Real-Time Market until the CAISO issues a subsequent Market Notice either that (i) the cause of the temporary suspension has been resolved and the EDAM Entity has been reinstated, in which case EDAM participation by the EDAM Entity will return to normal; or (ii) EDAM participation by the EDAM Entity has been terminated, in which case the EDAM Entity will continue participation in the EIM as an EIM Entity.

**33.1.2.1 CAISO Action.**

In the event the CAISO issues a Market Notice of the temporary suspension of EDAM participation by an EDAM Entity, the CAISO will (i) prevent EDAM Transfers and separate the EDAM Entity Balancing Authority Area from operation of the Day-Ahead Market in the EDAM Area in accordance with the provisions of the Business Practice Manual for the Extended Day-Ahead Market, (ii) suspend Settlement of Day-Ahead Market charges with respect to the EDAM Entity in accordance with the provisions of the Business Practice Manual for the Extended Day-Ahead Market, and (iii) issue a subsequent Market Notice either that the cause of the temporary suspension has been resolved and the EDAM Entity has been reinstated, in which case EDAM participation by the EDAM Entity will return to normal, or EDAM participation by the EDAM Entity has been terminated.

## 33.2 Access To EDAM

Section 2 will not apply to EDAM Market Participants; rather, the specific provisions of this Section 33.2 will apply to EDAM Market Participants.

The CAISO will provide open and non-discriminatory access to the Day-Ahead Market, including the Extended Day-Ahead Market for Balancing Authorities that also participate in the Energy Imbalance Market in accordance with the CAISO Tariff. Only EIM Entities may be EDAM Entities, while EIM Entities

who do not become EDAM Entities will have no obligation to participate in the Extended Day-Ahead Market and may continue to participate solely in the Energy Imbalance Market.

**33.2.1 EDAM Entity Implementation Agreement.**

A Balancing Authority that seeks to become an EDAM Entity must first execute an EDAM Entity Implementation Agreement with the CAISO that establishes the EDAM Entity Implementation Date, an obligation to sign an EDAM Addendum to EIM Entity Agreement, the onboarding fee for its implementation, and the scope of work required for its participation in the EDAM. A prospective EDAM Entity that has not yet executed an EDAM Addendum to EIM Entity Agreement may terminate its EDAM Entity Implementation Agreement at any time and for any reason in accordance with the terms of the EDAM Entity Implementation Agreement.

**33.2.2 Implementation Date.**

The CAISO and the prospective EDAM Entity shall work together to determine the EDAM Entity Implementation Date based on the complexity and compatibility of the Balancing Authority's transmission and technology systems with the CAISO systems and the planned timing of the CAISO's implementation of software enhancements. The EDAM Entity Implementation Date must be not less than six months after the date that the EDAM Entity Implementation Agreement between the CAISO and the Balancing Authority becomes effective in accordance with its terms. Once established, the EDAM Entity may request a change in the EDAM Entity Implementation Date to account for any circumstances that may affect the implementation timeline.

**33.2.3 Market Simulation and Parallel Operations.**

The CAISO and the prospective EDAM Entity will engage in (a) market simulation that accounts for the prospective EDAM Entity's implementation circumstances and (b) at least 30 days of parallel operations representing the Extended Day-Ahead Market to support the CAISO and the prospective EDAM Entity's implementation.

**33.2.4 Reporting.**

The CAISO will report on the CAISO Website periodically, but not less than once during market simulation, on progress towards completing the implementation activities and once again during parallel operations confirming completion of the implementation activities.

**33.2.5 Implementation Activities.**

The CAISO and the prospective EDAM Entity will complete the following implementation activities:

(A) **Execution of Necessary Agreements.** The prospective EDAM Entity has complied with Section 33.2.1, executed any necessary agreements for operating as an EDAM Entity, and helped the CAISO secure necessary agreements with third party prospective EDAM Market Participants.

(B) **Operations Training.** Prior to the start of parallel operations as set forth in Section 33.2.3, all operations staff (including contractors or vendors) identified by the prospective EDAM Entity who will have responsibility for EDAM operations, market transactions and settlements, will have completed identified CAISO training modules.

(C) **Forecasting Capability.** The CAISO and, to the extent the prospective EDAM Entity will use its own forecasts or is otherwise required to provide forecasting information to the CAISO, the prospective EDAM Entity has demonstrated its respective forecasting capability through –

(i) the definition of day-ahead demand forecast boundaries based on the conforming and non-conforming load characteristics, as applicable;

(ii) the documentation of EDAM Entity's choice of day-ahead demand forecast provider and how the demand forecast will be completed;

(iii) the accuracy of the CAISO forecast of demand based on historical actual load data for the defined demand forecast boundaries;

(iv) the identification of weather stations locations used in forecasting, as applicable;

(v) the identification of the source of day-ahead Variable Energy Resource forecasts;

(vi) the accuracy of the day-ahead forecast of Variable Energy Resources;

(vii) the identification of all Hybrid Resources; and

(viii) the provision of CAISO historical data on day-ahead demand and renewable forecast information to fill the needed historical data period to produce the Imbalance Reserve requirements at the net load level.

(D) **Resource Sufficiency Evaluation.** The prospective EDAM Entity Scheduling Coordinator demonstrates its ability to pass the Resource Sufficiency Evaluation for the prospective EDAM Entity's Balancing Authority Area.

(E) **Transmission Availability.** The prospective EDAM Entity confirms initial registration of the transmission rights of the EDAM Transmission Service Providers in its Balancing Authority Area available for EDAM Transfers or that otherwise may be scheduled in the Day-Ahead Market.

(F) **Operating Procedures.** Prior to the start of parallel operations pursuant to Section 33.2.3, the CAISO and the prospective EDAM Entity have defined, completed, and tested operating procedures for the prospective EDAM Entity and its Scheduling Coordinator's participation in the Extended Day-Ahead Market.

(G) **System Readiness and Integration.**

(i) **System and Functional Testing.** The prospective EDAM Entity and the CAISO have tested the functional and system elements in accordance with functional and system testing documentation posted on the CAISO Website.

(ii) **Prospective EDAM Entity Identification.** The CAISO has established and the prospective EDAM Entity has tested all necessary SCIDs and Resource IDs established for the prospective EDAM Entity's Balancing Authority Area.

(iii) **Certificates and Access.** The prospective EDAM Entity has issued all necessary certificates to its employees, contractors and vendors that require system access to perform EDAM-related job functions.

(H) **Market Simulation and Structured Scenarios simulation.** The prospective EDAM Entity operations staff identified by the prospective EDAM Entity who will

have responsibility for EDAM operations, transactions and settlements, have executed and passed all structured scenarios provided by CAISO with all significant issues resolved.

(I) **Settlements.** The CAISO and the prospective EDAM Entity have demonstrated that –

(i) CAISO settlement statements and invoices match the operational data published to stakeholders or fed into settlement system and the resulting calculations correspond to the formulas defined in CAISO's tariff and Business Practice Manuals.

(ii) CAISO settlement statements and invoices allocates charges and credits to its customers accurately reflecting system and market data during parallel operations.

(J) **Parallel Operations Plan.** The period of parallel operations specified in Section 33.2.3 runs consistently and in accordance with the prospective EDAM Entity specific parallel operations plan.

(K) **Historical Revenue Recovery.** As specified in the Business Practice Manual for the Extended Day-Ahead Market, but no later than three (3) months before the EDAM Access Charge would begin to be assessed, the EDAM Entity, and the CAISO for the CAISO Balancing Authority Area for the initial EDAM implementation, will exchange the information and documentation necessary to account for the EDAM Recoverable Revenue pursuant to Section 33.26 associated with the EDAM Transmission Service Providers in its Balancing Authority Area.

**33.2.6 Readiness.**

No later than 10 days prior to the prospective EDAM Entity Implementation Date as established in the EDAM Entity Implementation Agreement, the CAISO will determine, in consultation with the prospective EDAM Entity, whether prospective EDAM Entity will be ready for the prospective EDAM Entity's participation in the Extended Day-Ahead Market on the EDAM Entity

Implementation Date as contemplated by the implementation activities in Section 33.2.5.

**33.2.7 Delay.**

If the CAISO or the prospective EDAM Entity determines that either cannot proceed with implementation on the EDAM Entity Implementation Date, the CAISO and the prospective EDAM Entity will establish a new EDAM Entity Implementation Date as soon as it can be determined and reflect that date in an amended version of the EDAM Entity Implementation Agreement.

**33.2.8 Confidentiality**

The CAISO and the prospective EDAM Entity will provide confidential treatment of all information they exchange in connection with the EDAM Entity Implementation Agreement necessary to complete the implementation activities and which is identified as containing commercially sensitive or confidential information.

### 33.3 Local Furnishing PTO

The provisions applicable to transmission facilities owned by a Local Furnishing PTO or other Tax-Exempt PTO in CAISO Tariff Section 3 do not apply to the Extended Day-Ahead Market.

### 33.4 Roles And Responsibilities

Section 4 will apply to EDAM Market Participants to the extent their roles and responsibilities are included in the Extended Day-Ahead Market, in addition to the provisions in this Section 33.4.

(a) Nothing in this Section 33 will alter the CAISO's responsibilities under the other sections of the CAISO Tariff, under any agreement not required by Section 33, or under NERC Reliability Standards, any other NERC requirements or criteria, or any other Applicable Reliability Criteria as the Balancing Authority for the CAISO Balancing Authority Area and the transmission operator for the CAISO Controlled Grid. During any interruption of the normal operation of the Day-Ahead Market, the CAISO as Balancing Authority will remain responsible for managing the resources in its Balancing Authority Area and the flows on transmission lines internal to the CAISO Balancing Authority Area, including imports and exports, for the duration of the interruption.

(b) Nothing in this Section 33 will alter an EDAM Entity's responsibilities under NERC Reliability Standards and any other NERC requirements or criteria as the Balancing Authority for the EDAM Entity Balancing Authority Area and, to the extent applicable, as the transmission operator for

transmission facilities within its Balancing Authority Area. During any interruption of the normal operation of the Day-Ahead Market, the EDAM Entity as Balancing Authority will remain responsible in accordance with Section 33.7 for managing the resources in its Balancing Authority Area and the flows on internal transmission lines, including imports into and exports out of its Balancing Authority Area, for the duration of the interruption.

(c) An EDAM Transmission Service Provider will remain the transmission service provider in accordance with its tariff and will be responsible to manage transmission sales, reservations, and schedules on its transmission system in accordance with the EDAM Transmission Service Provider tariff.

(d) The CAISO will remain the transmission service provider for transmission capacity on the CAISO Controlled Grid in accordance with the CAISO Tariff.

**33.4.1 EDAM Entity**

An EDAM Entity must be a Balancing Authority registered and certified as such under the applicable authorities and execute an EDAM Addendum to EIM Entity Agreement no later than ninety (90) days before the EDAM Entity Implementation Date. Upon receipt of such notice, the CAISO will undertake all necessary preparations to enable operation of the Day-Ahead Market within the EDAM Entity Balancing Authority Area, as outlined in the Business Practice Manual for the Extended Day-Ahead Market, including issuance of a Market Notice within five Business Days after receipt of such notice.

An EDAM Entity must:

(a) perform the obligations of an EDAM Entity in accordance with the EDAM Addendum to EIM Entity Agreement, Section 33, and other provisions of the CAISO Tariff that apply to EDAM Entities, subject to the limitations specified in Section 33.1;

(b) determine and inform the CAISO about all Load Serving Entities within the EDAM Entity's Balancing Authority Area necessary to enable operation of the Day-Ahead Market in its Balancing Authority Area;

(c) qualify as, or secure representation by, an EDAM Entity Scheduling Coordinator, provided that an EDAM Entity may not be represented by more than one EDAM Entity

Scheduling Coordinator;

(d) provide the CAISO and its EDAM Entity Scheduling Coordinator with information regarding all Transmission Constraints of which it is aware;

(e) work with the CAISO to identify all resources within its Balancing Authority Area that do not currently participate in the Energy Imbalance Market pursuant to Section 29 so they can be represented in the Extended Day-Ahead Market as EDAM Resources and execute an EDAM Addendum to EIM Participating Resource Agreement pursuant to Section 33, which may be accomplished through execution of a separate EDAM Addendum to EIM Participating Resource Agreement or by including all or some of the resources under its EDAM Addendum to EIM Participating Resource Agreement;

(f) define Load Aggregation Points in its Balancing Authority Area and be responsible for serving the associated Demand, including for an EDAM Load Serving Entity in its Balancing Authority Area that will be separately responsible for serving the associated Demand;

(g) identify and inform the CAISO which resource types supported by the CAISO Markets are eligible to participate in the Day-Ahead Market as EDAM Resource Facilities;

(h) determine and inform the CAISO of EDAM Transmission Service Providers within the EDAM Entity Balancing Authority Area;

(i) serve as the entity that interacts with EDAM Transmission Service Providers within the EDAM Entity Balancing Authority Area; and

(j) inform the CAISO whether or not the EDAM Entity intends to utilize the CAISO's Demand Forecast consistent with Section 33.31.1.

**33.4.2 EDAM Transmission Service Provider**

An EDAM Transmission Service Provider must execute an EDAM Transmission Service Provider Agreement with the CAISO. An EDAM Transmission Service Provider that is not an EDAM Entity and no longer wishes to make transmission service available for use in the Day-Ahead Market may terminate the EDAM Transmission Service Provider Agreement pursuant to its terms only if such termination is concurrent with the termination of participation in the Day-Ahead Market by

the EDAM Entity for the Balancing Authority Area within which the EDAM Transmission Service Provider operates or holds transmission rights.

An EDAM Transmission Service Provider must:

(a) perform the obligations of an EDAM Transmission Service Provider in accordance with the EDAM Transmission Service Provider Agreement, Section 33, and other provisions of the CAISO Tariff that apply to EDAM Transmission Service Providers;

(b) have provisions in effect in the EDAM Transmission Service Provider's tariff, as necessary or applicable, to enable operation of the Day-Ahead Market, including an obligation for customers of the EDAM Transmission Service Provider to have a Scheduling Coordinator for purposes of interfacing with the CAISO;

(c) use the EDAM Entity Scheduling Coordinator as the Scheduling Coordinator for the EDAM Transmission Service Provider with respect to Settlements of charges for the EDAM Entity Balancing Authority Area and services provided by the EDAM Entity under applicable tariffs and agreements;

(d) provide information about transmission capacity available to the Day-Ahead Market to its EDAM Entity Scheduling Coordinator and the CAISO; and

(e) ensure transmission customers of the EDAM Transmission Service Provider that will submit schedules in the Day-Ahead Market secure representation by a Scheduling Coordinator.

**33.4.3 EDAM Entity Scheduling Coordinator**

An EDAM Entity Scheduling Coordinator must meet or have met the certification requirements in Section 4.5.1 for a Scheduling Coordinator, and enter into an EDAM Addendum to EIM Entity Scheduling Coordinator Agreement with the CAISO, which will satisfy the obligation to enter into a Scheduling Coordinator Agreement under Section 4.5.1 with regard to its representation of the EDAM Entity.

An EDAM Entity Scheduling Coordinator may represent a Market Participant other than an EDAM Entity if it enters into a Scheduling Coordinator Agreement under Section 4.5.1 with regard to

such Market Participant or more than one EDAM Entity if it has certified to the CAISO in the manner described in the Business Practice Manual for the Extended Day-Ahead Market that it has informed each EDAM Entity it represents of the multiple representation. However, an EDAM Entity Scheduling Coordinator may not also be an EDAM Resource Scheduling Coordinator or a Scheduling Coordinator for a Participating Generator, Participating Load, Demand Resource Provider, or Load Serving Entity, unless the EDAM Entity Scheduling Coordinator is a transmission provider subject to the standards of conduct set forth in 18 C.F.R. § 358, is a governmental entity that agrees to comply with standards of conduct equivalent to those set forth in 18 C.F.R. § 358, or is a generation-only balancing authority that has implemented procedures equivalent to the protections offered under the standards of conduct that specifically include procedures addressing the no-conduit rule to preclude non-public transmission function information that may be received from being passed to employees that satisfy the definition of a "Marketing Function Employee."

**33.4.4 EDAM Resource**

The owner or operator of each resource in an EDAM Entity Balancing Authority Area is required to participate in the Day-Ahead Market and is required to register its resource with the CAISO as an EDAM Resource Facility if it is capable of delivering Energy, Imbalance Reserves, Reliability Capacity, Flexible Ramping Product, other Ancillary Services, curtailable Demand, or Demand Response Services (or similar services) that may be committed in the Day-Ahead and committed for dispatch in the Real-Time Market as provided in the CAISO Tariff and the Business Practice Manual for the Extended Day-Ahead Market.

**33.4.4.1 EDAM Addendum to EIM Participating Resource Agreement**. An EDAM Resource must (a) perform the obligations of an EDAM Resource under the EDAM Addendum to EIM Participating Resource Agreement and Section 33, and (b) perform the obligations applicable to Market Participants and resources under the provisions of the CAISO Tariff described in Section 33.1. An EDAM Resource Facility must be listed in an executed EDAM Addendum to EIM Participating Resource Agreement.

**33.4.4.2 EDAM Resource and the Energy Imbalance Market**. An EDAM Resource

Facility must also be registered as an EIM Resource pursuant to Section 29 and participate in the Real-Time Market as an EIM Participating Resource through representation by an EIM Participating Resource Scheduling Coordinator. Resource non-participation as provided under Section 29 is no longer an option.

**33.4.5 EDAM Resource Scheduling Coordinator.**

Each EDAM Resource must be represented by an EDAM Resource Scheduling Coordinator. An EDAM Resource Scheduling Coordinator must meet or have met the certification requirements in Section 4.5.1 for a Scheduling Coordinator, and enter into an EDAM Addendum to EIM Participating Resource Scheduling Coordinator Agreement with the CAISO (in addition to an EIM Participating Resource Scheduling Coordinator Agreement if it has not done so already), which will satisfy the obligation to enter into a Scheduling Coordinator Agreement under Section 4.5.1 with regard to its representation of the EDAM Resource.

An EDAM Resource Scheduling Coordinator may represent more than one EDAM Resource or a Market Participant other than an EDAM Resource, but only if it enters into a Scheduling Coordinator Agreement under Section 4.5.1 with regard to such Market Participant. However, an EDAM Resource Scheduling Coordinator may not also be an EDAM Entity Scheduling Coordinator unless the EDAM Resource Scheduling Coordinator is a transmission provider subject to the standards of conduct set forth in 18 C.F.R. § 358, is a governmental entity that agrees to comply with standards of conduct equivalent to those set forth in 18 C.F.R. § 358, or is a generation-only balancing authority that has implemented procedures equivalent to the protections offered under the standards of conduct that specifically include procedures addressing the no-conduit rule to preclude non-public transmission function information that may be received from being passed to employees that satisfy the definition of a “Marketing Function Employee.”

An EDAM Resource Scheduling Coordinator must (a) perform the obligations of an EDAM Resource Scheduling Coordinator under the EDAM Addendum to EIM Participating Resource Scheduling Coordinator Agreement and Section 33, (b) perform the obligations of a Scheduling Coordinator under the provisions of the CAISO Tariff described in Section 33.1(c), (c) ensure that

the entity it represents has obtained any transmission service necessary to participate in the Extended Day-Ahead Market under the terms of the CAISO Tariff or the tariff of another transmission service provider, as applicable, and (d) register in the manner set forth in the Business Practice Manual for the Extended Day-Ahead Market all EDAM Resources that it represents, provide such information to the EDAM Entity Scheduling Coordinator, and update such information with the CAISO in a timely manner.

**33.4.6 EDAM Load Serving Entity**

All Load in an EDAM Entity Balancing Authority Area must be represented by an EDAM Load Serving Entity. An EDAM Load Serving Entity will be responsible for Load in the Day-Ahead Market and the Real-Time Market, including the submission of Bids and Settlement of Demand, in accordance with Section 33 and Section 29, and must be represented by an EDAM Load Serving Entity Scheduling Coordinator.

**33.4.7 EDAM Load Serving Entity Scheduling Coordinator**

An EDAM Load Serving Entity Scheduling Coordinator must meet or have met the certification requirements in Section 4.5.1 for a Scheduling Coordinator, and enter into a Scheduling Coordinator Agreement with the CAISO, which will satisfy the obligation to enter into a Scheduling Coordinator Agreement under Section 4.5.1 with regard to its representation of the EDAM Load Serving Entity.

An EDAM Load Serving Entity Scheduling Coordinator may represent more than one EDAM Load Serving Entity or a Market Participant other than an EDAM Load Serving Entity, but only if it enters into a Scheduling Coordinator Agreement under Section 4.5.1 with regard to such Market Participant. However, an EDAM Load Serving Entity Scheduling Coordinator may not also be an EDAM Entity Scheduling Coordinator unless the EDAM Load Serving Entity Scheduling Coordinator either is a transmission provider subject to the standards of conduct set forth in 18 C.F.R. § 358, a governmental entity that agrees to comply with standards of conduct equivalent to those set forth in 18 C.F.R. § 358, or a generation-only balancing authority that has implemented procedures equivalent to the protections offered under the standards of conduct that specifically include procedures addressing the no-conduit rule to preclude non-public transmission function

information that may be received from being passed to employees that satisfy the definition of a "Marketing Function Employee".

An EDAM Load Serving Entity Scheduling Coordinator must (a) perform the obligations of an EDAM Load Serving Entity Scheduling Coordinator under the applicable Scheduling Coordinator Agreement and Section 33, (b) perform the obligations of a Scheduling Coordinator under the provisions of the CAISO Tariff described in Section 33.1, (c) ensure that Load it represents has secured any transmission service necessary to participate in the Extended Day-Ahead Market under the terms of the applicable EDAM Transmission Service Provider tariff, and (d) register the EDAM Demand that it represents in the manner set forth in the Business Practice Manual for the Extended Day-Ahead Market, provide such information to the EDAM Entity Scheduling Coordinator, and update such information with the CAISO in a timely manner.

**33.4.8 Scheduling Coordinator Representation**

The Scheduling Coordinator for an EDAM Entity must be the same as the Scheduling Coordinator for the corresponding EIM Entity to ensure alignment between representation of the Balancing Authority Area in the Day-Ahead Market and the Real-Time Market. The Scheduling Coordinator for an EDAM Resource must be the same as the Scheduling Coordinator for the corresponding EIM Participating Resource to ensure alignment between representation of resources in the Day-Ahead Market and the Real-Time Market. Similarly, an EDAM Load Serving Entity Scheduling Coordinator will be responsible for Settlement of the Demand in the Real-Time Market it represents in the Day-Ahead Market. If the Demand represented by an EDAM Load Serving Entity Scheduling Coordinator is also associated with an EIM Sub-Entity, the Scheduling Coordinator must also represent the Demand for the EIM Sub-Entity in the Real-Time Market.

## 33.5 Black Start

The provisions applicable to Black Start and system restoration in Section 5 do not apply to the Extended Day-Ahead Market.

## 33.6 Communications

Section 6 will apply to EDAM Market Participants and govern communications and information availability

regarding EDAM Market Participants in the Day-Ahead Market, except as this Section 33.6 specifically provides.

**33.6.1 Technical Requirements.**

The EDAM Entity must satisfy the technical and communication requirements specified in the Business Practice Manual for the Extended Day-Ahead Market, which will be based on the Inter-Control Center Communication Protocol and Reliability Standards.

**33.6.2 Communications and OASIS.**

Section 6 will govern communications and information availability regarding the participation of EDAM Market Participants in the Day-Ahead Market except that (a) references to internal resources will be deemed to include EDAM Resource Facilities, (b) references in Sections 6.2.2.1 and 6.5.2.1 to the CAISO Controlled Grid and references in Sections 6.5.4.2.2(a) and 6.5.5.1.1 to the CAISO Balancing Authority Area will be deemed references to the EDAM Area, and (c) the provisions of Section 6.3.1 that authorize the CAISO to communicate directly with Generators and Demand Response Providers to ensure System Reliability will not apply to Generators and Demand Response Providers in the EDAM Entity's Balancing Authority Area or pseudo-tied from an external Balancing Authority Area to the EDAM Entity Balancing Authority Area.

**33.6.3 Loss of Communications.**

The CAISO and each EDAM Entity, EDAM Entity Scheduling Coordinator, and EDAM Load Serving Entity Scheduling Coordinator will establish procedures to address an interruption of Day-Ahead Market communications, which will include steps to be taken to restore communications and address any impact on system or market operations as provided in Section 33. An EDAM Entity that loses communication with the CAISO remains responsible for managing its Balancing Authority Area without the Day-Ahead Market, and each EDAM Entity will have communication procedures to address such circumstances.

**33.6.4 Variable Energy Resource Forecast Communications.**

If the EDAM Resource Scheduling Coordinator for a Variable Energy Resource elects to use an independent forecasting service, it must make data transfer arrangements with the CAISO for the CAISO to receive the forecast in a format and on a schedule set forth in the Business Practice

Manual for the Extended Day-Ahead Market.

**33.6.5 Hybrid Resource Forecast Communications.**

If the EDAM Resource Scheduling Coordinator for a Hybrid Resource elects to use an independent forecasting service, it must make data transfer arrangements with the CAISO for the CAISO to receive the forecast in a format and on a schedule set forth in the Business Practice Manual for the Extended Day-Ahead Market.

**33.6.6 Provision of Market Information to EDAM Entities**

CAISO may make certain market information available to an EDAM Entity to the extent such information relates to the EDAM Entity's Balancing Authority Area operations and is equivalent to information available to the CAISO Balancing Authority. This information will not include individual market bids or prices or other information that could be used to gain an unfair competitive advantage in the CAISO Markets. CAISO, in its function as a market operator, will provide such information in a manner that does not unduly discriminate against or give undue preference to any EDAM Entity, including CAISO as a Balancing Authority and transmission operator.

**33.7 EDAM Operations Under Normal And Emergency Conditions**

Section 7 of the CAISO Tariff will not apply to EDAM Market Participants; rather, the specific provisions of this Section 33.7 will apply to EDAM Market Participants.

**33.7.1 Normal Operations**

The CAISO will administer the transmission capacity made available to the Day-Ahead Market to support transfers of Energy, Reliability Capacity, and Imbalance Reserves in the EDAM Area under normal operations. The CAISO will issue a Day-Ahead Schedule only to an EDAM Entity Scheduling Coordinator or EDAM Load Serving Entity Scheduling Coordinator for Load in the Day-Ahead Market. The CAISO will issue a Day-Ahead Schedule to an EDAM Resource only if that resource has a Bid in the Day-Ahead Market, including Load participating as an EDAM Resource. The CAISO will have no authority to issue an Exceptional Dispatch to an EDAM Resource.

**33.7.2 EDAM Transfer Modeling.**

EDAM Transfers support both Energy and capacity transfers between Balancing Authority Areas in the EDAM Area. Each EDAM Transfer is modeled by a pair of export and import EDAM Transfer System Resources, one for each Balancing Authority Area on each side of the EDAM Internal Intertie with equal Energy schedules and/or capacity awards. EDAM Transfers include the exchange of Energy, Imbalance Reserves, Reliability Capacity, and ancillary services in support of the EDAM RSE at EDAM Internal Interties. The Ancillary Service transfers are declared by the Balancing Authority, not optimized in the IFM, and supported by designated transmission capacity. The CAISO will model individual constraints for each EDAM Transfer scheduling limit available on an EDAM Internal Intertie based on the transmission capacity made available under Section 33.18, and will enforce the scheduling limit for an EDAM Transfer in the Day-Ahead Market. The CAISO will calculate the net scheduled EDAM Transfers for the Balancing Authority Areas in the EDAM Area and derive from these net scheduled EDAM Transfers the schedules on EDAM Internal Interties for E-Tag purposes. The CAISO will communicate the EDAM Transfer limit to the EDAM Entity Scheduling Coordinator with each Balancing Authority Area in the EDAM Area for E-Tag purposes.

**33.7.3 Manual Dispatch.**

The EDAM Entity may issue a manual dispatch to an EDAM Resource in its Balancing Authority Area, outside of the Market Clearing of the Day-Ahead Market, and enforce Transmission Constraints when necessary to address issues in the EDAM Entity Balancing Authority Area that the CAISO is unable to address through normal economic Dispatch and Congestion Management in accordance with the timelines and procedures in Business Practice Manual for the Extended Day-Ahead Market. The EDAM Entity Scheduling Coordinator will inform the CAISO of the manual dispatch through submission of a Self-Schedule or EIM Manual Dispatch, and if the EDAM Entity Balancing Authority Area is under manual operation. Upon receiving notice of a manual dispatch, the CAISO will reflect the manual dispatch in the applicable CAISO Market depending upon when the notice is received and only to the extent that reflection of the manual dispatch in the market is practicable.

**33.7.4 EDAM Disruption.**

The CAISO may declare an interruption of EDAM Entity participation in the Day-Ahead Market when in its judgment (a) operational circumstances (including a failure of the Day-Ahead Market operation to produce feasible results in the EDAM Area or other CAISO Market Disruption) in the EDAM Area have caused or are in danger of causing an abnormal system condition in the CAISO Balancing Authority Area or an EDAM Entity Balancing Authority Area that requires immediate action, or (b) communications between the CAISO and EDAM Market Participants are disrupted and prevent an EDAM Entity, EDAM Entity Scheduling Coordinator, EDAM Load Serving Entity Scheduling Coordinator, or EDAM Resource Scheduling Coordinator from accessing CAISO systems to submit or receive information. The CAISO will reinstate normal operation of the Day-Ahead Market in the EDAM Area at such time as it determines that the conditions that caused the interruption of EDAM Entity participation in the Day-Ahead Market have been resolved.

**33.7.4.1 CAISO Response to EDAM Disruption.** If the CAISO declares an interruption of EDAM Entity participation in the Day-Ahead Market or the CAISO Balancing Authority Area in the EDAM Area, the CAISO may in its judgment, among other things:

(a) separate the affected EDAM Entity Balancing Authority Area or the CAISO Balancing Authority Area from the EDAM Area and maintain the Day-Ahead Market for other Balancing Authority Areas in the EDAM Area including the CAISO Balancing Authority Area, by enforcing a net transfer constraint for the affected Balancing Authority Area to separate it from the remainder of the EDAM Area,

(b) reduce or suspend EDAM Transfers between one or more Balancing Authority Areas in the EDAM Area, including the CAISO Balancing Authority Area, in accordance with Section 33.7.5, and communicate and coordinate with impacted EDAM Entities to assess and potentially mitigate potential issues within the EDAM Area,

(c) instruct one or more EDAM Entities to maintain system balance within their Balancing Authority Area without Day-Ahead Market results, or take similar actions within the CAISO Balancing Authority Area,

(d) in addition or as an alternative, use market results in the Day-Ahead Market in accordance with Section 7.7.9 or take any of the actions specified in Section 7.7.6 or

Section 7.7.7 with respect to the Day-Ahead Market, with reference to Section 29.7(j)(2)(D)(i) as necessary to establish an Administrative Price,

(e) suspend or limit the ability of all Scheduling Coordinators to submit Virtual Bids on behalf of Convergence Bidding Entities at specific Eligible PNodes or Eligible Aggregated PNodes, or at all Eligible PNodes or Eligible Aggregated PNodes, or

(f) postpone the publication of Day-Ahead Market results.

**33.7.4.2 EDAM Entity Responsibility.** In response to an interruption of EDAM Entity participation in the Day-Ahead Market by the CAISO, all EDAM Entities will follow NERC Reliability Standards applicable to their roles as Balancing Authorities in an effort to alleviate operational and system conditions and restore routine operations, and all EDAM Entity Scheduling Coordinators will promptly inform the CAISO of actions taken by the EDAM Entities they represent in response to an interruption of EDAM Entity participation in the Day-Ahead Market by the CAISO through updates to their Schedules, Interchange E-Tags, transmission limit adjustments, or Outage and derate information, as applicable. If the interruption of EDAM Entity participation results in the EDAM Entity not receiving a Day-Ahead Market Schedule, then the EDAM Entity must submit information to the RTM as required by Section 29 and applicable to an EIM Entity. If it is necessary for an EDAM Entity to reduce or suspend EDAM Transfers between one or more Balancing Authority Areas in the EDAM Area, the EDAM Entity must communicate and coordinate with the CAISO and impacted EDAM Entities prior to curtailing EDAM Transfers or as soon as practicable, and should continue to communicate and coordinate with the CAISO and all EDAM Entities to assess and mitigate potential issues within the EDAM Area.

**33.7.5 EDAM Transfer Priority Relative to Demand**

EDAM Transfers will have a priority equal to Demand in the EDAM Area. If it is necessary for an EDAM Entity or the CAISO to reduce or suspend EDAM Transfers between one or more Balancing Authority Areas in the EDAM Area based on operational judgement and consistent with Good Utility Practice, the EDAM Entity will do so solely with respect to its Balancing Authority Area or the CAISO will do so solely with respect to its Balancing Authority Area, provided that the

reduction or suspension is consistent with the EDAM Transmission Service Provider tariff or the CAISO Tariff, as applicable, and communicated to potentially impacted Balancing Authority Areas in the EDAM Area in advance, if practicable, or immediately following the reduction or suspension. This communication and subsequent coordination should continue among the CAISO and all potentially impacted EDAM Entities to assess and mitigate potential issues within the EDAM Area until resolution of the circumstances underlying the reduction or suspension in the Real-Time Market as may be reflected by information provided by the CAISO under Section 29.34(o). The CAISO will promptly adjust the EDAM Transfer limits or EIM Transfer limits associated with the reduction or suspension to reflect in the CAISO Markets the reduction or suspension directed by the EDAM Entity with respect to its Balancing Authority Area or the CAISO with respect to its Balancing Authority Area.

### 33.8 Ancillary Services

Ancillary services are not procured through the EDAM and the Ancillary Services provisions of Section 8 do not apply to the Extended Day-Ahead Market, including other CAISO Tariff sections that apply to the procurement and pricing of Ancillary Services. Each EDAM Entity will remain responsible for procuring and maintaining its own Ancillary Services to meet its Balancing Authority Area obligations and communicating these quantities to the CAISO as Self-Provided Ancillary Services through a Submission to Self-Provide an Ancillary Service.

#### 33.8.1 [Not Used]

### 33.9 Outages and Critical Contingencies

Section 9 does not apply to EDAM Market Participants except as referenced in this Section 33.9.

#### 33.9.1 Maintenance Outages

An EDAM Entity, EDAM Transmission Service Provider, or transmission operator within the Balancing Authority Area shall remain responsible for performing engineering studies and approving Maintenance Outages under the applicable EDAM Transmission Service Provider tariff or the Reliability Standards, as applicable, within its EDAM Entity Balancing Authority Area on both transmission facilities and EDAM Resources. An EDAM Entity Scheduling Coordinator must submit notice of Maintenance Outages approved by that EDAM Entity to the CAISO by the means

and in the manner set forth in the Business Practice Manual for the Extended Day-Ahead Market at least seven Business Days prior to the planned Outage. The CAISO implements Maintenance Outages submitted by that deadline in the Day-Ahead Market process and informs the EDAM Entity of any anticipated transmission overloads expected due to Maintenance Outages reported to the CAISO.

**33.9.2 Forced Outages**

EDAM Entity Scheduling Coordinators and EDAM Resource Scheduling Coordinators must report Forced Outages to the CAISO for Outages of transmission facilities within the EDAM Entity Balancing Authority Area they represent and Generating Units or other resources they represent as EDAM Resources, respectively, in accordance with the provisions of Section 9 regarding Forced Outage reporting, including Sections 9.3.6.4.1(b), 9.3.6.4.1(c), 9.3.6.4.1(d), 9.3.6.4.2(2), 9.3.6.4.2(3), and 9.3.10.

**33.9.3 Transmission Limits**

An EDAM Entity Scheduling Coordinator must notify the CAISO by the means and in the manner specified in the Business Practice Manual for the Extended Day-Ahead Market regarding transmission limits on the transmission capacity made available to the Day-Ahead Market within the EDAM Entity Balancing Authority Area that need to be enforced in the Day-Ahead Market.

**33.10 EDAM Metering and Telemetry**

Section 10 will apply in the EDAM unless otherwise noted in this Section 33.10. In the event of any conflict, this Section 33.10 will apply.

Scheduling Coordinators must ensure compliance with this Section 33.10. The EDAM Entity Scheduling Coordinator will ensure compliance with this Section 33.10 for each Energy, Load, intertie, or other resource in its Balancing Authority Area unless that resource or Load has its own Scheduling Coordinator. The EDAM Entity will ensure each EDAM Market Participant in an EDAM Entity Balancing Authority Area becomes either a CAISO Metered Entity or a Scheduling Coordinator Metered Entity and complies with the requirements of Section 10.

**33.10.1 Demand Metering**

The EDAM Entity will ensure that any Load Aggregation Point in its Balancing Authority Area not

represented by the EDAM Entity Scheduling Coordinator is metered separately so that the associated Demand may be settled.

**33.10.2 EDAM Resource Metering**

All EDAM Resource Facilities must be CAISO Metered Entities or Scheduling Coordinator Metered Entities and comply with Section 10. Scheduling Coordinators for EDAM Resources may elect to submit Meter Data in 5-minute or 15-minute intervals. Scheduling Coordinators for EDAM Resources that cannot meter the EDAM Resource's Energy every 15 minutes or faster may not submit Economic Bids or provide Ancillary Services, and must submit Self-Schedules in the EDAM and Real-Time Market.

**33.10.3 EDAM Interties**

EDAM Interties must have their Meter Data reported by either CAISO Metered Entities or Scheduling Coordinator Metered Entities. Each EDAM Entity Scheduling Coordinator for the EDAM Entity at the EDAM Intertie will be responsible for submitting Settlement Quality Meter Data in compliance with Section 10. EDAM Entity Scheduling Coordinators also must ensure the EDAM Intertie provides telemetry consistent with Section 33.10.4.

**33.10.4 Telemetry**

As described in the Business Practice Manual for the Extended Day-Ahead Market, Scheduling Coordinators for EDAM Interties and EDAM Resource Facilities, including without limitation Generating Units, storage resources, Distributed Energy Resources, and Demand Response Resources, must satisfy communications, telemetry, and control requirements in a manner that ensures that the CAISO and EDAM Entities will have the ability, consistent with the CAISO Tariff, to monitor the EDAM Resource Facility as necessary to maintain reliability in their respective Balancing Authority Areas. An EDAM Resource Facility will be exempt from this Section 33.10.4 if it has a rated capacity of less than ten (10) MW, unless it is certified by the CAISO to provide Ancillary Services. For purposes of this calculation, aggregated resources will calculate their aggregated capacity and provide telemetry at the aggregate level. EDAM Resource Facilities must comply with any EDAM Entity or Local Regulatory Authority requirements in addition to this Section 33.10.4.

## 33.11 Settlements and Billing for EDAM Market Participants

Section 33.11, rather than Section 11, will apply to CAISO Settlement with EDAM Entity Scheduling Coordinators, EDAM Resource Scheduling Coordinators, EDAM Load Serving Entity Scheduling Coordinators and EDAM Market Participants, except as otherwise provided in this Section 33.11.

### 33.11.1 Transfer Revenue and Congestion Revenue Allocation

EDAM Transfer revenue will be collected when one Balancing Authority Area in the EDAM Area provides Energy, Imbalance Reserve, and/or Reliability Capacity to another Balancing Authority Area in the EDAM Area and the associated EDAM Transfer System Resource prices elements or components differ. Congestion revenue will be collected when a Transmission Constraint or intertie scheduling limit binds at different locations of the transmission system and the LMP varies across a Balancing Authority Area in the EDAM Area. The CAISO will allocate EDAM Transfer revenue and Congestion revenue attributed to an EDAM Entity Balancing Authority Area or the CAISO Balancing Authority Area as provided below.

#### 33.11.1.1 Transfer Revenue

The CAISO will calculate and allocate EDAM Transfer revenue for Energy transfers, Imbalance Reserve transfers, and/or Reliability Capacity transfers for a Balancing Authority Area in the EDAM Area.

##### 33.11.1.1.1 Energy Transfer Revenue

EDAM Transfer revenue for Energy occurs when the net EDAM Transfer scheduling limit is reached in the Day-Ahead Market. This manifests as a separation of the Marginal Energy Cost of the binding Balancing Authority Area in the EDAM Area from the Marginal Energy Cost of an adjacent Balancing Authority Area in the EDAM Area that is attributed to an EDAM Transfer System Resource. The CAISO will allocate the EDAM Transfer revenue for Energy represented by EDAM Transfer System Resources equally between the Balancing Authority Areas, except when the CAISO has been notified during the implementation of the Day-Ahead Market within a prospective EDAM Entity Balancing Authority Area of an agreement between both EDAM Entities on either side of a EDAM Transfer that a different allocation for some portion of the EDAM Transfer revenue is

required to give effect to a pre-existing commercial arrangement. The CAISO will then allocate the EDAM Transfer revenue for Energy directed to a Balancing Authority Area based upon whether the transmission across an EDAM Internal Intertie is made available by: (a) by an EDAM Entity pursuant to Section 33.18.2, in which case the CAISO will allocate the EDAM Transfer revenue to the EDAM Entity Scheduling Coordinator, (b) an EDAM Transmission Service Provider customer pursuant to Section 33.18.2.2.2, in which case the CAISO will allocate the EDAM Transfer revenue to the Scheduling Coordinator for the EDAM Transmission Service Provider customer, or (c) an EDAM Legacy Contract, Existing Contract, EDAM Transmission Ownership Right, or Transmission Ownership holder pursuant to Section 33.18.2.2.2, in which case the CAISO will allocate the EDAM Transfer revenue to the Scheduling Coordinator for the EDAM Legacy Contact, Existing Contract EDAM Transmission Ownership Right, or Transmission Ownership holder, respectively. An EDAM Entity will ensure EDAM Transfer revenue for Energy allocated to its EDAM Entity Scheduling Coordinator is thereafter allocated by all applicable EDAM Transmission Service Providers as may be detailed in the EDAM Transmission Service Provider tariff and business practices. EDAM Transfer revenue for Energy allocated to the CAISO Balancing Authority is further allocated according to the CAISO Tariff, unless allocated directly to a Scheduling Coordinator for a Transmission Ownership Rights holder or Existing Contract rights holder consistent with the terms of the agreement concerning use of the transmission facilities supporting the EDAM Transfer.

#### 33.11.1.1.2 Imbalance Reserve Transfer Revenue

The CAISO collects EDAM Transfer revenue for Imbalance Reserves when the transfer scheduling limit binds while optimizing capacity to meet the Imbalance Reserves Requirement for an EDAM Entity Balancing Authority Area or the CAISO Balancing Authority Area and manifests as price separation between the Shadow Price of the Imbalance Reserves procurement between the two Balancing Authority Areas at an EDAM Transfer location that is attributed to an EDAM Transfer System Resource. The CAISO calculates the hourly EDAM Transfer revenue for Imbalance Reserves as the

product of the transfer quantity and the difference between the Locational IRU Price or Locational IRD Price, as appropriate, on either side of the binding limit. The CAISO will allocate the EDAM Transfer revenue for Imbalance Reserves equally between the Balancing Authority Areas, except when the CAISO has been notified during the implementation of the Day-Ahead Market within a prospective EDAM Entity Balancing Authority Area of an agreement between both EDAM Entities on either side of a EDAM Transfer that a different allocation for some portion of the EDAM Transfer revenue is required to give effect to a pre-existing commercial arrangement. The CAISO will then allocate the EDAM Transfer revenue for Imbalance Reserves directed to a Balancing Authority Area based upon whether the transmission across an EDAM Internal Intertie is made available by: (a) an EDAM Entity pursuant to Section 33.18.2, in which case the CAISO will allocate the EDAM Transfer revenue to the EDAM Entity Scheduling Coordinator, (b) an EDAM Transmission Service Provider customer pursuant to Section 33.18.2.2.2, in which case the CAISO will allocate the EDAM Transfer revenue to the Scheduling Coordinator for the EDAM Transmission Service Provider customer, or (c) an EDAM Legacy Contract, Existing Contract, EDAM Transmission Ownership Right, or Transmission Ownership holder pursuant to Section 33.18.2.2.2, in which case the CAISO will allocate the EDAM Transfer revenue to the Scheduling Coordinator for the EDAM Legacy Contact, Existing Contract EDAM Transmission Ownership Right, or Transmission Ownership holder, respectively. An EDAM Entity will ensure that EDAM Transfer revenue for Imbalance Reserves allocated to its EDAM Entity Scheduling Coordinator is thereafter allocated by all applicable EDAM Transmission Service Providers as may be detailed in the EDAM Transmission Service Provider tariff. EDAM Transfer revenue for Imbalance Reserves allocated to the CAISO Balancing Authority is further allocated in the CAISO Balancing Authority Area according to the CAISO Tariff, unless allocated directly to a Scheduling Coordinator for a Transmission Ownership Rights holder or Existing Contract rights holder consistent with the terms of the agreement concerning use of the transmission facilities supporting the EDAM Transfer.

#### 33.11.1.1.3 Reliability Capacity Transfer Revenue

EDAM Transfer revenue for Reliability Capacity occurs when the transfer scheduling limit binds while optimizing capacity to meet the RUC Procurement Target for an EDAM Entity Balancing Authority Area or the CAISO Balancing Authority Area and manifests as price separation between the Shadow Price of the Reliability Capacity procurement between the two Balancing Authority Areas at an EDAM Internal Intertie that is attributed to an EDAM Transfer System Resource. The CAISO calculates the hourly EDAM Transfer revenue for Reliability Capacity as the product of the transfer quantity and the difference between the RUC Price for RCU and the RUC Price for RCD, as applicable, on either side of the binding limit. The CAISO will allocate the EDAM Transfer revenue for Reliability Capacity equally between the Balancing Authority Areas, except when the CAISO has been notified during the implementation of the Day-Ahead Market within a prospective EDAM Entity Balancing Authority Area of an agreement between both EDAM Entities on either side of a EDAM Transfer that a different allocation for some portion of the EDAM Transfer revenue is required to give effect to a pre-existing commercial arrangement. The CAISO will then allocate the EDAM Transfer revenue for Reliability Capacity directed to a Balancing Authority Area based upon whether the transmission across an EDAM Internal Intertie is made available by: (a) an EDAM Entity pursuant to Section 33.18.2, in which case the CAISO will allocate the EDAM Transfer revenue to the EDAM Entity Scheduling Coordinator, (b) an EDAM Transmission Service Provider customer pursuant to Section 33.18.2.2.2, in which case the CAISO will allocate the EDAM Transfer revenue to the Scheduling Coordinator for the EDAM Transmission Service Provider customer, or (c) an EDAM Legacy Contract, Existing Contract, EDAM Transmission Ownership Right, or Transmission Ownership holder pursuant to Section 33.18.2.2.2, in which case the CAISO will allocate the EDAM Transfer revenue to the Scheduling Coordinator for the EDAM Legacy Contact, Existing Contract EDAM Transmission Ownership Right, or Transmission Ownership holder, respectively. An EDAM Entity will ensure that EDAM Transfer revenue for Reliability Capacity allocated to

its EDAM Entity Scheduling Coordinator is thereafter allocated by all applicable EDAM Transmission Service Providers as may be detailed in the EDAM Transmission Service Provider tariff and business practices. EDAM Transfer revenue for Reliability Capacity allocated to the CAISO Balancing Authority Area is further allocated in the CAISO Balancing Authority Area according to the CAISO Tariff, unless allocated directly to a Scheduling Coordinator for a Transmission Ownership Rights holder or Existing Contract rights holder consistent with the terms of the agreement concerning use of the transmission facilities supporting the EDAM Transfer.

**33.11.1.2 Congestion Revenue**

The CAISO will collect Congestion revenue based on price differences in the Marginal Cost of Congestion of the LMP across PNodes within the EDAM Area. For each Settlement Period of the DAM, the CAISO will calculate the contribution of each Balancing Authority Area in the EDAM Area to the Marginal Cost of Congestion at each resource location and intertie in the EDAM Area for each Balancing Authority Area based on the location of the Transmission Constraints in each Balancing Authority Area, EDAM Interties, and constraints enforced outside of the EDAM Area needed to manage that Balancing Authority Area's responsibilities. The CAISO will distribute the Congestion Charge revenue collected from the Transmission Constraints in each Balancing Authority Area in the EDAM Area to the applicable Balancing Authority Area within which the Congestion occurred, following any adjustment for (a) the CAISO Balancing Authority Area in accordance with Section 11 and EDAM Entity Balancing Authority Areas to account for schedules associated with EDAM Legacy Contracts, EDAM Transmission Ownership Rights and registered EDAM Transmission Service Provider transmission customer rights under Sections 33.16, 33.17, and 33.18, respectively, and (b) the Marginal Cost of Congestion difference between nodes within an EDAM Balancing Authority Area that result from Transmission Constraints in a Balancing Authority Area in the EDAM Area outside of that EDAM Balancing Authority Area and are associated with registered, qualified and balanced Day-Ahead Self-Schedules under Section 33.11.1.2.1.

An EDAM Entity will ensure that Congestion revenue allocated to its EDAM Entity Scheduling Coordinator is further allocated by all applicable EDAM Transmission Service Providers as may be detailed in the EDAM Transmission Service Provider tariff and business practices. Congestion revenue allocated to the CAISO Balancing Authority Area will be further allocated according to the CAISO Tariff, including Section 11.2.1 and Section 11.2.4.

#### 33.11.1.2.1 EDAM Entity Balancing Authority Area MCC Adjustment

For each Settlement Period of the DAM, the CAISO will determine through calculations detailed in the Business Practice Manual for Settlements and Billing the Congestion difference within the EDAM Area from the contribution of qualified and balanced Day-Ahead Self-Schedules registered by the EDAM Entity in each EDAM Entity Balancing Authority Area to the Marginal Cost of Congestion at each resource location and intertie in the EDAM Area. This Congestion difference will be allocated to the EDAM Entity Balancing Authority Area where the qualified and balanced Day-Ahead Self-Schedule is associated for sub-allocation as required by Section 33.11.1.2. Qualification for this adjustment will be afforded to eligible long-term firm and monthly firm point-to-point and network integration transmission service rights, including conditional firm, as defined under the EDAM Transmission Service Provider tariff (with shorter-term rights being ineligible for this treatment). Registration of qualified transmission service rights will occur through the procedures described in Section 33.18.3 and result in a CRN to facilitate this adjustment. A Day-Ahead Self Schedule will be considered balanced for purposes of this adjustment in accordance with the provisions of Section 33.16 applicable to the determination of whether an EDAM Legacy Contract is balanced in the DAM.

### 33.11.2 EDAM RSE Failure Surcharge

A Balancing Authority Area in the EDAM Area must meet the requirements of the EDAM RSE for its Balancing Authority Area, as provided in Section 33.31.1.4. The applicable Scheduling Coordinator for each Balancing Authority Area in the EDAM Area that fails to meet all of the requirements of the EDAM RSE will be allocated the applicable EDAM RSE failure surcharge, as

provided in Section 33.31.1.5.

### 33.11.2.1 Calculation of the EDAM RSE Failure Surcharges

#### 33.11.2.1.1 EDAM RSE On-Peak Upward Failure Insufficiency Surcharge

If a Balancing Authority Area in the EDAM Area fails to satisfy all of the upward components of the EDAM RSE, as set forth in Section 33.31.1.3, during any hour within the sixteen-hour on-peak period, then the applicable Scheduling Coordinator for the Balancing Authority Area may be allocated the EDAM RSE On-Peak Upward Failure Insufficiency Surcharge in each hour of the sixteen-hour on-peak period, with such surcharge established on a tiered structure, as provided in Section 33.31.1.5. The EDAM RSE On-Peak Upward Failure Insufficiency Surcharge will be calculated as the product of (a) the highest EDAM RSE Hourly Upward Deficiency Quantity during the sixteen-hour on-peak period of that day, (b) the greater of the published bilateral electric index prices for the applicable EDAM Trade Location, and (c) the EDAM RSE Failure Multiplier adjusted by the EDAM RSE Failure Scaling Factor. The EDAM RSE On-Peak Upward Failure Insufficiency Surcharge applied in each hour of the sixteen-hour block will be adjusted by the EDAM RSE On-Peak Upward Credit amount for each hour the Balancing Authority Area satisfied all of the upward components of the EDAM RSE. In the event the EDAM RSE On-Peak Credit amount exceeds the surcharge amount, the EDAM RSE On-Peak Upward Failure Insufficiency Surcharge will be zero.

#### 33.11.2.1.2 EDAM RSE Off-Peak Upward Failure Insufficiency Surcharge

If a Balancing Authority Area in the EDAM Area fails to satisfy all of the upward components of the EDAM RSE, as set forth in Section 33.31.1.3 in the upward direction during any hour within the off-peak period, then the applicable Scheduling Coordinator for the Balancing Authority Area may be allocated the EDAM RSE Off-Peak Upward Failure Insufficiency Surcharge for each hour during the off-peak period in which there has been an upward failure. The EDAM RSE Off-Peak Upward Failure Insufficiency Surcharge will be calculated as the product of (a) EDAM RSE Hourly Upward Deficiency Quantity; (b) the load-weighted average of the LMP of the LAP within that Balancing Authority Area

and (c) the EDAM RSE Failure Multiplier.

#### 33.11.2.1.3 EDAM RSE Downward Failure Insufficiency Surcharge

If a Balancing Authority Area in the EDAM Area fails to satisfy all of the downward components of the EDAM RSE during any hour, as set forth in Section 33.31.1.3, then the applicable Scheduling Coordinator for the Balancing Authority Area may be allocated the EDAM RSE Downward Failure Insufficiency Surcharge for each hour in which there has been a downward failure. The EDAM RSE Downward Insufficiency Charge will be calculated as the product of (a) the EDAM RSE Hourly Downward RSE Deficiency Quantity and (b) the Marginal Energy Cost of that Balancing Authority Area. If the EDAM RSE Hourly Downward Deficiency Quantity is greater than ten (10) MW, then the Balancing Authority Area will be assessed the EDAM RSE Downward Failure Insufficiency Surcharge for each hour in which there has been a downward failure. If the EDAM RSE Hourly Downward Deficiency Quantity is less than or equal to ten (10) MW, then there will be no EDAM RSE Downward Failure Insufficiency Surcharge during the applicable hour given the *de minimis* nature of the failure.

### 33.11.2.2 EDAM RSE Surcharge Distribution

The CAISO will sum all EDAM RSE surcharge-related revenue on an hourly basis and distribute as follows:

#### 33.11.2.2.1 EDAM RSE On-Peak Upward Failure Insufficiency Revenue Distribution

On an hourly basis, the CAISO will sum the EDAM RSE On-Peak Upward Failure Insufficiency Surcharge revenue owed by Balancing Authority Areas with tier 2 or tier 3 upward failures of the EDAM RSE during the on-peak hours and distribute that revenue, pro rata, to the applicable Scheduling Coordinator for the Balancing Authority Areas in the EDAM Area that satisfied all upward components of the EDAM RSE in all of the sixteen on-peak hours of that Trading Day. If no Balancing Authority Area in the EDAM Area satisfied all of the upward components of the EDAM RSE in all of the sixteen on-peak hours of that Trading Day, then the CAISO will distribute the revenue collected on

an hour-by-hour basis, pro rata, to the applicable Scheduling Coordinator for the Balancing Authority Areas that satisfied all of the upward components of the EDAM RSE in that on-peak hour. In both cases, the pro-rata distribution will be determined based on a Balancing Authority Area's total net EDAM Transfers in the export direction as the numerator and the total sum of the net EDAM Transfers in the export direction of Balancing Authority Areas that satisfied all of the upward components of the EDAM RSE upward tests as the denominator. If no Balancing Authority Area in the EDAM Area satisfied all of the upward components of the EDAM RSE in any single on-peak hour, then the CAISO will not collect the EDAM RSE On-Peak Upward Failure Insufficiency Surcharge revenue from the applicable Scheduling Coordinator for the Balancing Authority Area in the EDAM Area for that single on-peak hour.

**33.11.2.2.2 EDAM RSE Off-Peak Upward Failure Insufficiency Revenue Distribution**

On an hourly basis, the CAISO will sum the EDAM RSE Off-Peak Upward Failure Surcharge revenue owed by of the Balancing Authority Areas with tier 2 and tier 3 upward failures of the EDAM RSE during the off-peak hours and distribute that revenue to the applicable Scheduling Coordinator for the Balancing Authority Areas in the EDAM Area that satisfied all of the upward components of the EDAM RSE in all of the off-peak hours of that Trading Day. If no Balancing Authority Area in the EDAM Area satisfied all of the upward components of the EDAM RSE in all of the off-peak hours of that Trading Day, then the CAISO will distribute the revenue collected on an hour-by-hour basis, *pro rata*, to the applicable Scheduling Coordinator for the Balancing Authority Areas satisfied all of the upward components of the EDAM RSE in that off-peak hour. In both cases, the *pro rata* distribution will be determined based on a Balancing Authority Area's total net EDAM Transfers in the export direction as the numerator and the total net EDAM Transfers in the export direction of all Balancing Authority Areas that satisfied all of the upward components of the EDAM RSE as the denominator. If no Balancing Authority Area in the EDAM Area has satisfied all of the upward components of the EDAM RSE in

any single off-peak hour, then the CAISO will not collect the EDAM RSE Off-Peak Upward Failure Insufficiency Surcharge from the applicable Scheduling Coordinator for the Balancing Authority Area in the EDAM Area for that single off-peak hour.

**33.11.2.2.3 EDAM RSE Downward Failure Insufficiency Revenue Distribution**

On an hourly basis, the CAISO will sum the EDAM RSE Downward Failure Insufficiency revenue owed by Balancing Authority Areas in the EDAM Area that fail to satisfy all of the downward components of the EDAM RSE and distribute that revenue, *pro rata*, to the applicable Scheduling Coordinator for the Balancing Authority Areas in the EDAM Area that satisfied all downward components of the EDAM RSE for that Trading Day. If no Balancing Authority Area in the EDAM Area satisfied all of the downward components of the EDAM RSE over the twenty-four hour period of the Trading Day, then the CAISO will distribute the revenue collected on an hour-by-hour basis, *pro rata*, to the applicable Scheduling Coordinator for the Balancing Authority Areas that satisfied all of the downward components of the EDAM RSE in any single hour. In both cases, the *pro rata* distribution will be determined based on the Balancing Authority Area total net EDAM Transfers in the import direction as the numerator and the total sum of the net EDAM Transfers in the import direction of Balancing Authority Areas that satisfied all of the downward components of the EDAM RSE downward tests as the denominator. If no Balancing Authority Area in the EDAM Area satisfied all of the downward components of the EDAM RSE in any single hour, then the CAISO will not collect the EDAM RSE Downward Failure Insufficiency Surcharge from the applicable Scheduling Coordinator for the Balancing Authority Area in the EDAM Area for that single hour.

**33.11.2.3 EDAM RSE Surcharge Allocation**

Revenue and costs arising from the EDAM RSE failure surcharge(s) distributed in accordance with Section 33.11.2.2 will be allocated to the CAISO Balancing Authority Area for sub-allocation in accordance with the CAISO Tariff and, for all other Balancing Authorities in the EDAM Area, to the applicable Scheduling Coordinator for any further sub-allocation in accordance with the requirements of the applicable tariffs and business practices of the entities within that EDAM

Entity Balancing Authority Area.

### 33.11.3 Day-Ahead Market Settlement

The CAISO settles Day-Ahead Schedules and RUC Schedules issued to EDAM Market Participants as specified in this Section 33.11.3.

#### 33.11.3.1 Settling Day-Ahead Schedules for Energy

The CAISO settles Day-Ahead Schedules for Energy issued to EDAM Market Participants as specified in Section 11.2.1.1 for Supply and as specified in Section 11.2.1.2 for Demand. The CAISO settles Energy Exports at an EDAM External Intertie as specified in Section 11.2.1.4. The CAISO settles EDAM Transfers of Energy by assessing both the importing and exporting Balancing Authority Areas. In the case of EDAM Entities, the CAISO assesses the Scheduling Coordinator representing the importing Balancing Authority Area a settlement equal to the product of the quantity of the import and the LMP at the relevant Scheduling Point pricing location and assesses the Scheduling Coordinator representing the exporting Balancing Authority Area a settlement equal to the product of the quantity of the export and the LMP at the relevant Scheduling Point pricing location. If the CAISO is one of the importing or exporting Balancing Authority Areas, then the CAISO allocates the product of the export or import, as appropriate, and the LMP at the relevant Scheduling Point pricing location to CAISO Scheduling Coordinators as specified in Section 11 for allocating EDAM Transfers of Energy.

#### 33.11.3.2 Settling Imbalance Reserves

The CAISO settles Imbalance Reserves Awards issued to EDAM Resources as specified in Sections 11.2.1.1, 11.2.1.8, and 11.25.2.1.1 as though the EDAM Resource were a Participating Generator.

The CAISO allocates the costs of procuring Imbalance Reserves in the EDAM as specified in Section 11.2.1.9 individually for each EDAM Entity with the exception that any reference to the CAISO Balancing Authority Area is a reference to the Balancing Authority Area of the relevant EDAM Entity.

In allocating the costs of Imbalance Reserves, the CAISO assesses both the importing and exporting Balancing Authority Areas for EDAM Transfers of Imbalance Reserves. In the case of

EDAM Entities, the CAISO assesses the Scheduling Coordinator representing the importing Balancing Authority Area a settlement equal to the product of the quantity of the import and the Locational IRU Price or Locational IRD Price, as applicable, at the relevant Scheduling Point pricing location. In the case of EDAM Entities, the CAISO assesses the Scheduling Coordinator representing the exporting Balancing Authority Area a settlement equal to the product of the quantity of the export and the Locational IRU Price or Locational IRD Price, as applicable, at the relevant Scheduling Point pricing location. If the CAISO is one of the importing or exporting Balancing Authority Areas, then the CAISO allocates the product of the export or import, as appropriate, and the Locational IRU Price or Locational IRD Price, as applicable, at the relevant Scheduling Point pricing location to CAISO Scheduling Coordinators as specified in Section 11 for allocating EDAM Transfers of Imbalance Reserves.

**33.11.3.3 Settling Reliability Capacity**

The CAISO settles RUC Awards issued to EDAM Resources as specified in Section 11.2.2 as though the EDAM Resource were a Participating Generator or other seller of Energy or Ancillary Services.

The CAISO allocates the costs of procuring Reliability Capacity in the EDAM as specified in Section 11.8.6.5.3.3 individually for each EDAM Entity with the exception that any reference to the CAISO Balancing Authority Area is a reference to the Balancing Authority Area of the relevant EDAM Entity. In allocating the costs of Reliability Capacity, the CAISO assesses both the importing and exporting Balancing Authority Areas for EDAM Transfers of Reliability Capacity. The CAISO assesses the importing Balancing Authority Area a charge equal to the product of the quantity of the import and the RUC Price for RCU or RUC Price for RCD, as applicable, at the relevant Scheduling Point pricing location. The CAISO assesses the exporting Balancing Authority Area a credit equal to the product of the quantity of the export and the RUC Price for RCU or RUC Price for RCD, as applicable, at the relevant Scheduling Point pricing location. If the CAISO is one of the importing or exporting Balancing Authority Areas, then the CAISO allocates the product of the export or import, as appropriate, and the RUC Price for RCU or RUC Price for RCD, as applicable, at the relevant Scheduling Point pricing location to CAISO

Scheduling Coordinators as specified in Section 11 for allocating EDAM Transfers of Reliability Capacity.

#### 33.11.3.4 Settling Ancillary Services

The EDAM does not procure Ancillary Services for EDAM Entity Balancing Authority Areas and the CAISO therefore does not settle charges or payments for Ancillary Services for the EDAM Entities in the Extended Day-Ahead Market. Ancillary Services provided by an EDAM Entity cannot be used to offset Ancillary Services obligations of a Scheduling Coordinator representing an entity with Ancillary Services obligations in the CAISO Balancing Authority Area.

#### 33.11.3.5 IFM Bid Cost Recovery

EDAM Resources may receive Bid Cost Recovery for the IFM in accordance with Section 11.8. The CAISO allocates the IFM Bid Cost Uplift to Balancing Authority Areas in the EDAM Area, with the following rules in addition to any provisions in Section 11.8.

For a Balancing Authority Area with net Energy export transfer, the CAISO transfers a portion of the Balancing Authority Area's IFM Bid Cost Uplift amount to Balancing Authority Areas receiving net Energy import transfers. For purposes of the foregoing, a Balancing Authority Area has net import transfers if the sum of the Balancing Authority Area's net Energy transfer and its net Imbalance Reserve transfer is in the import direction. If such sum is in the export direction, the Balancing Authority Area is deemed to have a net Energy export transfer.

The Balancing Authority Area IFM Bid Cost Uplift transfer adjustment amount will equal the product of the Balancing Authority Area hourly IFM Bid Cost Uplift amount and the ratio of the Balancing Authority Area's Day-Ahead net Energy export transfers and net Imbalance Reserve Up export transfers divided by Balancing Authority Area's Day-Ahead Schedules for Load and export Energy, Day-Ahead net Energy export transfers, net Imbalance Reserve Up export transfers and virtual demand, if applicable. The CAISO allocates the IFM Balancing Authority Area IFM Bid Cost Uplift transfer adjustment amount to Balancing Authority Areas with net transfers in the import direction. For each EDAM Entity Balancing Authority Area, the CAISO allocates the adjusted Balancing Authority Area IFM BCR amounts to the EDAM Entity for allocation under the applicable tariff and, for the CAISO Balancing Authority Area, pursuant to

Section 11.8.6.

**33.11.3.6 RUC Bid Cost Recovery**

EDAM Resources may receive Bid Cost Recovery for RUC in accordance with Sections 11.8.3. For each Trading Hour, the CAISO calculates the RUC Bid Cost Uplift for each EDAM Entity and the CAISO Balancing Authority Area. The CAISO allocates the RUC Bid Cost Uplift to each EDAM Entity Balancing Authority Area according the methodology specified in Section 11.8.6.5 with the following adjustments.

For a Balancing Authority Area with net Reliability Capacity export transfer, the CAISO transfers a portion of the Balancing Authority Area's RUC Bid Cost Uplift amount to Balancing Authority Areas receiving net Reliability Capacity transfers. For purposes of the foregoing, a Balancing Authority Area receives net Reliability Capacity transfers if the sum of the Balancing Authority Area's net Reliability Capacity transfers is in the import direction. If such sum is in the export direction, the Balancing Authority Area is deemed to have a net Reliability Capacity export transfer.

The Balancing Authority Area RUC Bid Cost Uplift transfer adjustment amount will equal the product of the Balancing Authority Area hourly RUC Bid Cost Uplift amount and the ratio of the Balancing Authority Area's net Reliability Capacity export transfers divided by Balancing Authority Area's Reliability Capacity Schedules. The CAISO allocates the Balancing Authority Area RUC Bid Cost Uplift transfer adjustment amount to Balancing Authority Areas with net transfers in the import direction. For each EDAM Entity Balancing Authority Area, the CAISO allocates the adjusted Balancing Authority Area RUC BCR amounts to the EDAM Entity for allocation under its tariff and, for the CAISO Balancing Authority Area, pursuant to Section 11.8.6.

**33.11.3.7 Greenhouse Gas in the IFM**

Resources that receive a Day-Ahead attribution to serve Demand in a GHG Regulation Area will receive a GHG payment. The GHG payment is the product of the IFM obligation to serve Demand in a specific GHG Regulation Area and the IFM Marginal GHG Cost for that respective GHG Regulation Area. For a resource within a GHG Regulation Area that does not receive an attribution to served Demand in another GHG Regulation Area, the cost of GHG compliance is

embedded in the resource's LMP.

#### 33.11.3.8 EDAM Legacy Contracts, EDAM Ownership Rights, and Day-Ahead Schedules

Scheduling Coordinators who Self-Schedule Energy in the IFM using their qualified and registered EDAM Transmission Service Provider rights will settle at the LMP in a manner similar to all other Day-Ahead awards. Scheduling Coordinators who Self-Schedule Energy in the IFM using their qualified and registered EDAM Legacy Contract Rights or EDAM Transmission Ownership Rights will settle at the LMP in a manner similar to all other Day-Ahead awards, except the balanced portion of a Schedule associated with an EDAM Legacy Contract or an EDAM Transmission Ownership Right will be eligible for mitigation against Congestion costs in accordance with Section 33.16 and Section 33.17, and be settled as described in this Section 33.11.3.8. The CAISO will facilitate this mitigation by reversing the Marginal Cost of Congestion component of the LMP difference between the balanced source Day-Ahead Schedule and sink Day-Ahead Schedule. The CAISO will include these Congestion costs in the calculation of Day-Ahead Congestion revenue. In addition, long-term contracts with special marginal losses provisions will have a similar Settlement mechanism apply to the Marginal Cost of Losses component of the LMP.

#### 33.11.3.9 Neutrality

The CAISO will consider each component of the LMP to ensure neutrality within a Balancing Authority Area in the EDAM Area and across GHG Regulation Areas: Marginal Energy Cost, Marginal Cost of Congestion, Marginal Cost of Losses, and the applicable Marginal GHG Cost.

##### 33.11.3.9.1 Marginal Loss Offset

The CAISO will calculate an hourly Day-Ahead marginal loss offset amount for each Balancing Authority Area. The hourly Day-Ahead marginal loss offset amount will equal the sum of the product of Day-Ahead Energy Schedules, including Schedules for Virtual Awards and transfer Energy schedules, and the Marginal Cost of Losses at their relevant pricing location. The CAISO will allocate the hourly Day-Ahead marginal loss offset amount to the EDAM Entity and, for the CAISO Balancing Authority Area, to Measured

Demand. The hourly Day-Ahead marginal losses offset amount will also include any marginal losses reversal from balanced Schedule portions of EDAM Legacy Contracts, EDAM Transmission Ownership Rights, and Self-Schedules submitted in accordance with Section 33.18.2.2.1.

**33.11.3.9.2 Marginal Greenhouse Gas Cost Offset**

The CAISO will calculate an hourly Day-Ahead Marginal GHG Cost Offset amount in relation to each GHG Regulation Area. The hourly Day-Ahead Marginal GHG Cost Offset amount will equal the product of Day-Ahead Energy Schedules within the GHG Regulation Area, including Schedules for Virtual Awards; GHG attributions associated with the GHG Regulation Area and the applicable Marginal GHG Cost. The CAISO will allocate the Day-Ahead Marginal GHG Cost Offset amount to a GHG Regulation Area's metered Demand.

**33.11.3.9.3 Marginal Congestion Offset**

The CAISO will calculate an hourly Day-Ahead marginal Congestion offset revenue for each EDAM Entity Balancing Authority Area. The hourly Day-Ahead marginal Congestion offset revenue will equal the sum of the product of Day-Ahead Energy Schedules, including Schedules for Virtual Awards and Energy transfer Schedules, and the Marginal Cost of Congestion contribution for each EDAM Entity Balancing Authority Area at its relevant pricing location and considering relevant intertie Transmission Constraints. The hourly Day-Ahead Congestion revenue amount will also account for any EDAM Legacy Contracts and EDAM Transmission Ownership Rights marginal Congestion adjustment amounts and any adjustment amounts for Congestion revenue under Section 33.11.1.2.1. The CAISO will allocate the hourly Day-Ahead marginal Congestion revenue amount to each EDAM Entity and the hourly Day-Ahead marginal Congestion revenue amount allocated to the CAISO Balancing Authority Area will be distributed first to CRRs and then to any surplus allocated to Measured Demand per the CAISO Tariff.

**33.11.3.9.4 Marginal Energy Offset**

The CAISO will calculate an hourly Day-Ahead marginal Energy offset amount for each EDAM Entity Balancing Authority Area. The Balancing Authority Area hourly Day-Ahead marginal Energy offset amount will equal the remainder of the hourly Day-Ahead Energy Settlement less the offset amounts attributed to the Balancing Authority Area Day-Ahead Marginal Cost of Losses, Balancing Authority Area Day-Ahead Marginal GHG Cost, and Balancing Authority Area Day-Ahead Marginal Cost of Congestion. The CAISO will allocate the hourly Day-Ahead marginal Energy offset amount to the EDAM Entity and for the CAISO Balancing Authority Area to metered Demand.

### 33.11.4 Real-Time Market Settlement

The CAISO settles EIM Market Participants in the RTM as specified in Sections 11.5, 11.8, 11.10, 11.25, 11.29, and all other aspects of Section 11 that pertain to the RTM and apply to EIM Market Participants. The CAISO settles EDAM Market Participants as EIM Market Participants assuming references to an EIM Base Schedule is a reference to a Day-Ahead Schedule with the following modifications.

#### 33.11.4.1 Balancing Test Under-scheduling and Over-scheduling Charge

EDAM Entities are not subject to the balancing test in Section 29.34(k) and will not be eligible for revenue apportionment and allocation pursuant to Section 29.11(d)(3).

#### 33.11.4.2 Fifteen-Minute Market (FMM) Imbalance Energy Settlement

Intertie Schedules awarded an Energy Schedule in the Day-Ahead Market that subsequently have an incremental/decremental FMM Schedule change in the RTM, and did not submit an E-Tag prior to the HASP, will be subject to the HASP reversal rule applied through Settlement according to Section 11.32.

#### 33.11.4.3 Ancillary Services in the RTM

EDAM Entity Balancing Authority Areas will provide the RTM with total Ancillary Service self-provision. This RTM self-provision should equal the Day-Ahead self-provision or Day-Ahead self-provision plus any incremental Real-Time self-provision if Ancillary Service requirements increase in the RTM.

#### 33.11.4.4 Intertie Deviations

The CAISO does not assess Under/Over Delivery Charges pursuant to Section 11.31 for intertie transactions at EDAM Internal Interties between EDAM Entities.

**33.11.5 Implementation Fee**

The CAISO will recover an implementation fee through the EDAM Entity Implementation Agreement to recover its costs incurred to onboard each EIM Entity into the Extended Day-Ahead Market based on the CAISO's cost of service. The CAISO will determine hourly rates for onboarding activity on an annual basis based on current aggregated and burdened labor rates. The majority of the onboarding costs will be labor costs; however, it is reasonable to assume some onboarding-specific non-labor costs. The CAISO will recover the cost to implement each EDAM Entity, which may vary depending on the size and complexity of the project. A $300,000 deposit will be collected from prospective EDAM Entities to cover the actual start-up costs incurred. If the deposit exceeds the actual cost incurred to provide onboarding services, the CAISO will refund the excess amount, including any Interest accrued on the remaining deposit. If the actual implementation costs exceed the deposit, additional deposits in $300,000 increments will be required, which the EDAM Entity must pay within thirty (30) days of receiving the invoice. Any invoice payment past due will accrue interest, per annum, calculated in accordance with 5 C.F.R. § 1315.10. If the EDAM Entity fails to timely pay any undisputed costs, the CAISO will not be obligated to continue performing onboarding activities unless and until the EDAM Entity has paid all undisputed amounts. If an EDAM Entity terminates an implementation agreement after the prospective EDAM entity's onboarding has begun, the CAISO will make every attempt to halt work and stop incurring costs on implementation as soon as practical. Any implementation-related costs the CAISO incurs will be drawn against the deposit provided. The CAISO will invoice the prospective EDAM entity for any amounts over the onboarding deposit; invoices will be due no later than thirty (30) days after the date of receipt. The CAISO will provide a report that details deposit(s) received, actual costs incurred, and applicable interest earnings (on deposit balance) for each onboarding project and return any unused deposit remaining after onboarding, plus interest on the remaining deposit (based on the average interest rate earned), to the EDAM Entity within ninety (90) days after onboarding is completed and acknowledged by both the

CAISO and EDAM Entity.

**33.11.6 Administrative Charge**

The CAISO will charge each EDAM Market Participant an EDAM Administrative Charge, which consists of the System Operations Real-Time Dispatch Charge and the Market Services Charge, both volumetric charges. The CAISO will no longer collect the EIM Administrative Charge from an EDAM Market Participant. The Systems Operations Real-Time Dispatch Charge and the Market Services Charge are described in Appendix F, Schedule 1, Part A.

**33.11.6.1 Temporary EDAM Administrative Charge Transitional Load Ramp-in**

The EDAM Administrative Charge assessed to Scheduling Coordinators' demand-related charge codes will be assessed on an incremental percentage at the outset of EDAM. Each incremental percentage will apply to the calendar year, January to December, such that the CAISO would assess the incremental percentage to an EDAM Entity joining after January to the remaining part of the calendar year only. The first year EDAM is available for participation, the CAISO will assess five (5) percent of the MWh of each EDAM Scheduling Coordinator's metered demand to apply the EDAM Administrative Charge. In the second year, the CAISO will assess twenty-five (25) percent. In the third year, the CAISO will assess fifty (50) percent. In the fourth year and thereafter, the CAISO will assess seventy-five (75) percent. In the fifth year and thereafter, the CAISO will assess one-hundred (100) percent. The foregoing does not apply to EDAM Scheduling Coordinators' MWh of Energy or Supply: The CAISO will assess one-hundred (100) percent of the MWh of each EDAM Scheduling Coordinator's Energy to apply the EDAM Administrative Charge at the outset of EDAM and thereafter.

**33.11.7 Historical Revenue Recovery.**

The CAISO will allocate to each EDAM Entity an EDAM Access Charge for recovery of EDAM Recoverable Revenue according to Section 33.26. The CAISO will charge Market Participants for transmission service on the CAISO Controlled Grid according to Section 26.

**33.11.8 Flexible Ramping Product.**

The CAISO will allocate and settle payments and charges for the Flexible Ramping Product

according to Section 11.25.

**33.11.9 Settlement**

With regard to the CAISO's assessment and payment of charges to, and collection of charges from, EDAM Market Participants pursuant to Sections 11 and 33.11, the CAISO will assess, pay, and collect such charges, address disputed invoices, assess, pay and collect Settlement-related fees and charges, including those under Sections 11.21, 11.28, and 11.29, and make any financial adjustments in accordance with the terms and schedule set forth in Section 11.

**33.12 Creditworthiness**

EDAM Entity Scheduling Coordinators, EDAM Load Serving Entity Scheduling Coordinators, and EDAM Resource Scheduling Coordinators must comply with the creditworthiness requirements of the CAISO Tariff. In the event EDAM Entity Scheduling Coordinators, EDAM Load Serving Entity Scheduling Coordinators, or EDAM Resource Scheduling Coordinators fail to satisfy the credit or other requirements in Section 12, the consequences specified in Section 12 will apply.

**33.13 Dispute Resolution**

Confirmation and validation of any dispute associated with the participation of EDAM Market Participants in the Day-Ahead Market is subject to Section 11.29.8 and will be managed through the CAISO's customer inquiry, dispute, and information system and as provided in the Business Practice Manual for the Extended Day-Ahead Market. EDAM Market Participants will be subject to dispute resolution pursuant to Section 13.

**33.14 Force Majeure, Indemnity, Liabilities, and Penalties**

The provisions of Section 14 regarding Uncontrollable Force, indemnity, liability, and penalties will apply to the participation of EDAM Market Participants in the Day-Ahead Market.

**33.15 Regulatory Filings**

The regulatory filings provisions of Section 15 will apply to the Extended Day Ahead Market.

**33.16 EDAM Legacy Contracts**

**33.16.1 Administration.**

Section 16 will apply to EDAM Market Participants as referenced in this Section 33.16. The CAISO will accommodate EDAM Legacy Contracts in accordance with Section 16 as required to

implement this Section 33.16. With respect to applicable provisions of Section 16:

(a) references to Existing Contracts will be read as references to EDAM Legacy Contracts;

(b) references to a Participating TO will be read as references to an EDAM Entity;

(c) any applicable EDAM Transmission Service Providers in an EDAM Entity Balancing Authority Area must satisfy the requirements of Section 16 and this Section 33.16;

(d) references to the CAISO Controlled Grid will be read as references to EDAM Transmission Service Provider facilities; and

(e) references to the CAISO Balancing Authority or CAISO Balancing Authority Area will be read as references to an EDAM Entity Balancing Authority or EDAM Entity Balancing Authority Area, respectively.

**33.16.2 Registration**

The EDAM Entity for the Balancing Authority Area associated with a potential EDAM Legacy Contract will determine if the contract qualifies as an EDAM Legacy Contract and coordinate with the EDAM Legacy Contract rights holder and any applicable EDAM Transmission Service Providers to provide the CAISO with information and instructions as required by Section 16.4 and the procedures and timelines in the Business Practice Manual for the Extended Day-Ahead Market.

**33.16.3 Availability**

An EDAM Legacy Contract rights holder, in coordination with the applicable EDAM Entity, may Self-Schedule all the capacity available under the terms of the contract, in which case none of the capacity will be available for EDAM Transfers. Alternatively, an EDAM Legacy Contract rights holder may Self-Schedule a portion of the capacity or none at all, in which case the unreserved capacity will be made available only for EDAM Transfers in accordance with Section 33.18.2.2.2 and the terms of the EDAM Legacy Contract. An EDAM Legacy Contract rights holder must be represented by a Scheduling Coordinator, which may be the EDAM Entity Scheduling Coordinator. The EDAM Legacy Contract rights holder must coordinate use of its rights with the EDAM Entity associated with the EDAM Legacy Contract, and communicate the transmission

capacity available for EDAM Transfers to the CAISO in accordance with the procedures and timelines in the Business Practice Manual for the Extended Day-Ahead Market.

**33.16.4 Scheduling**

A Scheduling Coordinator for an EDAM Legacy Contract rights holder must submit Self-Schedules consistent with the requirements of Section 16.6 and not Economic Bids associated with its Contract Reference Number. Validation of Self-Schedules associated with a Contract Reference Number will follow the procedures in Section 16.6.2, and such Self-Schedules will receive the priority established in Section 16.5 and the settlement treatment established in Section 16.6.3 according to the results of the validation rules and the registered characteristics of the rights.

**33.16.5 Settlement**

EDAM Transfer revenue will be settled with the Scheduling Coordinator for an EDAM Legacy Contract rights holder under Section 33.11.1. Congestion revenue associated with an EDAM Legacy Contract will be settled with the Scheduling Coordinator for an EDAM Legacy Contract rights holder under Section 33.11.3.8. Settlement of charges associated with EDAM Legacy Contract rights that are allocated by the CAISO to the EDAM Balancing Authority Area and assigned to the EDAM Entity Scheduling Coordinator may also be subject to further allocation by the EDAM Entity according to the applicable transmission service provider's tariff and any applicable agreement among the transmission owners regarding allocation of charges associated with the EDAM Legacy Contract.

**33.17 EDAM Transmission Ownership Rights**

**33.17.1 Administration**

Section 17 will apply to EDAM Market Participants as referenced in this Section 33.17. The CAISO will administer EDAM Transmission Ownership Rights in accordance with Section 17 as required to implement this Section 33.17. With respect to applicable provisions of Section 17:

(a) references to Transmission Ownership Rights will be read as references to EDAM Transmission Ownership Rights;

(b) references to a Participating TO will be read as references to an EDAM Entity;

(c) any applicable EDAM Transmission Service Providers in an EDAM Entity Balancing Authority Area must satisfy the requirements of Section 17 and this Section 33.17;

(d) references to the CAISO Controlled Grid will be read as references to EDAM Transmission Service Provider facilities; and

(e) references to the CAISO Balancing Authority or CAISO Balancing Authority Area will be read as references to an EDAM Entity Balancing Authority or EDAM Entity Balancing Authority Area, respectively.

**33.17.2 Registration**

The EDAM Entity for the Balancing Authority Area associated with the EDAM Transmission Ownership Rights will coordinate with the EDAM Transmission Ownership Rights holder to provide information and instructions as required by Section 17.1 and the procedures and timelines in the Business Practice Manual for the Extended Day-Ahead Market.

**33.17.3 Availability**

An EDAM Transmission Ownership Rights holder may Self-Schedule all the capacity associated with its ownership interest and elect not to make any such capacity available for EDAM Transfers or other use by the market, or may exclude its EDAM Transmission Ownership Rights from the requirement to Self-Schedule to the extent that its EDAM Transmission Ownership Rights support a Pseudo-Tie export from the EDAM Balancing Authority Area. Alternatively, an EDAM Transmission Ownership Rights holder may release a portion of the capacity for EDAM Transfers in accordance with Section 33.18.2.2.2 and, if the EDAM Transmission Ownership Rights holder is also a transmission service provider, the CAISO will afford the transmission customers of that EDAM Transmission Ownership Rights holder similar treatment. An EDAM Transmission Ownership Rights holder or customer must be represented by a Scheduling Coordinator, which may be the EDAM Entity Scheduling Coordinator. The EDAM Transmission Ownership Rights holder must coordinate release of its rights with the EDAM Entity associated with the EDAM Transmission Ownership Rights, and communicate the available transmission capacity to the CAISO in accordance with the procedures and timelines in the Business Practice Manual for the

Extended Day-Ahead Market. Alternatively, an EDAM Transmission Ownership Rights holder may coordinate with the EDAM Entity to include all of its transmission ownership rights in the associated EDAM Transmission Service Information, in which case the transmission ownership rights would be made available pursuant to Section 33.18, Section 29.17, or both.

**33.17.4 Scheduling**

A Scheduling Coordinator for an EDAM Transmission Ownership Rights holder must submit Self-Schedules consistent with the requirements of Section 17.3 and not Economic Bids associated with EDAM Transmission Ownership Rights. Validation of Self-Schedules associated with EDAM Transmission Ownership Rights will follow the procedures in Section 17.3, and such Self-Schedules will receive the priority established in Section 17.2 and the settlement treatment established in Section 17.3.3 according to the results of the validation rules and the registered characteristics of the rights.

**33.17.5 Settlement**

EDAM Transfer revenue will be settled with the Scheduling Coordinator for the EDAM Transmission Ownership Rights under Section 33.11.1. Congestion revenue associated with an EDAM Transmission Ownership Right will be settled with the Scheduling Coordinator for the EDAM Transmission Ownership Rights under Section 33.11.3.8. Settlement of charges associated with EDAM Transmission Ownership Rights that are allocated by the CAISO to the EDAM Balancing Authority Area and assigned to the EDAM Entity Scheduling Coordinator may also be subject to further allocation by the EDAM Entity according to the applicable transmission service provider's tariff and any applicable agreement among the transmission owners regarding allocation of charges associated with the EDAM Transmission Ownership Rights, including an alternative arrangement with the EDAM Entity as permitted under Section 33.17.3.

**33.17.6 EDAM Transmission Service on EDAM Transmission Ownership Rights**

If a transmission service provider located primarily in one Balancing Authority Area (BAA1), as determined in accordance with the Business Practice Manual, provides service under its tariff on a transmission ownership interest it has in another Balancing Authority Area (BAA2) and BAA2 participates in EDAM, then that transmission ownership interest will be treated as an EDAM

Transmission Ownership Right in BAA2 and the transmission service provider in BAA1 will not be required to execute an EDAM Transmission Service Provider Agreement solely for its transmission facilities in BAA2. Transmission service provided on an EDAM Transmission Ownership Right in BAA2 established pursuant to this CAISO Tariff may also be subject to the applicable transmission service provider's tariff and any applicable agreement among the transmission owners regarding transmission service associated with the EDAM Transmission Ownership Rights, including an alternative arrangement with the EDAM Entity as permitted under Section 33.17.3.

**33.18 Tariff Transmission Service by EDAM Transmission Service Providers**

An EDAM Entity must provide the CAISO with EDAM Transmission Service Information for the transmission system within its Balancing Authority Area and an EDAM Transmission Service Provider must make available for use in the Day-Ahead Market the transmission capacity supporting the network model data included in the CAISO's Full Network Model for the EDAM Entity Balancing Authority Area, as provided in this Section 33. The EDAM Transmission Service Provider must amend its tariff to the extent the EDAM Entity deems necessary to account for the transmission capacity it will make available in the Day-Ahead Market, provided such amendments are consistent with this Section 33.

**33.18.1 Transmission at EDAM External Interties**

An EDAM Transmission Service Provider with a transmission system located within an EDAM Entity Balancing Authority Area must coordinate with the EDAM Entity so that the transmission system is available to the Day-Ahead Market and the EDAM Entity has all necessary information to register the transmission service customers' transmission service rights within the EDAM Entity Balancing Authority Area and at EDAM External Interties with the CAISO and other EDAM Entities as provided under the EDAM Transmission Service Provider tariff. The EDAM Entity must also ensure association of an EIM Mirror System Resource in accordance with Section 33.30.9 if an EDAM External Intertie is with an EIM Entity Balancing Authority Area.

**33.18.1.1 Qualification**

Transmission service that qualifies for registration includes network integration transmission service or firm and conditional firm point-to-point transmission service from:

(a) a source in an EDAM Entity Balancing Authority Area to an EDAM External Intertie location, (b) an EDAM External Intertie location to a sink within the EDAM Entity Balancing Authority Area, (c) a wheel through an EDAM Entity Balancing Authority Area from an EDAM External Intertie location to another EDAM External Intertie location, or (d) a source to a sink within an EDAM Entity Balancing Authority Area.

**33.18.1.2 Registration**

Qualified transmission services must be registered with the CAISO by the EDAM Entity in accordance with the procedures and timelines in the Business Practice Manual for the Extended Day-Ahead Market, which may differ depending upon the duration of the transmission rights, *e.g.,* yearly, monthly, weekly or of a shorter duration. Network integration transmission service customers will follow the EDAM Transmission Service Provider tariff for designation and un-designation of network resources.

**33.18.1.3 Scheduling**

The Scheduling Coordinator for a transmission customer of an EDAM Transmission Service Provider must use its firm or conditional firm point-to-point transmission service rights or associated secondary network service, and network integration transmission service rights, to/from an EDAM External Intertie by submitting a Self-Schedule export/import transaction to/from an EDAM External Intertie, a Self-Schedule wheeling through transaction between two EDAM External Interties, or an internal source and sink in accordance with Section 33.18.2.2.1.

**33.18.1.4 Permissible Intra-Day Transmission Schedule Changes**

When a schedule associated with registered transmission service rights is submitted in accordance with the EDAM Transmission Service Provider tariff after the start of the Day-Ahead Market, it will be accommodated in the Real-Time Market. The EDAM Entity Scheduling Coordinator for the EDAM Transmission Service Provider will ensure that the CAISO is notified of all such schedules submitted after the start of the Day-Ahead Market through submission of a Self-Schedule to the CAISO in accordance with Section 33.18.2.2.3.

#### 33.18.1.5 Settlement

A Self-Schedule associated with registered firm or conditional firm point-to-point transmission service rights or network integration transmission service at EDAM External Interties or within an EDAM Entity Balancing Authority Area will be settled by the CAISO with the Scheduling Coordinator that submitted the Self-Schedule.

#### 33.18.1.6 Resource Registration and Tagging

The EDAM Entity will be responsible for registration of System Resources associated with imports into its Balancing Authority Area at an EDAM External Intertie, and will provide the CAISO with a pre-market and after-the-fact E-Tag for transmission schedules associated with an import, export or wheel through its Balancing Authority Area at EDAM External Interties, unless a System Resource associated with an import is unknown and the import supports delivery of firm Energy in accordance with Section 33.30.8.2.

### 33.18.2 Transmission at EDAM Internal Interties

An EDAM Transmission Service Provider with a transmission system located within an EDAM Entity Balancing Authority Area must coordinate with the EDAM Entity and the EDAM Transmission Service Provider tariff so that the EDAM Entity will have all necessary information to register transmission service customers' transmission service at EDAM Internal Interties with the CAISO and other EDAM Entities in accordance with the procedures and timelines in the Business Practice Manual for the Extended Day-Ahead Market, which processes may differ depending upon the duration of the transmission rights, *e.g.,* yearly, monthly, weekly or of a shorter duration. EDAM Transfers must be supported by firm or conditional firm point-to-point transmission service rights across an EDAM Internal Intertie, network integration transmission service associated with an import of a designated network resource across an EDAM Internal Intertie, or available transfer capability across an EDAM Internal Intertie. EDAM Legacy Contracts may support EDAM Transfers only if registered under Section 33.16.2. EDAM Transmission Ownership Rights may support EDAM Transfers only if registered under Section 33.17.2. EDAM Transmission Service Provider rights may support EDAM Transfers as registered under this Section 33.18.2. An EDAM Entity Scheduling Coordinator must identify the

transmission limits associated with the firm and conditional firm point-to-point transmission service capacity and network integration transmission service capacity that will be available to the Day-Ahead Market at EDAM Internal Interties to support EDAM Transfers and register those rights with the CAISO. The EDAM Entity Scheduling Coordinator responsible for submitting the E-Tag must communicate to the CAISO the transmission limits associated with the transmission service available under Section 33.18.2.1, Section 33.18.2.2 broken down into individual components for Section 33.18.2.2.1 through Section 33.18.2.2.3, and Section 33.18.2.3, in accordance with the procedures and timelines in the Business Practice Manual for the Extended Day-Ahead Market.

**33.18.2.1 Transmission to Support Resource Sufficiency Provided by the EDAM Entity**

An EDAM Transfer from the source Balancing Authority Area to the sink Balancing Authority Area to support the EDAM Resource Sufficiency Evaluation for the sink Balancing Authority Area must be supported by firm or conditional firm point-to-point transmission service or network integration transmission service across an EDAM Internal Intertie. An EDAM Entity may also account for delivery of Supply external to its Balancing Authority Area in the EDAM Resource Sufficiency Evaluation under Section 33.30.8; however, the transmission that may ultimately support delivery of the Supply is not known before the Day-Ahead Market and will not be available to support EDAM Transfers.

**33.18.2.2 Transmission Provided by Transmission Customers**

The Scheduling Coordinator must take one of three pathways described in Section 33.18.2.2 prior to Market Close of the Day-Ahead Market to schedule its firm and conditional firm point-to-point transmission service rights, or network integration transmission service rights, at an EDAM Internal Intertie to support an EDAM Transfer which may or may not be required for the EDAM Resource Sufficiency Evaluation under Section 33.18.2.1.

**33.18.2.2.1 Self-Schedule Associated with Registered Transmission**

The Scheduling Coordinator for a transmission customer of an EDAM Transmission Service Provider may submit a Self-Schedule for Energy associated with its registered firm or conditional firm point-to-point transmission service rights or network integration transmission service rights prior to Market Close of the Day-Ahead Market. The Energy associated with the Self-Schedule will be settled by the CAISO with the Scheduling Coordinator for the registered transmission rights.

**33.18.2.2.2 Release of the Transmission**

The Scheduling Coordinator for a transmission customer of an EDAM Transmission Service Provider, EDAM Legacy Contract or EDAM Transmission Ownership Right must notify the CAISO and the EDAM Transmission Service Provider prior to 9:00 a.m. the morning of the Day-Ahead Market if it intends to release its long-term and monthly firm and conditional firm point-to-point registered transmission service rights across an EDAM Internal Intertie. The Scheduling Coordinator representing the transmission rights may determine, on a daily basis, whether to make the full amount or only a portion of its registered transmission service rights available for EDAM Transfers for that day only or a longer timeframe, provided such release is consistent with the registered transmission rights and the EDAM Transmission Service Provider tariff. Released transmission service rights cannot be reclaimed or scheduled for the duration of the trade date for which they have been released. The EDAM Entity Scheduling Coordinator associated with the EDAM Transmission Service Provider will ensure that information on such released transmission service rights is communicated to the CAISO for association with an EDAM Transfer System Resource in accordance with the timelines and procedures in the Business Practice Manual for the Extended Day-Ahead Market. The released transmission capacity utilized by the Day-Ahead Market will be settled by the CAISO with the Scheduling Coordinator for the transmission rights.

#### 33.18.2.2.3 Permissible Intra-Day Transmission Schedule Changes

If the Scheduling Coordinator for a transmission customer of an EDAM Transmission Service Provider does not release the transmission service rights or schedule its registered firm or conditional firm point-to-point transmission service rights under Section 33.18.2.2.1 or Section 33.18.2.2.2 prior to the Day-Ahead Market, the capacity will be made available for EDAM Transfers in the Day-Ahead Market, and the transmission customer may nonetheless later exercise its rights under the EDAM Transmission Service Provider tariff. If the transmission customer later submits a schedule associated with its registered transmission service rights in accordance with the EDAM Transmission Service Provider tariff, the EDAM Entity Scheduling Coordinator associated with the EDAM Transmission Service Provider will ensure that the CAISO is notified of all such transmission schedules through submission of a Self-Schedule to the CAISO by the EDAM Entity Scheduling Coordinator, which the CAISO will accommodate in the Real-Time Market. The Real-Time Market may re-dispatch if necessary to accommodate the late Self-Schedule of the associated transmission service rights and will afford the Self-Schedule submitted by the EDAM Entity Scheduling Coordinator equal priority to cleared Day-Ahead Schedules unless the CAISO receives instructions that the EDAM Transmission Service Provider that it has assigned the Self-Schedule associated with firm OATT rights, whether point to point, network integration transmission service, or conditional firm, a scheduling priority higher than cleared Day-Ahead Schedules in accordance with the EDAM Transmission Service Provider tariff. Self-Schedules submitted after the Day-Ahead Market will be settled with the EDAM Entity Scheduling Coordinator.

### 33.18.2.3 Unsold Available Transfer Capability

The EDAM Entity Scheduling Coordinator will determine the amount of unsold firm available transfer capability at an EDAM Internal Intertie under the EDAM Transmission

Service Provider tariff prior to 10:00 a.m. on the morning of the Day-Ahead Market, accounting for reserve sharing group obligations or other unique circumstances and arrangements as provided in the EDAM Transmission Service Provider tariff. The unsold transmission capability as communicated by the EDAM Entity Scheduling Coordinator will be available for EDAM Transfers. A single EDAM Entity Scheduling Coordinator, as agreed upon by the respective EDAM Transmission Service Providers at each EDAM Internal Intertie between Balancing Authority Areas in the EDAM Area will provide the CAISO with the available transfer capability associated with the EDAM Internal Interties for which it is responsible.

#### 33.18.2.4 EDAM Transfer Limits Used for the Day-Ahead Market

The CAISO will communicate the quantity of transmission that the Day-Ahead Market utilized for EDAM Transfers to the EDAM Entity Scheduling Coordinator after Market Close of the Day-Ahead Market, which the EDAM Entity associated with the EDAM Transmission Service Provider will ensure the EDAM Transmission Service Provider will thereafter use to determine any remaining transmission to make available in accordance with its tariff and Section 29. A single EDAM Entity Scheduling Coordinator, as agreed upon by the respective EDAM Transmission Service Providers at each EDAM Internal Intertie between Balancing Authority Areas in the EDAM Area, will provide the CAISO with an after-the-fact E-Tag for transmission schedules associated with the EDAM Internal Interties for which it is responsible.

### 33.18.3 Contract Reference Number (CRN)

The CAISO will recognize EDAM Transmission Service Provider customer transmission rights as provided under the EDAM Transmission Service Provider tariff subject to the provisions of Section 33.18.1 and Section 33.18.2. The CAISO will assign a CRN for firm point-to-point or network transmission rights with a duration of a month or longer and registered (a) at EDAM Internal Interties, which will be associated with an EDAM Transfer System Resource, (b) at EDAM External Interties, which will be associated with a System Resource or according to Section 33.30.8.2, or (c) within an EDAM Entity Balancing Authority Area, which will be

associated with an internal source and specific internal sink.

**33.18.3.1 Self-Schedules Associated with a CRN**

A Scheduling Coordinator that submits a balanced Self-Schedule less than or equal to the capacity associated with the CRN in accordance with Section 33.18.2.2.1 will be assigned a scheduling priority in the Day-Ahead Market above a Self-Schedule not associated with a CRN in the Day-Ahead Market in accordance with Section 27.4.3.4, which will be afforded a scheduling priority equal to cleared Day-Ahead Self-Schedules in the Real-Time Market. Otherwise, the Self-Schedule will be assigned the same priority as a Self-Schedule in the Day-Ahead Market not associated with a CRN, and will be afforded a scheduling priority equal to cleared Day-Ahead Self-Schedules in the Real-Time Market. The CAISO will notify the Scheduling Coordinator if a Self-Schedule associated with a CRN is not balanced prior to the Market Close of the Day-Ahead Market, which the Scheduling Coordinator may update prior to the Market Close of the Day-Ahead Market. A Scheduling Coordinator that submits a balanced Self-Schedule less than or equal to the capacity associated with the CRN in accordance with Section 33.18.2.2.3 will be assigned a scheduling priority equal to cleared Day-Ahead Self-Schedules in the Real-Time Market unless the CAISO receives instructions from the EDAM Transmission Service Provider that it has assigned the balanced Self-Schedule associated with firm OATT rights a scheduling priority higher than cleared Day-Ahead Self-Schedules in accordance with the EDAM Transmission Service Provider tariff. All other Self-Schedules will be assigned the same priority as a Self-Schedule in the Real-Time Market not associated with a CRN.

(a) An EDAM Transfer System Resource registered to an EDAM Entity will account for capacity available to support EDAM Transfers and will not be assigned a CRN, which may support a capacity release for optimization and the EDAM Resource Sufficiency Evaluation, as applicable.

(b) An EDAM Transfer System Resource registered to an EDAM Transmission Service Provider customer will support a Self-Schedule or capacity

release and will be assigned a CRN.

(c) An internal source and sink registered to an EDAM Transmission Service Provider customer will support a Self-Schedule and will be assigned a CRN.

(d) Any portion of a CRN that is Self-Scheduled in the Day-Ahead Market will be available for the EDAM Resource Sufficiency Evaluation.

(e) Any portion of a CRN released in accordance with Section 33.18.2.2 may not be Self-Scheduled in the Day-Ahead Market and may not be Self-Scheduled by the EDAM Entity after the Market Close of the Day-Ahead Market under Section 33.18.1.4 or Section 33.18.2.2.3.

(f) Any portion of a CRN that is neither released in accordance with Section 33.18.2.2 nor Self-Scheduled in the Day-Ahead Market will be available in the Day-Ahead Market and may be Self-Scheduled by the EDAM Entity Scheduling Coordinator after the Market Close of the Day-Ahead Market under Section 33.18.1.4 or Section 33.18.2.2.3.

(g) Self-Schedules not associated with a CRN will be afforded the same priority as any other Self-Schedule in the Day-Ahead Market that does not have a CRN.

(h) The CAISO will not adjust a Self-Schedule in the Day-Ahead Market associated with a CRN under this Section 33.18.3 to accommodate a Self-Schedule in the Day-Ahead Market that is not associated with a CRN.

(i) Each EDAM Entity will be responsible for managing Transmission Constraints after the Day-Ahead Market according to Section 29, Section 33.7.5, and the EDAM Transmission Service Provider tariff.

**33.18.3.2 Self-Schedules Associated with Short-Term Transmission Rights**

The CAISO will also assign a CRN for firm transmission rights with a duration of less than a month pursuant to the registration process provided in the Business Practice Manual for the Extended Day-Ahead Market. Self-Schedules associated with a CRN representing shorter-duration transmission rights will be afforded the same physical and

financial treatment as a CRN associated with a longer-duration transmission right under this Section 33.18.3.

#### 33.18.3.3 Transmission Not Available in the Day-Ahead Market

If the CAISO is informed through the prospective EDAM Entity implementation process or by the EDAM Entity Scheduling Coordinator for the EDAM Transmission Service Provider that accommodation of incremental intra-day schedules in the Real-Time Market should be unavailable in the Day-Ahead Market according to the EDAM Transmission Service Provider tariff, the CAISO will accept a notification from the EDAM Entity Scheduling Coordinator associated with the EDAM Transmission Service Provider and will adjust Day-Ahead Market availability of the impacted transmission elements and the associated transmission service rights.

### 33.18.4 CAISO Transmission at EDAM Interties

The CAISO will provide transmission service on the CAISO Controlled Grid and at EDAM Interties in accordance with the CAISO Tariff to support the EDAM Resource Sufficiency Evaluation for the CAISO Balancing Authority Area and to support the EDAM Resource Sufficiency Evaluation for an EDAM Entity Balancing Authority Area. The CAISO will make Available Transfer Capability at EDAM Internal Interties on the CAISO Controlled Grid available as determined in accordance with Section 23 and Appendix L at the start of the Day-Ahead Market to support EDAM Transfers, including the assessment of any applicable charges. The CAISO will facilitate the availability of transmission capacity associated with Existing Contracts and Transmission Ownership Rights for EDAM Transfers if the rights holder makes the capacity available to the CAISO consistent with Section 33.16.2 or Section 33.17.2, as applicable, which will then be eligible to receive EDAM Transfer revenue and Congestion revenue settlement with the Scheduling Coordinator for the Existing Contracts and Transmission Ownership Rights under Section 33.11.1 and Section 33.11.2.

#### 33.18.4.1 Wheels Through

The Scheduling Coordinator of Supply wheeled through the CAISO Balancing Authority Area and accounted for in the EDAM Resource Sufficiency Evaluation must demonstrate

establishment of a Wheeling Through transaction across the CAISO Controlled Grid and have designated transmission service under Section 33.18.2.1 into an EDAM Entity Balancing Authority Area and on the CAISO Controlled Grid Section in accordance with Section 23 and Appendix L. An EDAM Entity may similarly account for delivery of Supply wheeled through the CAISO Balancing Authority Area for its EDAM Resource Sufficiency Evaluation to be delivered under Section 33.30.8; however, the transmission that may ultimately support delivery of the Supply will not be available to support EDAM Transfers because it is not known before the Market Close of the Day Ahead Market.

**33.18.4.2 Exports From**

The Scheduling Coordinator of Supply from a CAISO Participating Resource accounted for in the EDAM Resource Sufficiency Evaluation of an EDAM Entity Balancing Authority Area must demonstrate it has a contract with a resource that has non-Resource Adequacy available capacity from the CAISO Balancing Authority Area and has designated transmission service under Section 33.18.2.1 into an EDAM Entity Balancing Authority Area and on the CAISO Controlled Grid Section in accordance with Section 23 and Appendix L. An EDAM Entity may similarly account for delivery of Supply exported from the CAISO Balancing Authority Area in the EDAM Resource Sufficiency Evaluation to be delivered under Section 33.30.8; however, the transmission that may ultimately support delivery of the Supply will not be available to support EDAM Transfers because it is not known before the Market Close of the Day Ahead Market.

**33.18.5 EDAM Transfer Priority**

EDAM Transfers will have a priority equal to Demand in the EDAM Area and may be curtailed only as provided in Section 33.7.5. The Day-Ahead Market will include a constraint as provided in Section 33.27.4 to ensure each Balancing Authority in the EDAM Area meets its Balancing Authority Area requirements before supporting EDAM Transfers.

**33.19 Reliability Coordination**

Reliability Coordination does not apply to the Extended Day-Ahead Market, although EDAM Market Participants may separately receive Reliability Coordination services according to Section 19.

**33.20 Confidentiality**

The confidentiality provisions in Section 20 will apply to participation of EDAM Market Participants in the Day-Ahead Market.

**33.21 Supplemental Services – DACA Services Charge**

(a) **Day-Ahead Contingency Analysis Services Charge.** The CAISO will recover from EDAM Entities that elect in writing to receive day-ahead contingency analysis services the annual charges for the ongoing software license fee, which will be passed through directly to the EDAM Entities, and charges set forth in the CAISO's most recently published report regarding the GMC and other rates, which will include –

(1) a start-up charge amortized over an initial three-year minimum commitment period; and

(2) the annual charge for CAISO support of the day-ahead contingency analysis services.

(b) **Invoicing for Day-Ahead Contingency Analysis Services.** If the EDAM Entity elects to receive day-ahead contingency analysis services, the EDAM Entity agrees to pay for three years of services regardless of whether it takes day-ahead contingency analysis services for the entire three-year term, and it will be invoiced one-third of that amount annually during the initial three-year term. Thereafter, the EDAM Entity will be invoiced annually for day-ahead contingency analysis services as described in the Business Practice Manual for EDAM.

(c) **Payment for Day-Ahead Contingency Analysis Services.** Payment for day-ahead contingency analysis services will be due within 21 Business Days of the invoice date.

(d) **Annual Election of Day-Ahead Contingency Analysis Services.** Each year, the EDAM Entity will notify the CAISO in writing, according to the timelines and procedures in the Business Practice Manual for EDAM, as to which day-ahead contingency analysis services it is electing to take for the following year. If the EDAM Entity does not provide such notice to the CAISO, the CAISO will continue to provide the EDAM Entity with the same day-ahead contingency analysis services it is providing to the EDAM Entity during the current year.

(e) **Termination of Day-Ahead Contingency Analysis Services**. An EDAM Entity that has elected to receive day-ahead contingency analysis services will continue to be invoiced for the services annually during the initial three-year term and each year thereafter until the services have been

terminated in accordance with the Business Practice Manual for EDAM.

**33.22 Miscellaneous**

Section 22 and the additional miscellaneous provisions of this Section 33.22 will apply to the EDAM.

To the extent that the CAISO would incur any tax liability as a result of the participation of EDAM Market Participants in the Day-Ahead Market, for example as market operator or as central counterparty to EDAM transactions, the CAISO will pass those taxes on to the EDAM Entity Scheduling Coordinator for the EDAM Entity Balancing Authority Area where the transactions triggered the tax liability.

Neither the CAISO nor the EDAM Entity is a "Purchasing Selling Entity" for purposes of E-Tags or EDAM Transfers, nor will either be listed as a "Purchasing Selling Entity" for purposes of E-Tags or EDAM Transfers.

Title to Energy in the Day-Ahead Market passes directly from the entity that holds title when the Energy enters the CAISO Controlled Grid or the transmission system of an EDAM Transmission Service Provider, whichever is first following Dispatch, to the entity that removes the Energy from the CAISO Controlled Grid or the transmission system of a EDAM Transmission Service Provider, whichever last precedes delivery to Load.

**33.23 Transmission Service Requirements for EDAM Resources**

This Section 33.23 applies only to EDAM Market Participants. Transmission service requirements on the CAISO Controlled Grid will continue in accordance with Section 23 and other provisions of the CAISO Tariff applicable to transmission service on the CAISO Controlled Grid.

An EDAM Resource Scheduling Coordinator must obtain transmission service from an EDAM Transmission Service Provider, which may be satisfied through the following options:

(a) The EDAM Resource is a designated network resource under the terms of an EDAM Transmission Service Provider tariff;

(b) The EDAM Resource reserves firm point-to-point transmission service of any duration under the terms of an EDAM Transmission Service Provider tariff, or

(c) The EDAM Resource is associated with an EDAM Legacy Contract or an EDAM Transmission Ownership Right.

If option (a), (b), or (c) above are not satisfied, the CAISO will inform the EDAM Entity associated with the

EDAM Transmission Service Provider so that the EDAM Transmission Service Provider may assess a transmission charge based on the transmission rate for the lowest duration of firm transmission service offered under its tariff, which may be a daily firm or hourly firm transmission service. Where a resource is unable to satisfy option (a), (b), or (c) above, the EDAM Transmission Service Provider tariff may provide for an adjustment of the firm transmission service charge as appropriate. If the EDAM Transmission Service Provider offers daily firm point-to-point transmission service as the lowest granularity of firm transmission service, the transmission service charge would be evaluated based on the single highest-hour Real-Time Dispatch of the resource across the day for the amount in excess of reserved transmission service. If the EDAM Transmission Service Provider offers hourly firm point-to-point transmission service as the lowest granularity of firm transmission service, the transmission service charge would be evaluated based on each individual hourly Real-Time Dispatch of the resource for the day. If the Real-Time Dispatch for any hour across the day is above the transmission reservation, the CAISO will inform the EDAM Entity associated with the EDAM Transmission Service Provider and the EDAM Transmission Service Provider will assess the hourly transmission charge as described above. This Section 33.23 establishes a common methodology for a Scheduling Coordinator to secure transmission service from an EDAM Transmission Service Provider. The specific transmission service requirements and any associated transmission service charges or penalties will be determined in accordance with the EDAM Transmission Service Provider tariff.

**33.24 Transmission Planning**

The Extended Day-Ahead Market does not include transmission planning related functions or services and Section 24 does not apply to EDAM Market Participants.

**33.25 Generator Interconnection**

The Extended Day-Ahead Market does not include generator interconnection related functions or services and Section 25 does not apply to EDAM Market Participants.

**33.26 Historical Revenue Recovery And Charges**

Access Charges for Day-Ahead Market transactions serving Load within the CAISO Balancing Authority Area that use the CAISO Controlled Grid are governed by Section 26. Transmission service charges for Day-Ahead Market transactions serving Load within an EDAM Entity Balancing Authority Area are

governed by the applicable EDAM Transmission Service Provider tariff. Transmission service charges for Day-Ahead Market transactions supported by EDAM Transfers are addressed in this Section 33.26. Transmission service charges for Real-Time Market transactions are governed by Section 11, Section 26, or Section 29.26, as applicable.

**33.26.1 EDAM Access Charges**

The CAISO will determine an EDAM Access Charge for each Balancing Authority Area in the EDAM Area based on the aggregate inputs of each EDAM Transmission Service Provider in that Balancing Authority Area. The CAISO will assess the EDAM Access Charges, allocate revenues collected, and true-up actual revenue recovery through calculation of the next year's EDAM Access Charges. EDAM Entities will provide forecasts for their EDAM Transmission Service Providers of the aggregate EDAM Recoverable Revenue from the three components described below, to be trued-up based on EDAM Recoverable Revenue each year.

**33.26.1.1 EDAM Recoverable Revenue Allocated to Gross Load**

To assess the EDAM Access Charge consistent with Section 33.26.3, the CAISO will derive a rate in $/MWh specific to each EDAM Entity Balancing Authority Area. The CAISO will calculate the rate by:

(1) allocating each EDAM Transmission Service Provider's EDAM Recoverable Revenue to the EDAM Balancing Authority Areas associated with the other EDAM Transmission Service Providers, on behalf of such other EDAM Transmission Service Providers, in proportion to

(a) the EDAM Transmission Service Provider's Gross Load divided by

(b) the total EDAM Area Gross Load minus Gross Load of the EDAM Transmission Service Provider;

(2) calculating the total EDAM Recoverable Revenue allocation; and

(3) dividing the total EDAM Recoverable Revenue by the EDAM Transmission Service Provider's Gross Load.

**33.26.1.2 Truing Up to Actual EDAM Recoverable Revenue**

At the conclusion of each calendar year, each EDAM Transmission Service Provider with

EDAM Recoverable Revenue will provide the CAISO calculations of actual forgone and collected revenue for each EDAM Access Charge component, and the supporting documentation required by Section 33.26.4. The EDAM Transmission Service Provider's EDAM Recoverable Revenue true-up amount for the following year will be the difference between (a) the actual sales of qualifying products in components 1 and 2, and (b) the EDAM Transmission Service Provider's projected sales for that year, as documented by the EDAM Transmission Service Provider consistent with Section 33.26.4. The CAISO will include the true-up amount, positive or negative, as an adjustment to the following year's EDAM Access Charge. The CAISO also will include a true-up amount, positive or negative, to balance the difference between the CAISO's projected EDAM Access Charge collections and actual collections for each EDAM Transmission Service Provider.

### 33.26.2 Calculation of EDAM Recoverable Revenue

EDAM Recoverable Revenue will consist of the sum of the following three components.

#### 33.26.2.1 Component 1: Short-Term Firm and Non-Firm Point-to-Point Transmission and Wheeling Access Charge Revenues

Eligible component 1 costs are revenue shortfalls associated with the costs of forgoing certain historical transmission sales to third parties, excluding costs related to sales to the EDAM Entity marketing function associated with EDAM Transmission Service Providers. Only forgone revenues associated with the following transmission products are eligible for historical revenue recovery: hourly non-firm point-to-point, daily non-firm point-to-point, weekly non-firm point-to-point, monthly non-firm point-to-point, hourly firm point-to-point, daily firm point-to-point, weekly firm point-to-point, and monthly firm point-to-point transmission service.

##### 33.26.2.1.1 Calculating Component 1

Each EDAM Transmission Service Provider will calculate the annual average of its revenues from the qualifying products described in Section 33.26.2.1 for the three years leading up to its EDAM participation. That three-year average will be fixed for purposes of calculating the EDAM Access Charge for the EDAM Entity's EDAM participation. For component 1 of EDAM Recoverable Revenue, the

EDAM Transmission Service Provider will include only that portion of revenues from the three-year average the EDAM Transmission Service Provider reasonably expects to forgo as a result of participating in the EDAM. In the annual true-up, the EDAM Transmission Service Provider will use its actual shortfall in lieu of the forecasted shortfall. The actual shortfall will be the difference between the EDAM Transmission Service Provider's actual sales of qualifying products for the applicable calendar year compared to the fixed three-year pre-EDAM average.

#### 33.26.2.1.2 EDAM Recoverable Revenue Limits

Component 1 EDAM Recoverable Revenue for each EDAM Entity will not exceed the product of (a) its projected Component 1 EDAM Recoverable Revenue and (b) the percentage resulting from dividing exports from its EDAM Balancing Authority Area to the EDAM Area by total exports from the EDAM Balancing Authority Area.

### 33.26.2.2 Component 2: New Transmission Capacity

Eligible component 2 costs include (a) costs resulting from reduced revenues from sales of non-firm and short-term firm transmission associated with the release of transmission capacity resulting from the expiration of EDAM Legacy Contracts, and (b) the cost associated with forgone transmission sales on certain new network upgrades.

#### 33.26.2.2.1 Component 2 Revenue Associated With New Transmission Capacity From Expired Legacy Contracts

An EDAM Transmission Service Provider may include in its component 2 EDAM Recoverable Revenue those revenue shortfalls from sales of non-firm and short-term firm transmission associated with the release of transmission capacity resulting from the expiration of EDAM Legacy Contracts that were not included as EDAM Recoverable Revenue in component 1. The EDAM Transmission Service Provider may not recover as EDAM Recoverable Revenue more than the product of the most recent annual revenue of the expired EDAM Legacy Contract multiplied by the ratio of (a) the non-firm and short-term firm point-to-point

historical EDAM recoverable transmission revenues from the pre-EDAM three-year average in component 1 to (b) the EDAM Entity's annual average revenue requirement over the same three years.

#### 33.26.2.2.2 Component 2 Revenue Associated With New Network Upgrades

An EDAM Transmission Service Provider may include in its component 2 EDAM Recoverable Revenue forgone revenue from eligible new network upgrades. Eligible new network upgrades are those that: (a) are in service; (b) are already included in the EDAM Transmission Service Provider's transmission rates or have otherwise been approved for rate recovery by the Local Regulatory Authority or FERC, as applicable; (c) increase transfer capability between EDAM Entity Balancing Authority Areas or between the CAISO Balancing Authority Area and an EDAM Entity Balancing Authority Area; and (d) are energized after the applicable EDAM Transmission Service Provider begins participation in the Day-Ahead Market. For each new qualifying network upgrade, the EDAM Transmission Service Provider will calculate an estimate of forgone revenue applicable to that network upgrade. Because new network upgrades will not have a three-year historical baseline, the EDAM Transmission Service Provider will calculate a proxy baseline. To do so, the EDAM Transmission Service Provider will calculate the ratio of (a) the non-firm and short-term firm point-to-point historical transmission revenues from the pre-EDAM three-year average in component 1 to (b) the EDAM Entity's annual average revenue requirement over the same three years. The EDAM Transmission Service Provider's proxy baseline for the new network upgrade will be the product of this ratio and the transmission revenue requirement for the new network upgrade. The EDAM Transmission Service Provider will then include as its component 2 EDAM Recoverable Revenue those revenues it expects to forgo from the new network upgrade as a result of participating in the EDAM, not to exceed the proxy baseline. After the first year the new network upgrade is included in the EDAM

Access Charge, the EDAM Transmission Service Provider will true-up actual forgone revenues to projected forgone revenues in the following year's component 2 EDAM Recoverable Revenue based on the proxy baseline. The CAISO will include examples of network upgrades that increase transfer capability for purposes of this Section and examples that do not do so in the Business Practice Manual for the Extended Day-Ahead Market. For purposes of this section, network upgrades will be deemed to increase transfer capability where they:

(a) increase total transfer capability;

(b) create new interfaces;

(c) increase the simultaneous import limits at existing interfaces;

(d) result from an Interregional Transmission Project to increase transfer capability; or

(e) were identified through the WECC path rating process as increasing total transfer capability or creating new transmission interfaces;

between EDAM Entity Balancing Authority Areas or between the CAISO Balancing Authority Area and an EDAM Entity Balancing Authority Area.

#### 33.26.2.3 Component 3: Recovery of Transmission Costs Associated With EDAM Wheeling Through Volumes Net of Imports/Exports

Eligible component 3 costs are projected revenue shortfalls associated with wheeling-through an EDAM Entity Balancing Authority Area or the CAISO Balancing Authority Area. An EDAM Transmission Service Provider's EDAM Recoverable Revenue will include those revenues associated with its total volume of wheeling-through transactions in excess of the total net transfers (imports and exports) of the applicable EDAM Entity Balancing Authority Area or CAISO Balancing Authority Area, as measured on a monthly basis. In periods where this excess occurs, the CAISO will calculate the EDAM Recoverable Revenue by multiplying that volume of wheeling-through transactions in excess of the total net transfers by the applicable EDAM Transmission Service Provider's

non-firm hourly point-to-point transmission rate. For Participating TOs, the CAISO will use the applicable Wheeling Access Charge rate.

**33.26.3 Assessing Access Charges and Allocating Revenues in the EDAM**

To recover each EDAM Transmission Service Provider's EDAM Recoverable Revenue, the CAISO will assess an EDAM Access Charge to Gross Load in each EDAM Balancing Authority Area. Each EDAM Access Charge will recover the projected EDAM Recoverable Revenue for the EDAM Balancing Authority Areas outside the Balancing Authority Area for that EDAM Access Charge, such that no EDAM Balancing Authority Area will be assessed its own projected EDAM Recoverable Revenue. The CAISO will assess EDAM Access Charges based on the EDAM Balancing Authority Areas' Gross Loads.

The CAISO will allocate revenues collected from the EDAM Access Charges to EDAM Entities on behalf of each EDAM Transmission Service Provider, in proportion to each EDAM Entity's proportionate share of total projected EDAM Recoverable Revenue. Any difference between projected EDAM Recoverable Revenue and actual EDAM Recoverable Revenue will be included as debits or credits in the annual true-up, as provided in Section 33.26.1.2.

**33.26.4 Documentation**

EDAM Transmission Service Providers will provide the CAISO all supporting documentation necessary to determine the local EDAM Access Charges in each Balancing Authority Area by July 1 of the year prior to each year in which the EDAM Access Charge will apply. The CAISO will publish all supporting documentation on the CAISO Website. At a minimum EDAM Entities must provide: (a) the final order from FERC or the Local Regulatory Authority effecting their approved transmission rates and any informational filings or postings under relevant formula rates; (b) the sums for each EDAM Recoverable Revenue component and true-up; and (c) an authorized affidavit from each EDAM Transmission Service Provider attesting to the accuracy of the data provided and that the EDAM Transmission Service Provider will make reasonable efforts to avoid any double recovery of costs through the EDAM Access Charge. All data provided must be sufficiently granular to enable verification of the EDAM Access Charge rates by the CAISO and Market Participants. For each EDAM Transmission Service Provider, the CAISO will

maintain on its Website the current sum of each recoverable revenue component, the total true-up amount, and the total eligible recovery amount. The CAISO will maintain on its Website each EDAM Access Charge, including the rate, the Gross Load, and the total eligible recovery amount in that Balancing Authority Area.

**33.26.5 Exit from EDAM**

If an EDAM Entity withdraws from the EDAM pursuant to Section 3 of its EDAM Addendum to EIM Entity Agreement, it will continue to collect and be assessed EDAM Access Charges only during the six (6) month interim notice period before withdrawing from the EDAM. A withdrawn EDAM Entity will not collect, be assessed, or true-up any costs or revenues through the EDAM Access Charge after this interim notice period, except for the previous calendar year's true-up under Section 33.26.5.1.

**33.26.5.1 Treatment of True-up Amounts**

If an EDAM Entity owed or was owed any true-up amount from the previous calendar year pursuant to Section 33.26.1.2 before it gave its written notice of termination to the CAISO in accordance with Section 3 of its EDAM Addendum to EIM Entity Agreement, and it withdraws from the EDAM before the end of the calendar year such that any true-up amount remains outstanding, either:

(a) the EDAM Entity will pay the CAISO the remaining true-up balance it owed upon the end of the interim period described in Section 33.26.5, and the CAISO will distribute that balance through the EDAM Access Charges over the rest of the calendar year; or

(b) the CAISO will continue to collect the remaining true-up amount owed the EDAM Entity through the EDAM Access Charges throughout the rest of the calendar year, and will pay that true-up amount to the EDAM Entity thereafter.

This Section 33.26.5.1 excludes all charges or payments outside of the previous calendar year true-up under Section 33.26.1.2.

**33.26.6 Three-Year Review**

No later than three (3) years after the original effective date of this Section 33.26, the CAISO will

publish on the CAISO Website a performance report on the EDAM Access Charge. The performance report will include without limitation: an explanation of the impacts of the EDAM Access Charge on EDAM Transmission Service Providers' revenue recovery and rates; the performance of the EDAM Access Charge in managing cost shifts among customers; and analysis by the CAISO of any other impacts or externalities.

**33.27 CAISO Markets And Processes**

The provisions of Section 27 that apply to the Day-Ahead Market will apply to EDAM Market Participants, except as provided in or inconsistent with this Section 33.27 or other provisions of Section 33. For purposes of applying this Section 33.27, the term CAISO Balancing Authority Area as used in Section 27 means the Market Area unless the context requires otherwise.

**33.27.1 Transitional Process**

For a period of six months following the EDAM Entity Implementation Date of a new EDAM Entity, the provisions of Section 27.4.3.2 and the second sentence of Section 27.4.3.4 will not apply to constraints that are within the Balancing Authority Area of the new EDAM Entity or affect EDAM Transfers between the Balancing Authority Area of the new EDAM Entity. For those intervals that experience infeasibilities described in those provisions, the CAISO will instead determine prices consistent with the provisions of Section 27, Section 31, and Appendix C, that would apply in the absence of Section 27.4.3.2 and the second sentence of Section 27.4.3.4 constraints.

In addition, for a period of six months following the EDAM Entity Implementation Date of a new EDAM Entity, when the transmission and/or power balance constraints as specified in Section 27.4.3.2 and the second sentence of Section 27.4.3.4 are relaxed, the CAISO will set the Imbalance Reserve parameter for pricing purposes, for the new EDAM Entity Balancing Authority Area, at an amount between and including $0 and $0.01. Sixty days prior to the expiration of the transition period, the CAISO will post on the CAISO Website an assessment of whether an extension of the transition period, for up to an additional six months, is needed for the applicable EDAM Entity. The CAISO will post an update to such assessment prior to the expiration of the transition period should there be any changes to its posted conclusions. Any extensions of the initial six-month transition period must be approved by FERC.

**33.27.2 Locational Marginal Price Formation**

The Locational Marginal Price for PNodes within each Balancing Authority Area in the EDAM Area will be determined in accordance with Appendix C.

**33.27.3 Generation Aggregation Points**

As described in Appendix C, the CAISO uses two types of Generation Aggregation Points in operation and Settlement of the Day-Ahead Market: Default Generation Aggregation Points and Custom Generation Aggregation Points.

**33.27.4 Power Balance Constraint Relaxation**

The Extended Day-Ahead Market will include a constraint to ensure each EDAM Entity meets its Balancing Authority Area requirements before supporting EDAM Transfers. The constraint will not allow a simultaneous power balance constraint violation in the upward/downward direction with a net EDAM Transfer export/import beyond the net EDAM Transfer eligible for the EDAM RSE as established in Section 33.18.2.1.

**33.27.5 IBAA and EDAM Entity Balancing Authority Areas**

Section 27.5.3 will not apply to an EDAM Entity Balancing Authority Area.

**33.28 Inter-SC Trades**

EDAM Entity Scheduling Coordinators, EDAM Load Serving Entity Scheduling Coordinators, EDAM Resource Scheduling Coordinators and other Scheduling Coordinators in the Extended Day-Ahead Market may not submit Inter-SC Trades for transactions outside the CAISO Balancing Authority Area, and Section 28 will not apply to the Extended Day Ahead Market.

**33.29 EDAM Relationship to EIM**

EDAM Market Participants are also EIM Market Participants and the provisions in Section 29 apply in their capacity as EIM Market Participants. Operation of the Day-Ahead Market within an EDAM Entity Balancing Authority Area produces outcomes that satisfy or modify certain requirements otherwise applicable to EIM Market Participants, including a Day-Ahead Schedule that will be referenced in the Real-Time Market instead of a submitted EIM Base Schedule and an initial EIM Base Load Schedule, pools of Balancing Authority Areas for purposes of the EIM Resource Sufficiency Evaluation, and capacity and Energy transfers between Balancing Authority Areas with equal priority to Demand.

## 33.30 Bids And Self-Schedule Submission

Scheduling Coordinators for EDAM Resources, EDAM Entities, Load Serving Entities, and other Day-Ahead Market Participants in the EDAM Area must submit Bids, including Self-Schedules, pursuant to this Section 33.30 as supplemented by Section 30.

### 33.30.1 Bids

A Scheduling Coordinator may submit a Bid in the Day-Ahead Market for an EDAM Resource eligible to participate in the Day-Ahead Market according to the EDAM Transmission Service Provider tariff and Section 33, while Scheduling Coordinators for EDAM Resources self-providing Ancillary Services must provide a Submission to Self-Provide Ancillary Services. Each EDAM Resource must comply with the general Bid rules in Section 30 as well as the specific Bid rules based on resource type, including without limitation owners or operators of Non-Generator Resources, Convergence Bidding Entities, Demand Response Providers, and Distributed Energy Resource Providers. Consistent with Section 30 and Appendix A, references to Bids include Self-Schedules, and references to Economic Bids exclude Self-Schedules.

### 33.30.2 Demand Bids

Only an EDAM Entity Scheduling Coordinator or an EDAM Load Serving Entity Scheduling Coordinator authorized by the EDAM Entity Scheduling Coordinator may submit a Demand Bid within the EDAM Entity's Balancing Authority Area. For EDAM Entities that have not yet enabled convergence bidding, the CAISO will limit Demand Bids in the Day-Ahead Market to the Energy Bids from EDAM Resources within the EDAM Entity's Balancing Authority Area.

### 33.30.3 Economic Bids at EDAM Interties

Except for resource-specific resources with an obligation to serve Demand in the EDAM Area described in Section 33.30.8, a Scheduling Coordinator for a designated resource associated with network integration transmission service of an EDAM Transmission Service Provider, or a resource located outside of the EDAM Area at an EDAM External Intertie with the CAISO Balancing Authority Area, may not submit Economic Bids at EDAM External Interties or EDAM Internal Interties unless the submission of Economic Bids has been enabled in accordance with Section 29.34(i)(2). Scheduling Coordinators may submit Self-Schedules at any EDAM Intertie.

### 33.30.4 EDAM Entity Access to Bid Information

For the CAISO to conduct the EDAM Resource Sufficiency Evaluation pursuant to Section 33.31, an EDAM Entity will necessarily have access to certain data related to Bids, without pricing information, associated with the EDAM Resources within the Balancing Authority Area it represents and at EDAM Interties with other Balancing Authority Areas.

### 33.30.5 Start-Up and Minimum Load

For the determination of Proxy Start-Up Costs and Proxy Minimum Load Costs, the CAISO will utilize the Market Services Charge and System Operations Real-Time Dispatch Charge reflected in the EDAM Administrative Charge.

### 33.30.6 RUC Availability Bids for Variable Energy Resources

An EDAM Resource Scheduling Coordinator for a Variable Energy Resource must submit RUC Availability Bids as specified in Section 31.5.1.2 as if the Variable Energy Resource were an Eligible Intermittent Resource.

### 33.30.7 Convergence Bidding

For all EDAM Entity Balancing Authority Areas with convergence bidding, Convergence Bidding Entities may submit Virtual Bids pursuant to Section 30.9. The CAISO will settle Virtual Bids pursuant to Section 11.3.

#### 33.30.7.1 Optional Transition Period

Each EDAM Entity may participate in the Day-Ahead Market without Virtual Bids in its Balancing Authority Area. Alternatively, each EDAM Entity may elect to forego a transition period and commence Day-Ahead Market participation with Virtual Bids in its Balancing Authority Area.

#### 33.30.7.2 Bidding Rules

During the period that an EDAM Entity has not enabled convergence bidding, Load Serving Entities within the EDAM Entity Balancing Authority Area may not Bid or Self-Schedule Demand above the amount of Supply within the EDAM Entity Balancing Authority Area. The CAISO will enforce this Demand limitation based on the available Supply, accounting for the difference between Variable Energy Resource Bids and their forecasts. Forecasts will account for each Variable Energy Resource's deliverable Energy based on system conditions and input from the

each EDAM Entity.

#### 33.30.7.3 Suspension or Limitation

The CAISO has the authority to suspend or limit convergence bidding pursuant to Section 7.9. Each EDAM Entity may recommend that the CAISO suspend convergence bidding in its Balancing Authority Area, provided that the CAISO will make the ultimate determination as to such recommendation.

### 33.30.8 Bids from External Resources

Resources located outside of the EDAM Area may participate in the Day-Ahead Market subject to certain requirements that depend on whether (a) the resource submits a Bid at an EDAM External Intertie or an EDAM Internal Intertie, (b) the intertie is with the CAISO Balancing Authority Area or an EDAM Entity Balancing Authority Area, and (c) the resource's location is specific or non-specific. The EDAM Entity Scheduling Coordinator responsible for the interchange associated with these transactions must identify the supporting resource in an E-Tag submitted in accordance with Section 29.4(c)(4).

#### 33.30.8.1 EDAM External Interties

A Scheduling Coordinator for a resource located outside of the EDAM Area may submit a Bid at an EDAM External Intertie with an EDAM Entity if the resource is pseudo-tied into the EDAM Entity Balancing Authority Area, is dynamically scheduled into the EDAM Entity Balancing Authority Area, or submits a Self-Schedule into the EDAM Entity Balancing Authority Area. An EDAM Entity will facilitate scheduling of export transactions from its Balancing Authority Area to EDAM External Interties pursuant to Section 33.18 and the EDAM Transmission Service Provider tariff or, in the case of the CAISO Balancing Authority Area, this CAISO Tariff. A Scheduling Coordinator for a resource located outside of the EDAM Area may submit a Bid at an EDAM External Intertie with the CAISO Balancing Authority Area in accordance with the CAISO Tariff. Economic Bids at EDAM External Interties with the CAISO Balancing Authority Area must be capable of delivery under Section 33.30.8.2 to count towards the EDAM RSE.

#### 33.30.8.2 Delivered Firm Energy Contracts

Bids from delivered firm Energy contracts may participate in the Day-Ahead Market. Such firm Energy contracts include but are not limited to arrangements pursuant to Service Schedule C of the Western Systems Power Pool Agreement, CAISO resource adequacy imports, and similar forward contracted Supply. All source-specific forward contracted supply will, if possible, be modeled in the EDAM Area and, when the source cannot be identified, modeling assumptions will be made regarding the source based on the best information available. Bids at an EDAM Intertie with the CAISO Balancing Authority Area will be submitted by the Scheduling Coordinator associated with a forward contract with a Load Serving Entity within the CAISO Balancing Authority Area.

**33.30.8.3 Non-Source Specific E-Tag Requirements.**

All Energy scheduled from non-resource-specific forward supply contracts under Section 33.30.8.2 must have a submitted E-Tag within three hours following publication of the Day-Ahead Market results. The CAISO will publish an EDAM Entity Balancing Authority Area's quantity of import Supply that does not have a Day-Ahead E-Tag for situational awareness. An EDAM Entity Scheduling Coordinator or a Scheduling Coordinator within the CAISO Balancing Authority Area, as applicable, will have until 5 hours before the start of the Operating Hour to submit E-Tags and/or replace the capacity with other firm schedules or physical resources for schedules that lack a valid Day-Ahead E-Tag within the timeframe. If the Scheduling Coordinator does not E-Tag the outstanding import schedules, including import EDAM Transfers, and fails to resupply by submitting additional incremental Energy Bids from internal supply EDAM Resources above the resource's Day-Ahead Schedule not encumbered by Day-Ahead capacity awards to cover the E-Tag insufficiency prior to the deadline, the CAISO will remove the EDAM Entity Balancing Authority Area or the CAISO Balancing Authority Area, as applicable, from the group of Balancing Authority Areas that comprise the EDAM Upward Pool in accordance with Section 33.31.1.4.

**33.30.9 Base Schedules Replaced by Day-Ahead Schedules**

An EDAM Entity Scheduling Coordinator will not submit EIM Base Schedules and the CAISO will

not provide an EIM Base Load Schedule for the EIM Entity Balancing Authority Area it represents in the Real-Time Market. Instead, the Day-Ahead Schedules for the EDAM Entity Balancing Authority Area will be used for the EIM Entity Balancing Authority Area in the Real-Time Market rather than submitted EIM Base Schedules and an EIM Base Load Schedule provided by the CAISO. EDAM Transfer schedules of Energy between Balancing Authority Areas in the EDAM Area will persist in the Real-Time Market with the corresponding Balancing Authority Areas in the EIM Area. EDAM Transfers of Energy will not be optimized in the Real-Time Market, but they will have equal scheduling priority with Demand. Day-Ahead import and export schedules at EDAM External Interties with Balancing Authority Areas in the EIM Area will also persist in the Real-Time Market and, if the import/export schedule is with another EIM Entity Balancing Authority Area, the Day-Ahead Schedule will be mirrored at the corresponding EIM Mirror System Resources for the Balancing Authority Areas in the Real-Time Market. Day-Ahead import and export schedules at EDAM External Interties will also not be optimized in the Real-Time Market, but they will have equal scheduling priority with Demand.

### 33.30.10 Information Available for Bidding by Gas-Fired Resources

The CAISO will publish advisory Day-Ahead Market results two days prior to the Trading Day in accordance with Section 6.5.2.2.3 to help inform gas procurement decisions by EDAM Resource Scheduling Coordinators that submit Bids from gas-fired EDAM Resource Facilities. An EDAM Resource Scheduling Coordinator must request this information before 05:00 a.m. of the Day-Ahead Market.

## 33.31 Extended Day-Ahead Market Requirements

The EDAM operates within the EDAM Area in accordance with Section 31, as supplemented by provisions in this Section 33.31. EDAM Market Participants must comply with Section 31 as applicable to their participation in the Day-Ahead Market.

### 33.31.1 EDAM Resource Sufficiency Evaluation (EDAM RSE)

Through the EDAM RSE, the CAISO will test each Balancing Authority Area in the EDAM Area, including the CAISO Balancing Authority Area, prior to the DAM and the results of the EDAM RSE serve as inputs into the DAM and EDAM with the CAISO completing the EDAM RSE before

the IFM MPM.

**33.31.1.1 Timing of Advisory and Binding EDAM RSE Runs**

The CAISO produces advisory results for each Balancing Authority Area in the EDAM Area for the EDAM RSE at approximately 6:00 a.m. and 9:00 a.m. on the day the CAISO runs the Day-Ahead Market for the next Trading Day; additional advisory results for the EDAM RSE will be provided to each Balancing Authority Area in the EDAM Area consistent with the process set forth in the Business Practice Manual for the Extended Day-Ahead Market. The CAISO conducts the binding EDAM RSE after the Day-Ahead Market submission process closes at approximately 10:00 a.m., after the CAISO has validated Bids pursuant to Section 33.30, and immediately prior to running the Day-Ahead Market. Results of the advisory and binding EDAM RSE will be made available in accordance with the procedures set forth in the Business Practice Manual for the Extended Day-Ahead Market.

**33.31.1.2 Components of the EDAM RSE**

The EDAM RSE uses existing CAISO market models with the goal of minimizing total cost of meeting Demand and relaxing the Energy and Imbalance Reserve procurement constraints, if they cannot be satisfied, by utilizing all available Bids in the Day-Ahead Market that are eligible for participation under Section 33.31 and validated under Section 33.30, excluding Virtual Bids, non-Participating Load Bids, and intertie transactions by resources that are not registered. The EDAM RSE will also utilize all Ancillary Service Bids, self-provision of ancillary service, and the forecasted output of Variable Energy Resources, together with any adjustments made pursuant to Section 33.31.4.1, in each Balancing Authority Area and for each hour of the Day-Ahead time horizon. EDAM Resources and intertie resources qualified to register, and registered, with the CAISO are eligible for the EDAM RSE upon satisfaction of the requirements and process set forth in the Business Practice Manuals for the Extended Day-Ahead Market. All internal resources in the CAISO Balancing Authority Area are eligible to be counted for purposes of the EDAM RSE without additional registration. The EDAM RSE reflects resource constraints based on registered resource characteristics including, but not limited to, hydro resource and limited energy storage resource energy constraints, together with other available information as provided in the Business

Practice Manuals, but does not enforce Transmission Constraints within each Balancing Authority Area. The result of the EDAM RSE is the quantity of upward sufficiency or downward insufficiency for each hour in the Day-Ahead time horizon for each Balancing Authority Area in the EDAM Area.

#### 33.31.1.2.1 Resource Sufficiency Requirements in the EDAM

To perform the EDAM RSE, the CAISO will use the following inputs in performing the advisory runs and binding runs set forth in Section 31.3.1.6.1 as requirements for each Balancing Authority Area in the EDAM Area in accordance with the procedures set forth in the Business Practice Manuals, with the following requirements fixed at the time of the final binding EDAM RSE.

##### 33.31.1.2.1.1 Forecast Requirement

The Demand Forecast and Variable Energy Resource forecast used in the 6:00 a.m. and 9:00 a.m. advisory run by the CAISO will be determined in accordance with Section 33.31.4 and the Business Practice Manual for the Extended Day-Ahead Market. The Demand Forecast and Variable Energy Resource forecast used in the final binding EDAM RSE will be the same forecasts the CAISO used in the 9:00 am advisory run, unless the timelines in the Business Practice Manual for the Extended Day-Ahead Market otherwise allow for adjustment.

##### 33.31.1.2.1.2 Imbalance Reserves Requirement

The Imbalance Reserve requirement used in the 6:00 a.m. and 9:00 a.m. advisory run by the CAISO will be calculated in accordance with Section 31.3.1.6. The Imbalance Reserve requirement used in the final binding EDAM RSE will be the same requirement the CAISO used in the 9:00 a.m. advisory run unless the timelines in the Business Practice Manual for the Extended Day-Ahead Market otherwise allow for adjustment.

##### 33.31.1.2.1.3 Ancillary Services Requirement

Each EDAM Entity must determine the requirements for ancillary services within its Balancing Authority Area consistent with its Balancing Authority obligations.

The EDAM Entity Scheduling Coordinator must communicate the ancillary services requirements to the CAISO for use in the advisory and binding runs in accordance with the timelines set forth in the Business Practice Manuals. The ancillary services requirements used in the final binding EDAM RSE for each EDAM Entity will be the same requirement the CAISO used in the 9:00 a.m. advisory run unless the timelines in the Business Practice Manual for the Extended Day-Ahead Market otherwise allow for adjustment. The Ancillary Services requirements for the CAISO Balancing Authority Area will be determined under Section 8 and used in the final binding EDAM RSE.

**33.31.1.2.2 Transfers Between Balancing Authority Areas in Support of EDAM RSE**

The CAISO will account for EDAM Transfers that will occur between two Balancing Authority Areas in the EDAM Area in support of the EDAM RSE pursuant to Section 33.18.2.1 by transferring the EDAM RSE requirements from the importing Balancing Authority Area to the exporting Balancing Authority Area prior to performing the advisory and binding runs of the RSE in accordance with the timelines set forth in the Business Practice Manual for the Extended Day-Ahead Market.

**33.31.1.3 Performance of the EDAM Resource Sufficiency Evaluation**

The EDAM RSE will evaluate whether RSE-eligible supply is sufficient to meet each of the upward and downward components of the requirements established for the Balancing Authority Area, as provided in Section 33.31.1.2 in each hour of the Day-Ahead Market.

**33.31.1.3.1 Demand Evaluation**

Each Balancing Authority Area in the EDAM Area must meet its Demand Forecast and Variable Energy Resource forecast requirements as determined by Section 33.31.1.2.1.1.

**33.31.1.3.2 Imbalance Reserves Evaluation**

Each Balancing Authority Area in the EDAM Area must meet its Imbalance

Reserve Up and Imbalance Reserve Down requirements as determined by Section 33.31.1.2.1.2.

#### 33.31.1.3.3 Ancillary Services Evaluation

Each Balancing Authority Area in the EDAM Area must meet its ancillary service requirements as determined by Section 33.31.1.2.1.3. The CAISO Balancing Authority Area must meet its Ancillary Service obligations as provided in Section 8.

### 33.31.1.4 Satisfaction of the EDAM RSE Requirements

A Balancing Authority Area in the EDAM Area will pass the final binding EDAM RSE if it meets all of the requirements in Section 33.31.1.3 for each hour of the Day-Ahead Market.

#### 33.31.1.4.1 Inclusion in the EDAM Upward Pool

A Balancing Authority Area in the EDAM Area which passes the final binding EDAM RSE by satisfying the upward requirements of the demand evaluation described in Section 33.31.1.3.1, the Imbalance Reserve evaluation described in Section 33.31.1.3.2, and the ancillary services evaluation described in Section 33.31.1.3.3 in each hour of the Day-Ahead Market, together with any Balancing Authority Area that cured its failure to pass the EDAM RSE in the upward direction through the IFM and incurred the applicable surcharge(s) set forth in Section 33.31.1.5, will be placed into the EDAM Upward Pool. The Balancing Authority Areas in the EDAM Area placed in the EDAM Upward Pool will be collectively accounted for when performing the EIM Resource Sufficiency Evaluation, with the EDAM Upward Pool evaluated as a collective in accordance with Section 29.34(m) and not otherwise evaluated under Section 29.34(k)-(l).

#### 33.31.1.4.2 Inclusion in the EDAM Downward Pool

A Balancing Authority Area in the EDAM Area which passes the final binding EDAM RSE by satisfying the downward requirements of the demand evaluation described in Section 33.31.1.3.1, the Imbalance Reserve evaluation described in

Section 33.31.1.3.2, and the ancillary services evaluation described in Section 33.31.1.3.3 in each hour of the Day-Ahead Market, together with any Balancing Authority Area that has cured its failure to pass the EDAM RSE in the downward direction through the IFM and incurred the applicable surcharge set forth in Section 33.31.1.5 will be placed into the EDAM Downward Pool. The Balancing Authority Areas in the EDAM Area placed in the EDAM Downward Pool will be collectively accounted for when performing the EIM Resource Sufficiency Evaluation, with the EDAM Downward Pool evaluated as a collective in accordance with Section 29.34(m) and not otherwise evaluated under Section 29.34(k)-(l).

**33.31.1.4.3 Exclusion from the EDAM Upward and Downward Pools**

If a Balancing Authority Area in the EDAM Area is excluded from either the EDAM Upward Pool or EDAM Downward Pool then the Balancing Authority Area excluded from either the EDAM Upward Pool or the EDAM Downward Pool will be evaluated as an individual Balancing Authority Area for the EIM Resource Sufficiency Evaluation in accordance with Section 29.34(m) and not otherwise evaluated under Section 29.34(k)-(l).

**33.31.1.5 Surcharge Upon Failure of the EDAM RSE**

A Balancing Authority Area in the EDAM Area that fails the EDAM RSE in any hour of any day and in any direction is subject to the following surcharges, with any resulting surcharges distributed to the applicable Scheduling Coordinator as provided in Section 33.11.2.2:

**33.31.1.5.1 EDAM RSE On-Peak Upward Failure Insufficiency Surcharge**

A Balancing Authority Area in the EDAM Area that has failed to satisfy the upward components of the EDAM RSE during the on-peak period will be subject to a three-tiered penalty structure as follows:

(i) In a tier 1 failure, the Balancing Authority Area failure is *de minimis* defined as the higher of 10 MW or an amount that is less than or equal to one percent of the

Balancing Authority Area's upward Imbalance Reserve requirement for that hour, and the EDAM RSE On-Peak Upward Failure Insufficiency Surcharge will not be calculated.

(ii) In a tier 2 failure, the Balancing Authority Area failure is above the *de minimis* failure amount and is less than or equal to fifty percent of the Balancing Authority Area's upward Imbalance Reserve requirement and the EDAM RSE On-Peak Upward Failure Insufficiency Surcharge will be calculated as provided in Section 33.11.2.1.1.

(iii) In a tier 3 failure, the Balancing Authority Area failure is greater than fifty percent of the Balancing Authority Area's upward Imbalance Reserve requirement and the EDAM RSE On-Peak Upward Failure Insufficiency Surcharge will be calculated as provided in Section 33.11.2.1.1.

**33.31.1.5.2 EDAM RSE Off-Peak Upward Failure Insufficiency Surcharge**

The EDAM RSE Off-Peak Upward Failure Insufficiency Surcharge will be calculated for each Balancing Authority Area that has failed the EDAM RSE during the off-peak period in the upward direction, as provided in Section 33.11.2.1.2. The EDAM RSE Off-Peak Upward Failure Insufficiency Surcharge will not be calculated for a *de minimis* failure, defined as the higher of 10 MW or an amount that is less than or equal to one percent of the Balancing Authority Area's upward Imbalance Reserve requirement for that hour, as provided in Section 33.11.2.1.2.

**33.31.1.5.3 EDAM RSE Downward Failure Insufficiency Surcharge**

The EDAM RSE Downward Failure Insufficiency Surcharge will be calculated for each Balancing Authority Area in the EDAM Area that has failed the EDAM RSE in the downward direction in any hour on any day, as provided in Section 33.11.2.1.3. The EDAM RSE Downward Failure Insufficiency Surcharge will not be calculated for a *de minimis* failure, defined as an amount that is greater than 10 MW in the hour, as provided in Section 33.11.2.1.3.

#### 33.31.1.6 Timely Submission of Tags Necessary to Remain in EDAM Upward and Downward Pools

A Balancing Authority Area in the EDAM Area must comply with the tagging protocols set forth in Section 33.30.8.3 and the Business Practice Manuals to ensure imports and exports are timely tagged. A Balancing Authority Area in the EDAM Area that fails to timely E-tag imports or exports and does not otherwise re-supply from a firm schedule or physical source to cover for the untagged imports or exports for the operating hour following the process in the Business Practice Manual will be removed from the EDAM Upward Pool or the EDAM Downward Pool, respectively, for that Trading Hour. A Balancing Authority Area in the EDAM Area that is removed from the EDAM Upward Pool or the EDAM Downward Pool in accordance with this Section 33.31.1.6 will not be evaluated as an individual Balancing Authority Area and will be allowed to share in the Diversity Benefits of the pool that it would have otherwise been a part of and as provided in Section 33.31.1.4.3.

### 33.31.2 Operation of the Day-Ahead Market in the EDAM Area

#### 33.31.2.1 IFM MPM in the EDAM Area

For purposes of the IFM MPM process in the EDAM Area, the CAISO applies a competitive path assessment to binding Transmission Constraints.to determine whether a path is competitive or non-competitive, consistent with the requirements of Section 29.39. If a path is non-competitive, MPM procedures will apply to determine any non-competitive contribution to LMPs. Resources' Bids will be subject to applicable mitigation procedures if the net contribution from non-competitive binding Transmission Constraints to these resources' LMPs is positive.

In relation to power balance constraints within the EDAM Area, the Marginal Energy Cost in the CAISO Balancing Authority Area will reflect a competitive marginal energy price. For this purpose, when an EDAM Balancing Authority Area's Marginal Energy Cost is greater than CAISO Balancing Authority Area's Marginal Energy Cost, then the IFM MPM process will apply the competitive path assessment. If non-competitive conditions exist, the IFM MPM process will treat

the differential between the Marginal Energy Cost in the CAISO Balancing Authority Area and the Marginal Energy Cost in the EDAM Balancing Authority Area similar to the non-competitive component of the Marginal Cost of Congestion in CAISO's Local Market Power Mitigation process and will subject resources' Bids to mitigation procedures.

**33.31.2.2 IFM in the EDAM Area**

The IFM procures Energy and Imbalance Reserves for EDAM Entity Balancing Authority Areas but does not procure Ancillary Services. EDAM Entities must self-provide their full Ancillary Services requirements to the IFM and cannot submit Economic Bids for Ancillary Services to the IFM.

The CAISO procures Energy across the EDAM Area as specified in Section 31.3.1. The CAISO procures Imbalance Reserves across the EDAM Area as specified in Sections 31.3.1.5 and 31.3.1.6. An EDAM Resource must meet the requirements applicable to Participating Generators to be eligible for Imbalance Reserves Awards and must meet all of the RTM Bidding Obligations specified in Section 31.3.4.

**33.31.2.3 RUC MPM in the EDAM Area**

For purposes of the IFM MPM process in the EDAM Area, the CAISO applies a competitive path assessment to binding Transmission Constraints.to determine whether a path is competitive or non-competitive, consistent with the requirements of Section 29.39. If a path is non-competitive, MPM procedures will apply to determine any non-competitive contribution to LMPs. Resources' Bids will be subject to applicable mitigation procedures if the net contribution from non-competitive binding Transmission Constraints to these resources' LMPs is positive.

In relation to power balance constraints within the EDAM Area, the Marginal Energy Cost in the CAISO Balancing Authority Area will reflect a competitive marginal energy price. For this purpose, when an EDAM Balancing Authority Area's Marginal Energy Cost is greater than CAISO Balancing Authority Area's Marginal Energy Cost, then the IFM MPM process will apply the competitive path assessment. If non-competitive conditions exist, the IFM MPM process will treat the differential between the Marginal Energy Cost in the CAISO Balancing Authority Area and the Marginal Energy Cost in the EDAM Balancing Authority Area similar to the non-competitive

component of the Marginal Cost of Congestion in CAISO's Local Market Power Mitigation process and will subject resources' Bids to mitigation procedures.

#### 33.31.2.4 RUC in the EDAM Area

The CAISO procures Reliability Capacity across the EDAM Area as specified in Sections 31.5 and 31.9 with the following additional qualifications. An EDAM Resource must meet the requirements applicable to Participating Generators to be eligible for RUC Awards and must meet all of the RTM Bidding Obligations specified in Section 31.5.8. The CAISO procures Reliability Capacity across the EDAM Area as specified in Sections 31.5, except that a reference to the CAISO Forecast of BAA Demand for the CAISO refers to the total CAISO Forecast of BAA Demand for all Balancing Authority Areas across the EDAM Area. The CAISO does not have authority under Section 31.5.3.1 to adjust the CAISO Forecast of BAA Demand for an EDAM Balancing Authority Area.

### 33.31.3 Net Export EDAM Transfer Constraint

The Extended Day-Ahead Market will include a configurable constraint to permit a Balancing Authority Area in the EDAM Area to enable an hourly limit on the amount of net EDAM Transfer exports, where the total net export EDAM Transfer constraint cannot be reduced below the higher of zero or the transmission service made available to support a net export in the EDAM RSE under Section 33.18.2.1. The net export EDAM Transfer constraint limit is calculated as the available capacity of Supply Bids from resources eligible for the EDAM RSE, plus the available capacity of Supply Bids from resources not eligible for the EDAM RSE, multiplied by a configurable confidence factor, minus the EDAM RSE requirements as described in Section 33.31.1, minus a configurable non-exportable capacity margin. The CAISO or an EDAM Entity may elect to enable the net export EDAM Transfer constraint for its Balancing Authority Area prior to 9:00 a.m. on the day before the Trading Day in accordance with the timelines and procedures in the Business Practice Manual for the Extended Day-Ahead Market. If an EDAM Entity or the CAISO elects to enable the constraint, then the CAISO applies the constraint across all IFM market processes, including deployment scenarios for IRU/IRD and the RUC. Once elected, the EDAM Entity or the CAISO can choose which hours in which the constraint can be applied to the

Operating Day for which the IFM is run.

#### 33.31.3.1 Confidence Factor

If there is observed risk of non-performance or non-delivery by Supply overall or from intertie schedules, then a Balancing Authority Area in the EDAM Area may register a confidence factor of less than 100%.

#### 33.31.3.2 Reliability Margin

Once the upper-bound limit of the net EDAM Transfer export constraint is derived, the CAISO or the EDAM Entity may further reduce this limit for its Balancing Authority Area by an additional reliability margin that reflects an amount of non-exportable capacity held back in anticipation of needing to respond to reliability conditions as may be permitted under the EDAM Transmission Service Provider tariff or the CAISO Tariff, as applicable, including associated business practices. An EDAM Entity or the CAISO may specify a reliability margin to be used in the net export EDAM Transfer constraint for its Balancing Authority Area prior to 9:00 a.m. on the day before the Trading Day for each hour of that Trading Day in accordance with the procedures in the Business Practice Manual for the Extended Day-Ahead Market.

### 33.31.4 CAISO Forecast of BAA Demand and Variable Energy Resource Forecast for EDAM Entities

In accordance with procedures set forth in the Business Practice Manual for the Extended Day-Ahead Market, the CAISO develops a Demand Forecast and Variable Energy Resource forecast for each EDAM Entity. This forecast constitutes the CAISO Forecast of BAA Demand and the Variable Energy Resource forecast for that EDAM Entity unless the EDAM Entity elects, in accordance with procedures set forth in the Business Practice Manual for the Extended Day-Ahead Market, to submit its own forecast. The forecast option selected by the EDAM Entity will be the same forecast option that is utilized in the Real-Time Market. A Demand Forecast submitted by the EDAM Entity that will be utilized as the CAISO Forecast of BAA Demand must contain the expected transmission loss as defined in the EDAM Entity's tariff. In the Day-Ahead Market, the CAISO Forecast of BAA Demand for a Balancing Authority Area modeled as Supply-only is zero. The Demand Forecast provided by the EDAM Entity that meets the procedures

established in the Business Practice Manual constitutes that EDAM Entity's CAISO Forecast of BAA Demand and the Variable Energy Resource forecast provided by the EDAM Entity that meets the procedures established in the Business Practice Manual constitutes that EDAM Entity's Variable Energy Resource forecast.

#### 33.31.4.1 Load Modification/Demand Response Programs

An EDAM Entity may elect to adjust its Demand Forecast to account for demand response programs administered in its Balancing Authority Area that do not qualify as EDAM Resource Facilities in accordance with procedures set forth in the Business Practice Manual for the Extended Day-Ahead Market. When enabled, the EDAM Entity will enable or deploy the demand response corresponding to the adjustment consistent with the applicable requirements for such demand response programs. If the EDAM RSE for the CAISO BAA is adjusted to reflect demand response resources participating in demand response programs administered in its Balancing Authority Area that do not qualify as RSE-eligible EDAM Resource Facilities, then the CAISO may adjust RUC participation to correspond to such adjustment in accordance with the procedures set forth in the Business Practice Manual for the Extended Day-Ahead Market. If such an adjustment is made, the CAISO will enable or deploy the demand response corresponding to the adjustment consistent with the applicable requirements for such demand response programs. Adjustments made pursuant to this Section 33.31.4.1 are subject to audit and monitoring as provided in Section 33.38.

### 33.31.5 Reserve Sharing Groups

The EDAM will accommodate ancillary service requirements that are satisfied through participation in a reserve sharing group. If multiple EDAM Entity Balancing Authority Areas participate in a reserve sharing group, they must identify the transmission that will be utilized to ensure delivery of the shown reserve capacity, consistent with existing practices the entities may have in place today for delivery of the reserves. This transmission capacity will not be available for EDAM Transfers to ensure the deliverability of the reserve sharing obligations in the Real-Time.

### 33.31.6 Interchange Schedules

After Day-Ahead Market results are published, EDAM Entity Scheduling Coordinators must submit Interchange Schedules with other Balancing Authority Areas at the relevant EDAM Interties and must update these Interchange Schedules with any adjustments, when applicable. For each EDAM Intertie Bid that clears the IFM resulting in a 15-minute EDAM Intertie Schedule, the EDAM Entity Scheduling Coordinator must submit to the CAISO the corresponding hourly transmission profile and 15-minute Energy profiles from the respective E-Tags. The required transmission profiles and Energy profiles must reflect the Point of Receipt and Point of Delivery that was declared in the IFM Bid submittal, must be submitted at least 20 minutes before the start of the Operating Hour, and the EDAM Entity Scheduling Coordinator must provide an updated Energy profile to the extent required by Section 30.5.7.

**33.32 Greenhouse Gas (GHG)**

**33.32.1 GHG Compliance Cost Recovery**

EDAM Resource Scheduling Coordinators and Scheduling Coordinators for resources within the CAISO Balancing Authority Area will have an opportunity to recover costs of compliance with GHG regulations adopted by a state jurisdiction that has priced GHG emissions as part of a state GHG reporting and reduction program. The provisions of Section 33.32 pertaining to the GHG Regulation Area of the State of Washington will not take effect until January 1, 2027.

**33.32.1.1 Bid Adders Used by the Integrated Forward Market**

The Integrated Forward Market will use GHG Bid Adders submitted by EDAM Resource Scheduling Coordinators for EDAM Resource Facilities located outside of a specific GHG Regulation Area to optimize the attribution of GHG Transfers into that GHG Regulation Area. The Integrated Forward Market will use GHG Bid Adders submitted by EDAM Resource Scheduling Coordinators for EDAM Resource Facilities located within the GHG Regulation Area of the State of Washington to optimize the attribution of GHG Transfers into GHG Regulation Areas outside of the State of Washington. The Integrated Forward Market will use GHG Bid Adders submitted by Scheduling Coordinators for resources located within the GHG Regulation Area of the State of California to optimize the attribution of GHG Transfers into GHG Regulation Areas outside of the State of

California.

**33.32.1.2 Bid Adders and GHG Regulation Areas**

For purposes of Section 33.32, GHG Regulation Areas will reflect the Pricing Nodes of the CAISO Balancing Authority Area or an EDAM Entity Balancing Authority Area within the GHG boundary as defined by a state jurisdiction that has priced GHG emissions as part of a state GHG reporting and reduction program.

EDAM Resource Scheduling Coordinators for EDAM Resource Facilities located inside a specific GHG Regulation Area will not submit GHG Bid Adders to serve Demand within that GHG Regulation Area. Scheduling Coordinators for resources located within the GHG Regulation Area of the State of California will not submit GHG Bid Adders to serve Demand within the GHG Regulation Area of California.

Scheduling Coordinators for resources with Pseudo-Tie arrangements or Dynamic Schedules into the CAISO Balancing Authority Area that register in the Master File that their resources' capacity is associated with serving Demand in the GHG Regulation Area within the State of California will not submit GHG Bid Adders.

**33.32.1.3 Bid Submission**

EDAM Resource Scheduling Coordinators for EDAM Resource Facilities located outside of GHG Regulation Areas may submit a separate GHG Bid Adder as an hourly Bid component specific to each GHG Regulation Area.

Scheduling Coordinators for resources located within the GHG Regulation Area of the State of California may submit a separate GHG Bid Adder as an hourly Bid component specific to each GHG Regulation Area located outside of the State of California. EDAM Resource Scheduling Coordinators for EDAM Resource Facilities within the GHG Regulation Area of the State of Washington may submit a separate GHG Bid Adder as an hourly Bid component specific to each GHG Regulation Area located outside the State of Washington.

GHG Bid Adders will consist of a price and MW quantity. The price included in the GHG Bid Adder will not be less than $0/MWh and not greater than 110% of the resource's

GHG maximum compliance cost as determined in accordance with Section 33.32.1.5.

**33.32.1.4 Default Treatment.**

If a resource located outside of a GHG Regulation Area does not have a GHG Bid Adder to serve Demand within a specific GHG Regulation Area, the Integrated Forward Market will not attribute the resource as supporting a GHG Transfer into that specific GHG Regulation Area.

**33.32.1.5 Determination of Maximum GHG Bid Adder**

The CAISO will calculate a maximum daily GHG Bid Adder for each EDAM Resource Facility and each resource located within the CAISO Balancing Authority Area in relation to GHG Regulation Areas, as applicable, based on the resource's highest average heat rate on its heat rate curve, the applicable GHG Allowance Price, and the resource's applicable emission rate. The CAISO will perform this calculation in accordance with the provisions of the applicable Business Practice Manual. The CAISO will also provide for an option for resources to negotiate a maximum GHG Bid Adder for each GHG Regulation Area in accordance with the provisions of the applicable Business Practice Manual.

**33.32.1.6 GHG Bid Adder Price**

The price included in the GHG Bid Adder will not be less than $0/MW. The sum of the GHG Bid Adder price and the Energy Bid price may not exceed the Soft Energy Bid Cap unless the sum of a resource's relevant maximum daily GHG Bid Adder and Default Energy Bid as adjusted pursuant to Section 30.11 exceeds the Soft Energy Bid Cap. In this case, the sum of a resource's GHG Bid Adder and Energy Bid price may not exceed the sum of the relevant maximum daily GHG Bid Adder and the resource's Default Energy Bid or the Hard Energy Bid Cap, whichever is lower.

**33.32.2 Consideration of GHG Bid Adders in Market Clearing**

**33.32.2.1 Dispatch of Resources with Non-zero Bid Adders**

The Integrated Forward Market will take into account GHG Bid Adders in selecting Energy produced by EDAM Resource Facilities located outside of a specific GHG

Regulation Area up to the associated MW quantity included in the GHG Bid Adder to serve Demand within that GHG Regulation Area.

The Integrated Forward Market will take into account GHG Bid Adders in selecting Energy produced by resources located within the CAISO Balancing Authority Area up to the associated MW quantity included in the GHG Bid Adder to serve load Demand in the GHG Regulation Area located outside of the State of California.

The Integrated Forward Market will not consider GHG Bid Adders when selecting EDAM Resources to serve Demand outside of GHG Regulation Areas.

**33.32.2.2 Maximum GHG Bid Adder MW Attribution**

The Integrated Forward Market will limit the maximum MW attribution of an EDAM Resource Facility to serve Demand in a specific GHG Regulation Area to a value equal to lower of (i) the MW value in the resource's GHG Bid Adder; (ii) the dispatchable Bid range between the resource's GHG reference pass schedule and the resource's effective upper Economic Bid, considering any applicable derates and Ancillary Services capacity reservations, for the relevant Operating Hour; or (iii) the resource's Day-Ahead Energy Schedule for that Trading Hour.

The Integrated Forward Market will limit the maximum MW attribution of a resource located within the GHG Regulation Area of the State of California to serve load within a GHG Regulation Area outside of the State of California to a value equal to the lower of (i) the MW value in the resource's GHG Bid Adder; (ii) the resource's Day-Ahead Energy Schedule for that Trading Hour.

**33.32.2.3 GHG Reference Pass**

The GHG reference pass runs before the Integrated Forward Market. The GHG reference pass uses Day-Ahead Bids and Self-Schedules of resources to optimally clear Supply and Demand Bids without GHG Transfers into GHG Regulation Areas. The GHG reference pass establishes GHG reference pass schedules for resources to determine what Dispatch would have occurred without GHG Transfers into GHG Regulation Areas. The GHG reference pass will not schedule capacity located outside of a GHG Regulation

Area obligated to serve Demand within a GHG Regulation Area that is registered with the CAISO in accordance with the applicable Business Practice Manual, thereby allowing this capacity to support a GHG Transfer into a GHG Regulation Area in the Integrated Forward Market.

Resources with Pseudo-Tie arrangements or Dynamic Schedules into a Balancing Authority Area that includes Demand within a specific GHG Regulation Area will register in the Master File whether they are associated with Demand in that GHG Regulation Area. The GHG reference pass will not schedule Pseudo-Tie or dynamically scheduled resources to serve Demand outside of a specific GHG Regulation Area if they are associated with Demand in that GHG Regulation Area.

#### 33.32.2.4 Dispatch of Resources with Bid Adders of Zero

The Integrated Forward Market will not dispatch resources located outside of a GHG Regulation Area for attribution to serve Demand in a GHG Regulation Area if the MW quantity included in the GHG Bid Adder is zero.

### 33.32.3 GHG Marginal Cost

The Integrated Forward Market will, taking into account Energy Bids and GHG Bids, optimally select resources located outside of a GHG Regulation Area to support GHG Transfers into a GHG Regulation Area until the total MW of GHG Transfers into the respective GHG Regulation Area is fully allocated. The Shadow Price of this allocation constraint is the Marginal GHG Cost for the respective GHG Regulation Area.

### 33.32.4 Compensation

When the Integrated Forward Market attributes a resource located outside of a GHG Regulation Area to support a GHG Transfer to serve Demand in a GHG Regulation Area, the EDAM Resource Scheduling Coordinator for the EDAM Resource Facility or Scheduling Coordinator for the resource will receive a payment equaling the product of the GHG Transfer to a GHG Regulation Area attributed to the resource in the IFM and the IFM Marginal GHG Cost for that respective GHG Regulation Area.

### 33.32.5 GHG Net Export Constraint

The CAISO will apply an hourly GHG net export constraint in the Integrated Forward Market for EDAM Entity Balancing Authority Areas that do not overlap with a GHG Regulation Area. This constraint will limit the aggregate attribution of EDAM Resources within a specific EDAM Entity Balancing Authority Area such that the aggregate attribution does not exceed the net exports from that EDAM Entity Balancing Authority Area. This constraint will also limit the aggregate attribution of resources within a specific GHG Regulation Area to serve Demand in another GHG Regulation Area such that the attribution may not exceed the net exports from these resources' native Balancing Authority Areas. This constraint will not restrict the Integrated Forward Market from attributing capacity located outside of a specific GHG Regulation Area obligated to serve Demand within that GHG Regulation Area that is registered with the CAISO in accordance with the applicable Business Practice Manual. The CAISO will not enforce this constraint for any Balancing Authority Area in the EDAM Area and in any Trading Hour in which the CAISO Balancing Authority Area or an EDAM Entity Balancing Authority Area with Demand in a GHG Regulation Area is deficient in the upward direction in the EDAM Resource Sufficiency Evaluation.

### 33.32.6 Data Availability

#### 33.32.6.1 Notification

The CAISO will notify EDAM Resource Scheduling Coordinators for EDAM Resource Facilities and Scheduling Coordinators for resources within the CAISO Balancing Authority Area of their resources' GHG reference pass schedules. The CAISO will notify an EDAM Resource Scheduling Coordinator through the results of the Integrated Forward Market of the MW quantity of any Energy of an EDAM Resource Facility located in an EDAM Entity Balancing Authority Area outside of a specific GHG Regulation Area that supports a GHG Transfer to serve Demand in that GHG Regulation Area.

The CAISO will notify an EDAM Resource Scheduling Coordinator through the results of the Integrated Forward Market of the MW quantity of any Energy of an EDAM Resource Facility located in the GHG Regulation Area of the State of Washington that supports a GHG Transfer to serve Demand in a GHG Regulation Area outside of the State of

Washington.

The CAISO will notify the Scheduling Coordinator for a resource located in the GHG Regulation Area of the State of California through the results of the Integrated Forward Market of the MW quantity of any Energy of a resource that supports a GHG Transfer to serve Demand in a GHG Regulation Area outside of the State of California.

**33.32.6.2 Disclosure**

The CAISO may disclose information related to GHG Transfers to a Governmental Authority, so long as such information does not disclose confidential information of any individual Market Participant.

**33.33 [Not Used]**

**33.34 [Not Used]**

**33.35 Market Validation And Price Correction**

The market validation and price correction provisions of Section 35 apply to the EDAM, except that, for a period not to exceed 180 days after an EDAM Entity Implementation Date, the time allowed for the CAISO's correction of Day-Ahead Market prices will be 10 Business Days.

**33.36 Congestion Revenue Rights**

Congestion Revenue Rights are not included in the Extended Day-Ahead Market, and the provisions of Section 36 will not apply to EDAM Market Participants.

**33.37 Rules Of Conduct**

All EDAM Market Participants will be subject to the provisions of Section 37 except for Section 37.2 and Section 37.4 to the extent it applies to Maintenance Outages.

**33.38 Market Monitoring in EDAM**

The CAISO Department of Market Monitoring is the market monitor for the EDAM and holds the same duties towards the EDAM as it holds under Appendix P, Section 5 towards the other CAISO Markets. Any referral to FERC of a potential Market Violation or market design flaw will be made under the procedures established in Appendix P, Section 11 and Appendix P, Section 12, respectively. The obligations the CAISO holds towards the Department of Market Monitoring under Appendix P, Sections 3 and 4 apply equally to the Department of Market Monitoring in its role as market monitor for the EDAM.

The CAISO Market Surveillance Committee holds the same duties towards the EDAM as it holds under Appendix O, Section 5 towards the CAISO Markets.

**33.39 Local Market Power Mitigation in EDAM**

The CAISO applies the Local Market Power Mitigation procedures set forth in Sections 31.2, 31.9, and 39.7 to the Extended Day-Ahead Market and uses the methods and standards for setting Default Energy Bids and Default Availability Bids in the Extended Day-Ahead Market as set forth in Section 39.7.

**33.40 [Not Used]**

**33.41 [Not Used]**

**33.42 [Not Used]**

**33.43 [Not Used]**

**33.44 Flexible Ramping Product**

The CAISO procures the Flexible Ramping Product in the EDAM Area as set forth in Section 44.

## 34. Real-Time Market

The CAISO conducts the Real-Time Market on any given Operating Day in which Scheduling Coordinators may submit Bids, and the CAISO commits and Dispatches Energy and procures Energy and Ancillary Services. The Real-Time Market consists of the following processes: (1) the Hour-Ahead Scheduling Process, (2) Real-Time Unit Commitment (RTUC), (3) the Short-Term Unit Commitment (STUC), (4) the Fifteen Minute Market (FMM), and (5) the Real-Time Dispatch (RTD).

The CAISO shall dispatch all resources, including Participating Load and Proxy Demand Resource, pursuant to submitted Bids or pursuant to the provisions below on Exceptional Dispatch.

### 34.1 Inputs to the Real-Time Market

The CAISO utilizes the following data and information as inputs in conducting the Real-Time Market:

#### 34.1.1 Day-Ahead Market Results as Inputs to the Real-Time Market

All of the Real-Time Market processes utilize results produced by the Day-Ahead Market for each Trading Hour of the Trading Day, including the combined commitments contained in the Day-Ahead Schedules, Day-Ahead Ancillary Services Awards, and RUC Awards. These DAM results are inputs to the RTM. The transactions associated with DAM results are settled based on the relevant DAM prices, and are not deemed performed in the Real-Time Market.

#### 34.1.2 Market Model and System Information

The CAISO utilizes the Base Market Model used in the Day-Ahead Market and adjusted as described in 27.5.1 and 27.5.6, and other system information provided through the State Estimator output, resource outage and derate/rerate information in conducting all of the Real-Time Market processes. Updates to the Base Market Model adjusted as described in Sections 27.5.1 and 27.5.6 used in all of the Real-Time Market processes include current estimates of real-time unscheduled flow at the Interties. The CAISO utilizes the most up-to-date Base Market Model and system information throughout the Real-Time Market processes to the extent feasible.

#### 34.1.3 Bids in the Real-Time Market

Scheduling Coordinators may submit Bids, including Self-Schedules, for Supply that the CAISO shall use for the Real-Time Market, starting from the time Day-Ahead Schedules are posted, which is approximately 1:00 p.m., unless the posting of the Day-Ahead Market results are delayed for reasons

specified in Section 31.6, until seventy-five (75) minutes prior to each applicable Trading Hour in the Real-Time. Scheduling Coordinators can submit Bids in the form of: (1) an Economic Bid for a Schedule in the RTM; (2) a Self-Schedule for acceptance to the RTM; (3) a Self-Schedule Hourly Block for acceptance in the HASP; (4) a Variable Energy Resource Self-Schedule for the RTM; (5) an Economic Hourly Block Bid for acceptance in the HASP; or (6) an Economic Hourly Block Bid with Intra-Hour Option for acceptance in the HASP and the FMM. This includes Self-Schedules by Participating Load that is modeled using the Pumped-Storage Hydro Unit. Scheduling Coordinators may not submit Bids, including Self-Schedules, for CAISO Demand in the RTM. Scheduling Coordinators may submit Bids, including Self-Schedules, for exports at Scheduling Points in the RTM. The rules for submitted Bids specified in Section 30 apply to Bids submitted to the RTM. Scheduling Coordinators may not submit Virtual Bids to the Real-Time Market, although Virtual Awards from the DAM are settled for their liquidated positions based on prices from the FMM. In the case of Multi-Stage Generating Resources, the RTM procedures will optimize Transition Costs in addition to the Start-Up Costs and Minimum Load Costs. If a Scheduling Coordinator submits a Self-Schedule or a Submission to Self-Provide Ancillary Services for a given MSG Configuration in a given Trading Hour, all of the RTM processes will consider the Start-Up Cost, Minimum Load Cost, and Transition Cost associated with any Economic Bids for other MSG Configurations as incremental costs between the other MSG Configurations and the self-scheduled MSG Configuration. In such cases, incremental costs are the additional costs incurred to transition or operate in an MSG Configuration in addition to the costs associated with the self-scheduled MSG Configuration.

### 34.1.4 Real-Time Validation of Schedules and Bids

After the Market Close of the Real-Time Market, the CAISO performs a validation process consistent with the provisions set forth in Section 30.7 and the following additional rules. The CAISO will insert a Generated Bid to cover any RUC Award or Day-Ahead Schedule in the absence of any Self-Schedule or Economic Bid components, or to fill in any gaps between Bid components to cover a RUC Award or Day-Ahead Schedule for use in the RTM. Schedules and Bids submitted to the RTM to supply Energy and Ancillary Services will be considered in the various RTM processes, including the MPM process, the HASP, the STUC, the RTUC, the FMM and the RTD.

### 34.1.5 Mitigating Bids in the RTM

#### 34.1.5.1 Generally

After the Market Close of the RTM, after the CAISO has validated the Bids pursuant to Section 30.7 and Section 34.1.4, and prior to conducting any other RTM processes, the CAISO conducts a MPM process. The results are used in the RTM optimization processes. Bids on behalf of Demand Response Resources, Participating Load, and Hybrid Resources are considered in the MPM process but are not subject to Bid mitigation. Energy storage resources whose PMax is less than five (5) MW are considered in the MPM process, but not subject to Bid mitigation.

#### 34.1.5.2 Fifteen-Minute MPM

The CAISO conducts the MPM process as the first pass of each fifteen-minute interval in the RTUC horizon starting with the unmitigated Bid set as validated pursuant to Section 30.7 and Section 34.1.4. The MPM process produces results for each fifteen-minute interval of the RTUC horizon and thus may produce mitigated Bids for any given resource for any fifteen-minute interval in the RTUC run horizon that applies to any CAISO Market Process that is based on a specific RTUC run. The determination as to whether a Bid is mitigated is made based on the non-competitive Congestion component of each LMP for each fifteen-minute interval of the RTUC run horizon, using the methodology set forth in Section 31.2.3 except that a resource may have a non-competitive Congestion component in a fifteen-minute interval based on a Transmission Constraint deemed non-competitive either in the base case for meeting Demand or in the separate cases of modeling the dispatch for Energy of all capacity awarded upward and downward Uncertainty Awards. If a Bid is mitigated in the MPM pass for a fifteen-minute interval in the RTUC run horizon, the mitigated Bid will be utilized in the corresponding binding HASP and FMM process for the fifteen-minute interval. If a Bid is not mitigated in a fifteen-minute MPM pass, the CAISO will still mitigate that Bid in subsequent fifteen-minute intervals of the RTUC horizon if the MPM pass for the subsequent intervals determine that mitigation is needed.

#### 34.1.5.3 Real-Time Dispatch MPM

The RTD MPM process produces results for each five-minute interval of a Trading Hour. The determination as to whether a Bid is mitigated is made based on the non-competitive Congestion component of each LMP for each five-minute interval, using the methodology set forth in Section 31.2.3

except that a resource may have a non-competitive Congestion component in a five-minute interval based on a Transmission Constraint deemed non-competitive either in the base case for meeting Demand or in the separate cases of modeling the dispatch for Energy of all capacity awarded upward and downward Uncertainty Awards. The RTD MPM process is performed for a configurable number of RTD advisory intervals after the binding RTD interval, and the mitigated Bids are used in the corresponding RTD intervals of the following RTD.

#### 34.1.5.4 Reliability Must Run Resources

For a Condition 1 Legacy RMR Unit, the use of RMR Proxy Bids is determined based on the non-competitive Congestion component of each LMP for each fifteen (15) minute interval of the applicable Trading Hour, using the methodology set forth in Section 31.2.3 above. If a Condition 2 Legacy RMR Unit is issued a Manual RMR Dispatch by the CAISO, then RMR Proxy Bids for all of the unit's Maximum Net Dependable Capacity will be considered in the MPM process. For both Condition 1 and Condition 2 Legacy RMR Units, when mitigation is triggered, a RMR Proxy Bid is calculated using the same methodology described above for non-RMR Units. For a Condition 1 Legacy RMR Unit that has submitted Bids and has not been issued a Manual RMR Dispatch, to the extent that the non-competitive Congestion component of an LMP calculated in the MPM process is greater than zero, and that MPM process dispatches a Condition 1 Legacy RMR Unit at a level such that some portion of its market Bid exceeds the Competitive LMP at the Legacy RMR Unit's Location, the resource will be flagged as an RMR Dispatch if it is dispatched pursuant to a Legacy RMR Contract at a level higher than the dispatch level determined by the Competitive LMP. Both Condition 1 and Condition 2 Legacy RMR Units may be issued manual RMR Dispatches at any time to address local reliability needs or to resolve non-competitive constraints.

#### 34.1.5.5 Competitive LMP Parameter

When a Bid is mitigated, the CAISO will add a cost, not to exceed $0.01/MWh, to the Competitive LMP used in the MPM process prior to the DAM or RTM process. The CAISO will set the Competitive LMP Parameter as low as possible while creating a reasonable price separation between the area where mitigation applies and other areas where mitigation does not apply. The CAISO will publish the value of the Competitive LMP Parameter in the Business Practice Manual.

### 34.1.6 Eligible Intermittent Resources Forecast

#### 34.1.6.1 Eligible Intermittent Resources using their own Forecast

For Eligible Intermittent Resources, including Participating Intermittent Resources, that have elected to use the resource's own forecast as specified in Section 4.8.2.1.1, the responsible Scheduling Coordinator must submit to the CAISO its forecast for the binding interval by 37.5 minutes prior to flow (the start of the applicable FMM optimization for the binding interval). If such Scheduling Coordinator does not provide such forecast to the CAISO, the CAISO will use the resource's direct telemetry MW output for Dispatch purposes. The CAISO shall use the forecast provided by the Scheduling Coordinator to establish MWh quantities to be cleared for that resource in the FMM if the resource has submitted only a Self-Schedule to the RTM. If a Scheduling Coordinator for a Variable Energy Resource submits an Economic Bid to the RTM (either with or without a Self-Schedule), then the CAISO receives and processes all Variable Energy Resources forecasts (as selected by CAISO) which establishes the upper economic limit for that resource in the FMM. Participating Intermittent Resources may elect not to use the forecast provided by the CAISO, in which case they must be certified to use their own forecast as provided in Section 4.8.2.1.1. In addition, the CAISO will not utilize the forecast it produces for the Participating Intermittent Resources using their own forecast. As provided in Section 4.8.2.1.1, the Scheduling Coordinator may submit such forecast in fifteen or five minute granularity. If the Scheduling Coordinator submits the forecast in five-minute granularity, the CAISO will use the average of the three five-minute forecasts provided by the Scheduling Coordinator to determine the MWh to be cleared in the FMM for that resource.

#### 34.1.6.2 Eligible Intermittent Resources using the CAISO Forecast

Eligible Intermittent Resources that have elected to use the CAISO forecast as specified in Section 4.8.2.1.2 are not required to submit a forecast for the binding interval by 37.5 minutes prior to flow. For Participating Intermittent Resources for which Scheduling Coordinators have elected to use the output forecast provided by the CAISO and have selected such a flag in their Master File, the CAISO will use the MWh forecast data the CAISO produces for such a resource at 37.5 minutes prior to the applicable FMM as follows: (a) as the MWh amounts input to be to cleared for that resource in the FMM if only a Self-Schedule is submitted, or (b) as the upper economic limit used for that resource in the FMM if an Economic Bid with or without a Self-Schedule is submitted. Dispatch instructions may also be affected by

transmission and resource operational constraints and utilization of updated forecasts. The forecast used by the CAISO will be in fifteen-minute granularity. Scheduling Coordinators representing Participating Intermittent Resources whose output is designated to satisfy a Resource Adequacy requirement must submit Variable Energy Resource Self-Schedules in the RTM in accordance with the output forecast provided by the CAISO, or an Economic Bid.

#### 34.1.6.3 Hybrid Resources

The CAISO will use reasonable efforts to issue Real-Time Market Schedules that observe Hybrid Resources' Dynamic Limits, High Sustainable Limits, State of Charge, and production forecasts, as applicable. Hybrid Resources with a variable component may elect to receive a CAISO forecast to inform their bidding, or they may elect to use their own forecast.

## 34.2 The Hour-Ahead Scheduling Process

### 34.2.1 The HASP Optimization

The Hour-Ahead Scheduling Process is a Real-Time Market process and a special run of the RTUC through which the CAISO accepts or rejects the following Bids submitted by Scheduling Coordinators at Scheduling Points: (1) Self-Schedule Hourly Blocks for Energy and Ancillary Services, (2) VER Self-Schedules for Energy, (3) Economic Hourly Block Bids for Energy and Ancillary Services, and (4) Economic Hourly Block Bids with Intra-Hour Option for Energy and providing an hourly schedule that can be changed at most once in the Trading Hour. The CAISO also produces advisory Energy schedules and Ancillary Services awards. Through the HASP, the CAISO may also issue binding unit commitment instructions for any resource participating in the RTM. After the Market Close for the RTM for the relevant Trading Hour, the RTM Bids have been validated, and the RTM Bids have been mitigated and the MPM process has been performed, the CAISO then conducts the HASP optimization. The CAISO does not accept Bids for CAISO Demand for any of the Real-Time Market processes. Therefore, CAISO clears Supply Bids against the CAISO Forecast of CAISO Demand plus submitted Export Bids, to the extent the Export Bids are selected in the MPM process. The HASP optimization also factors in forecasted unscheduled flow at the Interties, as do all the Real-Time Market processes. The HASP optimization does not produce Settlement prices for Energy or Ancillary Services and the CAISO settles all Bids accepted through the HASP based on FMM Schedules and Awards and FMM LMPs and ASMPs. Intertie

Schedules cleared in HASP at an EDAM Transfer location or an EIM Transfer location will not be optimized economically in the FMM and RTD, but may be subject to intra-hour or other adjustments pursuant to Section 34.

### 34.2.2 Treatment of Self-Schedules in HASP

The HASP optimization does not adjust submitted Self-Schedule Hourly Blocks for Energy or Ancillary Services, or Self-Scheduled Variable Energy Resources unless it is not possible to balance Supply and the CAISO Forecast of CAISO Demand plus Export Bids and manage Congestion using the available Economic Bids, in which case the HASP performs non-economic adjustments to Self-Schedules to accommodate operational restrictions. Once accepted, Self-Schedule Hourly Blocks for Energy or Ancillary Services are considered as Self-Schedules or Self-Provision, respectively, in each of the four FMM intervals. For accepted Variable Energy Resource Self-Schedules from external resources that are not Dynamic Schedules, the CAISO uses the Self-Schedule in the HASP optimization and the Scheduling Coordinator can update the Self-Schedule based on the most current Energy forecast, if it is qualified to do so by the CAISO and the Scheduling Coordinator registers it as such in the Master File. The HASP produces advisory MWh schedules for each of the four fifteen-minute intervals for FMM Economic Bids cleared in HASP, which can vary from the MWhs schedules cleared in the FMM. The MWh quantities of Self-Schedules of Supply that clear in the HASP constitute a feasible Dispatch for the Real-Time Market at the time HASP is executed, but the HASP results do not constitute a final Schedule for Generating Units because these resources may be adjusted for reasons other than economics in the FMM or RTD, if necessary to manage Congestion and clear Supply and Demand. The submission of a change to an ETC Self-Schedule beyond the deadline specified in Section 16.9.1, that is permitted pursuant to the terms of the applicable ETC, shall not be deemed to be an unbalanced ETC Self-Schedule for the purposes of Settlement, consistent with the ETC and TOR Self-Schedule Settlement treatment described in Section 11.5.7.

### 34.2.3 Ancillary Services in the HASP and FMM

All Operating Reserves procured in the Real-Time Market are Contingency Only Operating Reserves, as described in Section 30.5.2.6. Scheduling Coordinators submitting Ancillary Services Bids for Non-Dynamic System Resources in the Real-Time Market must also submit an Energy Bid under the same

Resource ID for the associated Ancillary Services Bid. For these Non-Dynamic System Resources, the CAISO will only use the Ancillary Services Bid in the HASP optimization and will not Schedule Energy in the HASP, FMM, or RTD from the Energy Bid provided under the same Resource ID as the Ancillary Services Bid. The CAISO may dispatch Energy from the Contingency Only Operating Reserves awarded to Non-Dynamic System Resources in the HASP through the Real-Time Contingency Dispatch as described in Section 34.5.2.

### 34.2.4 HASP Results

The CAISO publishes the results of the HASP processes no later than forty-five (45) minutes prior to the Trading Hour.

### 34.2.5 Cessation of the HASP

If, despite the variation of any time requirement or omission of any step, the CAISO is unable to operate any or all of the HASP processes, the CAISO may abort the HASP and perform all remaining Real-Time Market processes. When the CAISO aborts the HASP, Bids for HASP Block Intertie Schedules will revert to RUC Schedules and Day-Ahead Ancillary Service Awards.

## 34.3 Real-Time Unit Commitment

### 34.3.1 RTUC Optimization

The Real-Time Unit Commitment (RTUC) process uses SCUC and is run every fifteen (15) minutes to make commitment decisions for Short Start Units having Start-Up Times for the next four to seven subsequent fifteen-minute intervals, depending on when during the hour the run occurs. For Multi-Stage Generating Resources the RTUC will issue a binding Transition Instruction separately from the binding Start-Up or Shut Down instructions. The RTUC can also be run with the Contingency Flag activated, in which case the RTUC can commit Contingency Only Operating Reserves. If RTUC is run without the Contingency Flag activated, it cannot commit Contingency Only Operating Reserves. RTUC is run at the following time intervals: (1) at approximately 12 minutes prior to the first Trading Hour, to serve as the HASP run, for T-45 minutes to T+60 minutes; (2) at approximately 7.5 minutes into the current hour for T-30 minutes to T+60 minutes; (3) at approximately 22.5 minutes into the current hour for T-15 minutes to T+60 minutes; and (4) at approximately 37.5 minutes into the current hour for T to T+60 minutes, where T is the beginning of the next Trading Hour. The HASP is a special RTUC run that is performed at

approximately 71.5 minutes before each Trading Hour and has the additional responsibility of pre-dispatching Energy and awarding Ancillary Services for HASP Block Intertie Schedules. A Day-Ahead Schedule or RUC Schedule for an MSG Configuration that is later impacted by the resource's derate or outages, will be reconsidered in the RTUC and the FMM taking into consideration the impacts of the derate or outage on the available MSG Configurations. Not all resources identified as needed in a given RTUC run will necessarily receive CAISO commitment instructions immediately, because during the Trading Day the CAISO may issue a commitment instruction to a resource only at the latest possible time that allows the resource to be ready to provide Energy when it is expected to be needed.

**34.3.2 Commitment of Short Start Units**

RTUC produces binding and advisory Start-Up and Shut-Down Dispatch Instructions for Short Start Units that have Start-Up Times that can be committed prior to the end of the relevant time period of the RTUC run as described in Section 34.3.1. A Start-Up Dispatch Instruction is considered binding in any given RTUC run if there would not be sufficient time for a subsequent RTUC run to Start-Up the resource. A Start-Up Instruction is considered advisory if it is not binding, such that the resource could achieve its target Start-Up Time as determined in the current RTUC run in a subsequent RTUC run based on its Start-Up Time. A Shut-Down Instruction is considered binding if the resource could achieve the target Shut-Down Time as determined in the current RTUC run in a subsequent RTUC run. A Shut-Down Dispatch Instruction is considered advisory if the resource Shut-Down Instruction is not binding such that the resource could achieve its target Shut-Down time as determined in the current RTUC run in a subsequent RTUC run. A binding Dispatch Instruction that results in a change in Commitment Status will be issued, in accordance with Section 6.3, after review and acceptance of the Start-Up Instruction by the CAISO Operator. An advisory Dispatch Instruction changing the Commitment Status of a resource may be modified by the CAISO Operator to a binding Dispatch Instruction and communicated in accordance with Section 6.3 after review and acceptance by the CAISO Operator. For Multi-Stage Generating Resources the CAISO will also issue binding Transition Instructions when the Multi-Stage Generating Resource must change from one MSG Configuration to another. A Transition Instruction is considered binding in any given RTUC run if the Transition Time for the Multi-Stage Generating Resource is such that there would not be sufficient time for a subsequent RTUC run to transition the resource.

**34.3.3 [Not Used]**

## 34.4 Fifteen Minute Market

The CAISO conducts the Fifteen Minute Market using the second interval of each RTUC run horizon as follows: (1) at approximately 7.5 minutes prior to the first Trading Hour, for T-45 minutes to T+60 minutes where the binding interval is T-30 to T-15; (2) at approximately 7.5 minutes into the current hour for T-30 minutes to T+60 minutes where the binding interval is T-15 to T; (3) at approximately 22.5 minutes into the current hour for T-15 minutes to T+60 minutes for the binding interval T to T+15; and (4) at approximately 37.5 minutes into the current hour for T to T+60 minutes for the binding interval T+15 to T+30, where T is the beginning of the next Trading Hour. In these intervals the CAISO conducts the FMM to (1) determine financially binding FMM Schedules and corresponding Locational Marginal Prices for all Pricing Nodes, including all Scheduling Points; (2) determine financially and operationally binding Ancillary Services Awards and corresponding ASMPs, procure required additional Ancillary Services and calculate ASMP used for settling procured Ancillary Service capacity for the next fifteen-minute Real-Time Ancillary Service interval for all Pricing Nodes, including Scheduling Points; (3) determine LAP Locational Marginal Prices that are the basis for settling Demand; and (4) determine FMM Uncertainty Awards. For all Intertie Schedules at an EDAM Transfer location or EIM Transfer location, the FMM will use MWh quantities cleared in HASP subject to any intra-hour or other adjustments made pursuant to Section 34. In any FMM interval that falls within a time period in which a Multi-Stage Generating Resource is transitioning from one MSG Configuration to another MSG Configuration, the CAISO: (1) will not award any incremental Ancillary Services; (2) will disqualify any Day-Ahead Ancillary Services Awards; (3) will disqualify Day-Ahead qualified Submissions to Self-Provide Ancillary Services Award, and (4) will disqualify Submissions to Self-Provide Ancillary Services in RTM. Each particular FMM market optimization produces binding settlement prices for Energy, Flexible Ramping Product, and Ancillary Services for the first FMM interval in the FMM horizon but the optimization considers the advisory results from subsequent market intervals within the FMM horizon. The CAISO settles Hourly Block Schedules from Proxy Demand Resources, Reliability Demand Response Resources, Hourly Intertie Schedules, and Hourly Ancillary Services Awards accepted in the HASP as FMM Schedules and FMM Ancillary Services Awards in accordance with Section 11.5 and 11.10.1.2, respectively. In the event that a FMM run fails,

the CAISO reverts to Day-Ahead Market Ancillary Services Awards and RUC Schedules results corresponding to the same interval, or the corresponding interval from the previous RTUC. The FMM will clear Supply against the CAISO Forecast of CAISO Demand and exports. The FMM issues Energy Schedules and Ancillary Services Awards by twenty-two and a half minutes prior to the binding fifteen-minute interval.

### 34.4.1 Real-Time Ancillary Services Procurement

If the CAISO determines that additional Ancillary Services are required, other than those procured in the IFM, then the FMM will procure Ancillary Services on a fifteen (15) minute basis as necessary to meet reliability requirements and will determine Real-Time Ancillary Service interval ASMPs for such AS for the next Commitment Period. All Operating Reserves procured in the RTM are considered Contingency Only Operating Reserves. Any Ancillary Service awarded in FMM will be taken as fixed for the three (3) five (5) minute RTD intervals of its target fifteen (15) minute interval. In the FMM, all resources certified and capable of providing Operating Reserves that have submitted Real-Time Energy Bids shall also submit applicable Spinning or Non-Spinning Reserves Bids, respectively, depending on whether the resource is online or offline. The CAISO will utilize the RTM to procure Operating Reserves to restore its Operating Reserve requirements in cases when: (1) Operating Reserves awarded in the IFM have been dispatched to provide Energy, (2) resource(s) awarded to provide Operating Reserves in the IFM are no longer capable of providing such awarded Operating Reserves, or (3) the Operator determines that additional Operating Reserves are necessary to maintain Operating Reserves within NERC and WECC reliability standards, and any requirements of the NRC. The CAISO will utilize the FMM to procure additional Regulation capacity in Real-Time in cases when: (1) resource(s) awarded to provide Regulation in the IFM are no longer capable of providing such awarded Regulation, or (2) the Operator determines that additional Regulation is necessary to maintain sufficient control consistent with NERC and WECC reliability standards, and any requirements of the NRC and Good Utility Practice. The FMM will produce fifteen (15) minute ASMPs for the four (4) binding fifteen (15) minute intervals for the applicable Trading Hour. These fifteen (15) minute ASMPs are then used for the Settlement of the fifteen (15) minute AS Awards. The FMM run will also produce fifteen (15) minute Shadow Prices for each of the Interties for the four (4) fifteen (15) minute intervals for the applicable Trading Hour. These fifteen (15) minute Shadow

Prices are then used to charge for Intertie Real-Time AS Award providers for Congestion on the Interties. FMM AS Awards are settled in accordance with 11.10.1.3.

### 34.5 Real-Time Dispatch

The RTED uses a Security Constrained Economic Dispatch (SCED) algorithm every five (5) minutes throughout the Trading Hour to determine optimal Dispatch Instructions to balance Supply and Demand and determine Uncertainty Awards. The RTD can operate in three modes: RTED, RTCD and RTMD. In any given five-minute interval, the RTD optimization looks ahead over multiple five-minute intervals, but the CAISO issues Dispatch Instructions only for the next target five-minute interval. The CAISO will use the Real-Time Economic Dispatch (RTED) under most circumstances to optimally dispatch resources based on their Bids. The RTED can be used to Dispatch Contingency Only Operating Reserves, pursuant to Section 34.10, when needed to avoid an imminent System Emergency. The Real-Time Contingency Dispatch (RTCD) can be invoked in place of the RTED when a transmission or generation contingency occurs and will include all Contingency Only Operating Reserves in the optimization. If the CAISO awards a Non-Dynamic System Resource Ancillary Services in the IFM, HASP, or FMM and issues a Dispatch Instruction in the middle of the Trading Hour for Energy associated with its Ancillary Services (Operating Reserve) capacity, the CAISO will Dispatch the Non-Dynamic System Resource to operate at a constant level until the end of the Trading Hour. If the CAISO dispatches a Non-Dynamic System Resource such that the binding interval of the Dispatch is in the next Trading Hour, the CAISO will dispatch Energy from the Non-Dynamic System Resource at a constant level until the end of the next Trading Hour. The dispatched Energy will not exceed the awarded Operating Reserve capacity for the next Trading Hour and will be at a constant level for the entire next Trading Hour. The Real Time Manual Dispatch (RTMD) will be invoked as a fall-back mechanism only when the RTED or RTCD fails to provide a feasible Dispatch. These three (3) modes of the RTD are described in Sections 34.5.1, 34.5.2, and 34.5.3.

#### 34.5.1 Real-Time Economic Dispatch

RTED mode of operation for RTD normally runs every five (5) minutes starting at approximately 7.5 minutes prior to the start of the next Dispatch Interval and produces binding Dispatch Instructions for

Energy for the next Dispatch Interval and advisory Dispatch Instructions for multiple future Dispatch Intervals through at least the next Trading Hour. After being reviewed by the CAISO Operator, only binding Dispatch Instructions are communicated for the next Dispatch Interval in accordance with Section 6.3. RTED will produce a Dispatch Interval LMP for each PNode for the Dispatch Interval associated with the binding Dispatch Instructions. The RTED Dispatch target is the middle of the interval between five (5) minutes boundary points. For Variable Energy Resources that forecast with 5 minute granularity, the CAISO will use the 5-minute forecast available prior to the start of the RTD optimization as an input into the optimization to determine the instructed Energy of the resource. RTD will be based on the 5-minute forecast value, subject to transmission and resource operational constraints, as the instructed Energy for the binding RTD interval provided that the Variable Energy Resource is optimized through the RTED.

### 34.5.2 Real-Time Contingency Dispatch

#### 34.5.2.1 RTCD Mode

RTCD mode of operation for RTD is run in response to a significant Contingency event, such that waiting until the next normal RTD run is not adequate and/or Operating Reserves identified as Contingency Only need to be activated in response to the event. The CAISO Operator may activate Operating Reserves identified as Contingency Only either on a resource specific-basis or for all such resources. When activating Contingency Only reserves in RTCD, the original Energy Bids associated with the resources providing Operating Reserve will be used for the RTCD. RTCD uses SCED to produce an optimized set of binding Dispatch Instructions for one (1) or more ten-minute Dispatch Intervals instead of a normal five-minute Dispatch Interval. Resources must respond to RTCD Dispatch Instructions as soon as possible. After being reviewed by the CAISO Operator, only binding Dispatch Instructions are communicated for the next Dispatch Interval in accordance with Section 6.3. When activating a RTCD and returning to normal RTED run after a RTCD run, five-minute Dispatch Interval LMPs will be produced for each PNode based on the last available price from either the RTCD or normal RTED run relative to a five-minute target Dispatch Interval.

#### 34.5.2.2 RTDD Mode

RTDD is a special mode of the RTCD available to the CAISO Operator when 300 MW or more of capacity is needed to respond to a significant Contingency event. RTDD will not use SCED. Instead, RTDD will

give Dispatch priority to Energy Bids from Operating Reserve capacity over Energy Bids from non-Operating Reserve capacity. RTDD will dispatch the Operating Reserve capacity in merit order and will then dispatch the non-Operating Reserve capacity in merit order based on available MW within the capacity's ten-minute ramping capability. As with the RTCD mode, in the RTDD mode, the CAISO Operator may activate Operating Reserves identified as Contingency Only either on a resource-specific basis or for all such resources. Resources must respond to RTDD Dispatch Instructions as soon as possible. During each ten-minute Dispatch Interval in which RTDD is employed, the Energy Bid of the highest-priced resource dispatched under RTDD will be used to set the Market Clearing Price on a system-wide basis for all resources dispatched under RTDD. The Market Clearing Price will not reflect Transmission Losses or Transmission Constraints.

### 34.5.3 Real-Time Manual Dispatch

RTMD mode of operation for RTD is a merit-order run activated upon CAISO Operator request as a backup process in case the normal RTED process fails to converge. The RTMD run will provide the CAISO Operator a list of resources and quantity of MW available for Dispatch in merit-order based on Operational Ramp Rate but otherwise ignores Transmission Losses and Transmission Constraints. The CAISO Operator may dispatch resources from the list by identifying the quantity of FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is required for the system and/or directly selecting resources from the merit order taking into consideration actual operating conditions. After Dispatches have been selected, reviewed and accepted by the CAISO Operator, Dispatch Instructions will be communicated in accordance with Section 6.3. While the RTMD mode is being used for Dispatch a uniform five-minute MCP will be produced for all PNodes based on the merit order Dispatch. Until RTMD is actually run and RTMD-based Dispatch Instructions are issued after RTED fails to converge, all five-minute Dispatch Interval LMPs will be set to the last LMP at each Node produced by the last RTED run that converged.

## 34.6 Short-Term Unit Commitment

Once per hour, near the top of each Trading Hour, immediately after the FMM and the RTUC for the same interval is completed the CAISO performs a Short-Term Unit Commitment (STUC) run using SCUC and the CAISO Forecast of CAISO Demand over a 270-minute time horizon to commit Short Start Units,

with Start-Up Times greater than the time period covered by the RTUC described in Section 34.3. In any given Trading Hour, the STUC may commit resources for the third fifteen-minute interval of the current Trading Hour and extending into the next four (4) Trading Hours. The STUC looks ahead over a period of at least three (3) hours beyond the Trading Hour for which the RTUC optimization was run. STUC will utilize: (1) Bids previously submitted in the RTM by the Scheduling Coordinator for that Trading Hour; or (2) the Clean Bid from the Day-Ahead Market if the resource has a Day-Ahead Schedule or received a Start-Up Instruction in RUC for the Trading Hour; or (3) the Generated Bid if the resource has a Real-Time must-offer obligation for that Trading Hour and has not submitted a Bid in the RTM. The CAISO revises these replicated Bids each time the hourly STUC is run, to utilize the most recently available Bids. Not all resources identified for need as a given STUC run will necessarily receive CAISO commitment instructions immediately, because during the Trading Day the CAISO may issue a commitment instruction to a resource only at the latest possible time that allows the resource to be ready to provide Energy when it is expected to be needed. A Start-Up Instruction produced by STUC is considered binding if the resource could not achieve the target Start-Up Time as determined in the current STUC run in a subsequent RTUC or STUC run as a result of the Start-Up Time of the resource. A Start-Up Instruction produced by STUC is considered advisory if it is not binding, such that the resource could achieve its target start time as determined in the current RTUC run in a subsequent STUC or RTUC run based on its Start-Up Time. A binding Dispatch Instruction produced by STUC that results in a change in Commitment Status will be issued, in accordance with Section 6.3, after review and acceptance of the Start-Up Instruction by the CAISO Operator. The STUC may, but is not required to, decommit a resource in the same 270 minute look-ahead time period for which it was previously committed. STUC does not produce Locational Marginal Prices for Settlement. A Day-Ahead Schedule or RUC Schedule for an MSG Configuration that is later impacted by the resource's derate or outages, will be reconsidered in the STUC process taking into consideration the impacts of the derate or outage on the available MSG Configurations.

### 34.7 General Dispatch Principles

The CAISO shall conduct all Dispatch activities consistent with the following principles:

(1) The CAISO shall issue AGC instructions electronically as often as every four (4) seconds

from its Energy Management System (EMS) to resources providing Regulation and on Automatic Generation Control to meet NERC and WECC performance requirements;

(2) In each run of the RTED or RTCD the objective will be to meet the projected Energy requirements and Uncertainty Requirements over the applicable forward-looking time period of that run, subject to transmission and resource operational constraints, taking into account the short term CAISO Forecast of CAISO Demand or forecast of EIM Demand, adjusted as necessary by the CAISO or EIM operator to reflect scheduled changes to Interchange and non-dispatchable resources in subsequent Dispatch Intervals;

(3) Dispatch Instructions will be based on Energy Bids for those resources that are capable of intra-hour adjustments and will be determined through the use of SCED except when the CAISO must utilize the RTDD and RTMD;

(4) When dispatching Energy from awarded Ancillary Service capacity the CAISO will not differentiate between Ancillary Services procured by the CAISO and Submissions to Self-Provide an Ancillary Service;

(5) The Dispatch Instructions of a resource for a subsequent Dispatch Interval shall take as a point of reference the actual output obtained from either the State Estimator solution or the last valid telemetry measurement and the resource's operational ramping capability. For Multi-Stage Generating Resources the determination of the point of reference is further affected by the MSG Configuration and the information contained in the Transition Matrix;

(6) In determining the Dispatch Instructions for a target Dispatch Interval while at the same time achieving the objective to minimize Dispatch costs to meet the forecasted conditions of the entire forward-looking time period, the Dispatch for the target Dispatch Interval will be affected by: (a) Dispatch Instructions in prior intervals; (b) actual output of the resource; (c) forecasted conditions in subsequent intervals within the forward-looking time period of the optimization; and (d) operational constraints of the resource, such that a resource may be dispatched in a direction for the immediate target Dispatch Interval

that is different than the direction of change in Energy needs from the current Dispatch Interval to the next immediate Dispatch Interval, considering the applicable MSG Configuration;

(7) Through Start-Up Instructions the CAISO may instruct resources to Start-Up or Shut-Down, or may reduce Load for Participating Loads, Reliability Demand Response Resources, and Proxy Demand Resources, over the forward-looking time period for the RTM based on submitted Bids, Start-Up Bids and Minimum Load Bids, Pumping Costs and Pump Shut-Down Costs, as appropriate for the resource, or for Multi-Stage Generating Resource as appropriate for the applicable MSG Configuration, consistent with operating characteristics of the resources that the SCED is able to enforce. In making Start-Up or Shut-Down decisions in the RTM, the CAISO may factor in limitations on number of run hours or Start-Ups of a resource to avoid exhausting its maximum number of run hours or Start-Ups during periods other than peak loading conditions;

(8) The CAISO shall only start up resources that can start within the applicable time periods of the various CAISO Markets Processes that comprise the RTM;

(9) The RTM optimization may result in resources being shut down consistent with their Bids and operating characteristics provided that: (a) the resource does not need to be on-line to provide Energy; (b) the resource is able to start up within the applicable time periods of the processes that comprise the RTM; (c) the Generating Unit is not providing Regulation or Spinning Reserve; and (d) Generating Units online providing Non-Spinning Reserve may be shut down if they can be brought up within ten (10) minutes as such resources are needed to be online to provide Non-Spinning Reserves;

(10) For resources that are both providing Regulation and have submitted Energy Bids for the RTM, Dispatch Instructions will be based on the Regulation Ramp Rate of the resource rather than the Operational Ramp Rate if the Dispatch Operating Target remains within the Regulating Range. The Regulating Range will limit the Ramping of Dispatch Instructions issued to resources that are providing Regulation;

(11) For Multi-Stage Generating Resources the CAISO will issue Dispatch Instructions by

Resource ID and Configuration ID;

(12) The CAISO may issue Transition Instructions to instruct resources to transition from one MSG Configuration to another over the forward-looking time period for the RTM based on submitted Bids, Transition Bids, and Minimum Load Bids, as appropriate for the MSG Configurations involved in the MSG Transition, consistent with Transition Matrix and operating characteristics of these MSG Configurations. The RTM optimization will factor in limitations on Minimum Run Time and Minimum Down Time defined for each MSG configuration and Minimum Run Time and Minimum Down Time at the Generating Unit.

(13) The CAISO may make Reliability Demand Response Resources eligible for Dispatch in accordance with applicable Operating Procedure.

**34.8 Dispatch Instructions to Units, Participating Loads, PDRs, and RDRRs**

The CAISO may issue Dispatch Instructions covering:

(a) Ancillary Services;

(b) Energy, which may be used for:

(i) Congestion relief;

(ii) provision of imbalance energy; or

(iii) replacement of an Ancillary Service;

(c) agency operation of Generating Units, Participating Loads, Proxy Demand Resources, or Interconnection schedules, for example:

(i) output or Demand that can be Dispatched to meet Applicable Reliability Criteria;

(ii) Generating Units that can be Dispatched for Black Start;

(iii) Generating Units that can be Dispatched to maintain governor control regardless of their Energy schedules;

(d) the operation of voltage control equipment applied on Generating Units as described in this CAISO Tariff;

(e) MSS Load following instructions provided to the CAISO, which the CAISO incorporates to create their Dispatch Instructions;

(f) Dispatch necessary to respond to a System Emergency or imminent emergency;

(g) Transition Instructions;

(h) Dispatch of Reliability Demand Response Resources pursuant to Section 34.22; or

(i) Uncertainty Awards.

### 34.9 Utilization of the Energy Bids

The CAISO uses Energy Bids for the following purposes: (i) satisfying Real-Time Energy needs; (ii) mitigating Congestion; (iii) maintaining aggregate Regulation reserve capability in Real-Time; (iv) allowing recovery of Operating Reserves utilized in Real-Time operations; (v) procuring Voltage Support required from resources beyond their power factor ranges in Real-Time; (vi) establishing LMPs; (vii) as the basis for Bid Cost Recovery; (viii) to the extent a Real-Time Energy Bid Curve is submitted starting at minimum operating level for a Short Start Unit that is scheduled to be on-line, the RTM may Dispatch such a resource down to its minimum operating level and may issue a Shut-Down Instruction to the resource based on its Minimum Load Energy costs; and (ix) satisfying Uncertainty Requirements.

#### 34.9.1 [Not Used]

#### 34.9.2 [Not Used]

#### 34.9.3 [Not Used]

#### 34.9.4 [Not Used]

### 34.10 Dispatch of Energy from Ancillary Services

The CAISO may issue Dispatch Instructions to Participating Generators, Participating Loads, Proxy Demand Resources, (via communication with the Scheduling Coordinators of Demand Response Providers) System Units and System Resources contracted to provide Ancillary Services (either procured through the CAISO Markets, Self-Provided by Scheduling Coordinators, or through Exceptional Dispatch or dispatched in accordance with a Legacy RMR Contract) for the Supply of Energy. During normal operating conditions, the CAISO may Dispatch those Participating Generators, Participating Loads, Proxy Demand Resources, System Units and System Resources that have contracted to provide Spinning Reserve and Non-Spinning Reserve, except for those reserves designated as Contingency Only, in conjunction with the normal Dispatch of Energy. Contingency Only reserves are Operating Reserve capacity that have been designated, either by the Scheduling Coordinator or the CAISO, as available to supply Energy in the Real-Time only in the event of the occurrence of an unplanned Outage, a

Contingency or an imminent or actual System Emergency. During normal operating conditions, the CAISO may also elect to designate any reserve not previously identified as Contingency Only by Scheduling Coordinator as Contingency Only reserves. In the event of an unplanned Outage, a Contingency or a threatened or actual System Emergency, the CAISO may dispatch Contingency Only reserves. If Contingency Only reserves are dispatched through the RTCD, which as described in Section 34.5.2 only Dispatches in the event of a Contingency, such Dispatch and pricing will be based on the original Energy Bids. If Contingency Only or other scheduled reserves are dispatched in response to a System Emergency that has occurred because the CAISO has run out of Economic Bids when no Contingency event has occurred, the RTED will Dispatch such reserves using the Soft Energy Bid Cap as the Energy Bids for such reserves and will set prices accordingly. For CAISO Market intervals for which the conditions and parameters specified in Section 27.4.3.3 apply, the RTED will Dispatch such reserves using the Hard Energy Bid Cap as the Energy Bids for such reserves and will set prices accordingly. If a Participating Generator, Participating Load, System Unit or System Resource that is supplying Operating Reserve is Dispatched to provide Energy, the CAISO shall replace the Operating Reserve as necessary to maintain NERC and WECC reliability standards, including any requirements of the NRC. If the CAISO uses Operating Reserve to meet Real-Time Energy requirements, and if the CAISO needs Operating Reserves to satisfy NERC and WECC reliability standards, including any requirements of the NRC, the CAISO shall restore the Operating Reserves to the extent necessary to meet NERC and WECC reliability standards, including any requirements of the NRC through either the procurement of additional Operating Reserve in the RTM or the Dispatch of other Energy Bids in SCED to allow the resources that were providing Energy from the Operating Reserve to return to their Dispatch Operating Target. The Energy Bid Curve is not used by the AGC system when Dispatching Energy from Regulation. For Regulation Up capacity, the upper portion of the resource capacity from its Regulation Limit is allocated to Regulation regardless of its Energy Bid Curve. For a resource providing Regulation Up or Operating Reserves the remaining Energy Bid Curve shall be allocated to any RTM AS Awards in the following order from higher to lower capacity where applicable: (a) Spinning Reserve; and (b) Non-Spinning Reserve. For resources providing Regulation Up, the applicable upper Regulation Limit shall be used as the basis of allocation if it is lower than the upper portion of the Energy Bid Curve. The remaining portion of the Energy Bid Curve,

if there is any, shall constitute a Bid for RTM Energy. For Regulation Down capacity, the lower portion of the resource capacity from its applicable Regulation Limit is allocated to Regulation regardless of its Energy Bid Curve.

**34.10.1 [Not Used]**

**34.10.2 [Not Used]**

### 34.11 Exceptional Dispatch

The CAISO may issue Exceptional Dispatches for the circumstances described in this Section 34.11, which may require the issuance of forced Shut-Downs, forced Start-Ups, or forced MSG Transitions and shall be consistent with Good Utility Practice. Dispatch Instructions issued pursuant to Exceptional Dispatches shall be entered manually by the CAISO Operator into the Day-Ahead or RTM optimization software so that they will be accounted for and included in the communication of Day-Ahead Schedules and Dispatch Instructions to Scheduling Coordinators. Exceptional Dispatches are not used to establish the LMP at the applicable PNode. The CAISO will record the circumstances that have led to the Exceptional Dispatch. When considering the issuance of an Exceptional Dispatch to RA Capacity, the CAISO shall consider the effectiveness of the resource from which the capacity is being provided, along with Start-Up Bids, Transition Bids, and Minimum Load Bids, as adjusted pursuant to Section 30.7.10.2, if applicable, when issuing Exceptional Dispatches to commit a resource to operate at Minimum Load. When the CAISO issues Exceptional Dispatches for Energy to RA Capacity, the CAISO shall also consider Energy Bids, if available and as appropriate. Additionally, where the Exceptional Dispatch results in a CPM designation, the CAISO shall make CPM designations of Eligible Capacity for an Exceptional Dispatch by applying the criteria and procedures specified in Section 43A.4.

#### 34.11.1 System Reliability Exceptional Dispatches

The CAISO may issue a manual Exceptional Dispatch for Generating Units, System Units, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources, Dynamic System Resources, RMR Resources, and Condition 2 Legacy RMR Units pursuant to Section 41.9 in Appendix H, in addition to or instead of resources with a Day-Ahead Schedule dispatched by RTM optimization software during a System Emergency, or to prevent an imminent System Emergency or a situation that threatens System Reliability and cannot be addressed by the RTM optimization and system modeling. To

the extent possible, the CAISO shall utilize available and effective Bids from resources before dispatching resources without Bids. To deal with any threats to System Reliability, the CAISO may also issue a manual Exceptional Dispatch in the Real-Time for Non-Dynamic System Resources that have not been or would not be selected by the RTM for Dispatch, but for which the relevant Scheduling Coordinator has received a HASP Block Intertie Schedule.

**34.11.2 Other Exceptional Dispatches**

The CAISO may also issue manual Exceptional Dispatches for resources in addition to or instead of resources with a Day-Ahead Schedule or dispatched by the RTM optimization software to: (1) perform Ancillary Services testing; (2) perform pre-commercial operation testing for Generating Units; (3) perform periodic testing of Generating Units, including PMax testing; (4) mitigate for Overgeneration; (5) provide for Black Start; (6) provide for Voltage Support; (7) accommodate TOR or ETC Self-Schedule changes after the Market Close of the RTM; (8) reverse a commitment instruction issued through the IFM that is no longer optimal as determined through RUC; or (9) in the event of a Market Disruption, to prevent a Market Disruption, or to minimize the extent of a Market Disruption; or (10) reverse the operating mode of a Pumped-Storage Hydro Unit. The CAISO will not consider Start-Up Costs, Minimum Load Costs, or Energy Bids in connection with the issuance of Exceptional Dispatches to perform Ancillary Services testing, to perform PMax testing, or to perform pre-commercial operation testing for Generating Units.

**34.11.3 Transmission-Related Modeling Limitations**

The CAISO may also manually Dispatch resources in addition to or instead of resources with a Day-Ahead Schedule or dispatched by the RTM optimization software, during or prior to the Real-Time as appropriate, to address transmission-related modeling limitations in the Full Network Model. Transmission-related modeling limitations for the purposes of Exceptional Dispatch, including for settlement of such Exceptional Dispatch as described in Section 11.5.6, shall consist of any FNM modeling limitations that arise from transmission maintenance, lack of Voltage Support at proper levels as well as incomplete or incorrect information about the transmission network, for which the Participating TOs have primary responsibility. The CAISO shall also manually Dispatch resources under this Section 34.11.3 in response to system conditions including threatened or imminent reliability conditions for which the timing of the Real-Time Market optimization and system modeling are either too slow or incapable of

bringing the CAISO Controlled Grid back to reliable operations in an appropriate time-frame based on the timing and physical characteristics of available resources to the CAISO. All reliability-based Exceptional Dispatch Instructions for Reliability Demand Response Resources, including for testing, will be issued under this Section 34.11.3.

### 34.11.4 Reporting Requirements

The CAISO will report on Exceptional Dispatches as part of market performance reporting and post those reports on the CAISO Website.

## 34.12 CAISO Market Adjustment to Non-Priced Quantities in the RTM

All Self-Schedules are respected by the SCED and SCUC to the maximum extent possible and are protected from curtailment in the Congestion Management process to the extent that there are effective Economic Bids that can relieve Congestion. If all Effective Economic Bids for the RTM are exhausted, all Self-Schedules between the Minimum Load and the lowest Energy level of the first Energy Bid point will be subject to uneconomic adjustments based on assigned scheduling priorities. This functionality of the optimization software is implemented through the setting of scheduling parameters as described in Section 27.4.3 and specified in Section 27.4.3.1 and the BPMs. Through this process, imports and exports may be reduced to zero, Demand may be reduced to zero, and Generation may be reduced to a lower operating limit (or Regulation Limit) (or to a lower Regulation Limit plus any qualified Regulation Down Award or Self-Provided Ancillary Services, if applicable). Any Self-Schedules below the Minimum Load level are treated as fixed Self-Schedules and are not subject to uneconomic adjustments for Congestion Management but may be subject to decommitment via an Exceptional Dispatch if necessary as a last resort to relieve Congestion that could not otherwise be managed.

### 34.12.1 Increasing Supply

The scheduling priorities as defined in the RTM optimization to meet the need for increasing Supply as reflected from higher to lower priority are as follows:

| Scheduling Run Priority | Scheduling Parameters Under Soft Energy Bid Cap (27.4.3.2) | Scheduling Parameters Under Hard Energy Bid Cap (27.4.3.3) |
|---|---|---|
| CAISO Forecast of CAISO Demand; the export Self-Schedule of a Priority Wheeling Through; exports explicitly | $1450 | $2900 |

| | | |
|---|---|---|
| identified in a Resource Adequacy Plan backed by Resource Adequacy Capacity explicitly identified and linked in a Supply Plan to the exports; or Self-Schedules for exports at Scheduling Points in the RTM backed by Generation from non-Resource Adequacy Capacity or from non-RUC Capacity | | |
| RUC Schedules that are Self-Schedules of exports at Scheduling Points not backed by Generation from non-Resource Adequacy Capacity, or the RUC Schedules that are the export Self-Schedules of non-Priority Wheeling Throughs | $1250 | $2500 |
| Real-Time Market Self-Schedules of exports at Scheduling Points not backed by Generation from non-Resource Adequacy Capacity or non-RUC capacity, or the Real-Time Market Self-Schedules that are the export Self-Schedules of a non-Priority Wheeling Through | $1150 | $2300 |
| Contingency Only Operating Reserve if activated by Operator to provide Energy (as indicated by the Contingency Flag and the Contingency condition) | $1000 | $2000 |

**34.12.2 Decreasing Supply**

The scheduling priorities as defined in the RTM optimization to meet the need for decreasing Supply as reflected from higher to lower priority are as follows:

| **Scheduling Run Priority** | **Scheduling Parameters Under Soft Energy Bid Cap (27.4.3.2)** | **Scheduling Parameters Under Hard Energy Bid Cap (27.4.3.3)** |
|---|---|---|
| Non-Participating Load increase | Not Applicable | Not Applicable |
| Reliability Must Run (RMR) Schedule (Day-Ahead manual pre-dispatch or Manual RMR Dispatches or Dispatches that are flagged as RMR Dispatches following the MPM, for Legacy RMR Units and Exceptional Dispatch for RMR Resources process) | -$6000 | -$12000 |
| Transmission Ownership Right (TOR) Self-Schedule | -$5900 | -$11800 |

| | | |
|---|---|---|
| Existing Rights (ETC) Self-Schedule | -$5100 to -$5900 | -$10200 to -$11800 |
| Regulatory Must-Run and Regulatory Must-Take (RMT) Self-Schedule; | -$1400 | -$2800 |
| Participating Load increase | Not Applicable | Not Applicable |
| Day-Ahead Supply Schedule | -$1200 | -$2400 |
| Self-Schedule Hourly Block | -$1100 | -$2200 |
| Import Self-Schedule of a non-Priority Wheeling Through | $0 | $0 |

These dispatch priorities as defined in the RTM optimization may be superseded by operator actions and procedures as necessary to ensure reliable operations.

**34.12.3 Post-HASP Process**

In the event there is a transmission limitation on an Intertie in the import direction and HASP cannot meet CAISO Forecast of CAISO Demand or fully accommodate a Priority Wheeling Through transaction, the CAISO will perform a post-HASP process to pro rata allocate available transmission capacity between CAISO Demand and Priority Wheeling Through transactions, as described in the Business Practice Manual. The CAISO Demand pro rata share will be based on the lower of (1) the sum of the Real-Time Bid quantities of applicable Resource Adequacy Resources, shown non-Resource Adequacy Resources under contract, CPM imports with ATC or supported by TRM, resources supported by ATC awarded in the daily request window process, and imports supported by TRM or (2) the sum of shown Resource Adequacy Capacity and non-Resource Adequacy Capacity under contract that are supported by ATC, including resources supported by capacity awarded ATC in the daily request window process, CPM import capacity awarded ATC or supported by TRM, plus the remaining TRM quantity. The Priority Wheeling Through pro rata share for each Self-Schedule will be based on the lower of (1) the submitted Real-Time Market Self-Schedules of the Priority Wheeling Through transactions, or (2) the Priority Wheeling Through quantity awarded ATC under Section 23. The ATC for CAISO Demand and Priority Wheeling Throughs cannot exceed the Total Transfer Capability (TTC) of an Intertie. The amount of capacity considered for pro rata allocation in the post-HASP Process cannot exceed the TTC of the Intertie. The ATC the CAISO awards to Priority Wheeling Through transactions in the post-HASP Process cannot exceed the Priority Wheeling Through quantity the CAISO calculates in this pro rata

allocation. In no event, will the CAISO reduce Priority Wheeling Through transactions solely in the event of a CAISO supply shortfall that triggers a power balance infeasibility. Energy scheduled via the post-HASP process will be settled as Exceptional Dispatch Energy pursuant to Section 11.5.6.1, as applicable.

**34.12.4**

At its sole discretion, the CAISO may, after HASP, apply the market scheduling run priorities in Section 34.12.1 through manual operator intervention to curtail lower priority HASP hourly block export schedules even before the CAISO Balancing Authority Area is in an energy emergency alert. When the CAISO is in an emergency alert level 3 (EEA 3), subject to operator judgement and consistent with good utility practice, it will curtail in accordance with the priority specified below to prevent the need to arm Load, or reduce the amount of Load that is armed, and meet its operating reserve obligations. For purposes of this section, the CAISO would curtail lower priority exports in the following order:

(a) Real-Time economic hourly block export schedules that cleared HASP,

(b) Real-Time Self-Schedule hourly block export schedules not backed by Generation from non-Resource Adequacy Capacity and cleared HASP, then

(c) Day-Ahead hourly block export schedules not backed by Generation from non-Resource Adequacy Capacity that also cleared HASP.

To accommodate curtailment of lower priority exports in the order set forth above, the CAISO will consider any schedule to export energy, other than an export backed by Generation from non-Resource Adequacy Capacity, as firm provisional energy. A Scheduling Coordinator's failure to comply with the tagging requirements specified in the Business Practice Manual for any export schedule other than an export backed by Generation from non-Resource Adequacy Capacity will result in a default to the priority specified in (a) above (*e.g.*, will be curtailed in the same tranche as the Real-Time economic hourly block export schedules that cleared HASP).

**34.13 Means of Dispatch Communication**

The CAISO dispatches Regulation by AGC to Participating Generators and, for Dynamic System Resources, through dedicated communication links that satisfy the CAISO's standards for external imports of Regulation. The CAISO communicates all other Dispatch Instructions electronically, except that, at the CAISO's discretion, the CAISO may communicate Dispatch Instructions by telephone, or

facsimile. Scheduling Coordinators shall confirm the Dispatch Instructions that are communicated orally by repeating them to the CAISO employee providing the Dispatch Instruction. Except in the case of deteriorating system conditions or an actual or threatened System Emergency, and except for Dispatch Instructions for Regulation, the CAISO sends all Dispatch Instructions to the Scheduling Coordinator. The recipient Scheduling Coordinator shall immediately communicate the Dispatch Instruction to the operator of the resource. The CAISO may, with the prior permission of the applicable Scheduling Coordinator, communicate with and give Dispatch Instructions to the operators of the resource directly without having to communicate through their Scheduling Coordinator. The CAISO shall record the communications between the CAISO and Scheduling Coordinators relating to Dispatch Instructions in a manner that permits auditing of the Dispatch Instructions, and of the response of the resources, as applicable. In situations of deteriorating system conditions or System Emergency, the CAISO reserves the right to communicate directly with the resource(s) as required to ensure System Reliability. Scheduling Coordinators are required to advise the CAISO immediately of any change in resource availability that prevents the recipient of a Dispatch Instruction from performing in accordance with that Dispatch Instruction.

**34.13.1 Response Required by Resources to Dispatch Instructions**

Resources must:

(a) unless otherwise stated in the Dispatch Instruction, comply with a Dispatch Instruction immediately upon receipt;

(b) respond to all Dispatch Instructions in accordance with Good Utility Practice;

(c) meet voltage criteria in accordance with the provisions in the CAISO Tariff;

(d) meet any applicable Operational Ramp Rates;

(e) respond to Dispatch Instructions for Ancillary Services within the required time periods and (in the case of Participating Generators providing Regulation) respond to AGC from the EMS;

(f) if a time frame is stated in a Dispatch Instruction, respond to a Dispatch Instruction within the stated time frame; and

(g) not intentionally generate above or below Dispatch Operating Target.

Notwithstanding the requirements to comply with and respond to Dispatch Instructions, when an Eligible Intermittent Resource's Dispatch Operating Target is equal to its forecasted output, it may produce to its capability. An Eligible Intermittent Resource in the process of developing a CAISO forecast pursuant to Section 3.1 of Appendix Q may produce to its capability when its Dispatch Operating Target is equal to its scheduled output.

In any event, the CAISO may issue an Operating Instruction if necessary to maintain system reliability consistent with Sections 7.6 or 7.7. Upon receiving such an Operating Instruction, an Eligible Intermittent Resource must not generate in excess of its Dispatch Operating Target until the Operating Instruction expires, except when physically impossible. When such an Operating Instruction is in effect, Eligible Intermittent Resources should follow a linear ramp between Dispatch Operating Targets, except when physically impossible.

**34.13.2 Failure to Conform to Dispatch Instructions**

In the event that, in carrying out the Dispatch Instruction, an unforeseen problem arises (relating to plant operations or equipment, personnel or the public safety), the recipient of the Dispatch Instruction must notify the CAISO or, in the case of a Generator, the relevant Scheduling Coordinator immediately. The relevant Scheduling Coordinator shall notify the CAISO of the problem immediately. If a resource is unavailable or incapable of responding to a Dispatch Instruction, or fails to respond to a Dispatch Instruction in accordance with its terms, the resource shall be considered to be non-conforming to the Dispatch Instruction unless the resource has notified the CAISO of an event that prevents it from performing its obligations within thirty (30) minutes of the onset of such event through a submission in the CAISO's outage management system pursuant to Section 9. Notification of non-compliance via the Automated Dispatch System (ADS) will not supplant nor serve as the official notification mechanism to the CAISO. If the resource is considered to be non-conforming as described above, the Scheduling Coordinator for the resource concerned shall be subject to Uninstructed Imbalance Energy as specified in Section 11.5.2. This applies whether any Ancillary Services concerned are contracted or Self-Provided. For a Non-Dynamic System Resource Dispatch Instruction prior to the Trading Hour, the Scheduling Coordinator shall inform the CAISO of its ability to conform to a Dispatch Instruction via ADS. The Non-Dynamic System Resource has the option to accept, partially accept, or decline the Dispatch Instruction,

but in any case must respond within the timeframe specified in a Business Practice Manual. The Non-Dynamic System Resource can change its response within the indicated timeframe. If a Non-Dynamic System Resource does not respond within the indicated timeframe, the Dispatch Instruction will be considered accepted.

When a resource demonstrates that it is not following Dispatch Instructions, the RTM will no longer assume that the resource will ramp from its current output level. The RTM assumes the resource to be "non-compliant" if it is deviating its five (5)-minute Ramping capability for more than N intervals by a magnitude determined by the CAISO based on its determination that it is necessary to improve the calculation of the expected imbalance energy as further defined in the BPM. When a resource is identified as "non-compliant," RTM will set the Dispatch Operating Target for that resource equal to its actual output in the Market Clearing software such that the persistent error does not cause excessive AGC action and consequently require CAISO to take additional action to comply with reliability requirements. Such a resource will be considered to have returned to compliance when the resource's State Estimator or telemetry value (whichever is applicable) is within the above specified criteria. During the time when the resource is "non-compliant," the last applicable Dispatch target shall be communicated to the Scheduling Coordinator as the Dispatch Operating Target. The last applicable Dispatch target may be (i) the last Dispatch Operating Target within the current Trading Hour that was instructed prior to the resource becoming "non-compliant," or (ii) the Day-Ahead Schedule, or (iii) awarded Self-Schedule Hourly Block depending on whether the resource submitted a Bid and the length of time the resource was "non-compliant," or (iv) for a Dynamic System Resource or a Pseudo-Tie Generating Unit that is an Eligible Intermittent Resource, the most recently available telemetry for the actual output. During the time the resource is deemed to be "non-compliant" the CAISO will suspend the resource's eligibility for Ancillary Services and Uncertainty Awards.

**34.13.3 Co-located Resources and Dispatch Instructions**

Co-located Resources that are Non-Generator Resources may deviate from Dispatch Instructions only pursuant to this Section. A Co-located Resource that is a Non-Generator Resource may deviate from a Dispatch Instruction where a co-located Eligible Intermittent Resource at the same Generating Facility is producing above its Dispatch Operating Target due to meteorological conditions such that the Co-located

Resources' combined output would exceed the Interconnection Service Capacity of the Co-located Resources, or otherwise threaten reliability or safety. Such deviations may only occur through proper control technologies that ensure the combined output of all Co-located Resources does not exceed the Generating Facility's Interconnection Service Capacity. Co-located Resources that are Non-Generator Resources may deviate from Dispatch Instructions to observe their registered Charging Constraints consistent with Section 30.5.6.3. All deviations from Dispatch Instructions will be subject to Uninstructed Imbalance Energy.

### 34.14 Metered Subsystems

Scheduling Coordinators that represent MSSs may submit Bids for Supply of Energy to the RTM, irrespective of whether the MSS is a Load following MSS. All Bids submitted for MSS generating resources for the RTM and all Dispatch Instructions shall be generating resource-specific. MSS non-Load following resources are responsible for following Dispatch Instructions. Load following MSS Operators shall provide the CAISO with an estimate of the number of MWs the applicable generating resource(s) will be generating over the next two hours in five-minute interval resolution. The Dispatch Instructions for Load following resources are incorporated with Generation estimates provided by MSS Operators. Such MSS Load following resources can deviate from the Dispatch Instructions in Real-Time to facilitate the following of Load without being subject to the Uninstructed Deviation Penalty as further described in Section 11.23. The State Estimator will estimate all MSS Load in Real-Time and the CAISO will incorporate the information provided by the Load following MSS Operator for utilization in clearing the RTM and its Dispatch Instructions.

#### 34.14.1 [Not Used]

### 34.15 Treatment of Resource Adequacy Capacity in the RTM

Resource Adequacy Resources required to offer their Resource Adequacy Capacity in accordance with Section 40 shall be required to submit Energy Bids for: (1) all such Resource Adequacy Capacity and (2) any Ancillary Services capacity awarded or self-provided in the IFM, HASP, or Real-Time Market. In the absence of submitted Bids, as part of the validation described in 30.7, Generated Bids will be used for Resource Adequacy Resources required to offer their Resource Adequacy Capacity in accordance with Section 40. For any capacity from a Resource Adequacy Resource not required to offer Resource

Adequacy Capacity in accordance with Section 40 that was awarded or is self-providing Operating Reserves capacity in the IFM, Scheduling Coordinators must submit an Energy Bid for no less than the amount of awarded or self-provided Operating Reserves capacity above their Day-Ahead Schedule. Resource Adequacy Resources that are not required to offer their Resource Adequacy Capacity in accordance with Section 40 may voluntarily submit Energy Bids or Ancillary Services Bids. Submitted Energy Bids shall be subject to the maximum and minimum Bid requirements and Mitigation Measures as set forth in Section 39.

**34.15.1 [Not Used]**

**34.15.2 [Not Used]**

**34.15.3 [Not Used]**

**34.15.4 [Not Used]**

**34.15.5 [Not Used]**

**34.15.6 [Not Used]**

### 34.16 Real-Time Activities in the Hour Prior to Settlement Period

#### 34.16.1 Confirm Interchange Transaction Schedules (ITSs)

Also in the hour prior to the beginning of the Operating Hour the CAISO will:

(a) adjust Interchange transaction schedules (ITSs) as required under Existing Contracts in accordance with the procedures in the CAISO Tariff for the management of Existing Contracts;

(b) adjust ITSs as required by changes in transfer capability of transmission paths occurring after Market Close of the RTM; and

(c) agree on ITS changes with adjacent Balancing Authorities.

**34.16.2 [Not Used]**

**34.16.3 [Not Used]**

### 34.17 Rules for Real-Time Dispatch of Imbalance Energy Resources

#### 34.17.1 Resource Constraints

The SCED shall enforce the following resource physical constraints:

(a) **Minimum and maximum operating resource limits.** Outages and limitations due to

transmission clearances shall be reflected in these limits. The more restrictive operating or regulating limit shall be used for resources providing Regulation so that the SCED shall not Dispatch them outside their Regulating Range.

(b) **Forbidden Operating Regions.** When ramping in the Forbidden Operating Region, the implicit ramp rate will be used as determined based on the time it takes for the resource to cross its Forbidden Operating Region. A resource can only be ramped through a Forbidden Operating Region after being dispatched into a Forbidden Operating Region. The CAISO will not Dispatch a resource within its Forbidden Operating Regions in the Real-Time Market, except that the CAISO may Dispatch the resource through the Forbidden Operating Region in the direction that the resource entered the Forbidden Operating Region at the maximum applicable Ramp Rate over consecutive Dispatch Intervals. A resource with a Forbidden Operating Region cannot provide Ancillary Services in a particular fifteen (15) minute Dispatch Interval unless that resource can complete its transit through the relevant Forbidden Operating Region within that particular Dispatch Interval.

(c) **Operational Ramp Rates and Start-Up Times.** The submitted Operational Ramp Rate for resources shall be used as the basis for all Dispatch Instructions, provided that the Dispatch Operating Target for resources that are providing Regulation remains within their applicable Regulating Range. The Regulating Range will limit the Ramping of Dispatch Instructions issued to resources that are providing Regulation. The Ramp Rate for Non-Dynamic System Resources cleared in the FMM will not be observed. Rather, the ramp of the Non-Dynamic System Resource will respect inter-Balancing Authority Area Ramping conventions established by WECC. Ramp Rates for Dynamic System Resources will be observed like Participating Generators in the RTD. Each Energy Bid shall be Dispatched only up to the amount of imbalance energy that can be provided within the Dispatch Interval based on the applicable Operational Ramp Rate. The Dispatch Instruction shall consider the relevant Start-Up Time as, if the resource is off-line, the relevant Operational Ramp Rate function, and any other resource constraints or

prior commitments such as Schedule changes across hours and previous Dispatch Instructions. The Start-Up Time shall be determined from the Start-Up Time function and when the resource was last shut down. The Start-Up Time shall not apply if the corresponding resource is on-line or expected to start.

(d) **Maximum number of daily Start-Ups.** The SCED shall not cause a resource to exceed its daily maximum number of Start-Ups.

(e) **Minimum Run Time and Down Time.** The SCED shall not start up off-line resources before their Minimum Down Time expires and shall not shut down on-line resources before their Minimum Run Time expires. For Multi-Stage Generating Resources these requirements shall be observed both for the Generating Unit and MSG Configuration.

(f) **Operating (Spinning and Non-Spinning) Reserve.** The SCED shall Dispatch Spinning and Non-Spinning Reserve subject to the limitations set forth in Section 34.18.2.

(g) **Non-Dynamic System Resources.** If Dispatched, each Non-Dynamic System Resource flagged for hourly pre-dispatch in the next Trading Hour shall be Dispatched to operate at a constant level over the entire Trading Hour. The HASP shall perform the hourly pre-dispatch for each Trading Hour once prior to the Operating Hour. The hourly pre-dispatch shall not subsequently be revised by the SCED and the resulting HASP Block Intertie Schedules are financially binding and are settled pursuant to Section 11.5.4.

(h) **Daily Energy use limitation to the extent that Energy limitation is expressed in a resource's Bid.** If the Energy Limits are violated for purposes of Exceptional Dispatches for System Reliability, the Bid will be settled as provided in Section 11.5.6.1.

**34.17.2 Calculation of Dispatch Operating Points After Instructions**

The RTED process shall calculate Dispatch Operating Points as follows:

(a) After the RTUC issues a Start-Up Instruction, RTED moves the Dispatch Operating Point of a resource immediately from zero (0) MW to the applicable Minimum Load, as defined in the Master File or as modified via pursuant to Section 9.3.3, of a Generating Unit at the start of the Dispatch Interval pertaining to the Start-Up Instruction. The Dispatch Operating Point shall then be determined using the resource's applicable Operational

Ramp Rate as further described in Sections 34.17.4, 34.17.5, and 34.17.6.

(b) After the RTUC issues a Shut-Down Instruction, RTED shall first ramp the Dispatch Operating Point down to the applicable Minimum Load, as defined in the Master File or as modified pursuant to Section 9.3.3, of a Generating Unit at the end of the Dispatch Interval pertaining to the Shut-Down Instruction, using the resource's applicable Operational Ramp Rate. The Dispatch Operating Point shall then be set immediately to zero (0) MW.

(c) After the RTUC issues a Transition Instruction: (1) for MSG Configurations where the operating ranges of the two MSG Configurations do not overlap, the RTD will move the Dispatch Operating Point of the resource immediately from the boundary of the "from" MSG Configuration to the boundary of the "to" MSG Configuration, as defined in the Master File or as modified via the CAISO's outages reporting mechanism defined in Section 9, of a Multi-Stage Generating Resource; and (2) for MSG Configurations for which the operating ranges of the two MSG Configurations do overlap, RTD will move the Dispatch Operating Point of the resource within the overlapping operating range of the MSG Configuration until the MSG Transition is complete.

**34.17.3 [Not Used]**

**34.17.4 Inter-Hour Dispatch of Resources with Real-Time Energy Bids**

Dispatch Instructions associated with the ramp between the Real-Time Market Bid in one hour and the Real-Time Market Bid in the immediately succeeding Trading Hour shall be determined optimally by the SCED if the CAISO has Bids for either or both relevant Operating Hours. For any Operating Hour(s) for which Bids have been submitted Dispatch Instructions will be optimized such that the Dispatch Operating Point is within the Bid range(s). For any Operating Hour without submitted Bids, Dispatch Instructions will be optimized such that the Dispatch Operating Point conforms to the Schedule within the Operating Hour. Energy resulting from the Standard Ramp shall be deemed Standard Ramping Energy and will be settled in accordance with Section 11.5.1. Energy resulting from any ramp extending beyond the Standard Ramp will be deemed Ramping Energy Deviation and will be settled in accordance with Section 11.5.1. Energy delivered or consumed as a result of CAISO Dispatch of a resource's Energy Bid in one

Operating Hour to a Dispatch Operating Point such that the resource cannot return to its successive Operating Hour Schedule or to an infra-marginal operating point by the beginning of the next Operating Hour is Residual Imbalance Energy and shall be settled as RTD Instructed Imbalance Energy as provided for in Section 11.5.1 and also may be eligible for recovery of its applicable Energy Bid Costs in accordance with Section 11.8. Similarly, Energy delivered or consumed as a result of CAISO Dispatch of a resource's Energy Bid in a future Operating Hour to a Dispatch Operating Point different from its current Operating Point prior to the end of the current Operating Hour is also considered Residual Imbalance Energy and shall be settled as RTD Instructed Imbalance Energy as provided for in Section 11.5.1 and also may be eligible for recovery of its applicable Energy Bid Costs in accordance with Section 11.8. When Ramping Energy Deviation and Residual Imbalance Energy coexist within a given Dispatch Interval, the Ramping Energy Deviation shall be the portion of RTD Instructed Imbalance Energy that is produced or consumed within the Schedule-change band defined by the accepted RTM Bids of the two consecutive Settlement Periods; the Residual Imbalance Energy shall be the portion of RTD Instructed Imbalance Energy that is produced or consumed outside the Schedule-change band.

**34.17.5 Inter-Hour Resources Dispatch without Real-Time Energy Bids**

Dispatch Instructions shall be issued for each Dispatch Interval as needed to prescribe the ramp between a resource's accepted Self-Schedule in one Trading Hour and its accepted Self-Schedule in the immediately succeeding Trading Hour. Such Dispatch Instructions shall be based on the lesser of: (1) the applicable Operational Ramp Rate as provided for in Section 30.7.7 and (2) the Ramp Rate associated with the Standard Ramp. The Dispatch Instructions for Ramping of Generating Units without Real-Time Energy Bids in both Operating Hours shall ramp the resource between hourly Schedules symmetrically to the extent possible subject to the Regulation Ramping limitations across hourly boundaries in twenty (20) to sixty (60) minutes assuming Congestion can be resolved utilizing Economic Bids. The minimum twenty (20)-minute ramp is required for smooth hourly Schedule changes and is consistent with Intertie scheduling agreements between Balancing Authority Areas. Energy resulting from the Standard Ramp shall be deemed Standard Ramping Energy and will be settled in accordance with Section 11.5.1. Energy resulting from any ramp extending beyond the Standard Ramp will be deemed Ramping Energy Deviation and will be settled in accordance with Section 11.5.1.

### 34.17.6 Intra-Hour Exceptional Dispatches

For the special case where an Exceptional Dispatch begins in the new hour and the rules above would result in the violation of the resource's inter-temporal constraint(s), the following rules are applied and the Energy is settled as FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy as described in Section 11.5.6.

(a) If the ramp time is greater than one hour or greater than what can be achieved when RTM receives the constraint, RTM starts the ramp at the earliest possible time and continues Ramping the resource in the new Trading Hour.

(b) If the ramp time results in starting the ramp less than ten (10) minutes before the start of the hour, RTM instead starts the ramp at ten (10) minutes before the start of the hour and ramps the resource at a uniform rate so that it meets the constraint by the start time of the Exceptional Dispatch.

(c) If the new hour's Day-Ahead Schedule is beyond the Exceptional Dispatch constraint, RTM resumes the basic Ramping rules after the Exceptional Dispatch constraint is met, but limits the Ramp Rate as necessary to ensure that the resource does not complete its ramp before ten (10) minutes after the hour.

## 34.18 Ancillary Services in the Real-Time Market

### 34.18.1 Dispatch of Self-Provided Ancillary Services

The Scheduling Coordinator scheduling an Interruptible Import will be responsible for Operating Reserves associated with the Interruptible Import, regardless of whether the Scheduling Coordinator is an LSE or not. For all other Submissions to Self-Provide an Ancillary Service, the Energy Bid shall be used to determine the Dispatch, subject to the limitation on the Dispatch of Spinning Reserve and Non-Spinning Reserve set forth in Section 34.18.2.2.

### 34.18.2 Ancillary Services Requirements for RTM Dispatch

The following requirements apply to the Dispatch of Ancillary Services in the RTM:

#### 34.18.2.1 Regulation

(a) Regulation provided from Generating Units or System Resources must meet the standards specified in this CAISO Tariff and Part A of Appendix K;

(b) The CAISO will Dispatch Regulation through the EMS, which Dispatch of Regulation by EMS does not set the RTM LMP;

(c) In the event of an unscheduled increase in system Demand or a shortfall in Generation output and Regulation margin drops, the CAISO will use Dispatch Energy in the RTM or Dispatch Operating Reserve to restore Regulation margin; and

(d) When scheduled Operating Reserve is used for restoration of Regulation reserve, the CAISO shall arrange for the replacement of that Operating Reserve.

**34.18.2.2 Operating Reserves**

(a) Spinning Reserve:

(i) Spinning Reserve provided from Generating Units and System Resources must meet the standards specified in Part B of Appendix K;

(ii) The CAISO will Dispatch Spinning Reserve as may be required to meet the Applicable Reliability Criteria;

(iii) The CAISO may Dispatch Spinning Reserve as balancing Energy to return Regulation Generating Units to their Set Points and restore full Regulation margin; and

(iv) The CAISO will Dispatch Spinning Reserve as determined by the SCED, subject to Sections 34.4 and 34.10.

(b) Non-Spinning Reserve:

(i) Non-Spinning Reserve provided from Generating Units, Demands, and System Resources must meet the standards specified in Part C of Appendix K;

(ii) The CAISO may Dispatch Non-Spinning Reserve in place of Spinning Reserve to meet Applicable Reliability Criteria;

(iii) The CAISO will Dispatch Non-Spinning Reserve as determined by the SCED, subject to Sections 34.4 and 34.10; and

(iv) The CAISO may Dispatch Non-Spinning Reserve to replace Spinning Reserve if there is a shortfall in Spinning Reserve because of a deficiency of balancing Energy.

#### 34.18.2.3 Replacement of Operating Reserve

If Operating Reserve is used for Energy, the CAISO may replace such Operating Reserve through Dispatch of additional Energy available from Energy Bids submitted to the RTM or through procurement of additional reserves based on optimization of a resource's RTM Ancillary Service Bid and its Energy Bid.

#### 34.18.2.4 Voltage Support

(a) The CAISO may Dispatch Generating Units to increase or decrease MVar output within power factor limits established pursuant to Section 8.2.3.3 (or within other limits specified by the CAISO in any exemption granted pursuant to Section 8.2.3.3) at no cost to the CAISO when required for System Reliability.

(b) The CAISO may Dispatch each Generating Unit to increase or decrease MVar output outside of established power factor limits, but within the range of the Generating Unit's capability curve, at a price calculated in accordance with the CAISO Tariff.

(c) If Voltage Support is required in addition to that provided pursuant to Section 34.18.2.4 (a) and (b), the CAISO will reduce output of Participating Generators. The CAISO will select Participating Generators in the vicinity where such additional Voltage Support is required.

(d) The CAISO will monitor voltage levels at Interconnections to maintain them in accordance with the applicable inter-Balancing Authority Area agreements.

### 34.19 Dispatch Information and Instructions

#### 34.19.1 Dispatch Information to be Supplied by the CAISO

Communication of Dispatch information provided by the CAISO shall be in accordance with Section 6.3.

#### 34.19.2 Dispatch Information to be Supplied by SC

Each Scheduling Coordinator shall be responsible for the submission of Bids and Dispatch of Generation and Demand in accordance with its Day-Ahead Schedule. Each Scheduling Coordinator shall keep the CAISO apprised of any change or potential change in the current status of all Generating Units and Intertie Schedules. This will include any changes in Generating Unit capacity that could affect planned Dispatch and conditions that could affect the reliability of a Generating Unit. Each Scheduling

Coordinator shall immediately pass to the CAISO any information which it receives from a Generator which the Generator provides to the Scheduling Coordinator pursuant to Sections 34.11.1 and 34.11.2. Each Scheduling Coordinator shall immediately pass to the CAISO any information it receives from a MSS Operator which the MSS Operator provides to the Scheduling Coordinator regarding any change or potential change in the current status of all Generating Units, System Units and Intertie Schedules. This information includes any changes in MSS System Units and Generating Unit capacity that could affect planned Dispatch and conditions that could affect the reliability of the System Unit or Generating Unit.

**34.19.3 Dispatch Information to be Supplied by UDCs**

Each UDC shall keep the CAISO informed of any change or potential change in the status of its transmission lines and station equipment at the point of Interconnection with the CAISO Controlled Grid. Each UDC shall keep the CAISO informed as to any event or circumstance in the UDC's service territory that could affect the reliability of the CAISO Controlled Grid. This would include adverse weather conditions, fires, bomb threats, etc.

**34.19.4 Dispatch Information to be Supplied by PTOs**

Each PTO shall report any change or potential change in equipment status of the PTO's transmission assets turned over to the control of the CAISO or in equipment that affects transmission assets turned over to the control of the CAISO immediately to the CAISO (this will include line and station equipment, line protection, Remedial Action Schemes and communication problems, etc.). Each PTO shall also keep the CAISO immediately informed as to any change or potential change in the PTO's transmission system that could affect the reliability of the CAISO Controlled Grid. This would include adverse weather conditions, fires, bomb threats, etc.

Each PTO shall schedule all Outages of its lines and station equipment which are under the Operational Control of the CAISO in accordance with the appropriate procedures in Section 9.3. Each PTO shall coordinate any requests for or responses to Forced Outages on its transmission lines or station equipment which are under the Operational Control of the CAISO directly with the appropriate CAISO Control Center as defined in Section 7.1.

**34.19.5 Dispatch Information to be Supplied by Balancing Authorities**

The CAISO and each adjacent Balancing Authority shall keep each other informed of any change or

potential change in the status of the Interconnection and any changes in the Interconnection's TTC. The CAISO and each adjacent Balancing Authority shall keep each other informed of situations such as adverse weather conditions, fires, etc., that could affect the reliability of any Interconnection.

The CAISO and each adjacent Balancing Authority shall follow all applicable NERC and WECC scheduling procedures. This will include checking the Interconnection schedules for the next Settlement Period prior to the start of the Energy ramp going into that hour. The CAISO and each adjacent Balancing Authority shall check and agree on actual MWh net Interchange after the hour for the previous Settlement Period. One Balancing Authority Area shall change its actual number to reflect that of the other Balancing Authority Area in accordance with WECC standard procedures.

The CAISO and each adjacent Balancing Authority shall exchange MW, MVar, terminal and bus voltage data with each other on a four second update basis. MWh data for the previous hour shall be exchanged once per hour. All MW and MWh data for both the CAISO Balancing Authority Area and the adjacent Balancing Authority Areas must originate from the same metering equipment. All provisions in Sections 4.6.1.1(i) and 4.6.1.1 (ii) refer to information and data obtained from metering used for Balancing Authority Area operations and not metering used for billing and Settlement.

## 34.20 Pricing Imbalance Energy

### 34.20.1 General Principles

FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy shall be paid or charted at the applicable FMM or RTD LMP. Uninstructed Imbalance Energy shall be paid or charged the applicable RTD LMP. These prices are determined using the Dispatch Interval LMPs. The Dispatch Interval LMPs shall be based on the Bid of the marginal Generating Units, System Units, Participating Loads, Reliability Demand Response Resources, and Proxy Demand Resources dispatched by the CAISO to increase or reduce Demand or Energy output in each Dispatch Interval as provided in Section 34.20.2.1.

The CAISO will respond to the Dispatch Instructions issued by the SCED to the extent practical in the time available and acting in accordance with Good Utility Practice. The CAISO will record the reasons for any variation from the Dispatch Instructions issued by the SCED.

### 34.20.2 Determining Real-Time LMPs

#### 34.20.2.1 Dispatch Interval Real-Time LMPs

##### 34.20.2.1.1 Computation

For each Dispatch Interval, the CAISO will compute updated imbalance energy needs and will Dispatch Generating Units, System Units, Dynamic System Resources, Participating Load, Reliability Demand Response Resources, and Proxy Demand Resources according to the CAISO's SCED during that time period to meet imbalance energy requirements. The RTM transactions will be settled at the Dispatch Interval LMPs in accordance with Section 11.5.

##### 34.20.2.1.2 Eligibility to Set the Real-Time LMP

All Generating Units, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources (other than those Reliability Demand Response Resources addressed below in this Section 34.19.2.3), Dynamic System Resources, System Units, or COGs subject to the provisions in Section 27.7, with Bids, including Generated Bids, that are unconstrained due to Ramp Rates or other temporal constraints are eligible to set the LMP, provided that (a) a Generating Unit or a Dynamic Resource-Specific System Resource is Dispatched between its Minimum Operating Limit and the highest MW value in its Economic Bid or Generated Bid, or (b) a Participating Load, a Proxy Demand Resource, a Reliability Demand Response Resource, a Dynamic System Resource that is not a Resource-Specific System Resource, or a System Unit is Dispatched between zero (0) MW and the highest MW value within its submitted Economic Bid range or Generated Bid. A Reliability Demand Response Resource that is dispatched in Real-Time by an entity other than the CAISO in order to mitigate a local transmission or distribution system emergency pursuant to applicable state or local programs, contracts, or regulatory requirements not set forth in the CAISO Tariff, or to perform a test, will not be eligible to set the LMP. If a resource is Dispatched below its Minimum Operating Limit or above the highest MW value in its Economic Bid range or Generated Bid, or the CAISO enforces a resource-specific constraint on the resource due to an RMR or Exceptional Dispatch, the resource will not be eligible to set the LMP. Resources identified as MSS Load following resources are not eligible to set the LMP. A resource constrained at an upper or lower operating limit or dispatched for a quantity of Energy such that its full Ramping capability is

constraining the ability of the resource to be dispatched for additional Energy in target interval, cannot be marginal (i.e., it is constrained by the Ramping capability) and thus is not eligible to set the Dispatch Interval LMP. Non-Dynamic System Resources are not eligible to set the Dispatch Interval LMP. Dynamic System Resources are eligible to set the Dispatch Interval LMP. A Constrained Output Generator that has the ability to be committed or shut off within applicable time periods that comprise the RTM will be eligible to set the Dispatch Interval LMP if any portion of its Energy is necessary to serve Demand. Dispatches of Regulation resources by EMS in response to AGC will not set the RTM LMP. Dispatches of Regulation resources to a Dispatch Operating Target by RTM SCED will be eligible to set the RTM LMP.

## 34.21 Temporary Waiver of Timing Requirements for the RTM

### 34.21.1 Criteria for Temporary Waiver

The CAISO may at its sole discretion implement any temporary variation or waiver of the timing requirements of this Section 34, Section 6.5.4, and Section 6.5.5 (including the omission of any step) if any of the following criteria are met:

(i) such waiver or variation of timing requirements is reasonably necessary to preserve System Reliability, prevent an imminent or threatened System Emergency or to retain Operational Control over the CAISO Controlled Grid during an actual System Emergency.

(ii) because of error or delay, the CAISO requires additional time to fulfill its responsibilities;

(iii) problems with data or the processing of data cause a delay in receiving or issuing Bids or publishing information on the CAISO's secure communication system;

(iv) problems with telecommunications or computing infrastructure cause a delay in receiving or issuing Day-Ahead Schedules or publishing information on the CAISO's secure communication system.

### 34.21.2 Information to be Published on Secure Communication System

If the CAISO temporarily implements a waiver or variation of such timing requirements, the CAISO will publish the following information on the CAISO's secure communication system as soon as practicable:

(i) the exact timing requirements affected;

(ii) details of any substituted timing requirements;

(iii) an estimate of the period for which this waiver or variation will apply; and

(iv) reasons for the temporary waiver or variation.

### 34.22 Real-Time Dispatch of RDRRs

The CAISO may issue an Exceptional Dispatch Instruction for the Reliability Demand Response Resource for reliability or to perform a test as provided in Section 34.11.3. An entity other than the CAISO that has a contractual or tariff-based right to do so, may dispatch a Reliability Demand Response Resource in Real-Time in order to (1) mitigate a local transmission or distribution system emergency pursuant to applicable state or local programs, contracts, or regulatory requirements not set forth in the CAISO Tariff or (2) perform a test. If an entity other than the CAISO dispatches a Reliability Demand Response Resource in Real-Time in order to mitigate a local transmission or distribution system emergency or perform a test, the Scheduling Coordinator for the Demand Response Provider representing the Reliability Demand Response Resource shall immediately inform the CAISO, through the CAISO's Outage reporting system, that such dispatch has occurred or will occur and the MW amount of the dispatch.

#### 34.22.1 Testing of RDRRs

The CAISO may issue one (1) unannounced Exceptional Dispatch Instruction per year to each Reliability Demand Response Resource pursuant to Section 34.11.2 in order to test the availability and performance of the Reliability Demand Response Resource. The Demand Response Provider representing the Reliability Demand Response Resource may also test its Reliability Demand Response Resources in coordination with the CAISO. Any Demand Response Provider initiated testing will not trigger any CAISO settlement. The CAISO will share the results of all tests of the Reliability Demand Response Resource with the applicable Local Regulatory Authority. All tests of the Reliability Demand Response Resource shall count toward its RDRR Availability Limit. If, prior to the performance of a CAISO unannounced yearly test, the Reliability Demand Response Resource provides Demand Response Services in that year, its provision of Demand Response Services will eliminate the need for that year's test. Testing of Reliability Demand Response Resources will be conducted as described in the applicable Operating Procedure or Business Practice Manual.

# 35. Market Validation and Price Correction

## 35.1 Market Validation

The CAISO shall monitor the Market Clearing software solutions for the Day-Ahead Market, the RUC process, and the Real-Time Market for all market intervals to determine whether prices are calculated accurately, consistent with the provisions of the CAISO Tariff. To the extent reasonably practicable, the CAISO shall correct erroneous prices identified through such monitoring and re-run the relevant CAISO Markets prior to publication of prices on its Open Access Same-Time Information System (OASIS) or provision of prices directly to Market Participants, if applicable.

## 35.2 Timing of Price Correction Process

All prices for each Trading Day shall become subject to the CAISO's price correction process once the CAISO publishes them on its OASIS or provides them directly to Market Participants, if applicable. The price correction process consists of the process in which the CAISO verifies, determines the corrections it will make, conducts the correction, and posts the corrected process. For Day-Ahead Market prices, the price correction process for each Trading Day shall end no later than the end of the third Business Day following the Trading Day to which the Day-Ahead Market applies. For the Real-Time Market prices, the price correction process for each Trading Day shall end no later than the end of the fifth Business Day following that Trading Day. After these timelines have elapsed, the posted prices are final and used for Settlement purposes unless the CAISO must modify published prices for the reasons specified in Section 35.3. The CAISO shall provide notification on the CAISO Website or its OASIS, when it has reasonable grounds to believe that it may have to change published prices for reasons stated in Section 35.3.

## 35.3 Finality of Prices Subject to the Price Correction Process

All prices are provisional until the CAISO has completed the price correction process for each CAISO Market within the timeframe specified in Section 35.2. After the timelines specified in Section 35.2, the CAISO will not modify published prices except for the reasons specified in this Section 35.3.

### 35.3.1 Price Corrections and Changes Pursuant to FERC Orders

The CAISO will correct prices and further modify published prices after the timelines specified in Section 35.2, if so directed by the Federal Energy Regulatory Commission.

### 35.3.2 Processing and Publication Issues

The CAISO may make changes to published prices after the expiration of the timelines specified in Section 35.2 to remedy a price correction processing or publication issue, which consist of the types of issues further defined in this Section 35.3.2. For cases where the CAISO must remedy a price correction processing or publication issue arising from the separation or isolation from the Market Area of an EDAM Entity Balancing Authority Area or EIM Entity Balancing Authority Area, the CAISO must make any such changes within thirty (30) Business Days of the affected Trading Day. In all other cases, the CAISO must make any such changes within twenty (20) Business Days of the affected Trading Day. After the expiration of the applicable deadline, in the event of a discrepancy between prices posted on the CAISO's OASIS and prices provided to Scheduling Coordinators through other means, the CAISO will use the price posted on OASIS for Settlement purposes unless as specified in Section 35.3.1. The CAISO will only remedy processing and publication pursuant to this section for cases in which the CAISO has actually identified and logged in its systems the need for a price correction for specific CAISO Markets intervals within the timeframe specified in Section 35.2, but cannot complete the price correction and post the corrected prices within that timeframe for the specific reasons described below. To the extent the CAISO is aware of a processing or publication issue prior to the expiration of the timeframe specified in 35.2, the CAISO will issue a public notification of the affected intervals, and the time at which it expects to remedy the issue, as soon as practicable. To the extent the CAISO only becomes aware of the issue after the expiration of the timeframe specified in Section 35.2, the CAISO will issue a public notification with this same information, as soon as practicable. For purposes of the requirements in this Section 35.3, processing or publication issues shall consist of:

a) **Volumetric processing issue:** The CAISO cannot complete the corrections and post the corrected prices within the timeframes specified in Section 35.2 because the price correction affects a large number of market intervals.

b) **Hardware or software issues:** A software or hardware issue that impeded the CAISO from processing price corrections or publishing the corrected prices by the end of the timeframes specified in Section 35.2.

c) **Business process issues:** A limitation, failure or error in implementing an established

and identifiable business process that causes the publication of an incorrect price that is either corrected erroneously, or left uncorrected within the timeframes specified in Section 35.2.

d) **Complex manual corrections:** The CAISO has identified and logged into its systems within the timeframe specified in Section 35.2 the need for price corrections that require specifically tailored methodologies to implement the correction because of the complexity of the issue, which in some cases may span across the CAISO Markets, and implementing this price corrections will require the publication of corrected prices beyond the timeframe specified in Section 35.2.

### 35.4 Scope of Price Corrections

The CAISO may correct all financially binding prices, including all prices released pursuant to Section 6, whenever the CAISO identifies an invalid market solution or invalid prices in an otherwise valid market solution. The circumstances in which the CAISO may determine that an invalid market solution or invalid prices exist include the following: the occurrence of data input failure; the occurrence of hardware or software failure; or a result that is inconsistent with the CAISO Tariff. The reposting of prices to remedy processing or publication issue as discussed in Section 35.3 does not constitute a price correction.

### 35.5 Price Correction Methodology

The CAISO shall correct prices to conform with the relevant provisions of the CAISO Tariff to the extent such correction is practicable. To the extent such correction is not practicable, the CAISO shall correct prices so that they are as close as reasonably possible to the prices that should have resulted under the relevant provisions of the CAISO Tariff, using the most accurate data available, and in a manner that is consistent with the prevalent system conditions existing at that time. The CAISO shall correct prices using the first applicable and practicable correction method of the following:

(a) The CAISO shall selectively recalculate incorrect financially binding prices when the invalid prices are isolated and can be corrected such that no other financially binding prices are affected by the correction.

(b) If the correction method in Section 35.5(a) is not applicable and practicable, the CAISO shall recalculate prices for the invalidated market interval when all market inputs

applicable to the market interval to be recalculated are either (i) preserved from the original market run, for data that was not the cause of the invalidated price, (ii) corrected, in the case of invalid initial data in the initial Market Clearing, or (iii) recreated or replicated data using the best available alternate data sources, in the case of missing data in the initial Market Clearing.

(c) If the correction methods in Sections 35.5(a) and 35.5(b) are not applicable and practicable, the CAISO shall use, in place of prices for the binding interval of an invalidated market solution, replicated prices from binding or advisory intervals from the validated market solution in which the market conditions were most similar to the market conditions in the invalidated market solution, for the affected interval. In no case will an invalidated Day-Ahead Market solution be replaced with a valid Day-Ahead Market solution from a previous Trading Day. The method set forth in this Section 35.5(c) shall apply in the Day-Ahead Market only when some but not all hourly market intervals within a valid market run are deemed to be invalid and prices are not recalculated pursuant to the method set forth in Section 35.5(b), above.

The CAISO shall include details concerning the CAISO's price correction methodology in the applicable Business Practice Manual.

**35.6 Price Correction Report**

The CAISO shall summarize all price corrections that occur for each trade day in a report that shall be posted to the public. The report shall be posted by the Saturday of the week after the week in which the CAISO processed the price correction. For all price corrections that occur during the period covered by the report, the price correction report shall specify: (a) the market intervals affected, (b) the price locations affected, (c) a brief description of the reason for the price correction, and (d) the method of price corrective action undertaken. In the event the CAISO fails to post this report, the CAISO will endeavor to post the report within six months of the affected calendar week, after which the failed report will no longer be issued.

# 36. Congestion Revenue Rights

## 36.1 Overview of CRRs and Procurement of CRRs

The CAISO distributes CRRs through an allocation and auction process as described in this Section 36. CRR Holders and Market Participants eligible to become CRR Holders can also buy, sell, or trade CRRs bilaterally as described in Section 36.7.

## 36.2 Types of CRR Instruments

CRRs can be CRR Obligations or CRR Options. Each CRR is fully specified by its type (CRR Obligation or CRR Option), its CRR Source(s), its CRR Sink(s), its MW quantity, and the Trading Hours for which it is valid. The CRR Source(s) and CRR Sink(s) determine the direction of the CRR, which is from CRR Source(s) to CRR Sink(s).

### 36.2.1 CRR Obligations

A CRR Obligation entitles its holder to receive a payment from the CAISO or obligates it to make a payment to the CAISO as detailed in Section 11.2.4.4.

### 36.2.2 CRR Options

A CRR Option entitles its holder to receive payments as detailed in Section 11.2.4.4.

### 36.2.3 Point-To-Point CRRs

A Point-to-Point CRR is a CRR Option or CRR Obligation defined from a single CRR Source to a single CRR Sink.

### 36.2.4 [Not Used]

### 36.2.5 Monthly CRRs

Monthly CRRs have a term of one month, are differentiated by time of use periods (on-peak and off-peak), and are available through the monthly CRR Allocation and CRR Auction processes in advance of each month.

### 36.2.6 Seasonal CRRs

Seasonal CRRs have a term of three months, and are differentiated by the different time of use periods (on-peak and off-peak) for each day within a season. Seasonal CRRs are made available through the annual CRR Allocation and CRR Auction processes conducted each year prior to the year in which the Seasonal CRR applies.

### 36.2.7 Long Term CRRs

Long Term CRRs have a term of ten years. Long Term CRRs are seasonal and are differentiated by the different time of use periods (on-peak and off-peak) for each day within a season. When Long Term CRRs are nominated and allocated they apply to the same season and time of use period for each year of the ten-year term and represent binding ten-year commitments by the CRR Holders that hold Long Term CRRs. Long Term CRRs are nominated and allocated to LSEs in Tier LT that is one tier in the sequence of tiers in the annual CRR Allocation process. Long Term CRRs are not available through the CRR Auction.

### 36.2.8 Limitations on Funding of CRRs

Payments of CRR-related payments may be suspended if a System Emergency as described in Section 7.7.4, an Uncontrollable Force as described in Section 14, or a Participating TO's withdrawal of facilities or Entitlements from the CAISO Controlled Grid as described in Section 36.8.7 leaves the CAISO with inadequate revenues.

## 36.3 CRR Specifications

### 36.3.1 Quantity

CRRs are distributed and settled in no less than one-thousandth of a MW denomination.

### 36.3.2 Term

CRRs are Monthly CRRs, Seasonal CRRs, Long Term CRRs or Merchant Transmission CRRs. For CRR purposes, the applicable seasons are conventional calendar quarters as defined in the Business Practice Manual.

### 36.3.3 On-Peak and Off-Peak Specifications

CRRs are defined either for on-peak or off-peak hours as specified by the CAISO in the applicable Business Practice Manuals consistent with the WECC standards at the time of the relevant CRR Allocation or CRR Auction.

## 36.4 FNM for CRR Allocation and CRR Auction

The CAISO shall prepare the CRR FNM that it will use in the CRR Allocation and CRR Auction consistent with the following requirements:

### 36.4.1 Adjustments to the FNM in Preparing the CRR FNM

When the CAISO conducts its CRR Allocation and CRR Auction, the CAISO shall use the most up-to-date DC FNM which is based on the AC FNM used in the Day-Ahead Market.

#### 36.4.1.1 Seasonal Available CRR Capacity

The CAISO shall base the Seasonal Available CRR Capacity on the DC FNM, taking into consideration the following, all of which are discussed in the applicable Business Practice Manual:

(i) any long-term scheduled transmission Outages, including planned outages submitted pursuant to Section 9.3.6;

(ii) TTC adjusted for any long-term scheduled derates;

(iii) a downward adjustment due to TOR or ETC as determined by the CAISO; and

(iv) the impact on transmission elements used in the annual CRR Allocation and Auction of:

(a) transmission Outages or derates that are not scheduled at the time the CAISO conducts the Seasonal CRR Allocation or Auction determined through a methodology that calculates the breakeven point for revenue adequacy based on historical Outages and derates; and

(b) known system topology changes, both as further defined in the Business Practice Manuals.

#### 36.4.1.2 Monthly Available CRR Capacity

The CAISO shall base the Monthly Available CRR Capacity on the DC FNM, taking into consideration:

(i) any scheduled transmission Outages known at least thirty (30) days in advance of the start of that month as submitted for approval consistent with the criteria specified in Section 36.4.3;

(ii) adjustments to compensate for the expected impact of Outages that are not required to be scheduled thirty (30) days in advance, including unplanned transmission Outages;

(iii) adjustments to restore Outages or derates that were applied for use in calculating Seasonal Available CRR Capacity but are not applicable for the current month;

(iv) any new transmission facilities added to the CAISO Controlled Grid that were not part of the DC FNM used to determine the prior Seasonal Available CRR Capacity and that have

already been placed in-service and energized at the time the CAISO starts the applicable monthly process;

(v) TTC adjusted for any scheduled derates or Outages for that month;

(vi) a downward adjustment due to TOR or ETC as determined by the CAISO; and

(vii) adjustments for possible unscheduled flow at the Interties.

#### 36.4.1.3 Transmission Capacity for CRR Allocation and CRR Auction

With the exception of the Tier LT, the CAISO makes available sixty-five percent (65%) of Seasonal Available CRR Capacity for the annual CRR Allocation and CRR Auction processes, and one hundred percent (100%) of Monthly Available CRR Capacity for the monthly CRR Allocation and CRR Auction processes. The CAISO makes available sixty percent (60%) of Seasonal Available CRR Capacity in the Tier LT. Available capacity at Scheduling Points shall be determined in accordance with Section 36.8.4.2 for the purposes of CRR Allocation and CRR Auction of CRRs that have a CRR Source identified at a Scheduling Point. Before commencing with the annual or monthly CRR Allocation and CRR Auction processes, the CAISO may distribute Merchant Transmission CRRs and will model those as fixed injections and withdrawals on the DC FNM to be used in the allocation and auction. These fixed injections and withdrawals are not modified by the Simultaneous Feasibility Test. Similarly, before commencing the annual or monthly CRR Allocation and CRR Auction processes, the CAISO will model any previously allocated Long Term CRRs as fixed injections and withdrawals on the DC FNM to be used in the CRR Allocation and CRR Auction. These fixed injections and withdrawals are not modified by the Simultaneous Feasibility Test, which will ensure no degradation of previously allocated and outstanding Long Term CRRs due to the CRR Allocation and CRR Auction processes. Maintaining the feasibility of allocated Long Term CRRs over the length of their terms also is accomplished through the transmission planning process in Section 24.

### 36.4.2 Simultaneous Feasibility

The annual and monthly CRR Allocation processes release CRRs to fulfill CRR nominations as fully as possible subject to a Simultaneous Feasibility Test. To the extent that nominations are not simultaneously feasible, the nominations are reduced in accordance with the CRR Allocation optimization formulation until simultaneous feasibility is achieved. The CRR Allocation optimization formulation,

detailed in the Business Practice Manuals, utilizes a weighted least squares objective function that applies pro-rated reductions in flows on a binding constraint based on squares of the Power Transfer Distribution Factor of each CRR nomination for the binding constraint. In addition to the adjustments in Section 36.4.1.3, the Simultaneous Feasibility Test for each CRR Allocation considers:

(a) CRRs representing ETCs, Converted Rights and any TOR capacity that was not captured in the adjustments described in Section 36.4, which the CAISO deems necessary to prevent the Congestion Settlement of ETCs, Converted Rights, and TORs from causing revenue inadequacy of allocated and auctioned CRRs;

(b) In the case of the monthly CRR Allocation, the CRRs already released for that month in the annual CRR Allocation and Auction; and,

(c) The CRRs allocated in previous CRR Allocation tiers as described in Sections 36.8.3.1 through 36.8.3.6.

The CAISO will be responsible for submitting CRR nominations associated with ETC and Converted Rights Self-Schedules. These nominations will be Point-to-Point CRR nominations.

In the event that transmission Outages and derates modeled for the monthly CRR Allocation and CRR Auction render previously issued Seasonal CRRs infeasible, the CAISO will increase the transfer capacity on the overloaded facilities just enough to render all Seasonal CRRs issued for the month feasible without creating any additional capacity beyond what is needed for the feasibility of the Seasonal CRRs. The CAISO will announce these adjustments to the market prior to conducting the monthly CRR Allocation and CRR Auction so that Candidate CRR Holders can take these facts into consideration in preparing their nominations and bids.

### 36.4.3 Outages that may Affect CRR Revenue; Scheduling Requirements

#### 36.4.3.1 Submission Timelines

Pursuant to Section 9.3.6.4.2, an Operator shall submit all known CRR Transmission Maintenance Outages to the CAISO for approval no less than thirty (30) days in advance of the first day of the month in which the Operator proposes to begin the Outage. Pursuant to Section 9.3.7.1, Operators shall also provide their CRR Transmission Maintenance Outages plan by July 1 of each year, for Outages they plan to take the following year.

#### 36.4.3.2 CRR Transmission Maintenance Outage

CRR Transmission Maintenance Outages are those Outages that may have a significant effect upon CRR revenue adequacy, which are defined as outages that affect transmission facilities on the CAISO Controlled Grid that:

(a) are rated above 200 kV; or

(b) are part of any defined flow limit as described in a CAISO Operating Procedure; or

(c) were out of service in the last three (3) years and for which the CAISO determined a special flow limit was needed for real-time operation.

CRR Transmission Maintenance Outages consist only of outages that: (1) meet the criteria specified above; (2) involve system configuration changes that affect power flow in the CRR DC FNM; and (3) cannot be initiated and completed within a twenty-four (24) hour period.

The following types of Outages need not be submitted for approval within this thirty-day time frame and will not be designated as Forced Outages if they otherwise comply with the requirements in Section 9.3.6: (1) Outages previously approved by CAISO that are moved within the same calendar month either by the CAISO or by request of the Participating TO; and (2) Outages associated with CAISO-approved allowable transmission maintenance activities during restricted maintenance operations as covered in CAISO Operating Procedures.

#### 36.4.3.3 Operating Procedures

A list of the transmission facilities that satisfy criteria (b) and (c) in Section 36.4.3.2 is provided in the Operating Procedures. The CAISO will review the list annually in collaboration with the Participating TOs or will revise the list as appropriate; provided, however, that the CAISO will ultimately determine the lines that are included in the list.

### 36.5 Candidate CRR Holder and CRR Holder Requirements

Any entity that holds or intends to hold CRRs must register and qualify with the CAISO and comply with the other terms of this Section, regardless of whether they acquire CRRs by CRR Allocation, CRR Auction, the Secondary Registration System, or are assigned CRRs for Load Migration.

#### 36.5.1 Creditworthiness Requirements

All CRR Holders and Candidate CRR Holders must comply fully with all creditworthiness requirements as

provided in Section 12 and Section 12.6 and as further developed in the applicable Business Practice Manuals. The amount of available credit for participating in a CRR Auction cannot exceed the entity's Aggregate Credit Limit as provided in Section 12.

#### 36.5.2 Required Training

CRR Holders and Candidate CRR Holders must attend a training class at least once prior to participating in the CRR Allocations or CRR Auctions. The CAISO may update training requirements annually or on an as-needed basis. Unless granted a waiver by the CAISO, Candidate CRR Holders and CRR Holders shall at all times have in their employment a person, or have obtained the services of a third party or consultant, that has attended the CAISO's CRR training class and shall notify the CAISO as soon as practicable of a change in such status.

### 36.6 [Not Used]

### 36.7 Bilateral CRR Transactions

#### 36.7.1 Transfer of CRRs

##### 36.7.1.1 General Provisions of CRR Transfers

A CRR Holder may sell or otherwise transfer CRRs in increments of at least one-thousandth of a MW. Sales or other such transfers must be for at least a full day term consistent with the on-peak or off-peak specification of the CRR. The transferee may be any entity that is a Candidate CRR Holder or a CRR Holder consistent with the CAISO Tariff and the applicable Business Practice Manuals. All CRRs that are so sold or otherwise transferred by the CRR Holder continue to be subject to the relevant terms and conditions set forth in the CAISO Tariff and the applicable Business Practice Manuals.

##### 36.7.1.2 Specific Provisions for Transfer of Long Term CRRs

A CRR Holder that holds Long Term CRRs may sell or transfer through the Secondary Registration System MW portions and temporal segments of a Long Term CRR corresponding to the current calendar year as well as the calendar year covered by the most recently completed annual CRR Allocation. For such sales or transfers the Long Term CRR will be subject to the same limits on granularity that apply to Seasonal CRRs and Monthly CRRs, as specified in Section 36.7.1. A CRR Holder that holds Long Term CRRs may not transfer or sell through the Secondary Registration System any temporal segment of a Long Term CRR beyond the calendar year covered by the most recently completed annual CRR

Allocation. For temporal segments beyond the year covered by the most recently completed annual CRR Allocation, the CRR Holder to whom a Long Term CRR was originally allocated remains the holder of record of the entire Long Term CRR for CAISO Settlement purposes. Allocated Long Term CRRs represent binding ten-year commitments by a CRR Holder that holds Long Term CRRs and may not be terminated or otherwise modified by the CRR Holder prior to the end of the Long Term CRR's ten-year term.

### 36.7.2 Responsibility of the CAISO

The CAISO provides Market Participants a Secondary Registration System to facilitate and track CRR bilateral transactions. The bulletin board of the Secondary Registration System enables any entity that wishes to purchase or sell CRRs to post that information.

### 36.7.3 CRR Holder Reporting Requirement

CRR Holders must report to the CAISO by way of the Secondary Registration System all bilateral CRR transactions consistent with the terms of this CAISO Tariff and the Business Practice Manuals. Both the transferor and the transferee of the CRRs must register the transfer of the CRR with the CAISO using the Secondary Registration System five (5) Business Days prior to the effective date of transfer of revenues associated with a CRR, or with sufficient time necessary for the CAISO to evaluate the creditworthiness of the transferor and transferee, whichever is shorter. The CAISO shall not transfer any Settlement related to any CRR until such time that the CRR transfer has been successfully recorded through the SRS and the transferee has met all the creditworthiness requirements as specified in Section 12 and Section 12.6. Both the transferor and transferee shall submit the following information to the Secondary Registration System: (i) the effective start and end dates of the transfer of the CRR; (ii) the identity of the transferor; (iii) the identity of the transferee; (iv) the quantity of CRRs being transferred; (v) the CRR Sources and CRR Sinks of the CRRs being transferred; and (vi) time of use period of the CRR. The transferee must meet all requirements of CRR Holders, including disclosure to the CAISO of all entities with which the transferee is affiliated that are CRR Holders or Market Participants as defined in Section 36.5.

## 36.8 CRR Allocation

The CAISO allocates CRRs to Load Serving Entities serving Load internal to CAISO Balancing Authority Area, including MSS Operators as described in Section 36.10, as well as Qualified OBAALSEs. All CRRs

allocated under the terms of this Section 36.8 will be CRR Obligations.

### 36.8.1 Structure of the CRR Allocation Process

The CAISO conducts an annual CRR Allocation: (i) once a year for the entire year for Seasonal CRRs; and (ii) once a year for the ten-year term of Long Term CRRs. The annual CRR Allocation releases Seasonal CRRs and Long Term CRRs for four seasonal periods. The CAISO also conducts monthly CRR Allocations twelve times a year in advance of each month. Within each annual and monthly CRR Allocation process the CAISO performs distinct allocation processes for each on-peak and off-peak time of use specification. The CRR Allocation process for CRR Year One is a distinct process that differs from subsequent CRR Allocations as described in Sections 36.8.3.1 and 36.8.3.2. Each CRR Allocation procedure is based on nominations to the CAISO by LSEs or Qualified OBAALSEs eligible to receive CRRs. The CAISO performs adjustments to the Seasonal CRRs and Long Term CRRs allocated to LSEs as necessary to reflect Load Migration between LSEs, as described in Section 36.8.5. A timeline of the CRR Allocation and CRR Auction processes is contained in the BPMs.

### 36.8.2 Load Eligible for CRRs and Eligible CRR Sinks

Any entity that wishes to participate in the CRR Allocation process must provide information that demonstrates that it has an obligation to serve load. An LSE's eligibility for allocation of CRRs is measured by the quantity of Load that it serves that is exposed to Congestion Charges for the use of the CAISO Controlled Grid as determined in Sections 36.8.2.1 and 36.8.2.2. An OBAALSE's eligibility for allocation of CRRs is also measured by the quantity of load that it serves that is exposed to Congestion Charges for the use of the CAISO Controlled Grid as determined in Section 36.9.3. For LSEs, the information necessary may include, but is not limited to, Settlement Quality Meter Data or relevant documents filed with the California Energy Commission. For OBAALSEs, the necessary information may include, but is not limited to, historical tagged Real-Time Interchange Export Schedules and historical load data reflecting the load they serve that is exposed to Congestion Charges for the use of the CAISO Controlled Grid. In addition, each such OBAALSE shall support its data submission with a written sworn affidavit by an executive authorized to represent the OBAALSE attesting to the accuracy of the data, and the CAISO will have the right to audit the raw data and calculations used to develop the submitted data set. An LSE serving internal Load is eligible for CRRs up to its Seasonal CRR Eligible Quantity or

Monthly CRR Eligible Quantity, which is derived from its Seasonal CRR Load Metric or Monthly CRR Load Metric as described in Sections 36.8.2.1 and 36.8.2.2, respectively. Seasonal CRR Eligible Quantities and Monthly CRR Eligible Quantities for Qualified OBAALSEs are determined as provided in Section 36.9.3. These quantities are calculated for each LSE or Qualified OBAALSE separately for each combination of season and time of use period for the annual CRR Allocation process, and for each time of use period for each monthly CRR Allocation process, and for each CRR Sink at which the eligible LSE serves Load or the Qualified OBAALSE exports Energy from the CAISO Balancing Authority Area. MSS eligibility for CRRs will account for net or gross MSS Settlement in accordance with Section 4.9.13.1. If the MSS Operator elects net Settlement, LSEs for such MSS Load shall submit CRR Sink nominations at the MSS LAP. If the MSS elects for gross Settlement, LSEs for such MSS Load shall submit CRRs Sink nominations at the applicable Default LAP. Load that is Pumped-Storage Hydro Units but is not Participating Load may be scheduled and settled at a PNode or Custom Load Aggregation Point and therefore LSEs for such Load shall submit CRR Sink nominations at the applicable PNode or Custom Load Aggregation Point. Load that is a Participating Load that is also aggregated is scheduled and settled at a Custom Load Aggregation Point that is customized specifically for such Load and, therefore, LSEs for such Participating Load shall submit CRR Sink nominations at the Custom Load Aggregation Point. Load that is Participating Load is scheduled and settled at an individual PNode, and therefore LSEs for such Load shall submit CRR Sink nominations at the applicable PNode. Load that is non-Participating Load, and (i) is not Load associated with Pumped-Storage Hydro Units, (ii) is not Load associated with ETCs, TORs, or (iii) is not Load associated with MSS Operators that elect net Settlement, will be scheduled and settled at the Default LAP. Therefore, LSEs for such Load shall submit CRR Sink nominations at their assigned Default LAP or Default LAPs if the Load they serve is located in more than one Default LAP. In tier 2 and tier 3 of the annual process and tier 1 and tier 2 of the monthly process, such LSEs may also submit CRR Sink nominations at a Sub-LAP of their assigned Default LAP. The CAISO will make available a list of allowable CRR Sources and Sinks to be used in the allocation at approximately the same time as the CAISO releases each CRR FNM. The allowable CRR Sinks will be consistent with the applicable CRR FNM. In the event that unforeseen changes to network conditions arise after the initial release of the list of allowable CRR Sinks and warrant revisions to that list, the

CAISO will provide updates to the list prior to the closing of nominations for the CRR Allocation.

#### 36.8.2.1 Seasonal CRR Eligibility Quantity

Where feasible, the CAISO constructs Load duration curves by season and time of use periods for the annual CRR Allocation process for each LSE based on meter data already within the CAISO's possession. If the CAISO does not possess the needed meter data or it is otherwise not feasible for the CAISO to calculate the Load duration curves based on data within its possession, then the Load duration curves will be based on the LSE's submission to the CAISO of its historical hourly Load data for the prior year, for each LAP within which the LSE serves Load. For load that is subject to variable and difficult-to-predict hydrological conditions, the LSE has the option to submit the load's five-year rolling average historical hourly load data and the CAISO will use the submitted five-year average data for constructing the load duration curves. Once the LSE has exercised this option, the LSE must continue to submit five-year rolling average historical hourly load data for the annual CRR Allocation process in subsequent years. An LSE's Seasonal CRR Load Metric for each season and time of use period is the MW level of Load that is exceeded only in 0.5% of the hours based on the LSE's historical Load data. In the event that the LSE has lost or gained net Load through Load Migration during the course of the prior year, the Seasonal CRR Load Metric will be adjusted to reflect the loss or gain in accordance with the applicable BPM. The CAISO calculates an LSE's Seasonal CRR Eligible Quantity by first adjusting that LSE's Seasonal CRR Load Metric based on load migration and subtracting the quantity of Load served by its TORs, ETCs, and Converted Rights to form the LSE's Adjusted Load Metric, and then multiplying the result by 0.75.

#### 36.8.2.2 Monthly CRR Eligible Quantity

##### 36.8.2.2.1 Based on Load Forecast

Each month, LSEs whose Load forecasts are verifiable in accordance with Section 36.8.6 will submit hourly Load forecast data for the relevant month. Each month the CAISO will use the LSE's submitted hourly Load forecast data for the relevant month to calculate two Load duration curves (one on-peak and one off-peak Load duration curve for the applicable month) to form the basis for monthly allocations for each CRR Sink in which the LSE serves Load. Each LSE's submitted hourly forecast data should reflect any Load growth that is not due to Load Migration as well as the effect of net Load Migration for that LSE.

The Monthly CRR Load Metric for such Load is the MW level of Load that is exceeded only in 0.5% of the hours based on the LSE's submitted Load forecast. The CAISO will calculate an LSE's Monthly CRR Eligible Quantity by subtracting from that LSE's Monthly CRR Load Metric the quantity of Load served by its TORs, ETCs, and Converted Rights. In addition the CAISO will adjust the LSE's Monthly CRR Eligible Quantity, if such an adjustment is determined to be necessary pursuant to Section 36.8.6.

#### 36.8.2.2.2 Based on Historical Load Data

The Monthly CRR Load Metric for an LSE that serves Load that is eligible for CRRs but whose Load forecast is not verifiable in accordance with Section 36.8.6 is established based on five (5) years of prior hourly historical Load data for that Load for the same applicable month. The LSE must provide the historical Load data to the CAISO if the CAISO does not possess that data. Such LSE may submit fewer years of historical data for that Load if granted a waiver by the CAISO because five (5) years of such Load data does not exist. Each month the CAISO will use the hourly historical Load data for the relevant month to calculate two (2) Load duration curves for each year of historical Load data (one on-peak and one off-peak Load duration curve for the applicable month) for each CRR Sink in which such Load is located. For each Load duration curve, the CAISO will calculate the MW level of Load that is exceeded only in 0.5% of the hours. The CAISO will calculate an LSE's Monthly CRR Eligible Quantity for each on-peak and off-peak period for such Load by averaging the 0.5% exceeded values for the five years of data (or fewer years, if the CAISO does not possess five years of data and the CAISO granted the LSE waiver to submit fewer than five years of data), and then subtracting the quantity of Load served by its TORs, ETCs, and Converted Rights.

### 36.8.3 CRR Allocation Process

#### 36.8.3.1 Annual CRR Allocation for CRR Year One

The annual CRR Allocation process for CRR Year One consists of a sequence of four (4) tiers for each season and time of use period (on-peak and off-peak). Each tier will feature a SFT applied to the CRR nominations submitted by eligible LSEs or Qualified OBAALSEs, the results of which are provided by the CAISO to the respective LSEs or Qualified OBAALSEs prior to the LSEs or Qualified OBAALSEs submitting their nominations to the next tier. Allocations of CRRs in each tier are considered final once they are provided by the CAISO to the respective LSEs or Qualified OBAALSEs. After each tier, LSEs or

Qualified OBAALSEs will have an amount of time as specified in the Business Practice Manual after their receipt of the results of each tier to submit their nominations for the next tier, if there is one. The annual CRR Allocation allows LSEs or Qualified OBAALSEs to submit nominations for Seasonal CRRs up to their Seasonal CRR Eligible Quantities for each season of the relevant year, each time of use CRR Sink as provided in Sections 36.8.3.1.1, 36.8.3.1.2 and 36.8.3.1.4. The annual CRR Allocation also allows LSEs to submit nominations for Long Term CRRs up to twenty percent (20%) of their Adjusted Load Metric for each season, time of use period and each LAP; except that an LSE that demonstrates that more than twenty percent (20%) of its Adjusted Load Metric is covered by a combination of long-term procurement arrangements of ten (10) years or greater and ownership of Generation resources is able to submit nominations for a greater amount as specified in Section 36.8.3.1.3. As provided in Section 36.8.3.1.3.2, the annual CRR Allocation allows a Qualified OBAALSE to submit nominations for Long Term CRRs up to fifty percent (50%) of its Adjusted Load Metric for each season, time of use period and Scheduling Point provided that the Qualified OBAALSE demonstrates that all of its nominated Long Term CRR Sources are covered by a combination of long-term procurement arrangements of ten (10) years or greater and ownership of generation resources. The annual CRR Allocation for CRR Year One will be conducted in the following sequence of tiers:

**36.8.3.1.1 Tier 1.**

In tier 1, an LSE or a Qualified OBAALSE may nominate and the CAISO will allocate to the LSE or a Qualified OBAALSE Seasonal CRRs up to fifty percent (50%) of its Seasonal CRR Eligible Quantity for each season, time of use period and CRR Sink. An LSE or a Qualified OBAALSE can nominate Seasonal CRRs sourced at Trading Hubs in accordance with the LSE's or Qualified OBAALSE's verified CRR Sources. In running the SFT the CAISO shall disaggregate the Seasonal CRR nominations sourced at Trading Hubs as described in Section 36.8.4.1. All allocated CRRs that result from such disaggregation will be Point-to-Point CRRs each of whose CRR Source is a Generating Unit PNode that is an element of the Trading Hub.

**36.8.3.1.2 Tier 2.**

In tier 2, an LSE or a Qualified OBAALSE may nominate and the CAISO will allocate to the LSE or Qualified OBAALSE Seasonal CRRs up to seventy-five percent (75%) of its Seasonal CRR Eligible

Quantity for each season, time of use period and CRR Sink, minus the quantity of CRRs allocated to that LSE or Qualified OBAALSE in tier 1. An LSE or a Qualified OBAALSE can nominate Seasonal CRRs sourced at Trading Hubs in accordance with the LSE's or Qualified OBAALSE's verified CRR Sources. In tier 2 an LSE or a Qualified OBAALSE with a verified Trading Hub CRR Source may nominate up to seventy-five (75%) of the Adjusted Verified CRR Source Quantity for that Trading Hub, minus the total MW quantity of Point-to-Point CRRs the LSE or Qualified OBAALSE was allocated in tier 1 as a result of its tier 1 nomination of CRRs sourced at that Trading Hub. In running the SFT the CAISO shall disaggregate the Seasonal CRR nominations sourced at Trading Hubs as described in Section 36.8.4.1. All allocated CRRs that result from such disaggregation will be Point-to-Point CRRs each of whose CRR Source is a Generating Unit PNode that is an element of the Trading Hub.

**36.8.3.1.3 Tier LT.**

Tier LT will follow tier 2 for CRR Year One. In Tier LT, an LSE or a Qualified OBAALSE may nominate Long Term CRRs from the Seasonal CRRs allocated in tiers 1 and 2 as provided in this Section 36.8.3.1. The cleared Point-to-Point CRRs awarded in tier 1 and tier 2 that resulted from disaggregated CRR nominations sourced at a Trading Hub may not be nominated in Tier LT in CRR Year One. Any Point-to-Point CRRs awarded as a result of disaggregated CRR nominations sourced at a Trading Hub, as described in Section 36.8.4.1, must be nominated as Trading Hub CRRs as described in this Section 36.8.3.1.3. In running the SFT the CAISO shall disaggregate the Seasonal CRR nominations sourced at Trading Hubs as described in Section 36.8.4.1. All allocated Long Term CRRs that result from such disaggregation will be Point-to-Point CRRs each of whose CRR Source is a Generating Unit PNode that is an element of the Trading Hub.

**36.8.3.1.3.1 Tier LT for LSEs**

The quantity of Seasonal CRRs that an LSE can nominate as Long Term CRRs is limited to twenty percent (20%) of the LSE's Adjusted Load Metric, except that an LSE that can demonstrate that more than twenty percent (20%) of its Adjusted Load Metric is covered by a combination of long-term procurement arrangements of ten (10) years or greater and ownership of Generation resources is able to submit nominations for a greater amount as provided in this section. Such demonstrations shall be provided by the requesting LSE to the CAISO through the submission of a written sworn declaration by an

executive employee authorized to represent the LSE and attest to the accuracy of the data demonstration. As necessary, the CAISO may request, and such LSE must produce in a timely manner, documents in support of such declaration. If the LSE has demonstrated that more than twenty percent (20%) of its Adjusted Load Metric is covered by a combination of long-term procurement arrangements of ten (10) years or greater and ownership of Generation resources, the amount of Long Term CRRs that it may nominate is equal to the minimum of: (i) the sum of the owned resources and long-term procurement arrangements of ten (10) years or more and (ii) fifty percent (50%) of the LSE's Adjusted Load Metric. If an LSE's combination of long-term procurement arrangements of ten (10) years or greater and ownership of generation resources is greater than twenty percent (20%) of its Adjusted Load Metric and the LSE nominates more than twenty percent (20%) of its Adjusted Load Metric as Long Term CRRs, then the CRR Sources for all of the LSE's Long Term CRR nominations must be sources associated with its demonstrated long-term procurement arrangements of ten (10) years or greater or its owned generation resources. Subject to the maximum quantities described above in this Section 36.8.3.1.3.1, an LSE can nominate CRRs sourced at a Trading Hub in Tier LT up to the total MW amount of the Point-to-Point CRRs the LSE was allocated in tiers 1 and 2 as a result of its disaggregated tier 1 and 2 nominations of CRRs sourced at that Trading Hub.

**36.8.3.1.3.2 Tier LT for Qualified OBAALSEs**

A Qualified OBAALSE may submit nominations for Long Term CRRs up to fifty percent (50%) of its Adjusted Load Metric for each season, time of use period and Scheduling Point. The Qualified OBAALSE must demonstrate that all of its nominated Long Term CRRs are supported by a combination of long-term procurement arrangements of ten (10) years or greater and ownership of generation resources. Such demonstrations shall be provided by the requesting Qualified OBAALSE to the CAISO through the submission of a written sworn declaration by an executive employee authorized to represent the Qualified OBAALSE attesting to the accuracy of the data demonstration. As necessary, the CAISO may request, and such Qualified OBAALSE must produce in a timely manner, documents in support of such declaration.

**36.8.3.1.3.3 Tier LT SFT**

After receiving nominations for Long Term CRRs from LSEs and Qualified OBAALSEs, the CAISO will

run SFTs to ensure the feasibility of the nominated Long Term CRRs for the remaining nine years of the ten-year term of the Long Term CRR. The SFT runs in Tier LT will test the feasibility of only the Long Term CRR nominations and will not include in the analysis those Seasonal CRRs allocated in tiers 1 and 2 that are not nominated as Long Term CRRs. The quantity of Long Term CRRs that can be allocated for any season and time of use period must be feasible for the entire ten-year term of the Long Term CRR. As a result of the Tier LT SFT runs, Long Term CRR nominations may not be fully allocated; however, such a result will not affect the CRR Year One validity of the Seasonal CRR allocated in tiers 1 and 2. The CAISO will inform the nominating entity of the results of the Tier LT SFTs before the deadline for submission of the tier 3 nominations.

**36.8.3.1.4 Tier 3.**

In tier 3, an LSE or a Qualified OBAALSE may nominate and the CAISO will allocate to the LSE or Qualified OBAALSE Seasonal CRRs up to one hundred percent (100%) of its Seasonal CRR Eligible Quantity for each season, minus the quantity of CRRs allocated to that LSE or Qualified OBAALSE in tiers 1 and 2. In tier 3, Sub-LAPs will be eligible CRR Sinks provided that the Sub-LAP is within the nominating LSE's Default LAP. An LSE or a Qualified OBAALSE can nominate Seasonal CRRs sourced at Trading Hubs. In running the SFT the CAISO shall disaggregate the Seasonal CRR nominations sourced at Trading Hubs as described in Section 36.8.4.1. All allocated CRRs that result from such disaggregation will be Point-to-Point CRRs each of whose CRR Source is a Generating Unit PNode that is an element of the Trading Hub. A Qualified OBAALSE can only nominate CRRs from its verified CRR Sources as provided in Section 36.8.3.4.

**36.8.3.2 Monthly CRR Allocation for CRR Year One**

The monthly CRR Allocation in CRR Year One shall consist of a sequence of two (2) tiers for each time of use period (on-peak and off-peak). The monthly CRR Allocation will distribute Monthly CRRs to each LSE or Qualified OBAALSE up to one hundred percent (100%) of its Monthly CRR Eligible Quantity, minus CRRs allocated to that LSE or Qualified OBAALSE in the annual CRR Allocation for the relevant month and time of use period. The monthly CRR Allocation for CRR Year One will be conducted as follows:

**36.8.3.2.1 Tier 1.**

In tier 1 of the monthly CRR Allocations, an LSE or a Qualified OBAALSE may nominate and the CAISO will allocate to the LSE or Qualified OBAALSE Monthly CRRs up to fifty percent (50%) of the difference between its Monthly CRR Eligible Quantity and the quantity of Seasonal CRRs and previously allocated Long Term CRRs that apply to that month and time of use period. An LSE or a Qualified OBAALSE can nominate Monthly CRRs sourced at Trading Hubs in accordance with the LSE's or Qualified OBAALSE's verified CRR Sources. In running the SFT the CAISO shall disaggregate the Monthly CRR nominations sourced at Trading Hubs as described in Section 36.8.4.1. All allocated CRRs that result from such disaggregation will be Point-to-Point CRRs each of whose CRR Source is a Generating Unit PNode that is an element of the Trading Hub.

**36.8.3.2.2 Tier 2.**

In tier 2 of the monthly CRR Allocations, an LSE or a Qualified OBAALSE may nominate and the CAISO will allocate to the LSE or Qualified OBAALSE Monthly CRRs up to one hundred percent (100%) of the difference between its CRR Eligible Quantity and the quantity of Seasonal CRRs and previously allocated Long Term CRRs that apply to that month and time of use period, minus the quantity of CRRs the entity was allocated in tier 1 of the CRR Year One monthly CRR Allocation. An LSE or a Qualified OBAALSE can nominate Monthly CRRs sourced at Trading Hubs. In running the SFT the CAISO shall disaggregate the Monthly CRR nominations sourced at Trading Hubs as described in Section 36.8.4.1. In tier 2 of the monthly CRR Allocation, Sub-LAPs will be eligible CRR Sinks provided that the Sub-LAP is within the nominating LSE's Default LAP. A Qualified OBAALSE can only nominate CRRs from its verified CRR Sources as provided in Section 36.8.3.4.2.

**36.8.3.3 [Not Used]**

**36.8.3.4 Source Verification**

Source verification is required for LSE CRR nominations in tiers 1 and 2 of the CRR Year One annual allocation process and in tier 1 of each CRR Year One monthly allocation process. Source verification is required for all Qualified OBAALSE CRR nominations in all tiers of all CRR Allocation processes.

**36.8.3.4.1 CRR Year One Source Verification for LSEs**

In CRR Year One, nominations for tier 1 and tier 2 of the annual CRR Allocation and tier 1 of the monthly

CRR Allocations must be source verified for all LSEs. Prior to the beginning of the CRR Allocation process but no later than thirty (30) days before the date on which the Candidate CRR Holders or CRR Holders will be required to submit their nominations for the CRR Allocation, the CAISO will make available a list of allowable CRR Sources to be used in the CRR Allocation. The allowable CRR Sources will be consistent with the applicable CRR FNM. In the event that unforeseen changes to network conditions arise after the thirty-day release of the list of allowable CRR Sources and warrant revisions to that list, the CAISO will provide updates to the list prior to the closing of nominations for the CRR Allocation. An LSE must demonstrate that it could actually submit Bids, including Self-Schedules and Inter-SC Trades, for Energy from the locations to be nominated as CRR Sources to serve its Load either through ownership of, or contractual rights to receive Energy from, the relevant Generating Units, or a contract to take ownership of power at the relevant source, such as a Trading Hub or a Scheduling Point. For the second, third and fourth quarters of calendar year 2008 for CRR Year One, in conducting its source verification the CAISO will use data for the period beginning April 1, 2006 and ending December 31, 2006. For the first quarter of calendar year 2009 for CRR Year One, the CAISO will use data for the period beginning January 1, 2007 and ending March 31, 2007 as the basis for verification. Such demonstrations shall be provided by the requesting LSE to the CAISO through the submission of a written sworn declaration by an executive employee authorized to represent the LSE and attest to the accuracy of the data demonstration. As necessary, the CAISO may request, and such LSE must produce in a timely manner, documents in support of such declaration.

#### 36.8.3.4.2 Source Verification for Qualified OBAALSEs

All CRR nominations by Qualified OBAALSEs must be source verified. A Qualified OBAALSE's source verification will be based on its legitimate need showing as specified in Section 36.9.1.

#### 36.8.3.4.3 Calculation of Verified CRR Source Quantity

The Verified CRR Source Quantity associated with each verified CRR Source for a particular LSE or Qualified OBAALSE will be: (i) for an owned generation resource the PMax of the unit multiplied by the LSE's or Qualified OBAALSE's ownership share; (ii) for a contract with a generation resource, the hourly MWh of Energy specified in the contract averaged over all hours of the relevant time of use period, but no greater than the PMax of the unit; or (iii) for a contract that delivers Energy to a Trading Hub or

Scheduling Point, the hourly MWh of energy specified in the contract for delivery from the supplier to the LSE or Qualified OBAALSE at the Trading Hub or Scheduling Point, averaged over all hours of the relevant time of use period. Energy contracts submitted by an LSE to demonstrate that the LSE can submit Bids, including Self-Schedules and Inter-SC Trades, for Energy from the nominated CRR Sources to serve its Load must be at least one month in duration. Energy contracts submitted by a Qualified OBAALSE to demonstrate that the Qualified OBAALSE can submit Bids, including Self-Schedules and Inter-SC Trades, for Energy from the nominated CRR Sources to serve its Load must be at least one month in duration to support nominations of Monthly and Seasonal CRRs, and at least ten (10) years in duration to support nominations of Long Tem CRRs. Nominations of CRRs for which the CRR Source is a Scheduling Point must be source verified in accordance with Section 36.8.4.2.

#### 36.8.3.4.4 Calculation of Adjusted Verified CRR Source Quantity

For nominations by an LSE and a Qualified OBAALSE, except for a Qualified OBAALSE's nomination of Long Term CRRs, the CAISO will consider a contract that covers a portion of a season (but not less than one month) to be acceptable verification, with the adjustment described below, for the entire season for which a CRR is nominated. The CAISO will also consider a contract not less than one month in duration that covers portions of two consecutive months to be acceptable verification, with the adjustment described below, for both of the months that are partially covered. In such cases, for a contract that covers only a portion of the season or month for which the LSE or Qualified OBAALSE wishes to nominate source-verified CRRs, the CAISO will calculate an Adjusted Verified CRR Source Quantity, which equals the Verified CRR Source Quantity times the ratio of the number of days covered by the contract for a particular month or season to the total number of days in that month or season, consistent with the time of use period of the CRRs being nominated. Contracts submitted by a Qualified OBAALSE to support nomination of Long Term CRRs must be at least ten (10) years in duration and cover the entire season of the Long Term CRR being nominated, and therefore the Adjusted Verified CRR Source Quantity calculation does not apply to such nominations.

### 36.8.3.5 Annual CRR Allocation Beyond CRR Year One

The annual CRR Allocation for years beyond CRR Year One consists of a sequence of four (4) tiers for

each season and time of use period (on-peak and off-peak). Allocations of CRRs in each tier are considered final once they are provided by the CAISO to the respective LSEs or Qualified OBAALSEs. After each tier, LSEs or Qualified OBAALSEs will have an amount of time as specified in the Business Practice Manual after their receipt of the results of each tier to submit their nominations for the next tier, if there is one. The annual CRR Allocation will allow LSEs or Qualified OBAALSEs to submit nominations up to their Seasonal CRR Eligible Quantities minus the quantity of previously allocated Long Term CRRs for each season of the relevant year, each time of use period and each CRR Sink at which they serve Load. Annual CRR Allocations for years beyond CRR Year One will be conducted in the following sequence of tiers:

**36.8.3.5.1 Tier 1 – Priority Nomination Process**

Tier 1 of the annual CRR Allocation in years beyond CRR Year One will be a Priority Nomination Process through which CRR Holders may nominate some of the same CRRs that they were allocated in the immediately previous annual CRR Allocation process. As provided in Section 36.8.3.4.2, nominations by a Qualified OBAALSE in the PNP are subject to source verification. In all annual CRR Allocations after CRR Year One, an LSE or a Qualified OBAALSE may make PNP nominations up to the lesser of: (1) two-thirds of its Seasonal CRR Eligible Quantity, minus the quantity of Long Term CRRs allocated in the immediately preceding Seasonal CRR Allocation for each season, time of use period and CRR Sink for that year; or, (2) the total quantity of Seasonal CRRs allocated to that LSE in the previous annual CRR Allocation, minus the quantity of Long Term CRRs allocated in the immediately preceding Seasonal CRR Allocation for each season, time of use period and CRR Sink, and minus any reduction for net loss of Load or plus any increase for net gain of Load through retail Load Migration as described in Section 36.8.5.1. In addition, an LSE's or Qualified OBAALSE's nomination of any particular CRR Source-CRR Sink combination in the PNP may not exceed the MW quantity of CRRs having that CRR Source and CRR Sink that the LSE or Qualified OBAALSE was allocated in the previous annual CRR Allocation, reduced by the MW quantity of those Long-Term CRRs with the same CRR Source and CRR Sink that were awarded in the prior year's Long-Term CRR allocation, for the same season and time of use period, and in the case of an LSE, adjusted for net Load loss or gain resulting from Load Migration as described in Section 36.8.5.2.2. An LSE or a Qualified OBAALSE may nominate CRRs awarded with a CRR

Source at the Trading Hubs in the PNP. CRRs whose CRR Sink is a Sub-LAP are not eligible for nomination in the PNP. A CRR whose CRR Sink is a Custom LAP or PNode is eligible for nomination in the PNP. PNP Eligible Quantities are not affected by secondary transfers of CRRs, except as performed by the CAISO to reflect Load Migration as described in Section 36.8.5. That is, with the exception of transfers to reflect Load Migration: (i) an LSE or a Qualified OBAALSE may nominate in the PNP a CRR it was allocated in the prior annual CRR Allocation even though it transferred that CRR to another party during the year, and (ii) an LSE or a Qualified OBAALSE may not nominate in the PNP a CRR that it received through a secondary transfer from another party. CRRs received through a CRR Auction are not eligible for nomination in the PNP. CRRs received as Offsetting CRRs to reflect Load Migration are not eligible for nomination in the PNP. The maximum quantity of CRRs that an LSE or a Qualified OBAALSE may nominate in the PNP is fifty (50) percent of its Adjusted Load Metric, minus any previously allocated Long Term CRRs that are valid for the term of the CRRs being nominated. The CAISO does not guarantee that all CRR nominations in the PNP will be allocated. The CAISO will conduct an SFT to determine whether all CRR nominations in the PNP are simultaneously feasible. If the SFT determines that all priority nominations are not simultaneously feasible, the CAISO will reduce the allocated CRRs until simultaneous feasibility is achieved.

#### 36.8.3.5.2 Tier LT

In years subsequent to CRR Year One, Long Term CRRs will be allocated as provided in this section.

##### 36.8.3.5.2.1 Tier LT for LSEs

In Tier LT of CRR Year Two, an LSE may nominate Long Term CRRs from any of the Seasonal CRRs it was allocated in the PNP up to a maximum of thirty percent (30%) of the its Adjusted Load Metric, minus the quantity of previously allocated Long Term CRRs that are valid for that year; except that the LSE may nominate Long Term CRRs in amounts greater than thirty percent (30%) but no more than fifty percent (50%) of its Adjusted Load Metric if the LSE demonstrates that more than thirty percent (30%) of its Adjusted Load Metric is covered by a combination of long-term procurement arrangements of ten (10) years or greater and ownership of Generation resources. Such demonstrations shall be provided by the requesting LSE to the CAISO through the submission of a written sworn declaration by an executive employee authorized to represent the LSE and attest to the accuracy of the data demonstration. As

necessary, the CAISO may request, and such LSE must produce in a timely manner, documents in support of such declaration. If the LSE has demonstrated that more than thirty percent (30%) of its Adjusted Load Metric is covered by a combination of long-term procurement arrangements of ten (10) years or greater and ownership of Generation resources, the amount of Long Term CRRs that it may nominate is equal to the minimum of: (i) the sum of the owned resources and long-term procurement arrangements of ten (10) years or more, minus the quantity of previously allocated Long Term CRRs that are valid for that CRR year, and (ii) fifty percent (50%) of the LSE's Adjusted Load Metric, minus the quantity of previously allocated Long Term CRRs that are valid for that CRR year. In CRR Year Three, the limit on Long Term CRR nominations will increase by ten percent (10%) to forty percent (40%) of the eligible entity's Adjusted Load Metric but shall not exceed fifty percent (50%) of the Adjusted Load Metric. In CRR Year Three, an LSE may exceed the forty percent (40%) limit on Long Term CRR nominations if it demonstrates that its Adjusted Load Metric is covered by a combination of long-term procurement arrangements of ten (10) years or greater and ownership of Generation resources. The amount of Long Term CRRs that it may nominate is equal to the minimum of: (i) the sum of the owned resources and long-term procurement arrangements of ten (10) years or more, minus the quantity of previously allocated Long Term CRRs that are valid for that CRR year, and (ii) fifty percent (50%) of the LSE's Adjusted Load Metric, minus the quantity of previously allocated Long Term CRRs that are valid for that CRR year. In CRR Year Four and all subsequent years, an LSE may nominate Long Term CRRs from any of the Seasonal CRRs allocated in the PNP up to the maximum of fifty percent (50%) of its Adjusted Load Metric, minus the quantity of previously allocated Long Term CRRs that are valid for that year.

#### 36.8.3.5.2.2 Tier LT for Qualified OBAALSEs

A Qualified OBAALSE may submit nominations for Long Term CRRs up to the portion of its Adjusted Load Metric for which it has demonstrated coverage by a combination of long-term procurement arrangements of ten (10) years or greater and ownership of generation resources, up to a maximum of fifty percent (50%) of its Adjusted Load Metric for each season, time of use period and Scheduling Point, minus the quantity of previously allocated Long Term CRRs that are valid for that CRR year. Such demonstrations shall be provided by the requesting Qualified OBAALSE to the CAISO through the submission of a written sworn declaration by an executive employee authorized to represent the Qualified

OBAALSE and attest to the accuracy of the data demonstration. As necessary, the CAISO may request, and such Qualified OBAALSE must produce in a timely manner, documents in support of such declaration. Contracts submitted in support of OBAALSE nominations of Long Term CRRs must cover the entire season of the Long Term CRR being nominated.

**36.8.3.5.2.3 Tier LT SFT**

After receiving nominations for Long Term CRRs, the CAISO will run SFTs to ensure the feasibility of the nominated Long Term CRRs for the remaining nine years of the ten (10) year term of the Long Term CRR. The SFT run in Tier LT will test the feasibility of only the Long Term CRR nominations and will not include in the analysis those Seasonal CRRs allocated in the PNP that were not nominated as Long Term CRRs. The quantity of Long Term CRRs that can be allocated for any season and time of use period must be feasible for the entire ten (10) year term of the Long Term CRR. As a result of the Tier LT SFT runs, Long Term CRR nominations may not be fully allocated; however, such a result will not affect the validity of: (i) the Long Term CRRs allocated in previous years, or (ii) the Seasonal CRRs allocated in the PNP. The CAISO will inform nominating eligible entities of the results of the Tier LT SFTs before the deadline for submission of the tier 2 nominations.

**36.8.3.5.3 Tier 2.**

In tier 2 of the annual CRR Allocation, the CAISO will allocate Seasonal CRRs to each LSE and Qualified OBAALSE up to two-thirds of its Seasonal CRR Eligible Quantity for each season, time of use period and CRR Sink, minus the quantity of: (i) CRRs allocated to that LSE or Qualified OBAALSE in tier 1, (ii) Long Term CRRs previously allocated to it that are valid for the CRR term currently being allocated, and (iii) the net MW amount of long-term Load Migrations CRRs assigned to the LSE that are valid for the term currently being allocated. In tier 2 of the annual CRR Allocation, Sub-LAPs will be eligible CRR Sinks provided that the Sub-LAP is within the nominating LSE's Default LAP. An LSE or a Qualified OBAALSE can nominate Seasonal CRRs sourced at Trading Hubs. In running the SFT the CAISO shall disaggregate the Seasonal CRR nominations sourced at Trading Hubs as described in Section 36.8.4.1.

**36.8.3.5.4 Tier 3.**

In tier 3 of the annual CRR Allocation, the CAISO will allocate Seasonal CRRs to each LSE or Qualified

OBAALSE up to one hundred percent (100%) of its Seasonal CRR Eligible Quantity for each season, time of use period and CRR Sink, minus the quantity of: (i) CRRs allocated to that LSE or Qualified OBAALSE in tiers 1 and 2, (ii) Long Term CRRs previously allocated to that eligible entity that are valid for the CRR term currently being allocated, and (iii) the net MW amount of long-term Load Migrations CRRs assigned to the LSE that are valid for the term currently being allocated. In tier 3 of the annual CRR Allocation, Sub-LAPs will be eligible CRR Sinks provided that the Sub-LAP is within the nominating LSE's Default LAP. An LSE or a Qualified OBAALSE can nominate Seasonal CRRs where the CRR Source is a Trading Hub. In running the SFT the CAISO shall disaggregate the Seasonal CRR nominations sourced at Trading Hubs as described in Section 36.8.4.1.

#### 36.8.3.5.5 Alternatives for Renewal of Long Term CRRs and for the Transition of Expiring ETCs and Converted Rights to Long Term CRRs

Eligible entities may, in the final year of a Long Term CRR, nominate the identical CRR Source, CRR Sink, and MW terms of the expiring Long Term CRR in the PNP conducted that year, subject to any applicable quantity limitations specified in this Section 36. An eligible entity with an Existing Transmission Contract or Converted Rights that expire by the start of the year for which the CRR Allocation process is conducted may participate in the PNP as if its Existing Transmission Contract or Converted Rights sources and sinks were previously allocated Seasonal CRRs, subject to any applicable quantity limitations specified in this Section 36. In either case, if Seasonal CRRs are awarded to an LSE or a Qualified OBAALSE in the PNP based on its nomination of its expiring rights, such entity may then nominate those Seasonal CRRs in Tier LT of the same year's annual CRR Allocation process, subject to any applicable quantity limitations specified in this Section 36. Alternatively, CRR Holders of expiring LT CRRs, expiring Existing Transmission Contracts or expiring Converted Rights may bypass the tier 1 Priority Nomination Process and nominate their expiring rights as Long Term CRRs in Tier LT one year prior to the year of expiration, subject to any applicable quantity limitations specified in this Section 36. This alternative allows the holder of the expiring rights to nominate Long Term CRRs in the first Tier LT SFT in which the capacity corresponding to the expiring rights becomes available for the full nine (9) year period of the Tier LT SFT. For any entity who elects this alternative and obtains an allocated Long Term CRR, the length of the renewed Long Term CRR (or initial Long Term CRR in the case of expiring

Existing Transmission Contracts or expiring Converted Rights) will be nine (9) years, corresponding to the years included in the Tier LT SFT.

**36.8.3.6 Monthly CRR Allocation Beyond CRR Year One**

The monthly CRR Allocation shall consist of a sequence of two (2) tiers of allocations for each time of use period (on-peak and off-peak). The monthly CRR Allocation will distribute Monthly CRRs and will allow an LSE and a Qualified OBAALSE to nominate CRRs up to one hundred percent (100%) of its Monthly CRR Eligible Quantity, minus the total of any Seasonal CRRs allocated in the annual CRR Allocation, and minus any holdings of Long Term CRRs that are valid for the month and time of use of the CRRs being nominated. All CRR nominations by Qualified OBAALSEs must be source verified.

**36.8.3.6.1 Tier 1.**

In tier 1 of the monthly CRR Allocations, each LSE or Qualified OBAALSE may nominate Monthly CRRs up to one-hundred percent (100%) of the difference between its Monthly CRR Eligible Quantity and the total of any Seasonal CRRs allocated in the annual CRR Allocation and any holdings of Long Term CRRs that are valid for the month and time of use of the CRRs being nominated. An LSE or a Qualified OBAALSE can nominate Monthly CRRs where the CRR Source is a Trading Hub. In tier 1 of the monthly CRR Allocation, Sub-LAPs will be eligible CRR Sinks, provided that the Sub-LAP is within the nominating LSE's Default LAP. In running the SFT the CAISO shall disaggregate the Monthly CRR nominations sourced at Trading Hubs as described in Section 36.8.4.1.

**36.8.3.6.2 Tier 2.**

In tier 2 of the monthly CRR Allocations, each LSE or Qualified OBAALSE may nominate Monthly CRRs up to one hundred percent (100%) of the difference between its Monthly CRR Eligible Quantity and the total of any Seasonal CRRs allocated in the annual CRR Allocation and any holdings of Long Term CRRs that are valid for the month and time of use of the CRRs being nominated, minus the quantity of CRRs allocated to that LSE or Qualified OBAALSE in tier 1 of the current monthly CRR Allocation. In tier 2 of the monthly CRR Allocation, Sub-LAPs will be eligible CRR Sinks, provided that the Sub-LAP is within the nominating LSE's Default LAP. An LSE or a Qualified OBAALSE can nominate Monthly CRRs sourced at Trading Hubs. In running the SFT the CAISO shall disaggregate the Monthly CRR nominations sourced at Trading Hubs as described in Section 36.8.4.1.

### 36.8.4 Eligible Sources for CRR Allocation

In the CRR Allocation processes for Seasonal CRRs, Monthly CRRs, and Long Term CRRs, nominated CRR Sources can be either PNodes (including Scheduling Points) or Trading Hubs, except that a Proxy Demand Resource or Reliability Demand Response Resource cannot be a nominated CRR Source in a CRR Allocation process. An LSE or a Qualified OBAALSE may nominate up to one hundred percent (100%) of its Adjusted Verified CRR Source Quantities for Seasonal or Monthly CRRs in the combined tiers of the annual and monthly CRR Allocation processes as provided in this Section. For tiers 1 and 2 of the annual CRR Allocation in CRR Year One, an LSE may nominate CRRs from each of its verified CRR Sources in a quantity no greater than seventy-five percent (75%) of the Adjusted Verified CRR Source Quantity corresponding to each verified CRR Source. The LSE may then use tier 1 of the monthly CRR Allocations in CRR Year One to nominate up to the full one hundred percent (100%) of the Adjusted Verified CRR Source Quantity corresponding to each verified CRR Source. In tiers 1, 2 and 3 of the annual CRR Allocation in each year in which it participates, a Qualified OBAALSE may nominate CRRs from each of its verified CRR Sources in a quantity no greater than seventy-five percent (75%) of the Adjusted Verified CRR Source Quantity corresponding to each CRR Source. The Qualified OBAALSE may then use tiers 1 and 2 of the monthly CRR Allocations in the same year to nominate up to the full one hundred percent (100%) of the Adjusted Verified CRR Source Quantity corresponding to each verified CRR Source.

#### 36.8.4.1 CRRs with Trading Hub Sources

For purposes of the CRR Allocation processes the CAISO shall disaggregate CRR nominations with Trading Hub CRR Sources into Point-to-Point CRR nominations each of whose CRR Source is a Generating Unit PNode that is an element of the Trading Hub. In performing this disaggregation the MW quantity of each Point-to-Point CRR nomination will equal the MW quantity of the CRR nomination multiplied by the weighting factor of the corresponding Generating Unit PNode in the defined Trading Hub. The disaggregated, individual Point-to-Point CRRs will be used by the CAISO in conducting the SFTs for the nominated CRRs. In CRR years other than CRR Year One, an LSE may nominate in the PNP any Point-to-Point CRRs it was allocated the previous year as a result of Seasonal CRR nominations with Trading Hubs as CRR Sources, and may then nominate those Seasonal CRRs awarded

in the PNP as Long Term CRRs in Tier LT. In CRR Year One, an LSE that was allocated individual Point-to-Point CRRs in tiers 1 and 2 as a result of nominating CRRs sourced at a Trading Hub must nominate CRRs sourced at Trading Hubs in Tier LT in accordance with Section 36.8.3.1.3.1. For Qualified OBAALSEs, all nominated CRR Sources must be source verified as specified in Section 36.9.1. Any Long Term CRRs allocated by the CAISO as a result of nominations of CRRs sourced at Trading Hubs will be Point-to-Point CRRs each of whose CRR Sources is a Generating Unit PNode that is an element of the Trading Hub. *After Trading Hub CRRs are allocated in each annual and monthly CRR Allocation process, the CAISO shall combine the allocated CRRs into a Trading Hub CRR and issue counterflow CRRs to the holders of Trading Hub CRRs as necessary to maintain simultaneous feasibility. CRR Holders of such combined Trading Hub CRRs will be eligible to renew these Trading Hub CRRs in the Priority Nomination Process of the subsequent seasonal CRR Allocation process as described in this Section 36.8.4.1 and Section 36.8.3.5.1.*

**36.8.4.2 Import of CRRs**

An LSE or a Qualified OBAALSE may nominate Seasonal, Monthly or Long Term CRRs whose CRR Source is a Scheduling Point in the annual and monthly CRR Allocation in accordance with this Section.

**36.8.4.2.1 Scheduling Points as CRR Sources for LSEs in CRR Year One**

In CRR Year One, in tiers 1 and 2 of the annual CRR Allocation process an LSE may nominate Seasonal CRRs whose CRR Source is a Scheduling Point to the extent that it can demonstrate to the CAISO that, for the verification period stated in Section 36.8.3.4, it owned or was a party to a contract with a System Resource, and that it or the counter-party to the contract had procured appropriate transmission from the applicable transmission provider outside the CAISO to the Scheduling Point. In addition, also in tiers 1 and 2 of the annual CRR Allocation in CRR Year One, all LSEs eligible to nominate CRRs under this Section 36.8 may nominate as CRR Sources, without any verification, shares of the residual import CRR capacity at each Scheduling Point that remains after the completion of the CRR Source verification process. Each LSE's share of the residual import CRR capacity will be calculated as follows. Starting with the total capacity at each Scheduling Point that is available in the DC FNM for the annual CRR Allocation and CRR Auction processes, the CAISO will calculate the residual amount of capacity that remains at each Scheduling Point after subtracting the capacity accounted for by those Scheduling Point

CRR Sources submitted by LSEs for verification that have been verified. The CAISO will then set aside fifty percent (50%) of this residual amount at each Scheduling Point for the annual CRR Auction, and will allow LSEs to nominate pro rata shares of the other fifty percent (50%) in proportion to their Seasonal CRR Eligible Quantities. In each monthly CRR Allocation during CRR Year One, CRR Source verification will be required in tier 1 as in the annual CRR Allocation process. Following the verification process, the CAISO will calculate and set aside for the monthly CRR Auction fifty percent (50%) of the import capacity that remains at each Scheduling Point after accounting for the verified Scheduling Point CRR Source submissions to the monthly process and the annual CRR Allocation and CRR Auction results for that month, and will allow LSEs to nominate in tier 1 Monthly CRRs with CRR Sources at each Scheduling Point in quantities up to their pro rata shares of the other fifty percent (50%) in proportion to their Monthly CRR Eligible Quantities.

#### 36.8.4.2.2 Scheduling Points as CRR Sources for LSEs Beyond CRR Year One

In the annual CRR Allocation processes subsequent to CRR Year One, there will be no special provisions regarding CRR Sources at Scheduling Points in tiers 1 and 2 for LSEs. For tier 3 the CAISO will calculate and set aside for the annual CRR Auction fifty percent (50%) of the import capacity at each Scheduling Point that remains after the tier 1 and tier 2 CRR Allocations and after considering any previously allocated Long Term CRRs that are valid for that month as described in Section 36.4.1.3. In the monthly CRR Allocation processes subsequent to CRR Year One there will be no special provisions regarding CRR Sources at Scheduling Points in tier 1 for LSEs. For tier 2 the CAISO will calculate and set aside for the monthly CRR Auction fifty percent (50%) of the import capacity that remains at each Scheduling Point after accounting for the annual CRR Allocation and CRR Auction results for that month, any previously allocated Long Term CRRs that are valid for that month, and the results of tier 1 of the monthly CRR Allocation.

#### 36.8.4.2.3 Scheduling Points as CRR Sources for Qualified OBAALSEs

In the annual CRR Allocation process a Qualified OBAALSE may nominate CRRs whose CRR Source is a Scheduling Point to the extent it meets the requirements of Section 36.9.1.

### 36.8.5 Load Migration Between LSEs

The CAISO shall track Load Migration between LSEs through Load Migration data provided to the CAISO

by each UDC, MSS Operator or other entity that provides distribution serve to customers. Load Migration will be reflected in the hourly Load data and Load forecasts used by the CAISO to calculate the CRR Load Metrics and Seasonal CRR Eligible Quantities and Monthly CRR Eligible Quantities for each LSE, in accordance with procedures set forth in the applicable Business Practice Manual. Load Migration will be reflected in appropriate adjustments to each affected LSE's Seasonal CRR Eligible Quantities and Monthly CRR Eligible Quantities in subsequent annual and monthly CRR Allocations, as well as its PNP Eligible Quantities in the next annual CRR Allocation. LSEs that hold Seasonal CRRs or Long Term CRRs and that lose or gain Load through Load Migration must comply with Section 36.8.5.3 regarding the transfers of current CRR holdings to reflect Load Migration.

**36.8.5.1 Tracking of Load Migration by CAISO**

The CAISO will implement all appropriate adjustments due to Load Migration on a monthly basis. In order to enable the CAISO to track Load Migration and determine the appropriate adjustments, each UDC, MSS Operator, and other entity that provides distribution service to customers will provide to the CAISO the number of end-use customers that migrated in each of the customer classes in their service area. The end-use customer information provided to the CAISO by such parties shall be calculated based on the following details on each customer that migrates between LSEs: (i) customer identification information, (ii) information to establish the customer's retail customer class, (iii) the original and new LSEs serving the customer, (iv) the effective date of the Load Migration, and (v) the most recent twelve (12) months of billing data for the customer. Each UDC, MSS Operator and other entity that provides distribution service to customers will retain the details of the underlying calculations unless as requested by the CAISO pursuant to the dispute resolution process discussed in Section 36.8.5.7. The migration information provided to the CAISO by the parties shall consist of the number of customers served by each LSE in each retail customer class as of the start of each month, multiplied by the average consumption by customers in each retail customer class. Further details regarding the methodology used by the UDCs, MSSs, and other entities that provide distribution service to customers, to calculate this migration information to be supplied to the CAISO is set forth in the applicable Business Practice Manual. The CAISO will receive information from each UDC, MSS Operator, and other entity providing distribution service on an ongoing daily basis, and will perform the calculations for any appropriate adjustments due

to Load Migration on a monthly basis. New CRRs allocated due to Load Migration in accordance with Section 36.8.5.3 will be made effective on the first day of the first month, following the CAISO's performance of the calculations, in which the Load Migration is effective by the first of the month.

**36.8.5.2 Adjustments to CRR Eligible Quantities to Reflect Load Migration**

An LSE who loses or gains net Load through Load Migration in a given year will have its Seasonal CRR Eligible Quantities in the next annual CRR Allocation reduced or increased, respectively, in proportion to the net Load lost or gained through Load Migration. In addition, an LSE that loses Load through Load Migration in a given year will have its PNP Eligible Quantities reduced in proportion to the gross amount of Load lost through Load Migration. An LSE that gains Load through Load Migration in a given year will have its PNP Eligible Quantities increased in proportion to the amount of Load gained through Load Migration.

**36.8.5.3 Adjustments to Current CRR Holdings to Reflect Load Migration**

Because in between CRR Allocations each LSE can both lose Load and gain Load between itself and multiple other LSEs, the CAISO will calculate and perform appropriate adjustments to current CRR holdings for each pair of LSEs affected by Load Migration to reflect the net amount of Load that migrated between those two LSEs during each Load Migration tracking period and for each LAP in which the LSEs serve Load. The CAISO will perform such calculations in accordance with the appropriate Business Practice Manual, and will perform the adjustments by creating and allocating equal and opposite sets of new CRRs for each pair of LSEs affected by Load Migration. The net Load gaining LSE of the pair will receive a set of new CRRs that match the CRR Sources and CRR Sinks of all the Seasonal CRRs and Long Term CRRs previously allocated to the net Load losing LSE of the pair, in MW quantities proportional to the net amount of the net Load losing LSE's Load that migrated to the net Load gaining LSE of the pair within each LAP in which the LSEs serve Load. The net Load losing LSE of the pair will receive a set of new Offsetting CRRs. After the assignment of Offsetting CRRs, the net Load losing LSE will still hold the CRRs it held before it was assigned the Offsetting CRRs. The Load gaining LSE may nominate its new Seasonal CRRs in the Priority Nomination Process of the next annual CRR Allocation process. The net Load losing LSE may not nominate in the Priority Nomination Process either: (i) the Seasonal CRRs corresponding to the new CRRs allocated to the Load gaining LSE, or (ii) the Offsetting

CRRs allocated due to Load Migration. An LSE to which the CAISO allocates new CRRs to reflect Load Migration must be either a Candidate CRR Holder or a CRR Holder and meet all requirements applicable to such entities.

#### 36.8.5.4 Load Migration and Compliance with CAISO Credit Requirements

To the extent that the credit requirements of an LSE as specified in Section 12 are updated by the allocation of new CRRs to reflect Load Migration, the LSE will have its respective credit requirements updated and any changes will be processed through the otherwise applicable credit and collateral processes delineated in Section 12 and the appropriate Business Practice Manuals. In the event that the Load gaining LSE is not a CRR Holder or Candidate CRR Holder at the time the Load Migration process takes place, then the Load Migration CRRs will not be transferred to that load gaining LSE and will not be financially settled. Instead, the unclaimed Load Migration CRRs will be absorbed within the CRR Balancing Account for the duration of the term of the Load Migration CRRs. In addition, the LSEs affected by the Load Migration will not be eligible to nominate the transferred CRRs in subsequent Priority Nomination Tiers.

#### 36.8.5.5 Load Migration Adjustment for CRR Year One

For the CRR Year One CRR Allocation process, the CAISO will account for the cumulative Load Migration that takes place between the beginning of the CRR Year One CRR Allocation process and the first date that the Day-Ahead Market is operational as a single adjustment as described in the Business Practice Manuals.

#### 36.8.5.6 Load Migration Reflected in the Monthly CRR Allocation Process

An LSE who loses or gains net Load through Load Migration must reflect that loss or gain in the monthly Load forecasts it submits to the CAISO for determining its monthly CRR Eligible Quantities for future monthly CRR Allocations.

#### 36.8.5.7 Dispute Resolution Mechanism Regarding Load Migration Data Transfers

The CAISO shall provide the Load migration information referred to in Section 36.8.5.1 to the affected load-gaining or load-losing LSE. The data received by each affected LSE will be limited to the count of customers for which it is the load-gaining LSE, and the count of customers for which it is the load-losing LSE. The affected LSEs shall contact the CAISO and the UDC, MSS or other entities that provide

distribution service to customers that calculate this migration information, of any dispute regarding the load migration data provided to the CAISO no later than four calendar days after the affected LSE has received the load migration data. In the event that the affected LSE and UDC, MSS or other entity that provide distribution service to customers, are unable to resolve the LSE's disagreement, the LSE and UDC, MSS, or other entity that provides distribution service to customers, will submit the dispute to the CAISO. During the consultations with the CAISO concerning the dispute, the CAISO may request the data specified in Section 36.8.5.1, on which the load migration data is based and may request explanations of the disputed data from the disputing parties. In the event that the CAISO needs to receive and review the relevant data, the CAISO will purge the data after the resolution of the dispute. In the event that the affected parties cannot agree to a resolution of the dispute prior to the expiration of the fourth calendar day after the data was provided to the load-gaining or load-losing LSE by the CAISO, the CAISO will decide either to: (1) recalculate, to the extent feasible, the aggregated count of transferring customers and proceed with the subsequent steps based on that calculated amount; or (2) proceed with the amounts provided by the UDC, MSS or other entity that provides distribution service to customers. Nothing in this section should be construed to restrict the affected parties from seeking the dispute resolution mechanism available under Section 13; provided however, that in the interim the CAISO may proceed with the CRR processes defined in the CAISO Tariff based on the load migration amounts provided by the UDC, MSS or other entity that provides distribution service to customers. If the CAISO later determines that the resolution of the dispute requires a modification of the load-gaining or load-losing LSE's rights, the CAISO will make the appropriate adjustments in any of the upcoming CRR Allocations, but will not make any retroactive adjustments to the load-gaining or load-losing LSE's rights.

**36.8.6 Load Forecasts Used to Calculate CRR MW Eligibility**

The CAISO will work closely with appropriate state and Local Regulatory Authorities and agencies to ensure that historical Load data and Load forecasts used to establish Seasonal CRR Eligible Quantities and Monthly CRR Eligible Quantities as provided in Section 36.8.2 are consistent with the Load data and Load forecasts used to establish resource adequacy requirements. For the purpose of this consistency assessment, the CAISO will consider the most current available Load data and Load forecasts submitted by the LSE to the applicable state, Local Regulatory Authorities and agencies, subject to the CAISO's

ability to perform the consistency assessment and any necessary adjustments pursuant to Sections 36.8.2.1 and 36.8.2.2 within the CRR production time line as specified in the applicable Business Practice Manual.

### 36.8.7 Reconfiguration of CRRs

#### 36.8.7.1 Long Term CRRs and PTO Withdrawal from CAISO Controlled Grid

In the event a Participating TO gives the required notice and withdraws facilities or Entitlements from the CAISO Controlled Grid, the CAISO will reconfigure Long Term CRRs as necessary to reflect the CAISO Controlled Grid after the withdrawal. After reconfiguration, the CAISO will run SFTs on the reconfigured Long Term CRRs and, if necessary, reduce some of the reconfigured Long Term CRRs to ensure their feasibility. If the CRR Source and CRR Sink for an allocated Long Term CRR both are located within a departing Participating TO Service Territory, the Long Term CRR would expire on the effective date of the Participating TO's withdrawal.

#### 36.8.7.2 Changes in Topology of the ISO Transmission Grid

In the event that the CAISO experiences changes to the CAISO Controlled Grid within the term of outstanding annual CRRs, the CAISO will reconfigure outstanding Seasonal CRRs, as necessary, to reflect the changes to the CAISO Controlled Grid. After reconfiguration, the CAISO will run SFTs on the reconfigured Seasonal CRRs and, if necessary, reduce some of the reconfigured Seasonal CRRs to ensure their feasibility. If the CRR Source and CRR Sink for an allocated Seasonal CRR both are located within a departing Participating TO Service Territory, the Seasonal CRRs would expire on the effective date of the Participating TO's withdrawal.

The Priority Nomination Tier eligibility for the affected CRR Holders will be based on the MW quantity of the reconfigured Seasonal CRRs after ensuring the CAISO has conducted the Simultaneous Feasibility Test.

### 36.9 CRR Allocation to OBAALSEs

OBAALSEs who wish to nominate and be allocated CRR Obligations in the same annual and monthly CRR Allocation processes described in Section 36.8 may do so subject to the provisions of this Section 36.9 and if such OBAALSEs are qualified and registered as Candidate CRR Holders or CRR Holders. An OBAALSE may participate in the CRR Allocation processes and be allocated CRRs to the extent that: (1)

such OBAALSE makes a showing of legitimate need for the CRRs nominated as provided by Section 36.9.1; (2) such OBAALSE pre-pays or commits to pay the appropriate Wheeling Access Charge in the amount of MWs of CRRs nominated as provided in Section 36.9.2; (3) the external load for which CRRs are nominated will be exposed to CAISO Congestion charges because it is not served by Supply resources other than exports from the CAISO Balancing Authority Area; (4) the external load for which CRRs are nominated is not served through an ETC, TOR or Converted Rights by which it has been designated as eligible to receive the reversal of Congestion charges; (5) such OBAALSE complies with the verification requirements in Section 36.9.4; and (6) the nominated CRRs clear the relevant SFTs. An OBAALSE that participates in the CRR Allocation processes will be subject to the applicable rules governing the tiered structure of these processes. All CRRs allocated under the terms of this Section 36.9 will be CRR Obligations.

**36.9.1 Showing of Legitimate Need**

An OBAALSE must make a showing to the CAISO of legitimate need to enable the CAISO to verify the CRR Sources it wants to nominate. All CRR nominations by OBAALSEs in all CRR years must be source verified based on the showing of legitimate need. The CAISO's verification of legitimate need will be based on demonstration by the OBAALSE of an executed Energy contract from a Generating Unit(s) or System Resource that covers the time period of the CRRs nominated, or ownership of such Generating Unit(s) or System Resource. For such CRR Sources the showing of legitimate need must be made for each CRR term for which the OBAALSE wants to nominate CRRs in a timely manner prior to the start of the relevant annual or monthly CRR Allocation process. For CRR Sources that will be verified based on generating resources located outside the CAISO Balancing Authority Area, a Scheduling Point must be nominated as the corresponding CRR Source. Generating resources located outside of the CAISO Balancing Authority Area to be used by the OBAALSE to verify a Scheduling Point as a CRR Source must not be located within the OBAALSE's own Balancing Authority Area. The Verified CRR Source Quantity and Adjusted Verified CRR Source Quantity corresponding to any CRR Source nominated by an OBAALSE will be calculated in accordance with Section 36.8.3.4, with the modification that for an OBAALSE these quantities will be calculated for each CRR Allocation process in which the Qualified OBAALSE wants to participate, consistent with the requirement for ongoing source verification based on

a forward showing in conjunction with the OBAALSE's annual showing of legitimate need. For a CRR Source that is a Scheduling Point, pursuant to the legitimate need showing requirement, an OBAALSE must demonstrate that it has procured the appropriate transmission service from the transmission provider outside the CAISO Balancing Authority Area to the Scheduling Point that the OBAALSE intends to nominate as a CRR Source for the term of the CRR being nominated. Such demonstrations shall be provided by the OBAALSE to the CAISO through the submission of a written sworn declaration by an executive employee authorized to represent the OBAALSE and attest to the accuracy of the data demonstration. As necessary, the CAISO may request, and such OBAALSE must produce in a timely manner, documents in support of such declaration.

### 36.9.2 Prepayment of Wheeling Access Charge

#### 36.9.2.1 Prepayment of Wheeling Access Charge for Allocated CRRs

An OBAALSE will be required to prepay relevant Wheeling Access Charges, to be calculated as described in this section and further specified in the Business Practice Manual, for the full term of the Monthly CRRs, Seasonal CRRs and Long Term CRRs it intends to nominate in order to participate in the CRR Allocation processes and be allocated CRRs. To be eligible for the allocation of Seasonal CRRs or Monthly CRRs the OBAALSE must submit the full required prepayment and have it accepted by the CAISO prior to the OBAALSE's submission of nominations for the relevant annual or monthly CRR Allocation, except as provided below in Section 36.9.2.2. To be eligible for nominations of Long Term CRRs, the OBAALSE must submit the full prepayment and have it accepted by the CAISO prior to the OBAALSE's submission of nominations of Long Term CRRs in Tier LT, except as provided below in Section 36.9.2.2. For each MW of Monthly CRR, Seasonal CRR or Long Term CRR to be nominated the nominating OBAALSE must prepay one MW of the relevant Wheeling Access Charge, which equals the per-MWh WAC that is associated with the Scheduling Point the OBAALSE intends to nominate as a CRR Sink and that is expected at the time the CRR Allocation process is conducted to be applicable for the period of the CRR nominated, times the number of hours comprising the period of the CRR nominated as further specified in the applicable Business Practice Manual. The CAISO will credit any monthly payment obligation for Wheeling Access Charges by an OBAALSE for a monthly Wheeling Through Priority obtained under Section 23.4, toward the OBAALSE's prepayment obligation in this section 36.9.2.1.

Such OBAALSE must prepay the difference in accordance with the applicable prepayment timeline herein. The OBAALSE with a Wheeling Through Priority must prepay the difference in accordance with the applicable prepayment timeline. Any applicable credit check would be done based on the full value owed, including both the prepayment amount and the amount to be credited.

#### 36.9.2.2 Eligibility for Prepayment of WAC on an Annual or Monthly Basis

An OBAALSE deemed creditworthy pursuant to the requirements of Section 12 may elect to prepay the determined WAC responsibility on a monthly basis for the Seasonal CRRs or Long Term CRRs that it seeks to be allocated, provided that such OBAALSE has demonstrated a commitment to pay the required WAC for the entire term of the CRRs sought by submitting to the CAISO a written sworn statement by an executive that can bind the entity. In order to be eligible for this option, the OBAALSE must submit and the CAISO must accept this sworn statement prior to the applicable CRR Allocation process in which the OBAALSE intends to nominate a CRR. An OBAALSE choosing to pay on a monthly basis shall make its monthly payments on a schedule specified in the applicable Business Practice Manual. An OBAALSE deemed creditworthy pursuant to the requirements of Section 12 may also elect to prepay its determined WAC responsibility associated with an allocated Long Term CRR on an annual basis, provided that such OBAALSE has demonstrated a commitment to pay for the entire term of the Long Term CRRs sought by submitting to the CAISO and the CAISO accepting a written sworn statement by an executive that can bind the entity. An OBAALSE choosing to pay such WAC obligation on an annual basis shall make its payment each year on a schedule specified in the applicable Business Practice Manual.

#### 36.9.2.3 Refund of Prepaid WAC for Unallocated CRRs

To the extent that an OBAALSE prepays a quantity of the WAC and is not allocated the full amount of CRRs nominated, WAC prepayment for CRRs not allocated will be refunded by the CAISO within thirty (30) days following the completion of the relevant CRR Allocation process.

### 36.9.3 CRR Eligible Quantities

The CAISO will calculate the Seasonal CRR Eligible Quantities and Monthly CRR Eligible Quantities for OBAALSEs as described in Section 36.8.2 with the following modifications. The OBAALSE must submit two (2) sets of hourly data from which the CAISO will construct Load duration curves for determining the Seasonal CRR Eligible Quantities and Monthly CRR Eligible Quantities. One set of hourly data must

reflect the OBAALSE's historical hourly exports at the Scheduling Point that is the CRR Sink of the nominated CRRs. The historical hourly exports shall be based on the tagged Real-Time Interchange Export Schedules for the OBAALSE. An OBAALSE that wishes to nominate multiple Scheduling Points as CRR Sinks in the CRR Allocation process will have distinct CRR Eligible Quantities for each nominated Scheduling Point, and prior to each annual CRR Allocation process must submit historical hourly export data at each such Scheduling Point from which the CAISO will calculate the associated CRR Eligible Quantities. The second set of hourly data must reflect the prior year's hourly metered Load for the end-use customers the OBAALSE served outside the CAISO Balancing Authority Area and that were not served from sources other than exports from the CAISO Balancing Authority Area. The OBAALSE's Seasonal and Monthly CRR Eligible Quantities will be based on the lesser of (1) the total historical hourly export data for all Scheduling Points submitted as CRR Sinks, and (2) the hourly metered load for the external end-use customers served by the OBAALSE and that were not served from sources other than exports from the CAISO Balancing Authority Area. An OBAALSE also must demonstrate that it has firm transmission rights pursuant to the tariffs of intervening transmission providers from its Scheduling Point sink to the end-use customers in the OBAALSE's Balancing Authority Area. The OBAALSE shall support its data submission and the demonstration of transmission rights to its end-use customers with a sworn affidavit by an executive employee authorized to represent the OBAALSE and attest to the accuracy of the data and demonstration. As necessary, the CAISO may request, and such OBAALSE must produce in a timely manner, the raw data and calculations used to develop the submitted data set and the demonstration of transmission rights to its end-use customers.

**36.9.4 Eligible CRR Sources and Sinks**

Eligible CRR Sources will be the PNodes of the Generating Units or Scheduling Points for which the OBAALSE has made a legitimate need showing as described above in Section 36.9.1. Eligible CRR Sinks will be the Scheduling Points for which the CAISO has established Seasonal and Monthly CRR Eligible Quantities as described in Section 36.9.3. An OBAALSE nominating CRRs having CRR Sources internal to the CAISO Balancing Authority Area will be limited to seventy-five percent (75%) of each of its corresponding Adjusted Verified CRR Source Quantities in all tiers of the annual CRR Allocation process in CRR Year One and in subsequent years. An OBAALSE nominating CRRs having CRR Sources

external to the CAISO Balancing Authority Area will be limited to seventy-five percent (75%) of each of its corresponding Adjusted Verified CRR Source Quantities in all tiers of the annual CRR Allocation process in CRR Year One. In CRR years subsequent to CRR Year One, the OBAALSE may renew previously allocated CRRs having external CRR Sources, subject to the applicable quantity limitations and other requirements specified in this Section 36.

#### 36.9.5 Priority Nomination Process

CRRs allocated pursuant to this Section 36.9 shall be eligible for nomination in the Priority Nomination Process to the extent that the requirements of this Section 36.9 are met at the time of the relevant CRR Allocation.

### 36.10 CRR Allocation to Merchant Transmission Subsystems

An MSS Operator that elects gross Settlement may participate in the CRR Allocation processes and be allocated CRR Obligations. An MSS Operator that elects net Settlement may participate in the CRR Allocation processes and be allocated CRRs, except that its Seasonal CRR Eligible Quantities and Monthly CRR Eligible Quantities will reflect its net Load and its allocated CRRs will use MSS-LAPs as CRR Sinks. The MSS Operator will be required to submit to the CAISO the appropriate hourly historical net Load data and net Load forecast data from which the CAISO will construct net Load duration curves to determine the Seasonal CRR Eligible Quantities and Monthly CRR Eligible Quantities.

### 36.11 CRR Allocation to Merchant Transmission Facilities

Project Sponsors of Merchant Transmission Facilities who turn such facilities over to CAISO Operational Control and do not recover the cost of the transmission investment through the CAISO's Access Charge or WAC or other regulatory cost recovery mechanism may be allocated, at the Project Sponsor's election, either CRR Options or CRR Obligations that reflect the contribution of the facility to grid transfer capacity as determined below.

#### 36.11.1 Eligibility for Merchant Transmission CRRs

The Project Sponsor of a Merchant Transmission Facility shall be entitled to receive Merchant Transmission CRRs as determined in accordance with this Section 36.11. A Merchant Transmission CRR allocated through this process is effective for thirty (30) years or for the pre-specified intended life of the Merchant Transmission Facility, whichever is less. Merchant Transmission CRRs represent binding

commitments for thirty (30) years or for the pre-specified intended life of the Merchant Transmission Facility, whichever is less. The binding commitment by a CRR Holder that holds Merchant Transmission CRRs may not be terminated or otherwise modified by the CRR Holder prior to the end of the term of the Merchant Transmission CRR.

### 36.11.2 Procedure for Allocating Merchant Transmission CRRs

No less than forty-five (45) days prior to the in-service date of a Merchant Transmission Facility, the Project Sponsor of the facility will inform the CAISO of the In-Service Date of the facility and that the Project Sponsor will be requesting Merchant Transmission CRRs associated with the Merchant Transmission Facility. The CAISO will complete the Merchant CRR Allocation to make the Merchant Transmission CRRs effective as of the In-Service Date of the facility, or as soon as feasible thereafter. Where Merchant Transmission CRRs go into effect after the In-Service Date of the facility they will not be settled retroactive back to the In-Service Date, but their term will not begin until the day on which the Merchant Transmission CRRs go into effect.

### 36.11.3 CRRs Allocated to a Transmission Facility Project Sponsor

#### 36.11.3.1 Nominations of Merchant Transmission CRRs

The Project Sponsor of a Merchant Transmission Facility must submit nominations for Merchant Transmission CRRs at least twenty-one (21) days prior to the In-Service Date of the facility. The Project Sponsor may nominate up to five (5) individual, Point-to-Point CRRs for each of the two (2) on-peak and off-peak time of use periods. Each of the individual, point-to-point nominations must specify: (i) a single CRR Source location; (ii) a single CRR Sink location; (iii) a MW quantity; (iv) a time of use period (on-peak or off-peak); and (v) a CRR type, either CRR Options or CRR Obligations.

#### 36.11.3.2 Methodology to Determine Merchant Transmission CRRs

The CAISO shall determine the incremental Merchant Transmission CRRs associated with a Merchant Transmission Facility pursuant to this Section 36.11.3.2. The determination will include an assessment of the simultaneous feasibility of the incremental Merchant Transmission CRRs and all other outstanding CRRs. The CAISO will determine the feasible incremental Merchant Transmission CRRs using a three-step process.

##### 36.11.3.2.1 Step One: the Capability of the Existing Transmission System

In step one the CAISO will determine the base CRR capability of the system using a Simultaneous Feasibility Test that incorporates as Fixed CRRs all existing Encumbrances through the end of the CRR year for which the annual CRR Allocation and CRR Auction processes have already been conducted, including Encumbrances for the month covered by the most recently conducted monthly CRR Allocation and CRR Auction processes. This analysis will determine the extent to which the nominated Merchant Transmission CRRs are feasible on the existing transmission system absent the Merchant Transmission Facility. As a result of this analysis, the CAISO will create temporary test CRR Options to reserve grid capacity that the Project Sponsor of the Merchant Transmission Facility is not eligible to receive. The temporary test CRR Options will have the same CRR Source and CRR Sink pairs as the Merchant Transmission CRR nominations submitted by the Project Sponsor.

**36.11.3.2.2 Step Two: Mitigation of Impacts on Existing Encumbrances**

In the second step, the CAISO will add the proposed Merchant Transmission Facility to the DC FNM and run a SFT using the Fixed CRRs. The second step will ensure that the addition of a Merchant Transmission Facility does not negatively impact any existing Encumbrances through the end of the CRR year for which the annual CRR Allocation and Auction process for Annual CRRs has already been conducted, including encumbrances for the month covered by the most recently conducted monthly CRR Allocation and CRR Auction processes. For any impacts identified in this step the Project Sponsor of the Merchant Transmission Facility will be required to mitigate the impacts for the same period. The mitigation can include having the Project Sponsor of the Merchant Transmission Facility hold counterflow CRRs that maintain the feasibility of the existing encumbrances over the same period.

**36.11.3.2.3 Step Three: the Incremental Merchant Transmission CRRs**

In the third step, the CAISO will determine the Merchant Transmission CRRs to be allocated to the Project Sponsor of the Merchant Transmission Facility. The CAISO will determine the capability of the system to award incremental Merchant Transmission CRRs using a DC FNM that incorporates the proposed Merchant Transmission Facility. The CAISO will conduct separate SFTs for each time of use period and season, as needed. For each time of use period and season, as needed, the CAISO will perform a SFT. The SFT includes all existing Encumbrances for the month covered by the most recently conducted CRR Allocation and CRR Auction processes for Monthly CRRs including any temporary test

CRRs from step one and any counterflow CRRs from step two. Each SFT will consider the entire set of Merchant Transmission CRR nominations for the time of use period and will solve to award Merchant Transmission CRRs to the Project Sponsor of the Merchant Transmission Facility, subject to simultaneous feasibility. The nominated Merchant Transmission CRRs that are feasible in the SFT for each time of use period will be allocated to the Project Sponsor of the Merchant Transmission Facility.

**36.12 [Not Used]**

**36.13 CRR Auction**

The CAISO shall conduct CRR Auctions on an annual and monthly basis subsequent to each annual and monthly CRR Allocation process. Candidate CRR Holders may bid to purchase and may acquire CRR Obligations, and may sell CRRs, through the CAISO's annual and monthly CRR Auctions in accordance with the provisions of this Section 36.13. The CAISO shall settle CRR Auction results as provided in Section 11.2.4.3.

**36.13.1 Scope of the CRR Auctions**

The CAISO will conduct a CRR Auction corresponding to and subsequent to the completion of each CRR Allocation process, and prior to the start of the period to which the auctioned CRRs will apply. Each CRR Auction will release CRRs having the same seasons, months and time of use specifications as the CRRs released in the corresponding CRR Allocation. Each CRR Auction will utilize the same DC FNM that was utilized in the corresponding CRR Allocation. For each CRR Auction, the CRRs allocated in the corresponding CRR Allocation will be modeled as fixed injections and withdrawals on the DC FNM and will not be adjusted by the SFT in the CRR Auction process. Thus the CRR Auction will release only those CRRs that are feasible given the results of the corresponding CRR Allocation. CRRs released in a CRR Auction will be indistinguishable from CRRs released in the corresponding CRR Allocation for purposes of settlement and secondary trading. The following additional provisions apply. First, participants in the CRR Auctions will have more choices regarding CRR Sources and CRR Sinks than are eligible for nomination in the CRR Allocations, as described in Section 36.13.5. Second, to the extent a Market Participant receives CRRs in both a CRR Allocation and the corresponding CRR Auction, the CRRs obtained in the CRR Auction will not be eligible for nomination in the PNP. Third, in CRR Year One the CRR Auction cannot be used by CRR Holders to offer for sale CRRs they acquired in a prior CRR

Allocation, CRR Auction or through the Secondary Registration System. In the annual and monthly CRR Auction processes for years following CRR Year One, CRR Holders may offer for sale any CRRs held by such holders, subject to the limitations on sale and transfer of Long Term CRRs specified in Section 36.7.1.2. Merchant Transmission CRRs that are CRR Options may be offered for sale in the annual and monthly CRR Auctions for years following CRR Year One, subject to the same temporal limitations that apply to Long Term CRRs as specified in Section 36.7.1.2.

**36.13.2 Responsibilities of the CAISO Prior to Each CRR Auction**

The CAISO shall publish on the CAISO Website a notice of upcoming CRR Auctions at least seven (7) days prior to the CRR Auction. The CAISO will also provide additional information needed by CRR Auction participants in accordance with the provisions of Section 6.5.1.

**36.13.3 CRR Holder Creditworthiness**

All Market Participants are eligible to acquire CRRs by participating in the CRR Auction, provided that the Market Participant has met all the CRR Holder requirements described in Section 36.5, the creditworthiness provisions in Section 12 and Section 12.6 and the relevant Business Practice Manual.

**36.13.4 Bids in the CRR**

Market Participants will submit Bids to purchase CRRs in accordance with the requirements set out in this Section 36.13.4 and as further specified in the applicable Business Practice Manuals. Once submitted to the CAISO, CRR bids may not be cancelled or rescinded by the Market Participant after the CRR Auction is closed. Market Participants may bid to buy Point-to-Point CRRs and sell Point-to-Point CRRs that they previously acquired through CRR Allocation or CRR Auction processes. Each bid to buy or sell a Point-to-Point CRR shall specify:

(a) The associated month or season and time of use period;

(b) The associated CRR Source and CRR Sink;

(c) A monotonically non-increasing (in the case of a bid to buy) or non-decreasing (in the case of a bid to sell) piecewise linear bid curve in quantities (denominated in thousandths of a MW) and prices ($/MW).

Bid prices in all CRR bids may be negative.

**36.13.5 Eligible Sources and Sinks for CRR Auction**

Allowable CRR Sources for CRRs acquired in the CRR Auction will be generator PNodes/APNodes, Scheduling Points and Trading Hubs. Allowable CRR Sinks for CRRs acquired in the CRR Auction will be Scheduling Points, Trading Hubs, LAPs, MSS-LAPs and Sub-LAPs. Eligible Market Participants may only submit CRR bids that have the following CRR Source and Sink combinations: (1) from a generator PNode/APNode to either a LAP, MSS-LAP, Sub-LAP, Trading Hub, or Scheduling Point; or (2) from a Trading Hub to either a LAP, MSS-LAP, Sub-LAP, or Scheduling Point; or (3) from a Scheduling Point to either a LAP, MSS-LAP, Sub-LAP, or Trading Hub.

**36.13.6 Clearing of the CRR Auction**

The SFT used to clear the CRR Auction will utilize the same DC FNM and optimization algorithm as the corresponding CRR Allocation, except that nominations to the CRR Auction will have associated price-quantity bid curves. The CRR Auction SFT will use the bid prices in determining which CRRs to award when not all nominations are simultaneously feasible, will select the set of simultaneously feasible CRRs with the highest total auction value as determined by the CRR bids, and will calculate nodal prices at each PNode of the DC FNM. In the event that there are two (2) or more identical bids for a specific combination of CRR Source and CRR Sink that affect an overloaded constraint, the CRR Auction optimization cannot distinguish these bids based on either effectiveness or price and therefore the CRR Auction optimization will award each CRR bidder a pro rata share of the CRRs that can be awarded based on the bid MW amounts. Based on the nodal prices calculated by the CRR Auction SFT, the CRR Market Clearing Price per MW for a specific CRR in most cases will equal the nodal price at the CRR Source minus the nodal price at the CRR Sink. In certain anomalous cases as further described in the Business Practice Manuals, the CRR Market Clearing Price will be based on the CRR MWs cleared and the shadow price for each binding constraint at the specified location.

**36.13.7 Announcement of CRR Auction Results**

Within five (5) Business Days after the close of a CRR Auction, the CAISO shall post the results. The results shall include but are not limited to the MW quantity, the CRR Source and CRR Sink for each CRR awarded, the nodal prices calculated by the CRR Auction SFT, and the parties to whom the CRRs were awarded. The CAISO shall not disclose prices specified in any CRR bid.

**36.14 CRR Implications of new IBAAs or Modifying Existing IBAAs**

**36.14.1 Coordination of IBAA Changes with Release of CRRs**

To the extent practicable, the CAISO will coordinate future IBAA changes, including establishment of new IBAAs and modifications to existing IBAAs, with the annual CRR Allocation and CRR Auction processes. Where feasible, the CAISO will implement the FNM containing the IBAA changes for use in the CAISO Markets beginning with the markets for a Trading Day of January 1 of a new calendar year and, consistent with Section 6.5.1, will provide Market Participants all the IBAA modeling and pricing details as part of the FNM information package that is made available for CRR purposes prior to the CAISO conducting the annual CRR Allocation and CRR Auction process for that calendar year. As a result, all CRRs released in that process will be based upon the same FNM for IBAAs that will be used in the CAISO Markets when the released CRRs and the IBAA changes become effective. In the event that there is a need to implement an IBAA change other than on January 1, the CAISO will incorporate the IBAA change into the FNM for the monthly CRR Allocation and CRR Auction process for the first month in which the IBAA change will take effect. In all cases the CAISO will follow the provisions of this Section 36.14 for assessing and mitigating impacts on any Previously-Released CRRs.

**36.14.2 Modification to CRR Settlement to Reflect IBAA Changes**

To the extent an IBAA change, including the establishment of a new IBAA or a change to an existing IBAA, modifies the pricing for Settlement purposes of IFM scheduled transactions between the CAISO Balancing Authority Area and the IBAA, the Settlement of certain Previously-Released CRRs may no longer be consistent with the modified IFM Settlement. A CRR Holder of a Previously-Released CRR whose CRR Source or CRR Sink is affected by an IBAA change may make a one-time election either to (a) modify the Settlement of the affected CRR Source or CRR Sink to conform to the revised IFM pricing associated with the IBAA change, or (b) retain the original CRR Source or CRR Sink specification of the Previously-Released CRR. The CRR Holder of such a CRR must make the one-time election prior to the first CRR Allocation and CRR Auction process that incorporates the IBAA change in the CRR FNM, in accordance with the process time line specified in the applicable Business Practice Manual. If the IBAA change is implemented to coincide with the beginning of a calendar year and is coordinated with the annual CRR Allocation and CRR Auction process for that year, as described in Section 36.14.1, the provisions discussed herein apply only to Previously-Released CRRs that are Long Term CRRs and

Previously-Released CRRs that are Seasonal CRRs obtained through the CRR Allocation and are eligible for PNP nomination. In the event that the IBAA change is implemented in the CAISO Markets other than on January 1, then these provisions apply also to any Previously-Released CRRs that are Seasonal CRRs effective for the remainder of the year in which the IBAA change is implemented.

### 36.14.3 IBAA Change Impact on Adequacy of Previously-Released CRRs

It is possible that, as a result of modifying the CRR Sources or CRR Sinks of Previously-Released CRRs as provided in Section 36.14.2, the entire set of Previously-Released CRRs may no longer be simultaneously feasible. Any such violation of simultaneous feasibility may or may not lead to a revenue shortfall, that is, a deficiency over the course of a month between the IFM Congestion Charge and the amount of funds needed to fully settle the CRRs that are in effect for that month. Consistent with Section 11.2.4.4.1, any revenue shortfall that may result from IBAA-related changes to CRR Sources and CRR Sinks would be funded through the relevant daily CRR Balancing Account.

## 36.15 [Not Used]

# 37. Rules of Conduct

## 37.1 Objectives, Definitions, and Scope

### 37.1.1 Purpose

Section 37 sets forth the guiding principles for participation in the markets administered by the CAISO. The specified Rules of Conduct are intended to provide fair notice to Market Participants of the conduct expected of them, to provide an environment in which all parties may participate on a fair and equal basis, to redress instances of gaming and other instances of anticompetitive behavior, and thereby to foster confidence of Market Participants, ratepayers and the general public in the proper functioning of the CAISO markets.

### 37.1.2 Objectives

The objectives of this CAISO Tariff are to:

(a) Provide clear Rules of Conduct specifying the behavior expected of Market Participants; and

(b) Establish in advance the Sanctions and other potential consequences for violation of the specified Rules of Conduct.

### 37.1.3 Application of Other Remedies

The activities and remedies authorized under this Section 37 are in addition to any other actions or relief that may be available to the CAISO elsewhere in the CAISO Tariff or under law, regulation or order. Nothing in this Section 37 limits or should be construed to limit the right of the CAISO to take action or seek relief otherwise available to it, and such action or relief may be pursued in addition to the action or relief specified in this Section 37.

### 37.1.4 [Not Used]

### 37.1.5 Administration

The CAISO shall administer the following Rules of Conduct specified herein: Section 37.4.1, Section 37.4.2, Section 37.5.2, Section 37.6.1, Section 37.6.2, Section 37.6.3, and Section 37.7. FERC shall administer the following Rules of Conduct specified herein: Section 37.2.1, Section 37.2.3, Section 37.2.4, and Section 37.3.1.

### 37.2 Comply with Operating Instructions

#### 37.2.1 Compliance with Orders Generally

##### 37.2.1.1 Expected Conduct

Market Participants must comply with Operating Instructions issued by the CAISO as authorized under the CAISO Tariff. Deviation from an ADS Dispatch Instruction shall not constitute a violation of this Section 37.2.1.1. A Market Participant's failure to obey an Operating Instruction containing multiple instructions to address a specific operating condition will result in a single violation of Section 37.2. If some limitation prevents the Market Participant from fulfilling the action requested by the CAISO then the Market Participant must promptly and directly communicate the nature of any such limitation to the CAISO, pursuant to Section 4.2.1.

##### 37.2.1.2 [Not Used]

#### 37.2.2 [Not Used]

##### 37.2.2.1 [Not Used]

##### 37.2.2.2 [Not Used]

#### 37.2.3 Operations and Maintenance Practices

##### 37.2.3.1 Expected Conduct

Market Participants shall undertake such operating and maintenance practices as necessary to avoid contributing to a major Outage or prolonging response time to a major Outage. For the purposes of this Section 37.2.3.1, a major Outage is an Outage that affects at least ten (10) percent of the Load served by the Distribution System of a UDC or any Outage that results in major damage to the CAISO Controlled Grid or to the health and safety of personnel.

##### 37.2.3.2 [Not Used]

#### 37.2.4 Resource Adequacy Availability

##### 37.2.4.1 Expected Conduct

Subject to Section 40, a Market Participant shall start a Generating Unit listed as a Resource Adequacy Resource and bring it on-line and/or available consistent with a DAM or RUC commitment or Real-Time Dispatch Instructions and once started up, shall not shut down a Generating Unit listed as a Resource Adequacy Resource in a manner that is inconsistent with a DAM or RUC commitment or Real-Time

Dispatch Instructions, unless the CAISO releases the Generating Unit after the RUC process is completed, or a derate or Outage prevents the Generating Unit from being on-line and available.

**37.2.4.2 [Not Used]**

**37.2.5 [Not Used]**

**37.2.6 [Not Used]**

**37.3 Submit Feasible Bids and Submissions to Self-Provide**

**37.3.1 Bidding Generally**

**37.3.1.1 Expected Conduct**

Market Participants must submit Bids for Energy, RUC Capacity and Ancillary Services and Submissions to Self-Provide an Ancillary Service from resources that are reasonably expected to be available and capable of performing at the levels specified in the Bid, and to remain available and capable of so performing based on all information that is known to the Market Participant or should have been known to the Market Participant at the time of submission. Intertie Schedules in the RTM for import or export Energy are not subject to the foregoing requirement, but failure to deliver on such Intertie Schedules in the RTM can be subject to referral by DMM under Section 11.1, Appendix P.

**37.3.2.1 [Not Used]**

**37.3.2 Exceptions**

The submission of a Bid or of a Submission to Self-Provide Ancillary Services that causes, or that the CAISO expects to cause Congestion shall not, by itself, constitute a violation of Section 37.3.1.

**37.4 Comply with Available Reporting Requirements**

**37.4.1 Reporting Availability**

**37.4.1.1 Expected Conduct**

A Market Participant shall notify the CAISO Control Center of any Outage reportable pursuant to Section 9.3.10.3.1 of a Generating Unit subject to Section 4.6 within sixty (60) minutes after the Outage is discovered.

**37.4.1.2 Sanctions**

A “violation” for purposes of this Section shall mean each failure to notify the CAISO Control Center about an Outage of a Generating Unit within sixty (60) minutes after the Outage is discovered, as required by

Section 37.4.1, except that (a) for each Generating Unit, the first such failure in a calendar month shall not constitute a violation, and (b) for each Generating Unit, multiple failures in the same calendar day shall constitute a single violation. The Sanctions for a violation of Section 37.4.1 shall be as follows:

(a) for each Generating Unit that is the subject of a violation, the Sanction for the first violation in a calendar month shall be a warning letter;

(b) for each Generating Unit that is the subject of a violation, the Sanction for the second and subsequent violations in a calendar month will be a financial penalty, as follows:

(i) if the Generating Unit has not been the subject of a financial penalty for a previous violation within twelve (12) months of the instant violation, the Sanction will be $1,000;

(ii) if the Generating Unit has been the subject of one financial penalty for a previous violation within twelve (12) months of the instant violation, the Sanction will be $2,000;

(iii) if the Generating Unit has been the subject of two or more financial penalties for previous violations within twelve (12) months of the instant violation, the Sanction will be $5,000.

**37.4.2 Scheduling and Final Approval of Outages**

**37.4.2.1 Expected Conduct**

A Market Participant shall not undertake an Outage except as approved by the CAISO in accordance with Section 9.3.2, Section 9.3.9, and Section 9.3.6.7. A Market Participant shall not commence any Outage without obtaining final approval from the CAISO Control Center in accordance with Sections 9.3.9 and 9.3.10.

**37.4.2.2 Sanctions**

The Sanctions for a violation of Section 37.4.2 shall be as follows: for the first violation within a rolling twelve (12) month period, $5,000; for subsequent violations within a rolling twelve (12) month period, $10,000. A “violation” shall mean each Outage undertaken for which all required approvals were not obtained.

**37.4.3 [Not Used]**

### 37.4.4 Enhancements and Exceptions

Except as otherwise specifically provided, penalty amounts shall be tripled for any violation of Section 37.4.1 or 37.4.2 that occurs during a CAISO System Emergency.

## 37.5 Provide Factually Accurate Information

### 37.5.1 [Not Used]

### 37.5.2 Accurate and Timely SQMD

#### 37.5.2.1 Expected Conduct

Scheduling Coordinators representing Scheduling Coordinator Metered Entities shall provide complete and accurate Settlement Quality Meter Data for each Trading Hour and shall correct any errors in such data no later than the Settlement Quality Meter Data submission deadline specified in Section 10.3.6.3. Failure by a Scheduling Coordinator to submit Scheduling Coordinator Estimated Settlement Quality Meter Data that is complete and based on a good faith estimate that reasonably represents Demand and/or Generation quantities for each Settlement Period as required by Section 10 shall be a violation of this rule and may be referred to DMM for investigation.

##### 37.5.2.1.1 Inaccurate Meter Data

For the purposes of this Section 37.5.2, a Scheduling Coordinator has submitted inaccurate Meter Data and violated this Section 37.5.2 if it timely submits Actual Settlement Quality Meter Data for every applicable Settlement Period in a Trading Day as required by Section 10.3.6 but the Actual Settlement Quality Meter Data is erroneous and the Scheduling Coordinator does not correct the error(s) by the Settlement Quality Meter Data submission deadline specified in Section 10.3.6.3. Additionally, where a Scheduling Coordinator submits late Meter Data as defined in Section 37.5.2.1.2 and the Actual Settlement Quality Meter Data submitted by the Settlement Quality Meter Data resubmittal deadline specified in Section 10.3.6.4 is erroneous, then the Scheduling Coordinator has submitted inaccurate Meter Data in addition to late Meter Data. Provided, however, the CAISO applies a materiality threshold such that a Scheduling Coordinator has not violated this Section 37.5.2 if the net error across the Trading Day is less than the larger of: (a) three percent of the correct total Meter Data values for the Trading Day for the Scheduling Coordinator Metered Entity; and (b) three MWh.

##### 37.5.2.1.2 Late Meter Data

For the purposes of this Section 37.5.2, a Scheduling Coordinator has submitted late Meter Data and violated this Section 37.5.2 if it fails, by the Settlement Quality Meter Data submission deadline specified in Section 10.3.6.3, either to submit Actual Settlement Quality Meter Data for every applicable Settlement Period in a Trading Day as required by Section 10.3.6 or to replace Estimated Settlement Quality Meter Data with Actual Settlement Quality Meter Data for every applicable Settlement Period in a Trading Day as required by Section 10.3.6 but, in either case, corrects the failure by the Settlement Quality Meter Data resubmittal deadline specified in Section 10.3.6.4.

#### 37.5.2.1.3 Missing Meter Data

For the purposes of this Section 37.5.2 a Scheduling Coordinator has missing Meter Data and has violated this Section 37.5.2 if it fails, by the Settlement Quality Meter Data submission deadline specified in Section 10.3.6.3, either to submit Actual Settlement Quality Meter Data for every applicable Settlement Period in a Trading Day as required by Section 10.3.6 or to replace Estimated Settlement Quality Meter Data with Actual Settlement Quality Meter Data for every applicable Settlement Period in a Trading Day as required by Section 10.3.6 and, in either case, does not correct the failure by the Settlement Quality Meter Data resubmittal deadline specified in Section 10.3.6.4.

### 37.5.2.2 Sanctions and Market Adjustment

#### 37.5.2.2.1 Sanction for Inaccurate Meter Data

The Sanction for inaccurate Meter Data is the lower of: (a) 30 percent of the value of the error; or (b) $1,000. For purposes of calculating the inaccurate Meter Data Sanction, the value of the error is calculated based on a minimum price of $10/MWh. The Sanction applies per Trading Day per SCID with inaccurate Meter Data. A Scheduling Coordinator under a single SCID can face Sanction under this Section 37.5.2.2.1 and Section 37.5.2.2.2 for the same Trading Day.

A Scheduling Coordinator must provide reasonable cooperation with the CAISO in providing data needed to calculate the Sanction for inaccurate Meter Data.

Where a Scheduling Coordinator (under the same SCID or different SCIDs) submits inaccurate Meter Data for both a Generating Unit and Load for the same Trading Day, the CAISO does not consider the inaccurate Load Settlement Quality Meter Data for purposes of assessing Sanctions under this Section 37.5.2.2.1 if the Scheduling Coordinator demonstrates to the CAISO's reasonable satisfaction that the

Load Settlement Quality Meter Data is derived from the Generating Unit Settlement Quality Meter Data and that the inaccurate Load Settlement Quality Meter Data was caused by the inaccurate Generating Unit Settlement Quality Meter Data. In such cases, the CAISO considers the inaccurate Load Settlement Quality Meter Data in calculating any applicable market adjustment pursuant to Section 37.5.2.2.4.

**37.5.2.2.2 Sanction for Late Meter Data**

The Sanction for submitting late Meter Data as defined in Section 37.5.2.1.2 is $1,000 per Trading Day per SCID with late Meter Data. A Scheduling Coordinator under a single SCID can face Sanction under this Section 37.5.2.2.2 and Section 37.5.2.2.1 for the same Trading Day.

**37.5.2.2.3 Sanction for Missing Meter Data**

The Sanction for missing Meter Data as defined in Section 37.5.2.1.3 is $4,000 per Trading Day per SCID with missing Meter Data. For a given Trading Day, a Scheduling Coordinator under a single SCID cannot be sanctioned for both a missing Meter Data violation and either an inaccurate Meter Data violation or a late Meter Data violation. If a Scheduling Coordinator under a single SCID has missing Meter Data and inaccurate Meter Data or late Meter Data on the same Trading Day, then the CAISO only assesses a Sanction for the missing Meter Data.

**37.5.2.2.4 Market Adjustment**

The CAISO charges a Scheduling Coordinator a market adjustment if a Scheduling Coordinator violates Sections 37.5.2.1.1, 37.5.2.1.2, or 37.5.2.1.3, and the accurate or previously unsubmitted Meter Data is not reflected on the T+11M Recalculation Settlement Statement either because the Scheduling Coordinator provides the CAISO with the correct Actual Meter Data after the Settlement Quality Meter Data resubmittal deadline specified in Section 10.3.6.4 or because the CAISO does not issue a Recalculation Settlement Statement T+11M for the relevant Trading Day. The CAISO additionally charges a market adjustment in instances where, but for the materiality threshold specified in Section 37.5.2.1.1, there would have been an inaccurate Meter Data violation and a market adjustment would have applied to that violation.

The market adjustment is the value of the error calculated based on a minimum price of $10/MWh and the CAISO calculates the market adjustment for each hour with inaccurate, late, or missing data in addition to the financial Sanctions specified in either Sections 37.5.2.2.1, 37.5.2.2.2, or 37.5.2.2.3.

Provided, however, that the CAISO does not charge a market adjustment if: (a) the initially inaccurate, missing, or late Meter Data was to the Scheduling Coordinator's detriment; or (b) the Scheduling Coordinator, under a single SCID, is the only Scheduling Coordinator in the utility Service Area during the period of inaccurate, late, or missing Meter Data.

A Scheduling Coordinator must provide reasonable cooperation with the CAISO in providing data needed to calculate the market adjustment.

The CAISO allocates the market adjustment charge to Scheduling Coordinators in proportion to their charges for Unaccounted for Energy (UFE) in the utility Service Area during the total period of the inaccurate, late, or missing Meter Data event.

### 37.6 Provide Information Required by CAISO Tariff

#### 37.6.1 Required Information Generally

##### 37.6.1.1 Expected Conduct

Except as provided below in Section 37.6.4 (Review by FERC), all information that is required to be submitted to the CAISO under the CAISO Tariff must be submitted by the specified deadline. Provided, however, a violation of Sections 37.4.1, 37.5, or 37.7 is not separately a violation of this Section 37.6.1.1. For the purposes of this Section 37.6.1.1, the specified deadline is either the deadline established directly in the CAISO Tariff or, where the CAISO Tariff does not establish a specific deadline, by the deadline that the CAISO has authority to establish under the CAISO Tariff.

##### 37.6.1.2 Sanctions

Except as otherwise provided below, in Section 37.6.2 and Section 37.6.3, the Sanction for a violation of Section 37.6.1.1 shall be $500 for each day that the required information is late.

#### 37.6.2 Investigation Information

##### 37.6.2.1 Expected Conduct

Except as provided below in Section 37.6.4 (Review by FERC), Market Participants must submit information in response to a written request by the CAISO for information requested in the course of an investigation authorized by the CAISO by the deadline established in the request by the CAISO.

##### 37.6.2.2 Sanctions

The Sanction for a violation of Section 37.6.2 shall be as follows: for the first violation in a rolling twelve

(12) month period, $1000/day; for the second violation in a rolling twelve (12) month period, $2000/day; for the third and subsequent violations in a rolling twelve (12) month period, $5000/day. For purposes of this subsection, a violation shall be each failure to provide a full response to a written request and the Sanction shall be determined from the date that the response was due until a full response to the request is received.

**37.6.3 Audit Materials**

**37.6.3.1 Expected Conduct**

Except as provided below in Section 37.6.4 (Review by FERC), Market Participants shall comply with the CAISO's audit and/or test procedures authorized pursuant to Section 10.3.10, and further shall perform and submit an annual self-audit as required by the procedures the ISO establishes pursuant to Section 10.3.10, including procedures established relating to the deadline for submitting the required audit.

**37.6.3.2 Sanctions**

For failure to submit an audit report as required by Section 10.3.10.1, the Sanction shall be $1000/day until such report is received by the CAISO. For all other violations of this rule the Sanctions shall be as follows: for the first violation in a rolling twelve (12) month period, $1000/day; for the second violation in a rolling twelve (12) month period, $2000/day; for the third and subsequent violations in a rolling twelve (12) month period, $5000/day. For purposes of this subsection, a "violation" shall be each failure to provide all information required under the audit or test, from the date that the information was due until all required information is received by the CAISO.

**37.6.4 Review by FERC**

A Market Participant who objects to an information, audit or test obligation that is enforceable under Section 37.6.1, Section 37.6.2 or Section 37.6.3 above shall have the right immediately (and in all events, no later than the due date for the information) to seek review of the obligation with FERC. In the event that such review is sought, the time for submitting the response or other information to the CAISO shall be tolled until FERC resolves the issue.

**37.7 Provide Monitoring Data**

**37.7.1 Demand Response Monitoring Data**

**37.7.1.1 Expected Conduct**

Failure to submit a complete set of Demand Response Monitoring Data as specified in Section 11.6.8 is a violation of this Section 37.7.1.

For the purposes of this Section 37.7.1, a Scheduling Coordinator has late Demand Response Monitoring Data if it fails to submit Demand Response Monitoring Data by the SQMD submission deadline defined in Section 10.3.6.3 for the Trading Day on which the Demand Response Event occurred but submits such data by the SQMD submission deadline defined in Section 10.3.6.4.

For the purposes of this Section 37.7.1, a Scheduling Coordinator has missing Demand Response Monitoring Data if it fails to submit Demand Response Monitoring Data by the SQMD submission deadline defined in section 10.3.6.4 for the Trading Day on which the Demand Response Event occurred.

#### 37.7.1.2 Sanctions

The Sanction for late Demand Response Monitoring Data is $1,000. The Sanction applies per Trading Day per SCID with late Demand Response Monitoring Data.

The Sanction for missing Demand Response Monitoring Data is $4,000. The Sanction applies per Trading Day per SCID with missing Demand Response Monitoring Data.

A Scheduling Coordinator with a late Demand Response Monitoring Data violation and a separate missing Demand Response Monitoring Data violation for the same Trading Day under the same SCID is only assessed the missing Demand Response Monitoring Data Sanction.

### 37.8 Process for Investigation and Enforcement

#### 37.8.1 Purpose; Scope

The provisions of this Section 37.8 set forth the procedures by which the CAISO will independently investigate potential violations of the Rules of Conduct and administer enforcement activities. Except as hereinafter provided the provisions of this section apply to the Rules of Conduct set forth in Sections 37.2 through 37.7.

#### 37.8.2 Referrals to FERC

Section 37.2.1, Section 37.2.3, Section 37.2.4, and Section 37.3.1 shall be enforced by FERC, in accordance with FERC's rules and procedures. Pursuant to Section 11 of Appendix P, DMM shall refer suspected violations of Section 37.2.1, Section 37.2.3, Section 37.2.4, and Section 37.3.1 to FERC. For violations of this Section 37 that are enforced by FERC, Section 37.8.3, Section 37.8.4, Section 37.8.5,

Section 37.8.6, Section 37.8.7, Section 37.8.8, Section 37.8.9, and Section 37.8.10 shall not apply to any investigation DMM may conduct prior to submitting a referral to FERC.

### 37.8.3 Preliminary Investigation

Upon becoming aware of any action or inaction that may constitute a Rules of Conduct violation, the CAISO conducts a preliminary investigation of the potential violation based on facts, data, and other information within its possession.

### 37.8.4 Notice of Review

If the CAISO's preliminary investigation indicates a violation may have occurred, the CAISO provides a notice of review to the Scheduling Coordinator. The CAISO also provides the notice of review to all Market Participants the Scheduling Coordinator represents that are the subject(s) of the investigation if the CAISO has sufficient objective information to identify and verify the role of the Market Participant(s) in the potential Rules of Conduct violation. Such Market Participant(s) will likely have an existing contractual relationship with the CAISO (e.g., UDC, MSS, CAISO Metered Entity, Participating Transmission Owner, Participating Generator, Participating Load, Distributed Energy Resource Provider, or Demand Response Provider).

The notice of review provides the Scheduling Coordinator and Market Participants, as applicable, a description of the potential violation and provides an opportunity to respond to the CAISO with any issues of fact or other information relevant to the potential Rules of Conduct violation being investigated. The description in the notice of review must provide sufficient detail to allow for a meaningful response from the parties receiving the notice of review. Depending on the response to the notice of review, the CAISO may request additional information or pose clarifying questions to the Scheduling Coordinator and Market Participants. A response to the notice of review is optional.

### 37.8.5 Results of Review

After reviewing any information provided in response to a notice of review and all other relevant information, the CAISO concludes its investigation and provides the Scheduling Coordinator and Market Participant, as applicable, a results of review notice. The results of review notice notifies the parties of the results of the investigation and any applicable Sanctions.

### 37.8.6 Assessment of Sanctions

The CAISO assesses Sanctions on a Settlement Statement no sooner than 30 days after providing the results of review notice.

**37.8.7 [Not Used]**

**37.8.8 [Not Used]**

**37.8.9 Record of Investigation**

Where the CAISO issues a results of review notice concluding a Rules of Conduct violation occurred and a Sanction is not tolled pursuant to Section 37.8.10, then the CAISO must maintain a record of the investigation until at least the timeline for raising disputes specified in Section 11.29.8 has elapsed for the Settlement Statement on which the Sanction is assessed. Where the CAISO issues a results of review notice concluding a Rules of Conduct violation occurred and a Sanction is tolled pursuant to Section 37.8.10, the CAISO must maintain a record of the investigation until at least FERC's disposition of the appeal.

**37.8.10 Review of Determination**

A Scheduling Coordinator that receives a results of review notice concluding a Rules of Conduct violation occurred, or a Market Participant whose conduct gave rise to the results of review notice, may appeal the CAISO's conclusion to FERC by submitting a waiver request. The obligation to pay any Sanctions is tolled until FERC renders its decision on the appeal if the Scheduling Coordinator or Market Participant within 30 days of receiving the results of review notice: (a) files its appeal with FERC; and (b) provides the CAISO with notice of the appeal following the procedures established in the Business Practice Manual. A Scheduling Coordinator or Market Participant is permitted to file an appeal after this 30-day period but such filing does not relieve the Scheduling Coordinator from the obligation to pay the Sanction when it appears on a Settlement Statement, subject to refund based on FERC's disposition of the appeal. The disposition by FERC of such appeal shall be final, and no separate dispute of such Sanction may be initiated under Section 13. For the purpose of applying the time limitations set forth in Section 37.10.1, a Sanction is assessed when it is included on a Settlement Statement or, in the case of a Sanction that is tolled pursuant to this Section 37.8.10, when a Sanctions appeal is filed with FERC.

**37.9 Administration of Sanctions**

**37.9.1 Assessment, Waivers and Adjustments**

Penalty amounts for violation of these Rules of Conduct shall be calculated as specified in Section 37.4.1.2, Section 37.4.2.2, Section 37.4.4, Section 37.5.2.2, Section 37.6.1.2, Section 37.6.2.2, Section 37.6.3.2, and Section 37.7.1.2.

**37.9.2 [Not Used]**

**37.9.2.1 [Not Used]**

**37.9.2.2 [Not Used]**

**37.9.2.3 [Not Used]**

**37.9.2.4 [Not Used]**

**37.9.2.5 [Not Used]**

**37.9.2.6 [Not Used]**

**37.9.3 Settlement**

**37.9.3.1 Settlement Statements**

The CAISO will administer any penalties issued under this Section 37 through Settlement Statements, as relevant, issued to the responsible Scheduling Coordinator by the CAISO. Before invoicing a financial penalty through the Settlement process, the CAISO will provide a description of the penalty to the responsible Scheduling Coordinator and all Market Participants the Scheduling Coordinator represents that are liable for the penalty, when the CAISO has sufficient objective information to identify and verify responsibility of such Market Participants. The description shall include the identity of the Market Participant that committed the violation and the amount of the penalty.

**37.9.3.2 Payment**

Except as provided in Section 37.9.3.3 below, the Scheduling Coordinator shall be obligated to pay all penalty amounts reflected on Settlement Statements to the CAISO pursuant to the CAISO's Settlement process, as set forth in Section 11.

**37.9.3.3 Other Responsible Party**

Where a party or parties other than the Scheduling Coordinator is responsible for the conduct giving rise to a penalty reflected on a Settlement Statement, and where the Scheduling Coordinator bears no responsibility for the conduct, such other party or parties ultimately shall be liable for the penalty. Under such circumstances, the Scheduling Coordinator shall use reasonable efforts to obtain payment of the

penalty from the responsible party(ies) and to remit such payment to the CAISO in the ordinary course of the Settlement process. In the event that the responsible party(ies) wish to dispute the penalty, or the Scheduling Coordinator otherwise is unable to obtain payment from the responsible parties, the Scheduling Coordinator shall notify the CAISO and dispute the Settlement Statement. The CAISO promptly shall notify FERC. If the CAISO finds that a Market Participant separate from the Scheduling Coordinator that is unable to obtain payment from the responsible party(ies) is solely responsible for a violation, the Scheduling Coordinator that is unable to obtain payment may net its payment of its Invoice amount by the amount of the penalty in question. The CAISO may refuse to offer further service to any responsible party that fails to pay a penalty, unless excused under the terms of the CAISO Tariff, by providing notice of such refusal to the Scheduling Coordinator. Following such notice, the Scheduling Coordinator shall be liable for any subsequent penalties assessed on account of such responsible party.

**37.9.3.4 [Not Used]**

**37.9.4 Disposition of Proceeds**

The CAISO shall collect penalties assessed pursuant to this Section 37.9 and deposit such amounts in an interest bearing trust account. The CAISO shall distribute the penalty amounts together with interest earned through payments to Scheduling Coordinators as provided herein.

Each Scheduling Coordinator that is an ineligible Market Participant or that represented an ineligible Market Participant during the calendar year will identify, in a manner to be specified by the CAISO, the amount of GMC paid by each Market Participant for whom that Scheduling Coordinator provided service during that calendar year. The total amount assigned to all Market Participants served by that Scheduling Coordinator in such calendar year (including the Scheduling Coordinator itself for services provided on its own behalf), shall equal the total GMC paid by that Scheduling Coordinator.

The CAISO will calculate the payment due each Scheduling Coordinator based on the lesser of the GMC actually paid by all eligible Market Participants represented by that Scheduling Coordinator, or the product of a) the amount in the trust account, including interest, and b) the ratio of the GMC paid by each Scheduling Coordinator for eligible Market Participants, to the total of such amounts paid by all Scheduling Coordinators. Each Scheduling Coordinator is responsible for distributing payments to the eligible Market Participants it represented in proportion to GMC collected from each eligible Market

Participant.

For the purpose of distributing the penalty funds and associated interest, ineligible Market Participants are Market Participants that: (1) were assessed a Sanction on a Settlement Statement during the calendar year and the Sanction was never tolled pursuant to Section 37.8.10; (2) filed a Sanctions appeal during the calendar year that qualified for tolling pursuant to Section 37.8.10 and FERC's decision of the appeal did not overturn the CAISO's conclusion that a violation of Section 37 occurred; or (3) are exempt from financial Sanctions pursuant to Section 22.9. The CAISO determines if a Scheduling Coordinator is an ineligible Market Participant at the SCID level. A Market Participant that is not deemed an ineligible Market Participant is an eligible Market Participant for purposes of this Section 37.9.4.

If the total amount in the trust account to be allocated exceeds the total GMC obligation of all eligible Market Participants, then such excess shall be treated in accordance with Section 11.29.9.6.3.

The CAISO distributes the penalty funds after the end of each calendar year and once no more appeals to FERC are pending that could impact an entity's status as an eligible Market Participant for the calendar year. The CAISO may distribute the penalty funds through an initial allocation followed by supplemental allocations if an appeal to FERC is pending that would not impact an entity's status as an eligible Market Participant for the calendar year but could impact the total pool of funds to distribute.

After allocating the penalty proceeds, the CAISO posts an informational report to the CAISO Website providing information about the financial Sanctions assessed for the calendar year, including the number of violations and total financial Sanctions assessed for each category of violation, and issues a Market Notice informing Scheduling Coordinators and Market Participants of the availability of the report.

## 37.10 Miscellaneous

### 37.10.1 Time Limitation

Sanctions may only be assessed if the CAISO issues a notice of review, as specified in Section 37.8.4, within ninety (90) days of discovery of the events that are potentially subject to Sanction. The CAISO's methodology for assessing the discovery date for Rules of Conduct violations is established in the Business Practice Manual. Sanctions may be assessed under this Section 37 up to one year after discovery of the events constituting the violation, but no later than three years after the date of the violation. Nothing in this section shall limit the rights or liabilities of any party under any other provision of

applicable laws, regulations or tariff provisions.

**37.10.2 No Limitation on other Rights**

Nothing contained in this Section 37 shall limit the ability of the CAISO to collect information from Market Participants or to establish new provisions pursuant to Section 15.

**37.11 [Not Used]**

**37.11.1 [Not Used]**

**37.11.2 [Not Used]**

## 38. Market Monitoring

To comply with Commission Order No. 719, P 392, Section 38 has been consolidated with, and moved to, Appendix O (for the MSC) and Appendix P (for DMM). Where a provision in Appendix O or Appendix P is cross-referenced in another section or appendix of this Tariff, the language in Appendix O or Appendix P shall govern in the event of any conflict.

## 39. Market Power Mitigation Procedures

### 39.1 Intent of CAISO Mitigation Measures; Additional FERC Filings

These CAISO market power mitigation measures ("Mitigation Measures") are intended to provide the means for the CAISO to mitigate the market effects of any conduct that would substantially distort competitive outcomes in the CAISO Markets while avoiding unnecessary interference with competitive price signals. These Mitigation Measures are intended to minimize interference with an open and competitive market, and thus to permit, to the maximum extent practicable, price levels to be determined by competitive forces under the prevailing market conditions. To that end, the Mitigation Measures authorize the mitigation only of specific conduct identified through explicit procedures specified below. In addition, the CAISO shall monitor the markets it administers for conduct that it determines constitutes an abuse of market power but is not addressed by the market power mitigation procedures specified below. If the CAISO identifies any such conduct, it shall make a filing under Section 205 of the Federal Power Act, 16 U.S.C. § 824d, with FERC requesting authorization to apply appropriate mitigation measures. Any such filing shall identify the particular conduct the CAISO believes warrants mitigation, shall propose a specific mitigation measure for the conduct, and shall set forth the CAISO's justification for imposing that mitigation measure.

### 39.2 Conditions for the Imposition of Mitigation Measures

#### 39.2.1 Conduct Inconsistent with Competitive Conduct

In general, the CAISO shall consider a Market Participant's conduct to be inconsistent with competitive conduct if the conduct would not be in the economic interest of the Market Participant in the absence of market power. The categories of conduct that are inconsistent with competitive conduct include, but may not be limited to, the four categories of conduct specified in Section 39.3 below.

### 39.3 Categories of Conduct that May Warrant Mitigation

#### 39.3.1 Conduct Regarding Bidding, Scheduling or Facility Operation

Mitigation Measures may be applied to bidding, scheduling or operation of an Electric Facility or as specified in Section 39.3.1. The following categories of conduct, whether by a single firm or by multiple firms acting in concert, may cause a material effect on prices or generally the outcome of the CAISO Markets if exercised from a position of market power. Accordingly, the CAISO shall monitor the CAISO

Markets for the following categories of conduct, and shall impose appropriate Mitigation Measures if such conduct is detected and the other applicable conditions for the imposition of Mitigation Measures are met:

(1) Physical withholding of an Electric Facility, in whole or in part, that is, not offering to sell or schedule the output of or services provided by an Electric Facility capable of serving a CAISO Market. Such withholding may include, but not be limited to: (i) falsely declaring that an Electric Facility has been forced out of service or otherwise become totally or partially unavailable, (ii) refusing to offer Bids for an Electric Facility when it would be in the economic interest, absent market power, of the withholding entity to do so, (iii) declining Bids called upon by the CAISO (unless the CAISO is informed in accordance with established procedures that the relevant resource for which the Bid is submitted has undergone a forced outage or derate), or (iv) operating a Generating Unit in Real-Time to produce an output level that is less than the Dispatch Instruction.

(2) Economic withholding of an Electric Facility, that is, submitting Bids for an Electric Facility that are unjustifiably high (relative to known operational characteristics and/or the known operating cost of the resource) so that: (i) the Electric Facility is not or will not be dispatched or scheduled, or (ii) the Bids will set LMPs.

(3) Uneconomic production from an Electric Facility that is, increasing the output of an Electric Facility to levels that would otherwise be uneconomic in order to cause, and obtain benefits from, a Transmission Constraint.

(4) Bidding practices that distort prices or uplift charges away from those expected in a competitive market, such as registering Start-Up Cost and Minimum Load Cost data or submitting Bid Costs on behalf of an Electric Facility that are unjustifiably high (relative to known operational characteristics and/or the known operating cost of the resource) or misrepresenting the physical operating capabilities of an Electric Facility resulting in uplift payments or prices significantly in excess of actual costs.

**39.3.2 Market Effects of Rules, Standards, Procedures, Other Items**

Mitigation Measures may also be imposed to mitigate the market effects of a rule, standard, procedure, design feature, or known software imperfection of a CAISO Market that allows a Market Participant to

manipulate market prices or otherwise impair the efficient operation of that market, pending the revision of such rule, standard, procedure design feature, or software defect to preclude such manipulation of prices or impairment of efficiency.

#### 39.3.3 Using Different Prices in Other Markets as Appropriate

Taking advantage of opportunities to sell at a higher price or buy at a lower price in a market other than a CAISO Market shall not be deemed a form of withholding or otherwise inconsistent with competitive conduct.

#### 39.3.4 Foregoing Category List Subject to Amendment as Appropriate

The CAISO shall monitor CAISO Markets for other categories of conduct, whether by a single firm or by multiple firms acting in concert, that have material effects on prices in a CAISO Market or other payments. The CAISO shall seek to amend the foregoing list as may be appropriate to include any such conduct that would substantially distort or impair the competitiveness of any of the CAISO Markets.

### 39.4 Sanctions for Physical Withholding

The CAISO may report a Market Participant the CAISO determines to have engaged in physical withholding, including providing the CAISO false information regarding derating or outage of an Electric Facility, to the Federal Energy Regulatory Commission in accordance with Section 9.3.10.5. In addition, a Market Participant that fails to operate a Generating Unit in conformance with CAISO Dispatch Instructions shall be subject to the penalties set forth in Section 11.23.

### 39.5 FERC-Ordered Measures

In addition to any mitigation measures specified above, the CAISO shall administer, and apply when appropriate in accordance with their terms, such other mitigation measures as it may be directed to implement by order of the FERC.

### 39.6 Rules Limiting Certain Energy, AS, and RUC Bids

#### 39.6.1 Maximum Bid Prices

Notwithstanding any other provision of this CAISO Tariff, maximum Bid price provisions of this Section 39.6.1 shall apply to limit, Energy Bids, RUC Availability Bids, and Ancillary Service Bids.

#### 39.6.1.1 Energy Bid and Minimum Load Cost Caps

##### 39.6.1.1.1 Soft Energy Bid Caps

All Energy Bids, except for Virtual Bids or Bids for Non-Resource-Specific System Resources, are subject to the Soft Energy Bid Cap. Scheduling Coordinators may submit Energy Bids that are subject to the Soft Energy Bid Cap in excess of the Soft Energy Bid Cap, which the CAISO will process pursuant to Section 30.11.

##### 39.6.1.1.2 Hard Energy Bid Cap

All Energy Bids are subject to the Hard Energy Bid Cap. Scheduling Coordinators may submit Energy Bid prices in excess of the Hard Energy Bid Cap, which the CAISO will cost-verify pursuant to the rules specified in Section 30.11.

##### 39.6.1.1.3 Minimum Load Cost Hard Cap

All Minimum Load Bids are subject to the Minimum Load Cost Hard Cap. Scheduling Coordinators may submit Minimum Load Bid prices in excess of the Minimum Load Cost Hard Cap, which the CAISO will cost-verify pursuant to the rules specified in Section 30.11.

#### 39.6.1.2 Maximum RUC Availability Bid Prices

The maximum RUC Availability Bid price shall be $250/MW/h.

#### 39.6.1.3 Maximum Ancillary Services Bid Prices

The maximum level for Ancillary Services Bid prices shall be $250/MWh.

##### 39.6.1.3.1 Maximum Regulation Mileage Bid Price

The maximum Mileage Bid price shall be $50.

#### 39.6.1.4 Minimum Bid Price for Energy Bids

The minimum Energy Bid price shall be negative $150/MWh. These rules apply to all Energy Bids, including Virtual Bids.

#### 39.6.1.5 Minimum Bid Price for Ancillary and RUC Bids

Ancillary Service Bids and RUC Availability Bids submitted into CAISO markets must have Bid prices not less than $0/MW/h.

##### 39.6.1.5.1 Minimum Regulation Mileage Bid Prices

Regulation Mileage Bids submitted into CAISO markets must have Bid prices not less than $0.

### 39.6.1.6 Maximum Start-Up Cost and Minimum Load Cost Registered Cost Values

The maximum Start-Up Cost and Minimum Load Cost values registered in the Master File by Scheduling Coordinators for capacity of non-Multi-Stage Generating Resources that are eligible and elect to use the Registered Cost methodology in accordance with Section 30.4 cannot exceed the Minimum Load Cost Hard Cap and will be limited to one hundred fifty percent (150%) of the Projected Proxy Cost. The maximum Start-Up Cost and Minimum Load Cost values registered in the Master File by Scheduling Coordinators for capacity of Multi-Stage Generating Resources that are eligible and elect to use the Registered Cost methodology in accordance with Section 30.4 will be limited to one hundred fifty percent (150%) of the Projected Proxy Cost for each MSG Configuration of the resources. The Projected Proxy Cost for natural gas-fired resources will include a gas price component, a Variable Start-Up Operations and Maintenance Adder component and a Variable Minimum Load Operations and Maintenance Adder component, if available, a volumetric Grid Management Charge component, and, if eligible, a projected Greenhouse Gas Allowance Price component calculated as set forth in this Section 39.6.1.6. The Projected Proxy Cost for non-natural gas-fired resources will be based on costs provided to the CAISO pursuant to Section 30.4.5.2, a Variable Start-Up Operations and Maintenance Adder component and a Variable Minimum Load Operations and Maintenance Adder component, if available, a volumetric Grid Management Charge component, and, if eligible, a projected Greenhouse Gas Allowance Price component calculated as set forth in this Section 39.6.1.6.

#### 39.6.1.6.1 Gas Price Component of Projected Proxy Cost

For natural gas-fired resources, the CAISO will calculate a gas price to be used in establishing Default Start-Up Bids and Default Minimum Load Bids after the twenty-first (21st) day of each month and post it on the CAISO Website by the end of each calendar month. The price will be applicable for Scheduling Coordinators for natural gas-fired Use-Limited Resources electing to use the Registered Cost methodology set forth in Section 30.4.7 until a new gas price is calculated and posted on the CAISO Website. The gas price will be calculated as follows:

(1) Daily closing prices for monthly natural gas futures contracts at Henry Hub for the next calendar month are averaged over the first twenty-one (21) days of the month, resulting in a single average for the next calendar month.

(2) Daily prices for futures contracts for basis swaps at identified California delivery points, are averaged over the first twenty-one (21) days of the month for the identified California delivery points as set forth in the Business Practice Manual.

(3) For each of the California delivery points, the average Henry Hub and basis swap prices are combined and will be used as the baseline gas price applicable for calculating the Default Start-Up Bids and Default Minimum Load Bids for Use-Limited Resources electing to use the Registered Cost methodology set forth in Section 30.4.7. The most geographically appropriate prices will apply to a particular resource.

(4) The applicable intra-state gas transportation charge as set forth in the Business Practice Manual will be added to the baseline gas price for each Use-Limited Resource that elects to use the Registered Cost methodology set forth in Section 30.4.7 to create a final gas price for calculating the Default Start-Up Bids and Default Minimum Load Bids for each such resource.

For non-natural gas-fired resources, the Projected Proxy Costs for Default Start-Up Bids and Default Minimum Load Bids will be calculated using the information as registered in the Master File used for calculating the Proxy Cost, as set forth in the Business Practice Manual.

**39.6.1.6.2 Projected Greenhouse Gas Allowance Price**

For resources that are registered with the California Air Resources Board or the Washington Department of Ecology as having a greenhouse gas compliance obligation, the CAISO will calculate a projected Greenhouse Gas Allowance Price component to be used in establishing maximum Default Start-Up Bids and Default Minimum Load Bids after the twenty-first (21st) day of each month and will post it on the CAISO Website by the end of that month. The projected Greenhouse Gas Allowance Price component will be applicable for Scheduling Coordinators on behalf of eligible Use-Limited Resources electing to use the Registered Cost methodology until a new projected Greenhouse Gas Allowance Price component is calculated and posted on the CAISO Website. The projected Greenhouse Gas Allowance Price component will be calculated by averaging the applicable daily Greenhouse Gas Allowance Prices calculated over the first twenty (20) days of the month using the methodology set forth in Section 39.7.1.1.1.4. The CAISO will calculate a projected Greenhouse Gas Allowance Price separately for each

unlinked jurisdiction that regulates greenhouse gas compliance obligations.

#### 39.6.1.6.3 Variable Operations and Maintenance Adder Components

The Variable Start-Up Operations and Maintenance Adder component and the Variable Minimum Load Operations and Maintenance Adder component are determined based on the process set forth in Section 30.4.5.4.

#### 39.6.1.6.4 Volumetric Grid Management Charge Component

The volumetric Grid Management Charge component is set forth in Sections 39.7.1.1.1.1 and 39.7.1.1.1.2.

### 39.6.1.7 Maximum Transition Cost Values

Scheduling Coordinators for capacity of Multi-Stage Generating Resources that are eligible and elect to use the Registered Cost methodology in accordance with Section 30.4 must register Transition Costs for each feasible transition between a lower MSG Configuration and a higher MSG Configuration, between zero and a maximum of 150 percent of the difference between the Projected Proxy Cost for the Start-Up Costs for the higher MSG Configuration, minus the Projected Proxy Cost for the Start-Up Costs for the lower MSG Configuration. If the result of this calculation is negative for any transition between two MSG Configurations, then the associated Transition Cost shall be zero.

## 39.7 Local Market Power Mitigation for Energy Bids

Local Market Power Mitigation is based on the assessment and designation of Transmission Constraints as competitive or non-competitive pursuant to Section 39.7.2. The local market power mitigation processes are described in Section 31.2 for the DAM and Sections 34.1.5 for the RTM.

### 39.7.1 Calculation of Default Energy Bids

Default Energy Bids shall be calculated by the CAISO, for the on-peak hours and off-peak hours for both the DAM and RTMs, pursuant to one of the methodologies described in this Section. The Scheduling Coordinator for each Generating Unit owner or Participating Load must rank order the following options of calculating the Default Energy Bid starting with its preferred method. The Scheduling Coordinator must provide the data necessary for determining the Variable Costs unless the Negotiated Rate Option precedes the Variable Cost Option in the rank order, in which case the Scheduling Coordinator must have a negotiated rate established with the CAISO. If no rank order is specified for a Generating Unit or

Participating Load, then the default rank order of (1) Variable Cost Option, (2) Negotiated Rate Option, (3) LMP Option will be applied. For the first ninety (90) days after changes to resource status and MSG Configurations as specified in Section 27.8.3, including the first ninety (90) days after the effective date of Section 27.8.3, the Default Energy Bid option for the resource is limited to the Negotiated Rate Option or the Variable Cost Option. Default Energy Bids will not exceed the Hard Energy Bid Cap in any interval, regardless of the result of their inputs or calculations. Scheduling Coordinators for storage resources participating as Non-Generator Resources also may rank the storage resource option among their options. If no rank is specified for a storage resource participating as a Non-Generator Resource, then the default rank will be (1) Variable Cost Option and (2) LMP Option. Scheduling Coordinators for storage resources participating as Non-Generator Resources must provide the data necessary for determining the storage resource option if that option is the first in rank order.

**39.7.1.1 Variable Cost Option**

For natural gas-fueled units, the Variable Cost Option will calculate the Default Energy Bid by adding incremental cost (comprised of incremental fuel cost plus a volumetric Grid Management Charge adder plus a greenhouse gas cost adder if applicable) with the Variable Energy Operation and Maintenance Adder, by multiplying the sum by the Default Energy Bid Multiplier, adding a Bid Adder if applicable for a Frequently Mitigated Unit, and adding Variable Energy Opportunity Costs, if any. For non-natural gas-fueled units, the Variable Cost Option will calculate the Default Energy Bid by summing incremental fuel or fuel-equivalent cost plus a volumetric Grid Management Charge plus a greenhouse gas cost adder if applicable, multiplying the sum by the Default Energy Bid Multiplier, adding a Bid Adder if applicable for a Frequently Mitigated Unit, and adding Variable Energy Opportunity Costs, if any. For any Default Energy Bids calculated under the Variable Cost Option that exceed $1,000 per MWh because of an approved Reference Level Change Request, any ten percent (10%) adder or Frequently Mitigated Unit adder shall not exceed $100 per MWh.

**39.7.1.1.1 Incremental Cost Calculation Under the Variable Cost Option**

**39.7.1.1.1.1 Natural Gas-Fired Resources**

(a) Calculation of incremental fuel cost - For natural gas-fueled units, incremental fuel cost is

calculated based on an incremental heat rate curve multiplied by the natural gas price calculated as described below.

Resource owners shall submit to the CAISO average heat rates (Btu/kWh) measured for at least two (2) and up to eleven (11) generating operating points (MW), where the first and last operating points refer to the minimum and maximum operating levels (i.e., PMin and PMax), respectively. The average heat rate curve formed by the (Btu/kWh, MW) pairs is a piece-wise linear curve between operating points, and two (2) average heat rate pairs yield one (1) incremental heat rate segment that spans two (2) consecutive operating points. The incremental heat rates (Btu/kWh) in the incremental heat rate curve are calculated by converting the average heat rates submitted by resource owners to the CAISO to requirements of heat input (Btu/h) for each of the operating points and dividing the changes in requirements of heat input from one (1) operating point to the next by the changes in MW between two (2) consecutive operating points as specified in the Business Practice Manual. For each segment representing operating levels below eighty (80) percent of the unit's PMax, the incremental heat rate is limited to the maximum of the average heat rates for the two (2) operating points used to calculate the incremental heat rate segment.

The unit's final incremental fuel cost curve is calculated by multiplying this incremental heat rate curve by the applicable natural gas price, and then, if necessary, applying a left-to-right adjustment to ensure that the final incremental cost curve is monotonically non-decreasing. Heat rate and cost curves shall be stored, updated, and validated in the Master File.

(b) Calculation of greenhouse gas cost adder - For each natural gas-fired resource registered with the California Air Resources Board or the Washington Department of Ecology as having a greenhouse gas compliance obligation, the CAISO will calculate a greenhouse gas cost adder as the product of the resource's incremental heat rate, the greenhouse gas emissions rate authorized by the California Air Resources Board or the Washington Department of Ecology, and the applicable Greenhouse Gas Allowance

Price.

(c) Calculation of volumetric Grid Management Charge adder - For each natural gas-fired resource, the CAISO will include a volumetric Grid Management Charge adder that consists of: (i) the Market Services Charge; (ii) the System Operations Charge; and (iii) the Bid Segment Fee divided by the MW in the Bid segment.

**39.7.1.1.1.2 Non-Natural Gas-Fired Resources**

For non-natural gas-fueled units, incremental fuel cost is calculated based on an average cost curve as described below.

Resource owners for non-natural gas-fueled units shall submit to the CAISO average fuel or fuel equivalent costs ($/MW) measured for at least two (2) and up to eleven (11) generating operating points (MW), where the first and last operating points refer to the minimum and maximum operating levels (i.e., PMin and PMax), respectively. The average cost curve formed by the ($/MWh, MW) pairs is a piece-wise linear curve between operating points, and two (2) average cost pairs yield one (1) incremental cost segment that spans two (2) consecutive operating points. For each segment representing operating levels below eighty percent (80%) of the unit's PMax, the incremental cost rate is limited to the maximum of the average cost rates for the two (2) operating points used to calculate the incremental cost segment. The unit's final incremental fuel cost curve is then adjusted, if necessary, applying a left-to-right adjustment to ensure that the final incremental cost curve is monotonically non-decreasing. The CAISO will include, if applicable: (i) greenhouse gas allowance costs for each non-natural gas-fired resource registered with the California Air Resources Board or the Washington Department of Ecology as having a greenhouse gas compliance obligation, as provided to the CAISO by the Scheduling Coordinator for the resource; (ii) variable operation and maintenance cost; and (iii) a volumetric Grid Management Charge adder that consists of: (a) the Market Services Charge; (b) the System Operations Charge; and (c) the Bid Segment Fee divided by the MW in the Bid segment. Cost curves shall be stored, updated, and validated in the Master File.

**39.7.1.1.1.3 Calculation of Natural Gas Price**

(a) The CAISO will use different gas price indices for the Day-Ahead Market and the Real-Time Market. If a gas price index is unavailable for any reason, the CAISO will use the

most recent available gas price index as set forth in Section 39.7.1.1.1.3(c).

(b) For all Trading Days of the Day-Ahead Market, except for Mondays when the Monday-only gas price index is available and meets the liquidity criteria described below, the CAISO will calculate a gas price index based on natural gas commodity prices reported by the Intercontinental Exchange one (1) day prior to the applicable Trading Day between 8:00 a.m. and 9:00 a.m. Pacific Time for natural gas deliveries on the Trading Day. The natural gas commodity prices reported by the Intercontinental Exchange are volume-weighted average gas prices reported during its next-day trading window. For Monday Trading Days, the CAISO will use the Monday-only gas price index when it is reported by the Intercontinental Exchange three (3) days prior to the Monday Trading Day, provided:

(i) The historical average volume of the Monday-only gas price index at a given location, using no more than ninety (90) days of trading, is at least 25,000 MMBTUs based on the CAISO's test of whether the volume at a given location is above 25,000 MMBTUs at least once every six (6) months; and

(ii) On any given day the Monday-only gas price index published at the locations that meet the requirement in subsection (b)(i) above represents at least five (5) transactions.

(c) For all Trading Days of the Real-Time Market, except for Mondays when the Monday-only gas price index is available and meets the liquidity criteria described below, the CAISO will calculate a gas price index using at least one (1) price from the following publications: Natural Gas Intelligence, SNL Energy/BTU's Daily Gas Wire, or Platt's Gas Daily. The CAISO will update the gas price indices for the Real-Time Market between 7:00 p.m. and 10:00 p.m. Pacific Time using the natural gas prices published one (1) day prior to the applicable Trading Day for natural gas deliveries on the Trading Day, unless gas prices are not published on that day, in which case the CAISO will use the most recently published gas prices that are available. For Monday Trading Days, the CAISO will use the Monday-only gas price index when it is reported by the Intercontinental Exchange three (3) days prior to the Monday Trading Day, provided:

(i) The historical average volume of the Monday-only gas price index at a given location, using no more than ninety (90) days of trading, is at least 25,000 MMBTUs based on the CAISO's test of whether the volume at a given location is above 25,000 MMBTUs at least once every six (6) months; and

(ii) On any given day the Monday-only index gas price published at the locations that meet the requirement in subsection(c)(i) above represents at least five (5) transactions.

**39.7.1.1.1.4 Calculation of Greenhouse Gas Allowance Price**

The CAISO will calculate the Greenhouse Gas Allowance Price separately for each unlinked jurisdiction that regulates greenhouse gas compliance obligations. To calculate the Greenhouse Gas Allowance Price for each unlinked jurisdiction, the CAISO will average two prices from the following vendors: the Intercontinental Exchange and ARGUS. If a greenhouse gas price from a vendor is unavailable for any reason, the CAISO will use the most recent available greenhouse gas price from that vendor. If greenhouse gas prices from these vendors have not yet been calculated for a jurisdiction, the CAISO will utilize the best available proxy, as follows: for Washington State, the CAISO will utilize $41/MT CO2e until an allowance auction is held by the State of Washington, at which point the CAISO will use, as soon as is practicable, the most recent allowance auction clearing price. If for any reason the CAISO cannot calculate a Greenhouse Gas Allowance Price, it will use the most recently calculated value.

The CAISO will update the Greenhouse Gas Allowance Price by approximately 22:00 Pacific Time each day (T). The daily Greenhouse Gas Allowance Price will be used in the next day's Real-Time Market (T+1) and in the Day-Ahead Market for the following Trading Day (T+2). The CAISO will calculate each Greenhouse Gas Allowance Price during a year using prices for greenhouse gas allowances from that same year.

**39.7.1.1.2 [Not Used]**

**39.7.1.1.3 Variable Energy Opportunity Costs Under the Variable Cost Option**

The CAISO will determine eligibility for Variable Energy Opportunity Costs for Use-Limited Resources pursuant to Section 30.4.6.

#### 39.7.1.2 LMP Option

The CAISO will calculate the LMP Option for the Default Energy Bid as a weighted average of the lowest quartile of LMPs at the Generating Unit PNode in periods when the unit was Dispatched during the preceding ninety (90) day period for which LMPs that have passed the price validation and correction process set forth in Section 35 are available. The weighted average will be calculated based on the quantities Dispatched within each segment of the Default Energy Bid curve. Each Bid segment created under the LMP Option for Default Energy Bids will be subject to a feasibility test, as set forth in a Business Practice Manual, to determine whether there are a sufficient number of data points to allow for the calculation of an LMP based Default Energy Bid. The feasibility test is designed to avoid excessive volatility of the Default Energy Bid under the LMP Option that could result when calculated based on a relatively small number of prices.

#### 39.7.1.3 Negotiated Rate Option

##### 39.7.1.3.1 Submission Process

Scheduling Coordinators that elect the Negotiated Rate Option for the Default Energy Bid shall submit a proposed Default Energy Bid along with supporting information and documentation as described in a BPM. Within ten (10) Business Days of receipt, the CAISO will provide a written response. If the CAISO accepts the proposed Default Energy Bid, it will generally become effective within eleven (11) Business Days from the date of acceptance by the CAISO and remain in effect until: (1) the Default Energy Bid is modified by FERC; (2) the Default Energy Bid is modified by mutual agreement of the CAISO and the Scheduling Coordinator; or (3) the Default Energy Bid expires, is terminated or is modified pursuant to any agreed upon term or condition or pertinent FERC order.

If the CAISO does not accept the proposed Default Energy Bid, the CAISO and the Scheduling Coordinator shall enter a period of good faith negotiations that terminates sixty (60) days following the date of submission of a proposed Default Energy Bid by a Scheduling Coordinator. If at any time during this period, the CAISO and the Scheduling Coordinator agree upon the Default Energy Bid, it will generally become effective within eleven (11) Business Days of the date of agreement and remain in effect until: (1) the Default Energy Bid is modified by FERC; (2) the Default Energy Bid is modified by mutual agreement of the CAISO and the Scheduling Coordinator; or (3) the Default Energy Bid expires, is

terminated or is modified pursuant to any agreed upon term or condition or pertinent FERC order. If by the end of the sixty (60)-day period the CAISO and the Scheduling Coordinator fail to agree on the Default Energy Bid to be used under the Negotiated Rate Option, the Scheduling Coordinator has the right to file a proposed Default Energy Bid with FERC pursuant to Section 205 of the Federal Power Act. During the sixty (60)-day period following the submission of a proposed negotiated Default Energy Bid by a Scheduling Coordinator, and pending FERC's acceptance in cases where the CAISO fails to agree on the Default Energy Bid for use under the Negotiated Rate Option and the Scheduling Coordinator filed a proposed Default Energy Bid with FERC pursuant to Section 205 of the Federal Power Act, the Scheduling Coordinator has the option of electing to use any of the other options available pursuant to Section 39.7. If the Scheduling Coordinator does not elect to use any of the other options available pursuant to Section 39.7, or if sufficient data do not exist to calculate a Default Energy Bid using any of these options, the CAISO may establish a temporary Default Energy Bid as specified in Section 39.7.1.5. Any negotiated Default Energy Bid for a resource that includes an opportunity cost component as of April 1, 2019, will remain in effect, subject to the CAISO's renegotiation rights pursuant to Section 39.7.1.3.2.1, unless the Scheduling Coordinator pursues an Opportunity Cost pursuant to Section 30.4.6.1.2. If a Scheduling Coordinator pursues an Opportunity Cost pursuant to Section 30.4.6.1.2, the Scheduling Coordinator must either elect the Variable Cost Default Energy Bid or the CAISO will renegotiate the negotiated Default Energy Bid to, at a minimum, utilize the Variable Energy Opportunity Cost as a component of the negotiated Default Energy Bid in place of any previously negotiated Opportunity Cost value.

#### 39.7.1.3.2 Negotiated Values and Informational Filings

##### 39.7.1.3.2.1 Renegotiation of Values

The CAISO may require the renegotiation of any components including any Opportunity Costs negotiated pursuant to Section 30.4.6.3, any Default Energy Bids negotiated pursuant to this Section 39.7.1.3, or any temporary Default Energy Bids established pursuant to Section 39.7.1.5, that have become outdated, are possibly erroneous, or for which the Scheduling Coordinator has changed. In the renegotiation process, the CAISO may review and propose modifications to such values, and may require the Scheduling Coordinator to provide updated information to support continuation of such values.

#### 39.7.1.3.2.2 Informational Filings with FERC

The CAISO shall make an informational filing with FERC of any Opportunity Costs calculated pursuant to Section 30.4.6.2 or negotiated pursuant to Section 30.4.6.3, any Default Energy Bids negotiated pursuant to this Section 39.7.1.3, or any temporary Default Energy Bids established pursuant to Section 39.7.1.5, no later than seven (7) days after the end of the month in which the Opportunity Cost or Default Energy Bid values were established.

### 39.7.1.4 Frequently Mitigated Unit Option

A Frequently Mitigated Unit that is eligible for a Bid Adder may select a fourth Default Energy Bid option, which is equal to the Variable Cost Option plus the Bid Adder as described in Section 39.7.

### 39.7.1.5 Temporary Default Energy Bid

If the Scheduling Coordinator does not elect to use any of the other options available pursuant to Section 39.7.1, or if sufficient data do not exist to calculate a Default Energy Bid using any of the available options, the CAISO will first seek to obtain from the Scheduling Coordinator any additional data required for calculating the Default Energy Bid options available pursuant to 39.7.1. If the provision of additional data by a Scheduling Coordinator results in additional or modified Default Energy Bid options pursuant to 39.7.1, the Scheduling Coordinator will have another opportunity to elect one of these options as its temporary Default Energy Bid. If the Scheduling Coordinator does not elect to use any of the options available pursuant to Section 39.7.1, or if sufficient data still do not exist to calculate a Default Energy Bid using any of the available options, the CAISO may establish a temporary Default Energy Bid based on one or more of the following: (1) operating cost data, opportunity cost, and other appropriate input from the Market Participant; (2) the CAISO's estimated operating costs of the Electric Facility, taking the best information available to the CAISO; (3) an appropriate average of competitive Bids of one or more similar Electric Facilities; or (4) any of the other options for determining a Default Energy Bid for which data are available.

### 39.7.1.6 Default Energy Bids for RMR Resources

The Scheduling Coordinator for the RMR Resource must rank order its preferences between the Variable Cost Option and the Negotiated Rate Option, which shall be the default rank order if no rank order is specified by the Scheduling Coordinator. These preferences will be used to determine the Default Energy

Bids for the capacity for each RMR Resource. RMR Units are not eligible to receive the ten percent adder under the Variable Cost Option pursuant to Section 39.7.1.1 or the Bid Adder pursuant to Section 39.8.

#### 39.7.1.7 Hydro Default Energy Bid

Scheduling Coordinators may request a Hydro Default Energy Bid for a hydroelectric resource with storage capability located in the CAISO Balancing Authority Area or any EIM Entity Balancing Authority Area.

##### 39.7.1.7.1 Computation

For each Trading Day, the CAISO will calculate the Hydro Default Energy Bid as the maximum of the (a) gas floor, (b) short-term component, and (c) long-term/geographic component, which are all calculated as specified below.

###### 39.7.1.7.1.1 Gas Floor

The CAISO will calculate the gas floor as the most recent average heat rate for a typical gas turbine generator obtained from the Energy Information Administration, multiplied by the gas price for the fuel region applicable to the location of the hydroelectric resource, multiplied by 1.1.

###### 39.7.1.7.1.2 Short-Term Component

The CAISO will calculate the short-term component as 1.4 multiplied by the maximum of:

(a) the day-ahead peak price at the applicable electric pricing hub;

(b) the on-peak balance of the month on peak futures price for the current month at the applicable electric pricing hub; and

(c) the on-peak monthly index on peak futures price at the applicable electric pricing hub for one (1) month after the current month.

###### 39.7.1.7.1.3 Long-Term/Geographic Component

A Scheduling Coordinator may request that the long-term/geographic component be calculated based on multiple electric pricing hubs in addition to the default electric pricing hub consistent with Section 39.7.1.7.2.1. The CAISO will calculate the long-term/geographic component as 1.1 multiplied by the maximum of:

(a) the day-ahead on-peak price at the applicable electric pricing hub(s);

(b) the on-peak balance of the month futures prices for the current month at the applicable electric pricing hub(s); and

(c) the on-peak monthly index futures price at the applicable electric pricing hub(s) for all future months up to the maximum storage horizon after the current month.

**39.7.1.7.2 Requirements**

As part of its request for a Hydro Default Energy Bid, the Scheduling Coordinator must submit to the CAISO:

(a) Annually, for each month of the upcoming year and for each electric pricing hub requested that is not the default electric pricing hub, the Scheduling Coordinator must (1) demonstrate that it holds firm transmission rights to enable delivery from the hydroelectric resource's default market region to the requested electric pricing hub or to a delivery point that is similarly priced location; or (2) provide documentation that supports a historical practice of acquiring monthly firm transmission rights to the requested electric pricing hub(s) or similarly priced location. Scheduling Coordinators may demonstrate transmission rights to multiple locations and, based on the CAISO's evaluation of such information, the CAISO may include multiple electric pricing hubs, in addition to the default electric pricing hubs, in the long-term/geographic component of the Hydro Default Energy Bid for the affected resources. The Scheduling Coordinator will attest through its submission that it reasonably expects it will be able to use the demonstrated transmission rights to deliver incremental sales from the hydroelectric resource because the rights are not fully committed and that there is an actual opportunity to use these rights. If the CAISO includes multiple electric pricing hubs in the long-term/geographic component, the Hydro Default Energy Bid calculation will use the maximum of the electric price indices published for each electric pricing hub as determined for each Trading Day. On Trading Days for which there are no relevant published electric price indices at an electric pricing hub, the CAISO will use the most recently published index for the applicable electric pricing hub.

(b) For resources that Scheduling Coordinators demonstrate a quantity of firm transmission

rights to a requested electric pricing hub or similarly priced location that is less than the hydro resource's capacity, the CAISO will include the requested electric pricing hub up to the quantity demonstrated transmission rights, and apply a proportional weighting of the resource's transmission rights to calculate a weighted average of those bilateral electric pricing hub prices when calculating the value of the long-term/geographic component of the Hydro Default Energy Bid.

(c) In the absence of supporting transmission rights information when calculating the Hydro Default Energy Bid, the CAISO will revert to the default bilateral electric pricing hub specified in Section 39.7.1.7.3.

(d) If during the term of the annual period the Scheduling Coordinator no longer has the firm annual transmission rights previously demonstrated, or can no longer continue a historical practice of acquiring monthly firm transmission rights, the Scheduling Coordinator must inform the CAISO within five (5) Business Days of no longer holding such firm transmission rights.

(e) The CAISO may audit the Scheduling Coordinator and request additional information in support of the Scheduling Coordinator's assertions.

(f) If the CAISO determines the Scheduling Coordinator has submitted inaccurate information, the CAISO may revert the resource to the default electric pricing hubs as specified in Section 39.7.1.7.3.

**39.7.1.7.2.2 Maximum Storage Horizon**

The maximum hydroelectric resource storage horizon submitted by the Scheduling Coordinator must:

(a) Reflect the typical storage duration of a hydroelectric resource's reservoir, defined as the length of time between which the reservoir cycles from a maximum elevation to a new maximum elevation during a hydro cycle. The Scheduling Coordinator shall compute the reservoir's cycling time based on multiple years of reservoir elevation data.

(b) Be supported by (1) a written attestation by a representative who has the authority to bind the company stating that the value submitted to the CAISO as the maximum storage horizon is consistent with the requirements specified in Section 39.7.1.7.2.2 (a); or (2)

corroborating information submitted to the CAISO, which may include several years of historic reservoir levels for the specific hydroelectric resource and regulatory filings related to the operations of the hydroelectric resource.

#### 39.7.1.7.3 Default Electric Pricing Hubs

The default electric pricing hubs will be as specified in the Business Practice Manuals, which will also include a process for modifying or adding electric pricing hubs to the list of default electric pricing hubs.

### 39.7.1.8 Storage Resource Option

For storage resources participating as Non-Generator Resources, the storage resource option will calculate the Default Energy Bid by selecting the maximum of (1) the sum of the expected energy cost and the variable storage operation cost and, (2) the storage opportunity cost. The calculation is completed by adding ten percent (10%) to the value. To calculate the Default Energy Bid, the CAISO will use the PMin, PMax, Run Times, and other charging and discharging parameters registered in the Master File.

The expected energy cost represents the average cost to procure the amount of energy needed to charge the resource during the lowest-priced continuous block of time such that the resource can discharge completely, accounting for the resource's charging duration and round-trip efficiency, and excluding losses. To calculate this component in the Day-Ahead Market, the CAISO will use the average price of Energy during the lowest priced hours based upon the final Energy Supply Bids from the MPM process at the relevant PNode, not to be below $0/MWh. To calculate this component in the Real-Time Market, the CAISO will use the average price of Energy during the lowest priced hours based upon the LMP from the IFM at the relevant PNode on the Trading Day, not to be below $0/MWh.

The variable storage operation cost represents the variable costs of operating a storage resource beyond its designed daily cycling range, submitted by the Scheduling Coordinator in $/MWh. The CAISO will validate the storage operation cost based on manufacturer warranty, available data, and supporting documentation submitted by the Scheduling Coordinator. The storage opportunity cost represents the opportunity cost of being dispatched during lower-priced intervals, equal to the cost of Energy the resource could discharge during the highest-priced continuous block, accounting for the resource's discharge duration. To calculate this component in the Day-Ahead Market, the CAISO will use the lowest

price of Energy during the highest priced period over which the resource could have discharged, based upon advisory prices from the Market Power Mitigation process at the relevant PNode. To calculate this component in the Real-Time Market, the CAISO will use the lowest price of Energy during the highest priced period over which the resource could have discharged, based upon the LMP from the IFM at the relevant PNode on the Trading Day.

### 39.7.2 Competitive Path Designation

#### 39.7.2.1 Timing of Assessments

For the DAM and RTM, the CAISO will make assessments and designations of whether Transmission Constraints are competitive or non-competitive as part of the MPM runs associated with the DAM and RTM, respectively. Only binding Transmission Constraints determined by the MPM process will be assessed in the applicable market.

#### 39.7.2.2 Criteria

(A) Notwithstanding the provisions in Section 39.7.2.2(B), when the CAISO enforces the natural gas constraint pursuant to Section 27.11, the CAISO may deem selected internal constraints to be non-competitive for specific days or hours based on its determination that actual electric supply conditions may be non-competitive due to anticipated electric supply conditions in the Southern California Gas Company and San Diego Gas & Electric Company gas regions.

(B) Subject to Section 39.7.3, for the DAM and RTM, a Transmission Constraint will be non-competitive only if the Transmission Constraint fails the dynamic competitive path assessment pursuant to this Section 39.7.2.2.

(a) Transmission Constraints for the IFM - As part of the MPM process associated with the IFM, the CAISO separately evaluates Transmission Constraints for the base scenario for meeting Demand, for the scenario of modeling the dispatch of Energy for the capacity corresponding to IRU Awards, and for the scenario of modeling the dispatch of Energy for the capacity corresponding to IRD Awards. The CAISO also evaluates Transmission Constraints for the scenario of modeling the dispatch of Energy for the capacity corresponding to RCU Awards. The CAISO will designate a Transmission Constraint for the DAM as non-competitive when the fringe supply of counter-flow to the

Transmission Constraint from all portfolios of suppliers that are not identified as potentially pivotal is less than the demand for counter-flow to the Transmission Constraint. For purposes of determining whether to designate a Transmission Constraint as non-competitive pursuant to this Section 39.7.2.2(B)(a):

(i) Counter-flow to the Transmission Constraint means the delivery of Power from a resource to the system load distributed reference bus. If counter-flow to the Transmission Constraint is in the direction opposite to the market flow of Power to the Transmission Constraint, the counter-flow to the Transmission Constraint is calculated as the shift factor multiplied by the resource's scheduled Power. Otherwise, counter-flow to the Transmission Constraint is zero.

(ii) Fringe supply of counter-flow to the Transmission Constraint means all available capacity from internal resources not controlled by the identified potentially pivotal suppliers and all internal Virtual Supply Awards not controlled by the identified potentially pivotal suppliers that provide counter-flow to the Transmission Constraint. Available capacity reflects the highest capacity of a resource's Energy Bid adjusted for Self-Provided Ancillary Services and derates.

(iii) Demand for counter-flow to the Transmission Constraint means all internal dispatched Supply and Virtual Supply Awards that provide counter-flow to the Transmission Constraint.

(iv) Potentially pivotal suppliers mean the three (3) portfolios of net sellers that control the largest quantity of counter-flow supply to the Transmission Constraint.

(v) Portfolio means the effective available internal generation capacity under the control of the Scheduling Coordinator and/or Affiliate determined pursuant to Section 4.5.1.1.12 and all effective internal Virtual Supply Awards of the Scheduling Coordinator and/or Affiliate. Effectiveness in supplying counter-flow is determined by scaling generation capacity and/or Virtual Supply Awards by the shift factor from that location to the Transmission Constraint being tested.

(vi) A portfolio of a net seller means any portfolio that is not a portfolio of a net buyer.

A portfolio of a net buyer means a portfolio for which the average daily net value of Measured Demand minus Supply over a twelve (12) month period is positive. The average daily net value is determined for each portfolio by subtracting, for each Trading Day, Supply from Measured Demand and then averaging the daily value for all Trading Days over the twelve (12) month period. The CAISO will calculate whether portfolios are portfolios of net buyers in the third month of each calendar quarter and the calculations will go into effect at the start of the next calendar quarter. The twelve (12) month period used in this calculation will be the most recent twelve (12) month period for which data is available. The specific mathematical formula used to perform this calculation will be set forth in a Business Practice Manual. Market Participants without physical resources will be deemed to be net sellers for purposes of this Section 39.7.2.2(a)(vi).

(vii) In determining which Scheduling Coordinators and/or Affiliates control the resources in the three (3) identified portfolios, the CAISO will include resources and Virtual Supply Awards directly associated with all Scheduling Coordinator ID Codes associated with the Scheduling Coordinators and/or Affiliates, as well as all resources that the Scheduling Coordinators and/or Affiliates control pursuant to Resource Control Agreements registered with the CAISO as set forth Section 4.5.1.1.13. Resources identified pursuant to Resource Control Agreements will only be assigned to the portfolio of the Scheduling Coordinator that has control of the resource or whose Affiliate has control of the resource pursuant to the Resource Control Agreements.

(b) Transmission Constraints for the RTM - As part of the MPM processes associated with the RTM, the CAISO separately evaluates Transmission Constraints for the base scenario for meeting Demand, for the scenario of modeling the dispatch of Energy for the capacity corresponding to upward Uncertainty Awards, and for the scenario of modeling the dispatch of Energy for the capacity corresponding to downward Uncertainty Awards. The CAISO will designate a Transmission Constraint for the RTM as non-competitive

when the sum of the supply of counter-flow from all portfolios of potentially pivotal suppliers to the Transmission Constraint and the fringe supply of counter-flow to the Transmission Constraint from all portfolios of suppliers that are not identified as potentially pivotal is less than the demand for counter-flow to the Transmission Constraint. For purposes of determining whether to designate a Transmission Constraint as non-competitive pursuant to this Section 39.7.2.2(b):

(i) Counter-flow to the Transmission Constraint has the meaning set forth in Section 39.7.2.2(B)(a)(i).

(ii) Supply of counter-flow from all portfolios of potentially pivotal suppliers to the Transmission Constraint means the minimum available capacity from internal resources controlled by the identified potentially pivotal suppliers that provide counter-flow to the Transmission Constraint. The minimum available capacity for the current market interval will reflect the greatest amount of capacity that can be physically withheld. The minimum available capacity is the lowest output level the resource could achieve in the current market interval given its dispatch in the last market interval and limiting factors including Minimum Load, Ramp Rate, Self-Provided Ancillary Services, Ancillary Service Awards (in the Real-Time Market only), derates, and Uncertainty Awards.

(iii) Potentially pivotal suppliers mean the three (3) portfolios of net sellers that control the largest quantity of counter-flow supply to the Transmission Constraint that can be withheld. Counter-flow supply to the Transmission Constraint that can be withheld reflects the difference between the highest capacity and the lowest capacity of a resource's Energy Bid (not taking into account the Ramp Rate of the resource), measured from the Dispatch Operating Point for the resource in the immediately preceding fifteen (15) minute FMM interval or the preceding five (5) minute RTD interval, as applicable (taking into account the Ramp Rate of the resource), adjusted for Self-Provided Ancillary Services/ Ancillary Service Awards, derates, and Uncertainty Awards in determining

whether to designate a Transmission Constraint as non-competitive for the RTM. In determining whether to designate a Transmission Constraint as non-competitive for the RTM, counter-flow supply to the Transmission Constraint that can be withheld also reflects the PMin of each Short Start Unit with a Start-Up Time of sixty (60) minutes or less that was off-line in the immediately preceding fifteen (15) minute interval of the FMM. In determining whether to designate a Transmission Constraint as non-competitive for the FMM, counter-flow supply to the Transmission Constraint that can be withheld also reflects the PMin of each Short Start Unit with a Start-Up Time of fifteen (15) minutes or less that was off-line in the immediately preceding fifteen (15) minute interval.

(iv) Portfolio means the effective available internal generation capacity under the control of the Scheduling Coordinator and/or Affiliate determined pursuant to Sections 4.5.1.1.12 and 39.7.2.2(a)(vii). Effectiveness in supplying counter-flow is determined by scaling generation capacity by the shift factor from that location to the Transmission Constraint being tested.

(v) A portfolio of a net seller has the meaning set forth in Section 39.7.2.2(a)(vi).

(vi) Fringe supply of counter-flow to the Transmission Constraint means all available capacity from internal resources not controlled by the identified potentially pivotal suppliers that provide counter-flow to the Transmission Constraint. Available capacity reflects the highest capacity of a resource's Energy Bid (not taking into account the Ramp Rate of the resource), measured from the Dispatch Operating Point for the resource in the immediately preceding fifteen (15) minute interval of the FMM or five (5) minute interval of the RTD, as applicable (taking into account the Ramp Rate of the resource), adjusted for Self-Provided Ancillary Services/ Ancillary Service Awards, derates, and Uncertainty Awards in determining whether to designate a Transmission Constraint as non-competitive for the RTM.

(vii) Demand for counter-flow to the Transmission Constraint means all internal dispatched Supply that provides counter-flow to the Transmission Constraint.

### 39.7.3 Default Competitive Path Designations

The CAISO will maintain default competitive path designation sets for the Day-Ahead Market and for the Real-Time Market, which the CAISO will use in order to determine the competitiveness or non-competitiveness of Transmission Constraints under two circumstances: (1) in the event of a failure of the CAISO Markets software to perform an assessment of whether Transmission Constraints are competitive or non-competitive pursuant to Section 39.7.2; and (2) in order to determine whether Exceptional Dispatches are related to a non-competitive Transmission Constraint for purposes of mitigation of Exceptional Dispatches of resources under Section 39.10(1). Default competitive path designations will be determined pursuant to the methodology set forth in this Section 39.7.3 and will be updated no less frequently than once every seven (7) days. Until the CAISO has developed sufficient information to develop default competitive path designations, the CAISO will continue to utilize the most recent list of competitive path designations determined prior to the effective date of this tariff provision.

#### 39.7.3.1 Methodology for Determining Day-Ahead Default Competitive Path Designations for Transmission Constraints other than Path 15 and Path 26 Transmission Constraints

The CAISO will designate a Transmission Constraint other than the Path 15 Transmission Constraint or the Path 26 Transmission Constraint as competitive for purposes of determining default competitive path designations for the Day-Ahead Market only if both of the following conditions are met:

(1) Congestion occurred on the Transmission Constraint in ten (10) or more hours of the days for which the Transmission Constraint was tested for competitiveness pursuant to Section 39.7.2; and

(2) the Transmission Constraint was deemed competitive pursuant to Section 39.7.2 in seventy-five (75) percent or more of the instances in which the Transmission Constraint was binding when tested.

These calculations will be made utilizing data from the Day-Ahead Market for the most recent sixty (60) Trading Days for which data is available. The CAISO will designate a Transmission Constraint other than the Path 15 Transmission Constraint or the Path 26 Transmission Constraint as non-competitive if the CAISO lacks sufficient data to determine whether the occurrences set forth in Sections 39.7.3.1(1) and

39.7.3.1(2) took place on the Transmission Constraint over the sixty (60) Trading Day period.

**39.7.3.2 Methodology for Determining HASP/RTM Default Competitive Path Designations for Transmission Constraints other than Path 15 and Path 26 Transmission Constraints**

The CAISO will designate a Transmission Constraint other than the Path 15 Transmission Constraint or the Path 26 Transmission Constraint as competitive for purposes of determining default competitive path designations for the HASP/RTM only if both of the following conditions are met:

(1) Congestion occurred on the Transmission Constraint in ten (10) or more of the hours for which the Transmission Constraint was tested for competitiveness pursuant to Section 39.7.2; and

(2) the Transmission Constraint was deemed competitive pursuant to Section 39.7.2 in seventy-five (75) percent or more of the instances in which the Transmission Constraint was binding when tested.

These calculations will be made utilizing data from the Real-Time Market for the most recent sixty (60) Trading Days for which data is available. If the Transmission Constraint was binding during any 15-minute interval during an hour, then the Transmission Constraint will be deemed to be binding for the entire hour. If the Transmission Constraint was determined to be non-competitive during any 15-minute interval during an hour, then the Transmission Constraint will be deemed to be non-competitive for the entire hour. The CAISO will designate a Transmission Constraint other than the Path 15 Transmission Constraint or the Path 26 Transmission Constraint as non-competitive if the CAISO lacks sufficient data to determine whether the occurrences set forth in Sections 39.7.3.2(1) and 39.7.3.2(2) took place on the Transmission Constraint over the sixty (60) Trading Day period.

**39.7.3.3 Methodology for Determining Day-Ahead Competitive Path Designations for Path 15 and Path 26 Transmission Constraints**

The CAISO will designate the Path 15 Transmission Constraint or the Path 26 Transmission Constraint as competitive for purposes of determining default competitive path designations for the Day-Ahead Market unless both of the following conditions are met:

(1) Congestion occurred on the Transmission Constraint in ten (10) or more hours of the

days for which the Transmission Constraint was tested for competitiveness pursuant to Section 39.7.2; and

(2) the Transmission Constraint was deemed competitive pursuant to Section 39.7.2 in fewer than seventy-five (75) percent of the instances in which the Transmission Constraint was binding when tested.

These calculations will be made utilizing data from the MPM for the Day-Ahead Market for the most recent sixty (60) Trading Days for which data is available. The CAISO will designate the Path 15 Transmission Constraint or the Path 26 Transmission Constraint as competitive if the CAISO lacks sufficient data to determine whether the occurrences set forth in Sections 39.7.3.3(1) and 39.7.3.3(2) took place on the Transmission Constraint over the sixty (60) Trading Day period.

**39.7.3.4 Methodology for Determining RTM Default Competitive Path Designations for Path 15 and Path 26 Transmission Constraints**

The CAISO will designate the Path 15 Transmission Constraint or the Path 26 Transmission Constraint as competitive for purposes of determining default competitive path designations for the RTM unless both of the following conditions are met:

(1) Congestion occurred on the Transmission Constraint in ten (10) or more of the hours for which the Transmission Constraint was tested for competitiveness pursuant to Section 39.7.2; and

(2) the Transmission Constraint was deemed competitive pursuant to Section 39.7.2 in fewer than seventy-five (75) percent of the instances in which the Transmission Constraint was binding when tested.

These calculations will be made utilizing data from the MPM for the Real-Time Market for the most recent sixty (60) Trading Days for which data is available. If the Transmission Constraint was binding during any 15-minute interval during an hour, then the Transmission Constraint will be deemed to be binding for the entire hour. If the Transmission Constraint was determined to be non-competitive during any 15-minute interval during an hour, then the Transmission Constraint will be deemed to be non-competitive for the entire hour. The CAISO will designate the Path 15 Transmission Constraint or the Path 26 Transmission

Constraint as competitive if the CAISO lacks sufficient data to determine whether the occurrences set forth in Sections 39.7.3.4(1) and 39.7.3.4(2) took place on the Transmission Constraint over the sixty (60) Trading Day period.

### 39.7.4 Default Availability Bid for Imbalance Reserves and Reliability Capacity

The CAISO applies separate IRU Default Availability Bids and RCU Default Availability Bids.

A resource's IRU Default Availability Bid is the higher of: (a) $55/MWh; or (b) the IRU Negotiated Availability Bid.

A resource's RCU Default Availability Bid is the higher of: (a) $55/MWh; or (b) the RCU Negotiated Availability Bid.

A Scheduling Coordinator may choose to pursue both an IRU Negotiated Availability Bid and an RCU Negotiated Availability Bid.

#### 39.7.4.1 Process for Establishing an IRU or RCU Negotiated Availability Bid

Scheduling Coordinators that elect the option of pursuing a Negotiated Availability Bid must submit a proposed value to apply either for IRU or RCU, depending on which type of Negotiated Availability Bid they have chosen to pursue. The proposed value must represent the costs of providing the underlying product. Within ten (10) Business Days of receipt, the CAISO will provide a written response. If the CAISO accepts the proposed Negotiated Availability Bid, it will generally become effective within eleven (11) Business Days from the date of acceptance by the CAISO and remain in effect until: (1) FERC modifies the Negotiated Availability Bid; (2) the CAISO and the Scheduling Coordinator modify the Negotiated Availability Bid by mutual agreement; or (3) the Negotiated Availability Bid expires, is terminated, or is modified pursuant to any agreed upon term or condition or pertinent FERC order.

If the CAISO does not accept the proposed Negotiated Availability Bid, the CAISO and the Scheduling Coordinator shall enter a period of good faith negotiations that terminates sixty (60) days following the date of submission of a proposed Negotiated Availability Bid by a Scheduling Coordinator. If at any time during this period, the CAISO and the Scheduling Coordinator agree upon the Negotiated Availability Bid, it will generally become effective within eleven (11) Business Days of the date of agreement and remain in effect as if the CAISO accepted it initially.

If by the end of the sixty (60)-day period the CAISO and the Scheduling Coordinator fail to agree on the

Negotiated Availability Bid, the Scheduling Coordinator has the right to file a proposed Negotiated Availability Bid with FERC pursuant to Section 205 of the Federal Power Act.

During the sixty (60)-day period following the submission of a proposed Negotiated Availability Bid by a Scheduling Coordinator, and pending FERC's acceptance in cases where the Scheduling Coordinator filed a proposed Negotiated Availability Bid with FERC pursuant to Section 205 of the Federal Power Act, the IRU Default Availability Bid or RCU Default Availability Bid for the resource is $55/MWh.

The CAISO may require the renegotiation of any Negotiated Availability Bids enacted pursuant to this Section 39.7.4.1 that have become outdated, are possibly erroneous, or for which the Scheduling Coordinator has changed. In the renegotiation process, the CAISO may review and propose modifications to such values, and may require the Scheduling Coordinator to provide updated information to support continuation of such values.

The CAISO shall make an informational filing with FERC of any Negotiated Availability Bids enacted pursuant to this Section 39.7.4.1 no later than seven (7) days after the end of the month in which the CAISO enacted the Negotiated Availability Bids.

#### 39.7.4.2 Transition Period for Negotiated Availability Bids

The option to pursue a Negotiated Availability Bid will be unavailable until the CAISO certifies through a market notice it has gained sufficient operational experience with Imbalance Reserves and Reliability Capacity to validate that proposed Negotiated Availability Bids correspond reasonably to the underlying costs of providing the products. Such certification is deemed to have occurred if the CAISO does not issue the market notice within 18 months of the effective date of this Section 39.7.4.

### 39.8 Eligibility for Bid Adder

A Scheduling Coordinator submitting Bids for Generating Units is eligible to have a Bid Adder applied to a Generating Unit for the next operating month if the criteria in Section 39.8.1 are met as determined on a monthly basis in the preceding month.

#### 39.8.1 Bid Adder Eligibility Criteria

To receive a Bid Adder, a Generating Unit must: (i) have a Mitigation Frequency that is greater than eighty (80) percent in the previous twelve (12) months; and (ii) must not have a contract to be a Resource Adequacy Resource for its entire Net Qualifying Capacity, or be designated under the CPM for its entire

Eligible Capacity, or be subject to an obligation to make capacity available under this CAISO Tariff. If a Generating Unit is designated under the CPM for a portion of its Eligible Capacity, the provisions of this section apply only to the portion of the capacity not designated. Scheduling Coordinators for Generating Units seeking to receive Bid Adders must further agree to be subject to the Frequently Mitigated Unit option for a Default Energy Bid. Run hours are those hours during which a Generating Unit has positive metered output. After the first twelve (12) months from the effective date of this Section, the Mitigation Frequency will be based entirely on a Generating Unit being mitigated under the MPM procedures in Sections 31 and 33.

**39.8.2 New Generating Units**

For new Generating Units, with less than twelve (12) months of operation, determination of eligibility for the Bid Adder will be based on data beginning with the first date the Generating Unit participated in the CAISO Markets through the end date of the period for which the Mitigation Frequency is being calculated. The 200 run hour criteria will be pro-rated for the proportion of a twelve (12)-month period that the new Generating Unit submitted effective Bids in the CAISO markets.

**39.8.3 Bid Adder Values**

The value of the Bid Adder will be either: (i) a unit-specific value determined in consultation with the CAISO; or (ii) a default Bid Adder of $24/MWh. For Generating Units with a portion of their capacity identified as meeting an LSE's Resource Adequacy Requirements, that Generating Unit's Bid Adder value will be reduced by the percent of the Generating Unit's capacity that is identified as meeting an LSE's Resource Adequacy Requirements. The reduced Bid Adder will be applied to that Generating Unit's entire Default Energy Bid Curve.

**39.9 CRR Monitoring and Affiliate Disclosure Requirements**

The CAISO will monitor the CRR holdings and CAISO Markets activity for anomalous market behavior, gaming, or exercise of market power resulting from CRR ownership concentrations that are not aligned with actual transmission usage as a result of secondary market auction outcomes. If the CAISO identifies such behavior it may seek FERC approval to impose position limits on the total number or MW quantity of CRRs that may be held by any single entity and its Affiliates. Each CRR Holder or Candidate CRR Holder must notify the CAISO of any Affiliate that is a CRR Holder, Candidate CRR Holder, or Market

Participant, any Affiliate that participates in an organized electricity market in North America, and any guarantor of any such Affiliate.

### 39.10 Mitigation of Exceptional Dispatches of Resources

The CAISO shall apply Mitigation Measures to Exceptional Dispatches of resources when such resources are committed or dispatched under Exceptional Dispatch for purposes of: (1) addressing reliability requirements related to non-competitive Transmission Constraints; (2) ramping resources with Ancillary Services Awards or RUC Capacity to a dispatch level that ensures their availability in Real-Time; (3) ramping resources to their Minimum Dispatchable Level in Real-Time; and (4) addressing unit-specific environmental constraints not incorporated into the Full Network Model or the CAISO's market software that affect the dispatch of Generating Units in the Sacramento Delta and are commonly known as "Delta Dispatch".

#### 39.10.1 Measures for Resources Eligible for Supplemental Revenues

In all cases where a resource is subject to Mitigation Measures under Section 39.10, and the resource is eligible for supplemental revenues pursuant to Section 39.10.3, FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy delivered by the resource shall be settled as set forth in either Section 11.5.6.7.1 or Section 11.5.6.7.3, whichever is applicable.

#### 39.10.2 Resources Not Eligible for Supplemental Revenues

In all cases where a resource is subject to Mitigation Measures under Section 39.10, and the resource is not eligible for supplemental revenues pursuant to Section 39.10.3, FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy delivered by the resource shall be settled as set forth in either Section 11.5.6.7.2 or Section 11.5.6.7.3, whichever is applicable.

#### 39.10.3 Eligibility for Supplemental Revenues

Except as provided in Section 39.10.4, a resource that is committed or dispatched under Exceptional Dispatch shall be eligible for supplemental revenues only during such times that the capacity from the resource dispatched under Exceptional Dispatch is Eligible Capacity, the Eligible Capacity does not have an offer into the applicable CSP, and has declined an Exceptional Dispatch CPM designation offered under Section 43A.2.5.

### 39.10.4 Limitation on Supplemental Revenues

Supplemental revenues authorized under this Section 39.10 shall not exceed within a 30-day period (this 30-day period begins on the day of the first Exceptional Dispatch of the resource and re-starts on the day of the first Exceptional Dispatch of the resource following the end of any prior 30-day period) the CPM Soft Offer Cap, for which the resource would be eligible pursuant to Section 43A.7 had its Eligible Capacity been designated as CPM Capacity.

### 39.10.5 Calculation of Exceptional Dispatch Supplemental Revenues

The amount of Exceptional Dispatch supplemental revenues accrued by a resource within any 30-day period as defined in Section 39.10.4 shall be a running total of the sum of supplemental revenues received during that 30-day period. The calculation of supplemental revenues accrued by a resource within a 30-day period is based on the higher of (a) the Energy Bid price for the resource minus the Default Energy Bid price for the resource or (b) the relevant FMM or RTD LMP minus the Default Energy Bid price for the resource. The greater of (a) or (b) is multiplied by the amount of Energy provided by the resource under Exceptional Dispatch, and the results of that multiplication are summed across the successive hours of the 30-day period. Once the resource has reached the limit on supplemental revenues described in Section 39.10.4 based on the calculation above, then the Settlement for the resource will be as provided in Section 11.5.6.7.2 and the resource will not be eligible for additional supplemental revenues for the rest of the 30-day period.

## 39.11 Market Power Mitigation Applicable to Virtual Bidding

### 39.11.1 Affiliate Disclosure Requirements

Each Convergence Bidding Entity must satisfy the Affiliate disclosure requirements set forth in Section 4.14.2.1.

### 39.11.2 Monitoring of Virtual Bidding Activity

The CAISO and DMM will monitor virtual bidding activity for anomalous market behavior, gaming, or the exercise of market power.

## 40. Resource Adequacy Demonstration for all SCs in the CAISO BAA

### 40.1 Applicability

A Load Serving Entity, and its Scheduling Coordinator, shall be exempt from this Section 40 during the next Resource Adequacy Compliance Year, if the metered peak Demand of the Load Serving Entity did not exceed one (1) MW during the twelve months preceding October 1 of the year preceding the Resource Adequacy Compliance Year in question. This Section 40 shall apply to all other Load Serving Entities, and CPEs, and their respective Scheduling Coordinators. For purposes of Section 40, a Load Serving Entity shall not include any entity satisfying the terms of California Public Utilities Code Section 380(k)(3).

#### 40.1.1 [Not Used]

### 40.2 Information Requirements for Resource Adequacy Programs

#### 40.2.1 Requirements for CPUC Load Serving Entities and CPEs

(a) The Scheduling Coordinator for a CPUC Load Serving Entity or CPE must provide the CAISO with all information or data to be provided to the CAISO as required by the CPUC and pursuant to the schedule adopted by the CPUC, except that the monthly Resource Adequacy Plans or the same information as required to be included in the monthly Resource Adequacy Plans, plus any other information the CAISO requires as identified in the Business Practice Manual, shall be submitted to the CAISO no less than 45 days in advance of the first day of the month covered by the plan, as provided in Section 40.2.1(e).

(b) Where the information or data provided to the CAISO under Section 40.2.1(a) does not include Reserve Margin(s), then the provisions of Section 40.2.2.1(b) shall apply.

(c) Where the information or data provided to the CAISO under Section 40.2.1(a) does not include criteria for determining qualifying resource types and their Qualifying Capacity, then the provisions of Section 40.8 shall apply.

(d) Where the information or data provided to the CAISO under Section 40.2.1(a) does not include annual and monthly Demand Forecast requirements, then the provisions of Section 40.2.2.3 shall apply.

(e) Where the information or data provided to the CAISO under Section 40.2.1(a) does not include annual and monthly Resource Adequacy Plan requirements that include, at a minimum, identifying Local Capacity Area Resources and Listed Local RA Capacity, or where there is a requirement to submit monthly Resource Adequacy Plans but the submission date is less than 45 days in advance of the first day of the month covered by the plan, then Section 40.2.2.4 shall apply.

**40.2.2 Non-CPUC Load Serving Entities and CPEs**

**40.2.2.1 Reserve Margin**

(a) The Scheduling Coordinator for a Non-CPUC Load Serving Entity must provide the CAISO with the Reserve Margin(s) adopted by the appropriate Local Regulatory Authority or federal agency for use in the annual Resource Adequacy Plan and monthly Resource Adequacy Plans listed as a percentage of the Demand Forecasts developed in accordance with Section 40.2.2.3.

(b) For the Scheduling Coordinator for a Non-CPUC Load Serving Entity for which the appropriate Local Regulatory Authority or federal agency has not established a Reserve Margin(s) or a CPUC Load Serving Entity subject to Section 40.2.1(b), the Reserve Margin for each month is the additional quantity of Qualifying Capacity above the peak Demand Forecast in the CAISO BAA for that month needed to meet a 1-day-in-ten-years loss of load expectation standard as a percent of the peak Demand Forecast in the CAISO BAA for that month. As further specified in the BPM, the CAISO determines that quantity of additional Qualifying Capacity needed based on an annual probabilistic reliability analysis conducted consistent with accepted industry practices that models system conditions and considers potential variability in relevant underlying factors, such as production from wind and solar units, Forced Outages, and forecasted consumption patterns from Load. The CAISO provides stakeholders an opportunity to provide feedback on the proposed results of the analysis and key inputs to the analysis before finalizing the results and also provides transparency regarding the final results.

#### 40.2.2.2 Qualifying Capacity Criteria

The Scheduling Coordinator for a Non-CPUC Load Serving Entity must provide the CAISO with a description of the criteria adopted by the Local Regulatory Authority or federal agency for determining qualifying resource types and the Qualifying Capacity from such resources and any modifications thereto as they are implemented from time to time. The LSE may elect to utilize the criteria set forth in Section 40.8.

#### 40.2.2.3 Demand Forecasts

If the California Energy Commission does not produce a coincident peak Demand Forecast for a Load Serving Entity, the Scheduling Coordinator for that Load Serving Entity must provide the information requested by the CAISO on the schedule and in the reporting format(s) set forth in the Business Practice Manual.

#### 40.2.2.4 Annual and Monthly Resource Adequacy Plans

The Scheduling Coordinator for a Non-CPUC Load Serving Entity or a CPUC Load Serving Entity subject to Section 40.2.1(b), or a CPE must provide annual and monthly Resource Adequacy Plans for such Load Serving Entity or CPE, as follows:

(a) Each annual Resource Adequacy Plan must be submitted to the CAISO on a schedule and in the reporting format(s) set forth in the Business Practice Manual. The annual Resource Adequacy Plan must, at a minimum, set forth the Local Capacity Area Resources, if any, procured by the Load Serving Entity or CPE as described in Section 40.3, and may identify a Local Capacity Area Resource as Listed Local RA Capacity.

(b) Each monthly Resource Adequacy Plan or the same information as required to be included in the monthly Resource Adequacy Plan, plus any other information the CAISO requires as identified in the Business Practice Manual, must be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, and in accordance with the schedule and in the reporting format(s) set forth in the Business Practice Manual. For Load Serving Entities, the monthly Resource Adequacy Plan must identify all resources, including Local Capacity Area Resources, the Load Serving Entity will rely upon to satisfy the applicable month's peak hour Demand of the Load Serving

Entity as determined by the Demand Forecasts developed in accordance with Section 40.2.2.3 and applicable Reserve Margin. For CPEs, the monthly Resource Adequacy Plan must identify all Local Capacity Area Resources the CPE will rely upon to satisfy its Local Capacity Area Resource obligation. For each Local Capacity Area Resource identified on a monthly Resource Adequacy Plan, the Load Serving Entity or CPE also may identify RA Capacity from such resource as Listed Local RA Capacity. Resource Adequacy Plans must utilize the Net Qualifying Capacity requirements of Section 40.4. A Load Serving Entity is not obligated to commit a type of RA capacity on a monthly Resource Adequacy Plan if it holds a monthly obligation of less than 1 MW for that type of RA capacity but is not exempt from committing any other type of RA capacity for that month for which it holds a monthly obligation of 1 MW or greater and is not exempt for any relevant cost allocation from a CPM designation made pursuant to Section 43A associated with a monthly RA capacity obligation of less than 1 MW.

(c) The Scheduling Coordinator for a Load Serving Entity or CPE may submit at any time from 45 days through 30 days in advance of the relevant month, a revision to its monthly Resource Adequacy Plan to correct either: (i) a discrepancy between its monthly Resource Adequacy Plan and the monthly Supply Plan of a Resource Adequacy Resource providing that Load Serving Entity or CPE with Resource Adequacy Capacity, as provided in Section 40.7(b); or (ii) a deficiency in how much Resource Adequacy Capacity was provided on the monthly Resource Adequacy Plan. From 45 days through 30 days in advance of the relevant month, the Scheduling Coordinator for a Load Serving Entity or CPE also may revise its Resource Adequacy Plan voluntarily either to add additional Resource Adequacy Capacity or remove Resource Adequacy Capacity regardless of a discrepancy or deficiency that existed as of 45 days in advance of the relevant month. The CAISO will not accept any revisions to a monthly Resource Adequacy Plan from 30 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Load Serving Entity or CPE demonstrates good cause for the change and explains why it was not possible to submit

the change earlier.

(d) The Scheduling Coordinator for the Load Serving Entity or CPE that submits a revision to its monthly Resource Adequacy Plan to correct a deficiency or discrepancy must include in the revision a MW amount of Resource Adequacy Capacity for each day of the month that is no less than the MW amount of Resource Adequacy Capacity included in its original plan for each day of the month.

**40.2.3 [Not Used]**

**40.2.4 Load-Following MSS**

**(1) Applicability.** Unless otherwise provided in Section 40, Scheduling Coordinators for Load-following MSSs are subject solely to Sections 40.2.4, 40.3, and with respect to their Local Capacity Area Resources identified in accordance with Section 40.2.4, Section 40.9, and with respect to Flexible Resource Adequacy Capacity, Section 40.10.

**(2) Annual RA Plan.** A Scheduling Coordinator for a Load-following MSS must provide an annual Resource Adequacy Plan that sets forth, at a minimum, the Local Capacity Area Resources, if any, procured by the Load-following MSS as described in Section 40.3. The annual Resource Adequacy Plan shall utilize the annual coincident peak Demand determination provided by the California Energy Commission for such Load-following MSS using Demand Forecast data submitted to the California Energy Commission by the Load-following MSS, or, if the California Energy Commission does not produce coincident peak Demand Forecasts for the Load-following MSS, the annual coincident peak Demand Forecast produced by the CAISO for such Load-following MSS in accordance with its Business Practice Manual using Demand Forecast data submitted to the CAISO by the Load-following MSS.

**(3) Monthly RA Plan and Supply Plan.** The Scheduling Coordinator for a Load-following MSS must submit a monthly Resource Adequacy Plan and Supply Plan on the schedule set forth in the Business Practice Manual.

**40.3 Local Capacity Area Resource Requirements for SCs for LSEs**

**40.3.1 Local Capacity Technical Study**

On an annual basis, pursuant to the schedule set forth in the Business Practice Manual, the CAISO will, perform, and publish on the CAISO Website the Local Capacity Technical Study. The Local Capacity Technical Study shall identify Local Capacity Areas, determine the minimum amount of Local Capacity Area Resources in MW that must be available to the CAISO within each identified Local Capacity Area, and identify the Generating Units within each identified Local Capacity Area. The CAISO shall collaborate with the CPUC, Local Regulatory Authorities within the CAISO Balancing Authority Area, federal agencies, and Market Participants to ensure that the Local Capacity Technical Study is performed in accordance with this Section 40.3 and to establish for inclusion in the Business Practice Manual other parameters and assumptions applicable to the Local Capacity Technical Study and a schedule that provides for: (i) reasonable time for review of a draft Local Capacity Technical Study, (ii) reasonable time for Participating TOs to propose operating solutions, and (iii) release of the final Local Capacity Technical Study no later than 120 days prior to the date annual Resource Adequacy Plans must be submitted under this Section 40.

**40.3.1.1 Local Capacity Technical Study Criteria**

The Local Capacity Technical Study will determine the minimum amount of Local Capacity Area Resources needed to address the Contingencies identified in Section 40.3.1.2. The Local Capacity Technical Study also will consider hourly load shapes and system limits under emergency conditions to quantify minimum amounts of hourly capacity and energy, that Local Capacity Area Resources must be able to provide within each identified Local Capacity Area in order to resolve Contingencies identified in Section 40.3.1.2. In performing the Local Capacity Technical Study, the CAISO will apply those methods for resolving Contingencies considered appropriate for the performance level that corresponds to a particular studied Contingency, as provided in NERC Reliability Standards regarding Transmission System Planning Performance Requirements (TPL-001-4 or its successor), as augmented by CAISO Reliability Criteria in accordance with the Transmission Control Agreement and Section 24.3.1. The CAISO Reliability Criteria shall include:

(1) Time Allowed for Manual Readjustment: This is the amount of time required for the Operator to take all actions necessary to prepare the system for the next Contingency. This time should not be more than thirty (30) minutes.

(2) No voltage collapse or dynamic instability shall be allowed for a Contingency in Category Extreme Events [any P1 system readjusted (Common Structure) P7], as listed in TPL-001-4 in areas with load of 250 MW or more. For areas with less than 250 MW of load, mitigation will only be proposed if there is a risk of cascading beyond the area directly affected by the outage.

**40.3.1.2 Local Capacity Technical Study Contingencies.**

The Local Capacity Technical Study shall assess all the Contingencies and appropriate performance levels required by mandatory standards including, but not limited to, NERC, WECC and CAISO Planning Standards.

**40.3.2 Allocation of Local Capacity**

The CAISO will allocate Local Capacity Area Resource requirements to Scheduling Coordinators for Load Serving Entities in the following sequential manner:

(a) The responsibility for the aggregate Local Capacity Area Resources required for all Local Capacity Areas within each TAC Area as determined by the Local Capacity Technical Study will be allocated to all Scheduling Coordinators for Load Serving Entities that serve Load in the TAC Area in accordance with the Load Serving Entity's proportionate share of the LSE's TAC Area Load at the time of the CAISO's annual coincident peak Demand set forth in the annual peak Demand Forecast for the next Resource Adequacy Compliance Year as determined by the California Energy Commission. Expressed as a formula, the allocation of Local Area Capacity Resource obligations will be as follows: (∑ Local Capacity Area MW in TAC Area from the Local Capacity Technical Study) * (LSE Demand in TAC Area at CAISO annual coincident peak Demand)/(Total TAC Area Demand at the time of CAISO annual coincident peak Demand). This will result in a MW responsibility for each Load Serving Entity for each TAC Area in which the LSE serves Load. In no instance, however, is a Load Serving Entity with a Demand and Reserve Margin requirement for a particular TAC Area obligated to commit, on a monthly Resource Adequacy Plan, Local Capacity Area Resources in that particular TAC Area in excess of the quantity of capacity needed by that Load Serving Entity to meet its

applicable Demand and Reserve Margin requirements arising from its obligations in that TAC Area for the applicable compliance month. If the CAISO determines that a Load Serving Entity would have an obligation to show Local Capacity Area Resources of less than 1 MW in a particular TAC Area, then the Load Serving Entity will have an obligation of zero (0) MWs for that TAC Area in that year. A LSE or CPE may meet its MW responsibility, as assigned under this Section, by procuring Local Capacity Area Resources in any Local Capacity Area in the TAC Area.

(b) For Scheduling Coordinators for Non-CPUC Load Serving Entities, the Local Capacity Area Resource obligation will be allocated by default based on Section 40.3.2(a) above. The CAISO will re-allocate all or part of the Local Capacity Area Resource obligation for a Non-CPUC Load Serving Entity to a CPE if the Local Regulatory Authority notifies the CAISO of such allocation decision by the deadlines established in the Business Practice Manual. The same CPE may be re-allocated Local Capacity Area Resource obligations from multiple Local Regulatory Authorities.

(c) For Scheduling Coordinators for CPUC Load Serving Entities, the CAISO will calculate the individual and total Local Capacity Area Resource obligations attributable to the CPUC jurisdictional Load Serving Entities and will transmit them to the CPUC. The CPUC may then allocate the Local Capacity Area Resource obligation to its jurisdictional LSEs or CPEs based on a method adopted by the CPUC. However, if the allocation methodology adopted by the CPUC does not fully allocate the total sum of each CPUC Load Serving Entity's proportionate share calculated under Section 40.3.2(a), the CAISO will allocate the difference to all Scheduling Coordinators for CPUC Load Serving Entities in accordance with their proportionate share calculated under 40.3.2(a). If the CPUC does not adopt an allocation methodology or does not notify the CAISO of its allocation decision by the deadlines established in the Business Practice Manual, the CAISO will allocate Local Capacity Area Resources to Scheduling Coordinators for CPUC Load Serving Entities based on Section 40.3.2(a).

(d) By the deadline established in the Business Practice Manual, a Local Regulatory

Authority that has, per section 40.3.2(b) or 40.3.2(c), assigned a local obligation to a CPE must inform the CAISO how the Local Regulatory Authority wishes to assign the system and flexible attributes of the resources expected to be shown by the CPE to the LSEs represented by the CPE. The Local Regulatory Authority may decline to provide such assignment, in which case the system and flexible attributes of the resources will remain with the CPE. If the Local Regulatory Authority provides such LSE assignment by the deadline, the CAISO will provide provisional credits to those LSEs towards their RA requirements based on the assignments provided by the Local Regulatory Authority, provided that the Local Regulatory Authority assigns total system and total flex credits equal to the MWs of system and flex RA capacity expected to be shown by the CPE. If the CPE's annual or monthly RA plans include Local Capacity Area Resources that provide more MW or fewer MWs of system or flex capacity than were assumed in assigning the provisional LSE RA credits, then the CAISO will increase or reduce, respectively, the LSE credits based on each LSE's proportionate share of the provisional allocation. Any LSE deficiencies created by reducing such provisional RA credits may be addressed in the cure periods established in Sections 40.7 and 40.10.5.4.

Once the CAISO has allocated the total responsibility for Local Capacity Area Resources, the CAISO will inform the CPUC and the Scheduling Coordinators for each non-CPUC jurisdictional LSE of the LSE's specific allocated responsibility for Local Capacity Area Resources in each TAC Area in which the LSE serves Load.

**40.3.3 Procurement of Local Capacity Area Resources by LSEs and CPEs**

Nothing in this Section 40 obligates any Scheduling Coordinator to demonstrate on behalf of a Load Serving Entity or CPE that the Load Serving Entity or CPE has procured Local Capacity Area Resources to satisfy capacity requirements for each Local Capacity Area identified in the technical study. If a Load Serving Entity or CPE has procured Local Capacity Area Resources that satisfy generation capacity requirements for Local Capacity Areas, the Scheduling Coordinator for such Load Serving Entity or CPE shall include this information in its annual and monthly Resource Adequacy Plan(s).

**40.3.4 [Not Used]**

### 40.4 General Requirements on Resource Adequacy Resources

#### 40.4.1 Eligible Resources and Determination of Qualifying Capacity

The CAISO shall use the criteria provided by the CPUC or Local Regulatory Authority to determine and verify, if necessary, the Qualifying Capacity of all Resource Adequacy Resources; however, to the extent a resource is listed by one or more Scheduling Coordinators in their Resource Adequacy Plans, which apply the criteria of more than one Local Regulatory Authority that leads to conflicting Qualifying Capacity values for that resource, the CAISO will accept the methodology that results in the highest Qualifying Capacity value. Only if the CPUC, Local Regulatory Authority, or federal agency has not established any Qualifying Capacity criteria, or chooses to rely on the criteria in this CAISO Tariff, will the provisions of Section 40.8 apply.

#### 40.4.2 Net Qualifying Capacity Report

The CAISO shall produce an annual report posted to the CAISO Website on the schedule set forth in the Business Practice Manual that sets forth the Net Qualifying Capacity of all Participating Generators. All other Resource Adequacy Resources may be included in the annual report under Section 40.4.2 upon their request. The Net Qualifying Capacity of any resource included in the annual report, once posted to the CAISO Website, shall not be reduced by the CAISO for the next Resource Adequacy Compliance Year. Any change proposed to be made to a Net Qualifying Capacity value for a resource included in a prior annual report shall be explained, and any test results or analyses underlying the change provided, to the Scheduling Coordinator within ten (10) days of the CAISO's determination that a change to the resource's Net Qualifying Capacity is appropriate, which also must be at least fifteen (15) days prior to the posting on the CAISO Website of the annual report. Any disputes as to the CAISO's determination regarding Net Qualifying Capacity shall be subject to the CAISO ADR Procedures.

#### 40.4.3 General Qualifications for Supplying Net Qualifying Capacity

Resource Adequacy Resources included in a Resource Adequacy Plan submitted by a Scheduling Coordinator on behalf of either a Load Serving Entity serving Load in the CAISO Balancing Authority Area or a CPE must:

(1) Be available for testing by the CAISO to validate Qualifying Capacity, which can be no less than a resource's PMin as registered in the Master File even if the resource's

contractual Resource Adequacy Capacity is less than its PMin, and determine Net Qualifying Capacity for the next Resource Adequacy Compliance Year;

(2) Provide any information requested by the CAISO to apply the performance criteria to be adopted by the CAISO pursuant to Section 40.4.5;

(3) Submit Bids into the CAISO Markets as required by this CAISO Tariff;

(4) Be in compliance, as of the date that the CAISO performs any testing or otherwise determines Net Qualifying Capacity for the next Resource Adequacy Compliance Year, with the criteria for Qualifying Capacity established by the CPUC, relevant Local Regulatory Authority, or federal agency and provided to the CAISO;

(5) Be subject to Sanctions for non-performance as specified in the CAISO Tariff;

(6) For a resource with contractual Resource Adequacy Capacity less than PMin as registered in the Master File, make the PMin available to the CAISO for commitment or dispatch at PMin, subject to Section 11.8 provisions for Bid Cost Recovery, so that the resource's Resource Adequacy Capacity can be utilized as required by this CAISO Tariff; and

(7) For a resource with contractual Resource Adequacy Capacity falling in a Forbidden Operating Region or between two MSG Configurations, make available to the CAISO for commitment or dispatch the capacity falling at the upper bound of the Forbidden Operation Region or the lower bound of MSG Configuration above the RA capacity, respectively, subject to Section 11.8 provisions for Bid Cost Recovery, so that the resource's Resource Adequacy Capacity can be utilized as required by this CAISO Tariff.

**40.4.4 Reductions for Testing**

In accordance with the procedures specified in the Business Practice Manual, the Generating Unit of a Participating Generator or other Generating Units, System Units or Loads of Participating Loads, Reliability Demand Response Resources, or Proxy Demand Resources included in a Resource Adequacy Plan submitted by a Scheduling Coordinator on behalf of a Load Serving Entity or CPE can have its Qualifying Capacity reduced, for purposes of the Net Qualifying Capacity annual report under Section 40.4.2 for the next Resource Adequacy Compliance Year, if a CAISO testing program determines that it is

not capable of supplying the full Qualifying Capacity amount.

### 40.4.5 Reductions for Performance Criteria

No later than 12 months after the effective date of this Section 40, the CAISO will issue a report outlining a proposal with respect to performance criteria for Resource Adequacy Resources. The CAISO will collaborate with the CPUC and other Local Regulatory Authorities to develop the performance criteria to be submitted to FERC. The Scheduling Coordinator for a Resource Adequacy Resource shall provide or make available to the CAISO, subject to the confidentiality provisions of this CAISO Tariff, all documentation requested by the CAISO to determine, develop or implement the performance criteria, including, but not limited to, NERC Generating Availability Data System data.

### 40.4.6 Reductions for Deliverability

#### 40.4.6.1 Deliverability within the CAISO Balancing Authority Area

In order to determine Net Qualifying Capacity from Resource Adequacy Resources subject to this Section 40.4, the CAISO will determine that a Resource Adequacy Resource is available to serve the aggregate of Load by means of a deliverability study. Documentation explaining the CAISO's deliverability analysis will be posted on the CAISO Website. The deliverability study will be performed annually and shall focus on peak Demand conditions. The results of the deliverability study shall be incorporated into the Net Qualifying Capacity annual report under Section 40.4.2 and will be effective for the next Resource Adequacy Compliance Year. To the extent the deliverability study shows that the Qualifying Capacity is not deliverable to the aggregate of Demand under the conditions studied, the Qualifying Capacity of the Resource Adequacy Resource will be reduced on a MW basis for the capacity that is undeliverable. Resources will be electrically grouped in a manner consistent with the CAISO Deliverability Assessment methodology posted on the CAISO Website. For Resource Adequacy Resources in the same electrical group which have identified deliverability constraints, the Qualifying Capacity of the Resource Adequacy Resources that obtained Full Capacity Deliverability Status or partial deliverability through Section 8.2 of Appendix Y to this CAISO Tariff will be reduced prior to reducing the Qualifying Capacity of those resources which were originally provided Full Capacity Deliverability Status pursuant to inclusion in an Interconnection Study Cycle under Appendix Y to this CAISO Tariff.

#### 40.4.6.2 Deliverability of Imports

#### 40.4.6.2.1 Available Import Capability Assignment Process

For Resource Adequacy Plans, total Available Import Capability will be assigned on an annual basis for a one-year term to Scheduling Coordinators representing Load Serving Entities serving Load in the CAISO Balancing Authority Area and, in limited circumstances, to Scheduling Coordinators representing Participating Generators or System Resources, as described by the following sequence of steps.

**Step 1:** Determination of Maximum Import Capability on Interties into the CAISO Balancing Authority Area: The CAISO shall establish the Maximum Import Capability for each Intertie into the CAISO Balancing Authority Area, and will post those values on the CAISO Website in accordance with the schedule and process set forth in the Business Practice Manual.

**Step 2:** Determination of Available Import Capability by Accounting for Existing Contracts and Transmission Ownership Rights Held by Out-of-Balancing Authority Area LSEs: For each Intertie, the Available Import Capability will be determined by subtracting from the Maximum Import Capability established in Step 1 for each Intertie the import capability on each Intertie associated with (i) Existing Contracts and (ii) Transmission Ownership Rights held by load serving entities that do not serve Load within the CAISO Balancing Authority Area. The remaining sum of all Intertie Available Import Capability is the Total Import Capability. Total Import Capability shall be used to determine the Load Share Quantity for each Load Serving Entity that serves Load within the CAISO Balancing Authority Area.

**Step 3:** Determination of Existing Contract Import Capability by Accounting for Existing Contracts and Transmission Ownership Rights Held by CAISO Balancing Authority Area LSEs: From the Available Import Capability remaining on each Intertie after Step 2 above, Existing Contracts and Transmission Ownership Rights held by Load Serving Entities that serve Load within the CAISO Balancing Authority Area shall be reserved for the holders of such commitments and will not be subject to reduction under any subsequent steps in this Section. The import capability reserved pursuant to this Step 3 is the Existing Contract Import Capability.

**Step 4a:** Assignment of Pre-RA Import Commitments: From the Available Import Capability remaining on each Intertie after reserving Existing Contract Import Capability under Step 3 above, the CAISO will assign to Load Serving Entities serving Load within the CAISO Balancing

Authority Area Pre-RA Import Commitment Capability on a particular Intertie based on Pre-RA Import Commitments in effect (where a supplier has an obligation to deliver the Energy or make the capacity available) at any time during the Resource Adequacy Compliance Year for which the Available Import Capability assignment is being performed. The Pre-RA Import Commitment will be assigned to the Intertie selected by the Load Serving Entity during the submission of the import commitment data template as required per Business Process Manual, and it must be the primary Intertie upon which the Energy or capacity is anticipated to be scheduled. If a Pre-RA Import Commitment submitted on behalf of a LSE with Existing Contract Import Capability is assigned under this Section to the same Intertie on which the LSE holds Existing Contract Import Capability, the Pre-RA Import Commitment will be assumed to deliver over the Existing Contract Import Capability until exhausted, unless the LSE can demonstrate otherwise.

To the extent a particular Intertie becomes over requested with Pre-RA Import Commitments, such that the MW represented in all Pre-RA Import Commitments utilizing the Intertie exceed the Intertie's Available Import Capability in excess of that reserved for Existing Contracts and Transmission Ownership Rights under Steps 2 and 3, the Pre-RA Import Commitments will be assigned Pre-RA Import Commitment Capability, based on the Import Capability Load Share Ratio of each Load Serving Entity submitting Pre-RA Import Commitments on the particular Intertie. To the extent this initial assignment of Pre-RA Import Commitment Capability has not fully assigned the Available Import Capability of the particular over requested Intertie, the remaining Available Import Capability on the over requested Intertie will be assigned until fully exhausted based on the Import Capability Load Share Ratio of each Load Serving Entity whose submitted Pre-RA Import Commitment has not been fully satisfied by the previous Import Capability Load Share Ratio assignment iteration. The Available Import Capability assigned pursuant to this Step 4a is the Pre-RA Import Commitment Capability.

**Step 4b:** Assignment of New Use Import Commitments: From the Available Import Capability remaining on each Intertie after reserving Existing Contract Import Capability under Step 3 above and reserving Pre-RA Import Commitment Capability under step 4a above, the CAISO will assign to Load Serving Entities serving Load within the CAISO Balancing Authority Area New Use Import

Commitment Capability on a particular Intertie based on New Use Import Commitments in effect during the Resource Adequacy Compliance Year for which the Available Import Capability assignment is being performed. The CAISO will assign the New Use Import Commitment to the Intertie selected by the Load Serving Entity in the import commitment data template as required per Business Process Manual, and it must be the primary Intertie upon which the Energy or capacity is anticipated to be scheduled. If a New Use Import Commitment submitted by an LSE with Existing Contract Import Capability is assigned under this Section to the same Intertie on which the Load Serving Entity holds Existing Contract Import Capability, the CAISO will assume the New Use Import Commitment will be delivered over the Existing Contract Import Capability until exhausted, unless the LSE can demonstrate otherwise.

To the extent a particular Intertie becomes over requested with New Use Import Commitments, such that the MW represented in all New Use Import Commitments using the Intertie exceed the Intertie's Available Import Capability in excess of that reserved for Existing Contracts and Transmission Ownership Rights under Steps 2 and 3 as well as Pre-RA Import Commitments under Step 4a, the New Use Import Commitments will be assigned New Use Import Commitment Capability, based on the Import Capability Load Share Ratio of each Load Serving Entity submitting New Use Import Commitments on the particular Intertie. To the extent the initial assignment of New Use Import Commitment Capability does not fully assign the Available Import Capability on the over requested Intertie, the CAISO will assign the remaining Available Import Capability on the over requested Intertie until fully exhausted based on the Import Capability Load Share Ratio of each Load Serving Entity whose submitted New Use Import Commitment has not been fully satisfied by the previous Import Capability Load Share Ratio assignment iteration. The Available Import Capability assigned pursuant to this Step 4b is the New Use Import Commitment Capability. Any New Use Import Commitment Capability shall not exceed the limitations imposed in Section 40.4.6.2.2.4.

**Step 5:** Assignment of Remaining Import Capability Limited by Load Share Quantity: The Total Import Capability remaining after Step 4 will be assigned only to Load Serving Entities serving Load within the CAISO Balancing Authority Area that have not received Existing Contract Import

Capability, Pre-RA Import Commitment Capability and New Use Import Commitment Capability under Steps 3 and 4, that exceed the Load Serving Entity's Load Share Quantity. Only the MW quantity of any Pre-RA Import Commitment Capability and New Use Import Commitment Capability assigned to Existing Contract Import Capability under Step 4 that exceeds the Existing Contract Import Capability on the particular Intertie will be counted for purposes of this Step 5. The CAISO will assign Remaining Import Capability based on the following process. First, the CAISO will calculate the gross Remaining Import Capability by subtracting the sum of the MW quantity assigned to excluded LSEs from the Total Import Capability. Next, the CAISO will calculate the share of gross Remaining Import Capability based on load share ratio among the remaining eligible Load Serving Entities. Any CAISO internal Load Serving Entity with allocations received from both Steps 3 & 4 that exceed or are equal to its share of the gross Remaining Import Capability will be excluded from further allocation of Remaining Import Capability. The CAISO will re-perform this calculation until there are no excluded Load Serving Entities. Each remaining eligible Load Serving Entity will have its Remaining Import Capability calculated by subtracting its total of all allocations received under Steps 3, 4a & 4b from its share of the gross Remaining Import Capability. The Total Import Capability will be assigned until fully exhausted to those Load Serving Entities eligible to receive an assignment under this Step. The quantity of Total Import Capability assigned to the Load Serving Entity under this Step is the Load Serving Entity's Remaining Import Capability. This Step 5 does not assign Remaining Import Capability on a specific Intertie.

**Step 6:** CAISO Posting of Assigned and Unassigned Capability: Following the completion of Step 5, the CAISO will post to the CAISO Website, in accordance with the schedule set forth in the Business Practice Manual the following information:

(a) The Total Import Capability;

(b) The quantity in MW of Existing Contracts and Transmission Ownership Rights assigned to each Intertie, distinguishing between Existing Contracts and Transmission Ownership Rights held by Load Serving Entities within the CAISO Balancing Authority Area and those held by load serving entities outside the

CAISO Balancing Authority Area;

(c) The aggregate quantity in MW, and identity of the holders, of Pre-RA Import Commitments assigned to each Intertie; and

(d) The aggregate quantity in MW of Available Import Capability after Step 4, the identity of the Interties with Available Import Capability, and the MW quantity of Available Import Capability on each such Intertie.

(e) For each individual Intertie, the name of the holder of Existing Contracts and Transmission Ownership Rights, Pre-RA Import Commitments and New Use Import Commitments as well as maximum locked up amount, lock start date, lock expiration date and potentially other available information that provides stakeholders with transparency into the allocation process.

**Step 7:** CAISO Notification of LSE Assignment Information: Following the completion of Step 5, in accordance with the schedule set forth in the Business Practice Manual, the CAISO will notify the Scheduling Coordinator for each Load Serving Entity of:

(a) The Load Serving Entity's Import Capability Load Share;

(b) The Load Serving Entity's Load Share Quantity; and

(c) The amount of, and Intertie on which, the Load Serving Entity's Existing Contract Import Capability, Pre-RA Import Commitment Capability and New Use Import Commitment Capability, as applicable, has been assigned; and

(d) The Load Serving Entity's Remaining Import Capability.

**Step 8:** Transfer of Import Capability: In accordance with the schedule set forth in the Business Practice Manual, a Scheduling Coordinator for a Load Serving Entity shall be allowed to transfer some or all of its Remaining Import Capability to any other Scheduling Coordinator for a Load Serving Entity. The CAISO will accept transfers between Scheduling Coordinators only to the extent such transfers are reported to the CAISO, in accordance with the schedule set forth in the Business Practice Manual and through the CAISO's Import Capability Transfer Registration Process, by the entity receiving the Remaining Import Capability who must set forth (1) the name of the counter-parties, (2) the MW quantity, (3) term of transfer, and (4) price on a per MW basis.

The CAISO will post to the CAISO Website in accordance with the schedule set forth in the Business Practice Manual the information on transfers of Remaining Import Capability received under this Step 8.

**Step 9:** Initial Scheduling Coordinator Request to Assign Remaining Import Capability by Intertie: In accordance with the schedule set forth in the Business Practice Manual, the Scheduling Coordinator for each Load Serving Entity shall notify the CAISO of its request to assign its post-trading Remaining Import Capability on a MW basis per available Intertie. Total requests for assignment of Remaining Import Capability by a Scheduling Coordinator cannot exceed the sum of the post-traded Remaining Import Capability of its Load Serving Entities. The CAISO will honor the requests to the extent an Intertie has not been over requested. If an Intertie is over requested, the requests for Remaining Import Capability on that Intertie will be assigned based on each Load Serving Entity's Import Capability Load Share Ratio in the same manner as set forth in Step 4. A Scheduling Coordinator for a Load Serving Entity without an Import Capability Load Share will be assigned the Import Capability Load Share equal to the average Import Capability Load Share of those Load Serving Entities from which it received transfers of Remaining Import Capability.

**Step 10:** CAISO Notification of Initial Remaining Import Capability Assignments and Unassigned Capability: In accordance with the schedule set forth in the Business Practice Manual, the CAISO will:

(a) Notify the Scheduling Coordinators of accepted request(s) for assigning Remaining Import Capability under Step 9;

(b) Publish on the CAISO Website aggregate unassigned Available Import Capability, if any, the identity of the Interties with unassigned Available Import Capability, and the MW quantity of Available Import Capability, on each such Intertie; and

(c) Issue a Market Notice to advise the Scheduling Coordinators that Step 10 is complete and to specify the time at which the CAISO will begin accepting requests for the Remaining Import Capability for Step 11.

**Step 11:** Secondary Scheduling Coordinator Request to Assign Remaining Import Capability by Intertie: To the extent Remaining Import Capability remains unassigned as disclosed by Step 10, in accordance with the schedule set forth in the Business Practice Manual, Scheduling Coordinators for Load Serving Entities shall notify the CAISO of their requests to assign any Remaining Import Capability on a MW per available Intertie basis. Step 10 must be completed before a Scheduling Coordinator may submit a request under this step for any Remaining Import Capability. Any requests received prior to the time stated in the Market Notice issued at the completion of Step 10 will not be honored by the CAISO. The CAISO will honor the timely requests received to the extent an Intertie has not been over requested. If an Intertie is over requested, the requests on that Intertie will be assigned based on each Load Serving Entity's Import Capability Load Share Ratio, as used in Steps 4 and 9.

**Step 12:** Notification of Secondary Remaining Import Capability Assignments and Unassigned Capability: In accordance with the schedule set forth in the Business Practice Manual, the CAISO will:

(a) Notify the Scheduling Coordinator for each Load Serving Entity of the Load Serving Entity's accepted request(s) for assigning Remaining Import Capability under Step 11;

(b) Publish on the CAISO Website unassigned aggregate Available Import Capability, if any, the identity of the Interties with Available Remaining Import Capability, and the MW quantity of Availability Import Capability on each such Intertie; and

(c) Issue a Market Notice to advise the Scheduling Coordinator for each Load Serving Entity that Step 12 is complete and to specify the time at which the CAISO will begin accepting requests for the Balance of Year Unassigned Available Import Capability for Step 13.

**Step 13:** Requests for Balance of Year Unassigned Available Import Capability: To the extent total Available Import Capability remains unassigned as disclosed by Step 12, Scheduling Coordinators for Load Serving Entities, Participating Generators, or System Resources may notify

the CAISO of a request for unassigned Available Import Capability on a specific Intertie on a per MW basis. Step 12 must be completed before a Scheduling Coordinator may submit a request under this step for any remaining unassigned Import Capability. Any requests received prior to the time stated in the Market Notice issued at the completion of Step 12 will not be honored by the CAISO. Each request must include the identity of Load Serving Entity, Participating Generator, or System Resource on whose behalf the request is made. The CAISO will accept only two (2) requests per calendar week from any Scheduling Coordinator on behalf of a single Load Serving Entity, Participating Generator, or System Resource.

Load Serving Entities with existing Resource Adequacy contracts that have not otherwise received Import Capability will receive priority over other requests received on the same day. The load serving entity will only receive priority on the branch group where the existing Resource Adequacy contract is scheduled. To receive priority, the Resource Adequacy contract cannot be fully utilized as a Pre-RA Commitment or a New Use Import Commitment. If the Resource Adequacy contract is not fully utilized as a Pre-RA Commitment or a New Use Import Commitment, then the portion of the Resource Adequacy contract that is not utilized as a Pre-RA Commitment or a New Use Import Commitment shall receive priority.

If two or more Load Serving Entities request an allocation that exceeds the amount of Available Import Capability remaining on any given branch group, the assignment will be split among each Load Serving Entity with a valid request based on the following formula:

(Total unassigned Available Import Capability at the branch group divided by the sum of capacity from eligible portions of applicable Resource Adequacy contracts with priority) multiplied by each Load Serving Entity's eligible Resource Adequacy contract amount.

After addressing any priority for requests associated with Resource Adequacy contracts, the CAISO will honor timely requests in priority of the time requests from Scheduling Coordinators were received until the Intertie is fully assigned and without regard to any Load Serving Entity's Load Share Quantity. Any honored request shall be for the remainder of the Resource Adequacy Compliance Year.

The CAISO shall provide an electronic means, either through the Import Capability Transfer

Registration Process or otherwise, of notifying the Scheduling Coordinator of the time the request was deemed received by the CAISO and, within seven (7) days of receipt of the request, whether the request was honored. If a request made on behalf of a Load Serving Entity is honored, it shall be the responsibility of the Scheduling Coordinator and its Load Serving Entity to notify the CPUC or applicable Local Regulatory Authority of the acceptance of the request for unassigned Available Import Capability. If the request is not honored because the Intertie requested was fully assigned, the request will be deemed rejected and the Scheduling Coordinator, if it still seeks to obtain unassigned Available Import Capability, will be required to submit a new request for unassigned Available Import Capability on a different Intertie. The CAISO will update on its website the list of unassigned Available Import Capability by Intertie in accordance with the schedule set forth in the Business Practice Manual.

This multi-step process for assignment of Total Import Capability does not guarantee or result in any actual transmission service being assigned and is only used for determining the import capability that can be credited towards satisfying the Reserve Margin of a Load Serving Entity under this Section 40. Upon the request of the CAISO, Scheduling Coordinators must provide the CAISO with information on Pre-RA Import Commitments and New Use Import Commitments as well as any transfers or sales of assigned Total Import Capability.

**40.4.6.2.2 Bilateral Import Capability Transfers and Registration Process**

**40.4.6.2.2.1 [Not Used]**

**40.4.6.2.2.2 Reporting Process for Bilateral Import Capability Transfers**

This Section shall apply to all transfers of Existing Contract Import Capability, Pre-RA Import Commitment Capability, New Use Import Commitment Capability or Remaining Import Capability other than that provided for in Step 8 of Section 40.4.6.2.1. Any Load Serving Entity or other Market Participant that has obtained Existing Contract Import Capability, Pre-RA Import Commitment Capability, New Use Import Commitment Capability or Remaining Import Capability may assign, sell, or otherwise transfer such Existing Contract Import Capability, Pre-RA Import Commitment Capability, New Use Import Commitment Capability or Remaining Import Capability in MW increments rounded to two decimal places. The import capability subject to each transfer shall remain on the Intertie assigned pursuant to Section 40.4.6.2.1.

The Scheduling Coordinator for the Load Serving Entity or Market Participant receiving the transferred Existing Contract Import Capability, Pre-RA Import Commitment Capability, New Use Import Commitment Capability or Remaining Import Capability must report the transfer to the CAISO through the CAISO's Import Capability Transfer Registration Process by providing the following information:

(a) Identity of the counter-party(ies);

(b) The MW quantity;

(c) The Intertie on which the Existing Contract Import Capability, Pre-RA Import Commitment Capability, New Use Import Commitment Capability or Remaining Import Capability was assigned;

(d) Term of the transfer; and

(e) Price on a per MW basis.

The CAISO will promptly post to the CAISO Website the information on transfers received under this Section.

**40.4.6.2.2.3 Other Import Capability Information Postings**

The CAISO will post to the CAISO Website on a monthly basis in accordance with the schedule set forth in the Business Practice Manual, for each Intertie, the holder and that holder's quantity in MW of import capability assigned on the particular Intertie as of the reporting date.

The CAISO will also post to the CAISO Website following submission of the annual Resource Adequacy Plans under Sections 40.2.1, 40.2.2.4, 40.2.3.4, and 40.2.4, for each Intertie, by a "yes" or "no" designation, whether each holder of import capability assigned on the particular Intertie has fully included the assigned import capability in the holder's annual Resource Adequacy Plans.

**40.4.6.2.2.4 Reserving import capacity as New Use Import Commitment**

An import allocation received as Remaining Import Capability (Steps 5-13) may be reserved at the branch group level by the LSE holder for the applicable RA year. To reserve an import allocation, the LSE must hold the import allocation for all 12 months of the applicable RA year. LSEs cannot reserve import allocations for partial years.

An LSE may reserve an import allocation for the term of the New Use Import Commitment by showing an applicable New Use Import Commitment, signed by May 15th of the year prior to the requested import

allocation, if the New Use Import Commitment: (1) identifies a specific resource or an aggregation of specific resources that will provide capacity or energy, consisting of Pseudo-Tie Generating Units, Dynamic Resource-Specific System Resources, or Generating Units connected to the CAISO Controlled Grid while subject to CAISO Appendix DD 8.9.1 (b) and (c); and (2) meets all the requirements herein as well as those described in the appropriate Business Process Manual.

A New Use Import Commitment reservation can extend for an undetermined length of time, but the reserved quantity cannot exceed future year ahead Load Share Quantity. For implementation purposes, before import allocations are given out for the next RA year, an LSE must provide the CAISO with contract priority preference to determine the order of MIC allocation reduction in the event the reserved quantity exceeds future year ahead Load Share Quantity. If an LSE chooses to partially reduce the import allocation associated with a specific contract, the LSE must maintain the entire contract unchanged for the duration of the next RA year. Any material modification to the electric or operational characteristics of the contract, as determined by the CAISO, or the sale (part or entire) of the RA contract that currently qualifies as a New Use Import Commitment by its LSE holder will result in the loss of status as New Use Import Commitment.

An LSE can reserve up to 75% of its year ahead total import allocation (representing the sum of Existing Contract Import Capability, Pre-RA Import Commitment Capability, New Use Import Commitment Capability and Remaining Import Capability as communicated by the CAISO per step 7) at the branch group level with New Use Import Commitments that meet this tariff section. The total reserved amount for each LSE represents the sum of all their Existing Contract Import Capability, Pre-RA Import Commitment Capability and New Use Import Commitment Capability.

#### 40.4.6.3 Deliverability of Distributed Generation

The CAISO will perform an annual Deliverability Assessment, as described in Section 40.4.6.3.1, to determine MW quantities of Potential DGD at specific Nodes of the CAISO Controlled Grid for assigning Deliverability Status to Distributed Generation Facilities interconnected or seeking interconnection to the Distribution System of a Utility Distribution Company or a Metered Subsystem pursuant to the interconnection procedures of the Utility Distribution Company or Metered Subsystem, where such interconnection and Potential Deliverability Status can be provided:

(i) without any additional Delivery Network Upgrades (although Reliability Network Upgrades, Distribution Upgrades or other mitigation may be needed);

(ii) without the need for the CAISO to conduct any further Deliverability Assessment; and

(iii) without degrading the Deliverability Status of Generation in Commercial Operation, proposed Generating Facilities in the CAISO Interconnection queue, or the Distributed Generation Facilities of interconnection customers who have previously requested Full Capacity or Partial Capacity Deliverability Status.

Following the CAISO's publication of the nodal Potential DGD quantities resulting from the Deliverability Assessment, applicable Utility Distribution Companies and Metered Subsystems will assign Full Capacity Deliverability Status or Partial Capacity Deliverability Status to specific Distributed Generation Facilities pursuant to the rules set forth in Section 40.4.6.3.2.

This Section 40.4.6.3 is intended to supplement, and not to preclude or limit, the ability of an interconnection customer for a Distributed Generation Facility to seek and receive Full Capacity Deliverability Status or Partial Capacity Deliverability Status through applicable interconnection procedures. Nothing in this Section 40.4.6.3 is intended to relieve the interconnection customer for a Distributed Generation Facility from the requirements to request and achieve interconnection to the Distribution System through the applicable interconnection procedures. In addition, the amount of Resource Adequacy Capacity a Distributed Generation Facility may provide in any given Resource Adequacy Compliance Year is subject to the CAISO's annual Net Qualifying Capacity determination, as specified in Section 40.4.6.1.

**40.4.6.3.1 Deliverability Assessment to Determine Potential DGD**

This Section describes the annual DG Deliverability Assessment the CAISO will perform to determine nodal MW amounts of Potential DGD available to Utility Distribution Companies and Metered Subsystems for assigning Deliverability Status to Distributed Generation Facilities in accordance with Section 40.4.6.3.2. The DG Deliverability Assessment and its results will be based on the assumption that the Distributed Generation Facilities that are eventually assigned Deliverability Status under Section 40.4.6.3 complete all requirements for interconnection to the Distribution System under the applicable interconnection process and that these Distributed Generation Facilities will be supported by needed

Reliability Network Upgrades, Distribution Upgrades or other mitigation that would be needed to safely and reliably interconnect to the Distribution System and deliver Energy from the Distribution System to the appropriate CAISO Controlled Grid Node.

**40.4.6.3.1.1 Developing the Assessment Model**

To develop the base case model for the DG Deliverability Assessment, the CAISO will include:

(i) The most recent GIP or GIDAP Queue Cluster Phase II Interconnection Study deliverability power flow base case, which includes Distributed Generation Facilities of interconnection customers with active interconnection requests who have requested Full Capacity or Partial Capacity Deliverability Status;

(ii) Those Generating Facilities that have obtained Deliverability using the annual full capacity deliverability option under either Section 8.2 of the GIP, Section 9.2 of the GIDAP, or equivalent process(es) under the applicable Utility Distribution Company tariffs;

(iii) Transmission additions and upgrades approved in the final comprehensive Transmission Plan for the most recent Transmission Planning Process cycle;

(iv) Any Generating Facilities in the most recent GIDAP Phase I Interconnection Study that have been determined to be deliverable in accordance with their requested Deliverability Status (including Distributed Generation Facilities of interconnection customers with active interconnection requests who have requested Full Capacity or Partial Capacity Deliverability Status) and were not assigned any Delivery Network Upgrade costs in the Phase I Interconnection Study;

(v) Delivery Network Upgrades that have received governmental approvals or for which Construction Activities have commenced;

(vi) The MW amounts of resources interconnected to the Distribution System below specific Nodes of the CAISO Controlled Grid contained in the most recent Transmission Planning Process base portfolio, except that the CAISO will remove each Node (by using a zero MW value) located within electrical areas for which the most recently completed GIP or GIDAP Phase I or Phase II Interconnection Study has identified a need for a Delivery

Network Upgrade or for which the most recent Phase II Interconnection Study identified and then removed a Delivery Network Upgrade to support Deliverability for MW amounts in the Interconnection queue;

(vii) Actual distributed generation development based on the MW amount of distributed generation in applicable Utility Distribution Company and Metered Subsystem interconnection queues including non-net-energy-metering resources requesting interconnection through state-jurisdictional interconnection processes;

(viii) Any additional information provided by each Utility Distribution Company and Metered Subsystem regarding anticipated distributed generation development on its Distribution System; and

(ix) Other information that the CAISO, in its reasonable discretion, determines is necessary.

**40.4.6.3.1.2 Performing the DG Deliverability Assessment**

The CAISO will perform the DG Deliverability Assessment using the Deliverability Assessment procedures described in GIDAP Section 6.3.2 to determine the availability of transmission system capability, as reflected in the study model described above, to provide Deliverability Status for targeted amounts of additional distributed generation at given Nodes of the CAISO Controlled Grid. Except for Nodes that the CAISO removes by assigning a zero MW value pursuant to Section 40.4.6.3.1.1(vi), the targeted amounts of additional distributed generation at each Node shall be at least as large as the maximum of the corresponding nodal MW amounts determined in accordance with Sections 40.4.6.3.1.1(vi), 40.4.6.3.1.1(vii) or 40.4.6.3.1.1(viii). The CAISO may use larger targeted amounts as it deems appropriate to enhance the information provided by the DG Deliverability Assessment. The DG Deliverability Assessment will preserve modeled transmission system capability to provide requested levels of deliverability for the Generating Facilities of Interconnection Customers or the Distributed Generation Facilities of interconnection customers under a wholesale distribution access tariff who have previously requested Full Capacity or Partial Capacity Deliverability Status. Therefore, at each Node where all modeled Generating Facilities, including the distributed generation target amounts, cannot be simultaneously dispatched to the modeled output levels corresponding to their Full Capacity or Partial Capacity Deliverability Status without violating operating limits of the CAISO Controlled Grid, the CAISO

will reduce the modeled distributed generation target amounts as needed to achieve a feasible Dispatch.

#### 40.4.6.3.1.3 Publishing Results of the DG Deliverability Assessment

The CAISO will publish the results of the DG Deliverability Assessment by posting on the CAISO Website. The results will identify all Nodes modeled in the assessment with the corresponding nodal MW amounts of Potential DGD that (a) were studied as targeted amounts in the DG Deliverability Assessment; (b) were found to be deliverable in the DG Deliverability Assessment; and (c) are available for use by Utility Distribution Companies and Metered Subsystems to assign Deliverability Status to Distributed Generation Facilities in accordance with Section 40.4.6.3.2. The nodal MW amounts of Potential DGD available for assignment of Deliverability Status by Utility Distribution Companies and Metered Subsystems to individual Distributed Generation Facilities will be denominated in 0.01 MW increments and will not exceed the maximum of the corresponding nodal MW amounts determined in accordance with Sections 40.4.6.3.1.1(vi), 40.4.6.3.1.1(vii) or 40.4.6.3.1.1(viii), even though the amounts that were studied and found to be deliverable may be larger.

With respect to those Nodes at which more than one Utility Distribution Company's or Metered Subsystem's Distribution System is connected, the CAISO will publish, at the same time it publishes the results of the DG Deliverability Assessment, each Utility Distribution Company's or Metered Subsystem's respective share of the Potential DGD available to provide Deliverability Status to Distributed Generation Facilities at these Nodes based on the ratio of Load served via the facilities of each affected Utility Distribution Company and Metered Subsystem at such Nodes.

#### 40.4.6.3.1.4 Bilateral Transfers of Potential DGD at Shared Nodes

A Utility Distribution Company or Metered Subsystem shall be entitled to transfer all or a portion of its MW share of Potential DGD at a Node that is shared with the Distribution System of another Utility Distribution Company or Metered Subsystem, in quantities no smaller than 0.01 MW. A Utility Distribution Company that is also an IOU Participating Transmission Owner shall be entitled to transfer a MW share of Potential DGD to another Utility Distribution Company or Metered Subsystem only to the extent that the total MW quantity associated with Distributed Generation Facilities connected or seeking interconnection to the IOU Participating Transmission Owner's Distribution System at the Node that are eligible to receive Deliverability Assignments pursuant to Section 40.4.6.3.2.2.1 is less than the available Potential DGD for

that Node as indicated in the DG Deliverability Assessment for the current cycle. Both Utility Distribution Companies or Metered Subsystems participating in a transfer pursuant to this Section 40.4.6.3.1.4 shall notify the CAISO of the transfer. Utility Distribution Companies and Metered Subsystems may engage in such transfers during the period from the date they received notification of their shares of Potential DGD at shared Nodes under Section 40.4.6.3.1.3 through the date on which Deliverability Status assignments must be provided to the CAISO, pursuant to Section 40.4.6.3.2.

**40.4.6.3.2 Assignment of Deliverability Status to Distributed Generation Facilities**

After completion of the DG Deliverability Assessment associated with the current cycle of the process described in Section 40.4.6.3, and in accordance with a Market Notice setting out the schedule for the cycle, each Utility Distribution Company and Metered Subsystem will assign Deliverability Status to individual Distributed Generation Facilities interconnected, or seeking interconnection, to the Distribution System of the Utility Distribution Company or Metered Subsystem below each Node where the CAISO's DG Deliverability Assessment for the current cycle has indicated the availability of Potential DGD, consistent with the rules set forth in this Section 40.4.6.3.2, and will report all such assignments to the CAISO in accordance with the schedule for the cycle.

Upon receipt of this information the CAISO will validate that the Utility Distribution Company's or Metered Subsystem's assignments of Deliverability Status to specific Distributed Generation Facilities is consistent with (i) the MW quantities of Potential DGD available to that Utility Distribution Company or Metered Subsystem at specific Nodes; the CAISO's methodology for associating the Deliverability Status of a specific generating resource type with a MW quantity of Potential DGD, as set forth in Section 40.4.6.3.2.1; and (iii) the time limit on a Distributed Generation Facility's expected future Commercial Operation date, as set forth in Section 40.4.6.3.2.2. If the CAISO identifies an inconsistency between a Utility Distribution Company's or Metered Subsystem's assignment of Deliverability Status to a Distributed Generation Facility and any of these requirements, the CAISO will notify the Utility Distribution Company or Metered Subsystem, and the Utility Distribution Company or Metered Subsystem in consultation with the CAISO will adjust its assignments of Deliverability Status as needed. The CAISO will then inform the Utility Distribution Company or Metered Subsystem that the validation process has been completed, and the Utility Distribution Company or Metered Subsystem will notify the Distributed Generation Facilities of

their Deliverability Status assignments.

#### 40.4.6.3.2.1 Associating MW of Potential DGD with Deliverability Status of a Distributed Generation Facility

As described further in a Business Practice Manual, Utility Distribution Company's or Metered Subsystem's association of a MW quantity of Potential DGD at a specific Node with the Deliverability Status of a specific Distributed Generation Facility shall be commensurate with the MW Energy production level appropriate to the type of generating resource comprising the facility modeled in the Deliverability Assessment, the qualifying capacity determination method for that resource type, the installed capacity of the facility, and the Deliverability Status (Full Capacity or Partial Capacity) to be assigned to the facility, and shall be consistent with the CAISO's methodology for modeling resources in its deliverability studies.

#### 40.4.6.3.2.2 Eligibility of Distributed Generation Facilities to Obtain Deliverability Status Assignment

To be eligible to receive a Deliverability Status assignment, a Distributed Generation Facility must satisfy the requirements of the applicable application process pursuant to this Section 40.4.6.3.2.2 and, if the Distributed Generation Facility is not in Commercial Operation, it must have an expected Commercial Operation date set forth in its current interconnection request or interconnection agreement that is no later than three (3) years from the last date on which applications may be submitted for the current DG Deliverability Assessment cycle.

##### 40.4.6.3.2.2.1 Eligibility to Obtain Deliverability Status Assignment from IOU Participating Transmission Owners

Distributed Generation Facilities interconnected, or seeking interconnection, to the Distribution System of an IOU Participating Transmission Owner may apply to the applicable IOU Participating Transmission Owner to be eligible to receive a Deliverability Status assignment in the current DG Deliverability Assessment cycle as follows:

(i) Distributed Generation Facilities that are already in Commercial Operation and interconnected to the Distribution System of an IOU Participating Transmission Owner that do not have Deliverability Status may submit an application to be eligible for Full or

Partial Capacity Deliverability Status, and those that have Partial Capacity Deliverability Status may apply to be eligible for a higher level of Partial Capacity Deliverability Status or Full Capacity Deliverability Status.

(ii) Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have not requested Deliverability Status in the underlying interconnection process but have received their Phase I interconnection study results or the equivalent thereof may submit an application to be eligible to receive Partial Capacity Deliverability Status or Full Capacity Deliverability Status.

(iii) Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have not received their Phase I interconnection study results or the equivalent thereof, irrespective of whether they requested Deliverability Status in their interconnection request, may submit an application to be eligible to receive Partial Capacity Deliverability Status or Full Capacity Deliverability Status.

Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have requested Deliverability Status in the underlying interconnection process and have already received Phase I interconnection study results or the equivalent thereof are not eligible to be assigned Deliverability Status pursuant to Section 40.4.6.3 because their Deliverability Status is protected in accordance with the provisions of Section 40.4.6.3.1 and will be assigned through the applicable IOU Participating Transmission Owner's interconnection process. Applications from Distributed Generation Facilities in the eligible categories specified above must be submitted by the deadline specified in the schedule for the current DG Deliverability Assessment cycle in order for the Distributed Generation Facility to be treated as eligible to receive a Deliverability Status assignment in the current cycle. Distributed Generation Facilities that fail to apply in a timely manner will be assumed not to be seeking Deliverability Status in the current cycle. The CAISO will issue a Market Notice announcing the deadline for submitting applications. The deadline will be no earlier than thirty (30) days after the CAISO publishes the results of the DG Deliverability Assessment. The form of

the application shall be specified in a Business Practice Manual. The application shall be submitted to the applicable Participating Transmission Owner, which shall provide a copy of the application to the CAISO within five (5) Business Days after the application was submitted.

#### 40.4.6.3.2.2.2 Eligibility to Obtain Deliverability Status Assignment from Utility Distribution Companies and Metered Subsystems that are Not IOU Participating Transmission Owners

Distributed Generation Facilities interconnected, or seeking interconnection, to the Distribution System of a Utility Distribution Company or Metered Subsystem that is not an IOU Participating Transmission Owner may apply to the applicable Utility Distribution Company or Metered Subsystem to be eligible to receive a Deliverability Status assignment in the current DG Deliverability Assessment cycle pursuant to individual interconnection procedures of the Utility Distribution Company or Metered Subsystem.

#### 40.4.6.3.2.3 Assignment of Deliverability Status to Distributed Generation Facilities by IOU Participating Transmission Owners

Utility Distribution Companies that are also IOU Participating Transmission Owners will assign Deliverability Status on a first-come, first-served basis to those Distributed Generation Facilities either interconnected or seeking interconnection to their Distribution Systems at each applicable Node, and that are eligible for assignment pursuant to Section 40.4.6.3.2.2.1, in the following priority order:

(1) Distributed Generation Facilities already in Commercial Operation and interconnected to the Distribution System of the applicable IOU Participating Transmission Owner as of the deadline for submitting applications pursuant to Section 40.4.6.3.2.2.1, in order of the date they achieved Commercial Operation, from earliest to most recent. At Nodes where there is insufficient Potential DGD indicated in the DG Deliverability Assessment to fulfill all Deliverability Status applications received during the current cycle from Distributed Generation Facilities already in Commercial Operation, and two or more such Distributed Generation Facilities next in order to obtain the last remaining increment of Potential

DGD at a Node have the same Commercial Operation date, each such resource shall receive a pro rata share of the remaining Potential DGD in proportion to its MW Energy production level as modeled by the CAISO for the purpose of the CAISO's Deliverability Assessment methodology, in accordance with the level of Deliverability Status applied for in the current cycle.

(2) Distributed Generation Facilities with an active interconnection request in the interconnection queue of the applicable IOU Participating Transmission Owner that have submitted an application pursuant to Section 40.4.6.3.2.2.1 to obtain Deliverability Status through the process set forth in Section 40.4.6.3, in order of their queue position in the applicable interconnection process. At Nodes where there is insufficient Potential DGD indicated in the DG Deliverability Assessment to provide Deliverability Status to eligible Distributed Generation Facilities with active interconnection requests, and two or more such Distributed Generation Facilities next in order to obtain the last remaining increment of Potential DGD have the same interconnection queue position, the remaining amount of Potential DGD will be allocated in order of expected Commercial Operation date, from earliest to furthest in the future. For purposes of this determination, the expected Commercial Operation date shall be the Commercial Operation date specified in the Distributed Generation Facility's interconnection agreement, or if no interconnection agreement has yet been executed, the Distributed Generation Facility's application submitted pursuant to Section 40.4.6.3.2.2.1. If two or more such Distributed Generation Facilities have the same expected Commercial Operation date, each such resource shall receive a pro rata share of the remaining Potential DGD in proportion to its expected MW Energy production level as modeled by the CAISO for the purpose of the CAISO's Deliverability Assessment methodology, in accordance with the level of Deliverability Status requested in the current cycle.

Pursuant to this process, an IOU Participating Transmission Owner shall, during each cycle, fully utilize the maximum amount of Potential DGD available at each Node to provide Deliverability Status to eligible

Distributed Generation Resources. If, however, the total MW quantity associated with eligible Distributed Generation Resources at a particular Node is less than the available Potential DGD for that Node as indicated in the DG Deliverability Assessment for the current cycle, then the excess quantity of Potential DGD shall be treated as unassigned Potential DGD in accordance with Section 40.4.6.3.3.

#### 40.4.6.3.2.4 Assignment of Deliverability Status to Distributed Generation Facilities by Utility Distribution Companies and Metered Subsystems that are Not IOU Participating Transmission Owners

Utility Distribution Companies and Metered Subsystems that are not IOU Participating Transmission Owners will assign Deliverability Status to individual Distributed Generating Facilities interconnected, or seeking interconnection, to the Distribution System of such Utility Distribution Company or Metered Subsystem based on the Potential DGD available at applicable Nodes pursuant to their individual interconnection procedures. Such Utility Distribution Companies and Metered Subsystems may report assignments of Deliverability Status to the CAISO at any time. However, only those assignments of Deliverability Status that are reported to the CAISO in accordance with the assignment schedule established by the CAISO for the current DG Deliverability Assessment cycle will be eligible for inclusion in the CAISO's annual Net Qualifying Capacity determination as specified in Section 40.4.6.1 and thereby eligible to be designated as Resource Adequacy Resources for the next Resource Adequacy Compliance Year.

#### 40.4.6.3.3 Unassigned Potential DGD

If a Utility Distribution Company or Metered Subsystem does not fully utilize the MW quantity of Potential DGD available to assign Deliverability Status to specific Distributed Generation Facilities during an annual DG Deliverability Assessment cycle, the CAISO will preserve the unassigned Potential DGD for that Utility Distribution Company or Metered Subsystem through the next cycle.

#### 40.4.6.3.4 Deliverability Status of Distributed Generation Facilities

Once a Utility Distribution Company or Metered Subsystem has assigned Deliverability Status to a specific Distributed Generation Facility and reported such assignment to the CAISO, and the CAISO has

validated and accepted the reported information as specified under Section 40.4.6.3.2, the Deliverability Status becomes an attribute of the Distributed Generation Facility to which it was assigned. A Distributed Generation Facility assigned Deliverability Status pursuant to an application submitted under Section 40.4.6.3.2.2.1(iii) will be subject to the provisions of Section 40.4.6.3 with regard to its assigned Deliverability Status and will continue through the interconnection process for all other purposes as a request for Energy-Only Deliverability Status.

Distributed Generation Facilities that are assigned Deliverability Status pursuant to Section 40.4.6.3 prior to achieving Commercial Operation must, in order to retain such assignment, achieve Commercial Operation no later than six months after the Commercial Operation date specified in the Distributed Generation Facility's interconnection agreement, or if no interconnection agreement had been executed at the time the assignment was made, the Distributed Generation Facility's application submitted pursuant to Section 40.4.6.3.2.2. However, if the Distributed Generation Facility submitted its application pursuant to Section 40.4.6.3.2.2.1(ii), such assignment shall not be revoked if the Distributed Generation Facility's failure to achieve Commercial Operation within six months of its indicated Commercial Operation date is due to a delay in the Utility Distribution Company's or Metered Subsystem's completion of the upgrades necessary for the Distributed Generation Facility's interconnection. The applicable Utility Distribution Company or Metered Subsystem must report any such revocations and delays to the CAISO in accordance with the date set forth in a Business Practice Manual or in a Market Notice establishing the schedule for the annual DG Deliverability Assessment cycle.

With respect to a Distributed Generation Facility that meets this retention requirement, once that Distributed Generation Facility has achieved Commercial Operation, it will retain its assigned Deliverability Status for as long it remains in Commercial Operation. This also applies to Distributed Generation Facilities that were already in Commercial Operation at the time the assignment was made. Any loss of Deliverability Status granted pursuant to Section 40.4.6.3, due to either permanent cessation of commercial operation of a Distributed Generation Facility or revocation due to failure to meet the Commercial Operation date requirement set forth above, will be appropriately modeled by the CAISO in the next DG Deliverability Assessment cycle. Depending on other changes that may have occurred on the CAISO Controlled Grid and connected Distribution Systems, or in associated interconnection queues,

additional Potential DGD may be available in the next cycle for assignment of Deliverability Status in accordance with the process set forth in Section 40.4.6.3.

### 40.4.7 Submission of Supply Plans and Reports on Capacity Status

#### 40.4.7.1 Schedule for Submission of Supply Plans

Scheduling Coordinators representing Resource Adequacy Resources supplying Resource Adequacy Capacity shall provide the CAISO with annual and monthly Supply Plans, as follows:

(a) The annual Supply Plan shall be submitted to the CAISO on the schedule set forth in the Business Practice Manual and shall verify their agreement to provide Resource Adequacy Capacity during the next Resource Adequacy Compliance Year. The annual Supply Plan may identify a Local Capacity Area Resource as Listed Local RA Capacity.

(b) The monthly Supply Plans or the same information as required to be included in the monthly Supply Plan, plus any other information the CAISO requires as identified in the Business Practice Manual, shall be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, and in accordance with the schedule and in the reporting format(s) set forth in the Business Practice Manual, and shall verify their agreement to provide Resource Adequacy Capacity during that resource adequacy month. The monthly Supply Plan may identify a Local Capacity Area Resource as Listed Local RA Capacity. Provided, however, that a Scheduling Coordinator may submit an initial Supply Plan from 45 days through 30 days in advance of the relevant month if: (i) the Resource Adequacy Capacity on the initial Supply Plan was procured by a Scheduling Coordinator for a Load Serving Entity or CPE to resolve a deficiency; (ii) the initial Supply Plan is submitted to resolve a discrepancy that arose based on a Resource Adequacy Plan revision made to add additional Resource Adequacy Capacity voluntarily; or (iii) the initial Supply Plan solely includes a resource or resources that received an initial Net Qualifying Capacity value between 45 days through 30 days in advance of the relevant month.

(c) The Scheduling Coordinator for the Resource Adequacy Resource may submit, at any time from 45 days through 30 days in advance of the relevant month, a revision to its

monthly Supply Plan to correct a discrepancy between its monthly Supply Plan and a Resource Adequacy Plan of a Load Serving Entity or CPE. Such revision may be to address a discrepancy that existed as of the initial plan submissions by 45 days in advance of the relevant month or to address a discrepancy that arose between 45 days through 30 days in advance of the relevant month. A Scheduling Coordinator also may revise a monthly Supply Plan at any time from 45 days through 30 days in advance of the relevant month to remove Resource Adequacy Capacity from the Supply Plan. The CAISO will not accept any revisions to a monthly Supply Plan from 30 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Resource Adequacy Resource demonstrates good cause for the change and explains why it was not possible to submit the change earlier.

**40.4.7.2 Form of Supply Plans**

The Supply Plan must be in the form of the template provided on the CAISO Website, which shall include an affirmative representation by the Scheduling Coordinator submitting the Supply Plan that the CAISO is entitled to rely on the accuracy of the information provided in the Supply Plan to perform those functions set forth in this Section 40.

**40.4.7.3 Validation of Supply Plans**

The CAISO shall be entitled to take reasonable measures to validate the accuracy of the information submitted in Supply Plans under this Section. Supply Plan validation measures may include the following:

(a) The CAISO may compare a Resource Adequacy Resource's Resource Adequacy Capacity against the Resource Adequacy Resource's Net Qualifying Capacity, if applicable. To the extent the Resource Adequacy Capacity of a Resource Adequacy Resource included in a Supply Plan is greater than the Resource Adequacy Resource's Net Qualifying Capacity, the CAISO will notify the respective Scheduling Coordinators for the Resource Adequacy Resource and each Load Serving Entity or CPE that has included the Resource Adequacy Resource in its Resource Adequacy Plan that the Resource Adequacy Capacity from the Resource Adequacy Resource shall be reduced

to the Resource Adequacy Resource's Net Qualifying Capacity and that it will be considered a mismatch under Section 40.7. If the CAISO is not advised as to how the reduction in Resource Adequacy Capacity to conform with the Resource Adequacy Resource's Net Qualifying Capacity shall be allocated among each Load Serving Entity and CPE that included the Resource Adequacy Resource on its Resource Adequacy Plan, the CAISO will apply a pro rata reduction based on the Supply Plan.

(b) The CAISO may verify whether the Resource Adequacy Capacity listed in the monthly Supply Plan is scheduled to take an Approved Maintenance Outage during the month. To the extent the Resource Adequacy Capacity of a Resource Adequacy Resource included in a Supply Plan is greater than the Resource Adequacy Capacity designated for the resource in the Resource Adequacy Plan, the CAISO will notify the Scheduling Coordinator for the Resource Adequacy Resource and the respective Scheduling Coordinators for each Load Serving Entity and CPE that has included the Resource Adequacy Resource in its Resource Adequacy Plan that there is a discrepancy, which will be treated as a mismatch under Section 40.7. To the extent the Resource Adequacy Capacity of a Resource Adequacy Resource included in a Supply Plan is less than the Resource Adequacy Capacity designated for the resource in the Resource Adequacy Plan, the CAISO will notify the Local Regulatory Authority, the Scheduling Coordinator for the Resource Adequacy Resource, and the respective Scheduling Coordinators for each Load Serving Entity or CPE that has included the Resource Adequacy Resource in its Resource Adequacy Plan that there is a discrepancy, which will be treated as a mismatch under Section 40.7.

(c) Other errors or inaccuracies identified by the CAISO in a Supply Plan shall be treated as a mismatch under Section 40.7.

Disputes regarding the CAISO's determination of Net Qualifying Capacity shall be subject to Section 40.4.2. The provisions of this Section shall not affect a Resource Adequacy Resource's Net Qualifying Capacity posted by the CAISO under Section 40.4.2.

**40.4.7.4 Reports on Capacity Status**

Scheduling Coordinators of resources with NQC or EFC that are within the CAISO Balancing Authority Area and are not shown as Resource Adequacy Capacity or Flexible Resource Adequacy Capacity for their full NQC or EFC values, respectively, must provide a report to the CAISO on why the resource was not shown for its full capacity.

The report must be provided using the categories and processes defined in the BPM. The report must be made in both the year-ahead and month-ahead timeframes by the submission deadlines established for submission of the annual and monthly Supply Plans, respectively. The information provided in the report must represent a good-faith submission of the Scheduling Coordinator's intentions at the time it submits the report. Scheduling Coordinators are not required to update the report based on changes in the resource status following submission.

## 40.5 Minimum State of Charge Tool for Non-Generator Resources Electing Limited Energy Storage Resource Status that Provide RA Capacity

### 40.5.1 Operation of the MSOC Tool

Through the earlier of (a) September 30, 2023, or (b) the implementation of the CAISO's Exceptional Dispatch State of Charge enhancements, the CAISO enforces the MSOC Tool in the RTM on any Non-Generator Resource that has selected a primary fuel type in Master File of "Limited Energy Storage Resource" and is an RA Resource for the day on which the MSOC is enforced. The MSOC Tool limits RTM awards to any covered resource in the market intervals preceding any Trading Hour that meets the requirements specified in Section 40.5.2 such that, based on its registered operating parameters, the resource will have sufficient charge to meet its discharge awards from its Day-Ahead Schedule for any Trading Hour that meets the requirements specified in Section 40.5.2. The MSOC tool does not increase the charge on a resource beyond what is necessary to ensure it can meet a discharge award from a Day-Ahead Schedule.

When reviewing market and system conditions on the Operating Day, the CAISO may choose not to apply the MSOC Tool for particular Trading Hours if its assessment of projected conditions reflects that the MSOC Tool is not necessary for system reliability in those Trading Hours.

### 40.5.2 Determining the Days and Hours for which the MSOC Applies

The CAISO enforces the MSOC Tool for a Trading Day if there is at least one Trading Hour on that

Trading Day for which, per Section 31.5.5, the RUC process initially cannot find a feasible solution without adjusting the constraints described in Section 31.5.4. For such Trading Days, the MSOC Tool applies to discharge awards from Day-Ahead Schedules for the Trading Hours that the CAISO projects, at the time the Day-Ahead Market runs, will have the highest CAISO system load net of wind and solar output.

**40.5.3 Notification of Applying the MSOC Tool**

At approximately the same time it publishes Day-Ahead Market Results for a Trading Day, the CAISO provides public notice if the Trading Day will be subject to enforcement of the MSOC Tool and, if so, the Trading Hours whose discharge awards will be subject to the MSOC Tool.

**40.5.4 [Not Used]**

**40.5.5 [Not Used]**

**40.6 Requirements for SCs and Resources for LSEs**

This Section 40.6 does not apply to Resource Adequacy Resources of Load-following MSSs. Scheduling Coordinators supplying Resource Adequacy Capacity shall make the Resource Adequacy Capacity listed in the Scheduling Coordinator's monthly Supply Plans under Section 40.4.7 available to the CAISO each hour of each day of the reporting month in accordance with this Section 40.6 and Section 9.3.1.3.

**40.6.1 Day-Ahead Availability**

Except as otherwise provided in Sections 40.6.1.1 and 40.6.4, Scheduling Coordinators supplying Resource Adequacy Capacity shall make such Resource Adequacy Capacity, available Day-Ahead to the CAISO as follows:

(1) Resource Adequacy Resources physically capable of operating must submit: (a) Economic Bids for Energy and/or Self-Schedules for all their Resource Adequacy Capacity and (b) Economic Bids for Ancillary Services and/or a Submission to Self-Provide Ancillary Services in the IFM for all of their Resource Adequacy Capacity that is certified to provide Ancillary Services. For Resource Adequacy Capacity that is certified to provide Ancillary Services and is not covered by a Submission to Self-Provide Ancillary Services, the resource must submit Economic Bids for each Ancillary Service for which the resource is certified. For Resource Adequacy Capacity subject to this requirement for which no Economic Energy Bid or Self-Schedule has been submitted, the CAISO shall

insert a Generated Bid in accordance with Section 40.6.8. For Resource Adequacy Capacity subject to this requirement for which no Economic Bids for Ancillary Services or Submissions to Self-Provide Ancillary Services have been submitted, the CAISO shall insert a Generated Bid in accordance with Section 40.6.8 for each Ancillary Service the resource is certified to provide.

(2) Resource Adequacy Resources must be available except for limitations specified in the Master File, legal or regulatory prohibitions or as otherwise required by this CAISO Tariff or by Good Utility Practice.

(3) Through the IFM co-optimization process, the CAISO will utilize available Resource Adequacy Capacity to provide Energy, Imbalance Reserves, or Ancillary Services in the most efficient manner to clear the Energy market, manage congestion and procure required Ancillary Services. In so doing, the IFM will honor submitted Energy Self-Schedules of Resource Adequacy Capacity unless the CAISO is unable to satisfy one hundred percent (100%) of the Ancillary Services requirements. In such cases, the CAISO may curtail all or a portion of a submitted Energy Self-Schedule to allow Ancillary Service-certified Resource Adequacy Capacity to be used to meet the Ancillary Service requirements. The CAISO will not curtail for the purpose of meeting Ancillary Service requirements a Self-Schedule of a resource internal to a Metered Subsystem that was submitted by the Scheduling Coordinator for that Metered Subsystem. If the IFM reduces the Energy Self-Schedule of Resource Adequacy Capacity to provide an Ancillary Service, the Ancillary Service Marginal Price for that Ancillary Service will be calculated in accordance with Section 27.1.2 using the Ancillary Service Bids submitted by the Scheduling Coordinator for the Resource Adequacy Resource or inserted by the CAISO pursuant to this Section 40.6.1, and using the resource's Generated Energy Bid to determine the Resource Adequacy Resource's opportunity cost of Energy. If the Scheduling Coordinator for the Resource Adequacy Resource believes that the opportunity cost of Energy based on the Resource Adequacy Resource's Generated Energy Bid is insufficient to compensate for the resource's actual opportunity cost, the

Scheduling Coordinator may submit evidence justifying the increased amount to the CAISO and to the FERC no later than seven (7) days after the end of the month in which the submitted Energy Self-Schedule was reduced by the CAISO to provide an Ancillary Service.

The CAISO will treat such information as confidential and will apply the procedures in Section 20.4 of this CAISO Tariff with regard to requests for disclosure of such information. The CAISO shall credit any higher opportunity costs approved by FERC.

(4) Resource Adequacy Resources must submit RUC Availability Bids for RCU for the amount of their Resource Adequacy Capacity that is eligible for a RUC Award under Section 31.5.5.3 and is within the Energy Bid range of the Energy Bid Curve.

(5) Resource Adequacy Resources eligible to provide Imbalance Reserves must submit Bids for IRU and IRD for all RA Capacity that meets its obligation pursuant to 40.6.1(1)(a) by submitting an Economic Bid.

**40.6.1.1 Day-Ahead Availability - Specific RA Resource Types**

(a) **Distributed Generation Facilities.** Distributed Generation Facilities shall comply with the IFM and RUC bidding requirements that apply to the same technology type of a resource connected to the CAISO Controlled Grid.

(b) **Non-Generator Resources**

(1) Non-Generator Resources that do not use Regulation Energy Management shall submit: Economic Bids or Self-Schedules into the IFM for all RA Capacity for all hours of the month the resource is physically capable of operating; and RUC Availability Bids for both RCU and RCD for all RA Capacity for all hours of the month the resource is physically capable of operating.

(2) Non-Generator Resources using Regulation Energy Management shall submit Economic Bids or Self-Schedules into the IFM for all RA Capacity for Regulation for all hours of the month the resource is physically capable of operating.

(c) **Extremely Long-Start Resources.** Extremely Long-Start Resources that are Resource Adequacy Resources must make themselves available to the CAISO by complying with:

(1) the Extremely Long-Start Commitment Process under Section 31.7 or otherwise committing the ELS Resource upon instruction from the CAISO, if physically capable; and

(2) the applicable provisions of Section 40.6.1 regarding Day-Ahead availability for the Trading Days for which it was committed.

**40.6.2 Real-Time Availability**

(a) **General Requirement.** Except as otherwise provided in Section 40.6.4, for every Trading Hour in which a Resource Adequacy Resource receives a Day-Ahead Schedule for Energy, Imbalance Reserves, or Ancillary Services or a RUC Schedule, the Resource Adequacy Resource must submit Bids to the Real-Time Market for that Trading Hour that conform with the Resource Adequacy Resource's obligations under Section 40.6.1 for the Day-Ahead Market. Provided, however, that any reference in Section 40.6.1 to RUC bidding does not apply to the Real-Time Market bidding obligations.

(b) **Short Start Units.** Irrespective of their Day-Ahead Schedule for Energy, Day-Ahead Schedule for Ancillary Services, or RUC Schedule, Short Start Units must, for each Trading Hour, submit Bids to the Real-Time Market that conform to their obligations under Section 40.6.1 for the Day-Ahead Market. Provided, however, that any reference in Section 40.6.1 to RUC bidding does not apply to the Real-Time Market bidding obligations for Short Start Units. The CAISO may waive these availability obligations for a resource that is not a Long Start Unit or an Extremely Long-Start Resource that does not have an Day-Ahead Schedule or a RUC Schedule based on a procedure to be published on the CAISO Website. The CAISO will insert Generated Bids in accordance with Section 40.6.8 for any Resource Adequacy Capacity subject to the above requirements for which the resource has failed to submit the appropriate bids to the RTM.

(c) **Long Start Units.** Long Start Units not committed in the Day-Ahead Market will be released from any further obligation to submit Self-Schedules or Bids for the relevant Operating Day. Scheduling Coordinators for Long Start Units are not precluded from self-committing the unit after the Day-Ahead Market and submitting a Self-Schedule or

Wheeling-Out in the RTM, unless precluded by terms of their contracts.

(d) **Extremely Long-Start Resources.** Once an Extremely Long-Start Resource providing Resource Adequacy Capacity is committed by the CAISO, it shall comply, for the Trading Days for it was committed, with the Real-Time availability provisions in sub-sections (a) and (b) of this Section 40.6.2, including those provisions that otherwise apply only to Short Start Units.

(e) **Self-Schedules.** The CAISO will honor submitted Energy Self-Schedules of Resource Adequacy Capacity unless the CAISO is unable to satisfy one hundred (100) percent of its Ancillary Services requirements. In such cases, the CAISO may curtail all or a portion of a submitted Energy Self-Schedule to allow Ancillary Service-certified Resource Adequacy Capacity to be used to meet the Ancillary Service requirements, as long as such curtailment does not lead to a real-time shortfall in energy supply. If the CAISO reduces a submitted Real-Time Energy Self-Schedule for Resource Adequacy Capacity when that capacity is needed to meet an Ancillary Services requirement, the Ancillary Service Marginal Price for that capacity will be calculated in accordance with Sections 27.1.2 and 40.6.1.

(f) **Distributed Generation Facilities.** Distributed Generation Facilities shall comply with the RTM bidding requirements that apply to the same technology type of resource connected to the CAISO Controlled Grid.

(g) **Non-Generator Resources**

(1) Non-Generator Resources that do not use Regulation Energy Management shall submit –

(A) Economic Bids or Self-Schedules into the RTM for any remaining RA Capacity scheduled in the IFM or RUC; and

(B) Economic Bids or Self-Schedules into the RTM for all RA Capacity not scheduled in the IFM,

(2) Non-Generator Resources using Regulation Energy Management that are not Use-Limited Resources under Section 40.4.6.1 shall submit Economic Bids or

Self-Schedules into the RTM for any remaining RA Capacity from resource scheduled in IFM or RUC.

**40.6.3 [Not Used]**

**40.6.4 Availability Requirements for Resources with Operational Limitations that are not Qualified Use-Limits**

**40.6.4.1 Must-Offer Obligation in DAM and RTM**

Conditionally Available Resources (irrespective of Use-Limited Resource qualification) and Run-of-River Resources that provide Resource Adequacy Capacity and that are physically capable of operating must submit Self-Schedules or Bids in the Day-Ahead Market for their expected available Energy or their expected as-available Energy, as applicable, in the Day-Ahead Market and RTM up to the quantity of Resource Adequacy Capacity the resource is providing. Such resources shall also revise their Self-Schedules or submit additional Bids in RTM based on the most current information available regarding Expected Energy deliveries.

An Eligible Intermittent Resource providing Resource Adequacy Capacity may, but is not required to, submit Bids in the Day-Ahead Market.

**40.6.4.2 RUC Availability Bids**

The following resource types providing Resource Adequacy Capacity are not required to submit RUC Availability Bids for that capacity: Pumping Load, Reliability Demand Response Resources, Combined Heat and Power Resources, Regulatory Must-Take Generation, Non-Generator Resources using Regulation Energy Management, Conditionally Available Resources, Run-of-River Resources, and Eligible Intermittent Resources.

**40.6.4.3 Ancillary Services Bids from Participating Loads that is Pumping Load**

The must-offer obligation for Participating Load that is Pumping Load is limited to submitting, for hours where underlying Load permits, Non-Spin Ancillary Services Bids and/or a Submission to Self-Provide Non-Spin Ancillary Services in the Day-Ahead Market for its Resource Adequacy Capacity that is certified to provide Non-Spinning Reserve Ancillary Service, and Economic Bids for Energy in the Real-Time Market for its Non-Spinning Reserve Capacity that receives an Ancillary Service Award in the Day-Ahead Market.

#### 40.6.4.4 Proxy Demand Resources

(a) Short Start Proxy Demand Resources that provide Resource Adequacy Capacity shall submit RUC Availability Bids for all of their Resource Adequacy Capacity for all hours of the month the resource is physically available.

(b) Long Start Proxy Demand Resources are not required to submit Bids or Self Schedules in the RUC for their Resource Adequacy Capacity.

### 40.6.5 Requirements for System Resources Providing Resource Adequacy Capacity

#### 40.6.5.1 Eligibility of System Resources to Provide Resource Adequacy Capacity

System Resources, other than Dynamic Resource-Specific System Resources, providing Resource Adequacy Capacity must be shown on Resource Adequacy Plans and Supply Plans with a Resource ID defined by both a single Scheduling Point and specific Intertie. Dynamic Resource-Specific System Resources providing Resource Adequacy Capacity or Flexible RA Capacity must be shown with a Resource ID defined by both a single CGAP and specific Intertie.

The CAISO will reject a Supply Plan submitted for a System Resource if there is insufficient import capability, as determined by Section 40.4.6.2, to support deliverability of the RA Capacity or Flexible RA Capacity at the Intertie associated with the Resource ID of the System Resource.

For the avoidance of doubt, this Section 40.6.5 does not apply to Resource Adequacy Capacity or Flexible RA Capacity from a Generating Unit that is Pseudo-Tied into the CAISO Balancing Authority Area.

#### 40.6.5.2 Reassigning Resource Adequacy Obligations for Capacity Sourced from an EDAM Balancing Authority Area

Resource Adequacy Capacity or Flexible RA Capacity that is sourced from an EDAM Entity Balancing Authority Area will be unavailable for purposes of Section 40.9.3 for an entire Trading Hour to the extent its Scheduling Coordinator does not reassign its Resource Adequacy obligations for that Trading Hour by the Day-Ahead Market reassignment deadline specified in the BPM and using the procedures specified in the BPM for reassignments. Such reassignment made by the Day-Ahead Market reassignment deadline must be to a physical resource located in the source EDAM Entity Balancing Authority Area or a System Resource at the boundary of the EDAM Entity Balancing Authority Area.

#### 40.6.5.3 Accepting Reassignment of Resource Adequacy Obligations

The Scheduling Coordinator for a resource accepting reassignment of Resource Adequacy Capacity or Flexible RA Capacity obligations must accept the reassignment by the deadline specified in the BPM and using the procedures specified in the BPM. The CAISO does not recognize a reassignment for a resource that fails to follow either the applicable deadline or the defined procedures.

A resource accepting reassignment must have a valid Resource ID at the time it accepts the reassigned capacity. The quantity of capacity reassigned to a physical resource cannot exceed that resource's PMax.

For the quantity of reassigned capacity and period of reassignment, a resource with a recognized reassignment of Resource Adequacy Capacity or Flexible RA Capacity holds the same availability obligations, application of Generated Bids, and treatment under RAAIM the resource would hold if it were RA Substitute Capacity.

A resource accepting reassignment that receives an Energy schedule in the CAISO Markets must submit an E-Tag reflecting the CAISO Balancing Authority Area as the sink Balancing Authority Area for delivery of the awarded Energy.

#### 40.6.5.4 RA Capacity from System Resources that can Bid in the Day-Ahead Market

For System Resources permitted to bid into the Day-Ahead Market, in the IFM, the multi-hour block constraints of a System Resource, other than a System Resource capable of submitting a Dynamic Schedule or a Resource-Specific System Resource, are honored in the optimization. Such a resource that is also a Resource Adequacy Resource must be capable of hourly scheduling by the CAISO in RUC if it is not fully scheduled in the IFM. If such a Resource Adequacy Resource is scheduled in the RUC, the CAISO will schedule the resource in the RTM for each hour of the resource's RUC schedule without regard to the multi-hour block constraint that was submitted to the IFM. For an existing System Resource that provides Resource Adequacy Capacity through a call-option that expires prior to the close of the IFM, such a System Resource listed on a Resource Adequacy Plan must be reported to the CAISO for consideration in the Extremely Long-Start Commitment Process.

System Resources permitted to bid into the Day-Ahead Market that are not Use-Limited Resources are subject to the requirements of Sections 40.6.1 and 40.6.2. System Resources permitted to bid into the

Day-Ahead Market that are Use-Limited Resources are subject to the availability requirements and other provisions relevant to Use-Limited Resources that provide RA Capacity.

**40.6.6 Requirement for Partial Resource Adequacy Resources**

Only that output of a Resource Adequacy Resource that is designated by a Scheduling Coordinator as Resource Adequacy Capacity in its monthly or annual Supply Plan shall have an availability obligation to the CAISO. Exports being supported by non-Resource Adequacy Capacity from a Resource Adequacy Resource that becomes unavailable or unusable shall be considered as an export of non-Resource Adequacy Capacity as follows: If a Resource Adequacy Resource goes on a Forced Outage, until the Scheduling Coordinator provides the information requested under section 9.3.10.3.2, the CAISO shall determine if the Scheduling Coordinator indicated under section 30.5.1 (aa) that capacity from its Resource Adequacy Resource is backing a Self-Schedule of exports at Scheduling Points explicitly sourced by non-Resource Adequacy Capacity. If the Scheduling Coordinator has indicated capacity from its Resource Adequacy Resource is backing a Self-Schedule of exports at Scheduling Points explicitly sourced by non-Resource Adequacy Capacity, the CAISO will allocate the derate pro rata between the RA Capacity and the remainder of the resource's capacity up to its PMax.

**40.6.7 [Not Used]**

**40.6.8 Use of Generated Bids**

(a) **Day-Ahead Market.** Prior to completion of the Day-Ahead Market, the CAISO will determine if Resource Adequacy Capacity subject to the requirements of Section 40.6.1 and for which the CAISO has not received notification of an Outage has not been reflected in a Bid for Energy, Reliability Capacity, and Ancillary Services and will insert a Generated Bid for such capacity into the CAISO Day-Ahead Market.

(b) **Real-Time Market.** Prior to running the Real-Time Market, the CAISO will determine if Resource Adequacy Capacity subject to the requirements of Section 40.6.2 and for which the CAISO has not received notification of an Outage has not been reflected in a Bid and will insert a Generated Bid for such capacity into the Real-Time Market.

(c) **Partial Bids for RA Capacity.** If a Scheduling Coordinator for an RA Resource submits a partial bid for the resource's RA Capacity, the CAISO will insert a Generated Bid only

for the remaining RA Capacity. In addition, the CAISO will determine if all dispatchable Resource Adequacy Capacity from Short Start Units, not otherwise selected in the IFM or RUC, is reflected in a Bid into the Real-Time Market and will insert a Generated Bid for any remaining dispatchable Resource Adequacy Capacity for which the CAISO has not received notification of an Outage.

(d) **Exemptions.** Notwithstanding any of the provisions of Section 40.6.8, for the following resource types providing Resource Adequacy Capacity, the CAISO only inserts a Bid in the Day-Ahead Market or Real-Time Market where the generally applicable bidding rules in Section 30 call for bid insertion: Use-Limited Resource, Non-Generator Resource, Variable Energy Resource, Hydro electric Generating Unit (including Run-of-River resources), Proxy Demand Resource, Reliability Demand Response Resource, Participating Load, including Pumping Load, Combined Heat and Power Resource, Conditionally Available Resource, Non-Dispatchable Resource, resources providing Regulatory Must-Take Generation, and System Resource providing RA Capacity sourced from an EDAM Balancing Authority Area.

(e) **NRS-RA Resources.** The CAISO will submit a Generated Bid in the Day-Ahead Market for a Non-Resource-Specific System Resource not otherwise exempt under Section 40.6.8(d) in each RAAIM assessment hour, to the extent that the resource provides Resource Adequacy Capacity subject to the requirements of Section 40.6.1 and does not submit an outage request or Bid for the entire amount of that Resource Adequacy Capacity. Aside from where the generally applicable bidding rules in Section 30 call for Bid insertion, the CAISO will not submit a Generated Bid in the Real-Time Market for a Non-Resource-Specific System Resource that fails to meet its bidding obligations under Section 40.6.2. A Bid inserted for the Real-Time Market pursuant to the generally applicable bidding rules in Section 30 may not necessarily cover the full Real-Time Market obligation under Section 40.6.2 and the resource may thus remain exposed to Non-Availability Charges.

(f) **Generated Bids for RUC.** The CAISO submits a Generated Bid for RUC Availability

Bids for Resource Adequacy Resources for which a RUC Availability Bid was not submitted as required in Section 40.6.1(4). For RA Resources that submit a RUC Availability Bid for RCU with an insufficient quantity, the CAISO extends the quantity component of the Bid using the submitted price component of the Bid. For RA Resources that fail to submit any RUC Availability Bid for either RCU or RCD, the Generated Bid is for the required quantity at the Default Availability Bid.

#### 40.6.8.1 Generated Bids for NRS-RA Resources

Generated Bids to be submitted by the CAISO pursuant to Section 40.6.8 for Non-Resource-Specific System Resources that provide Resource Adequacy Capacity shall be calculated in accordance with this Section 40.6.8.1.

##### 40.6.8.1.1 Calculation Options for Generated Bids

The Scheduling Coordinator for each Non-Resource-Specific System Resource that provides Resource Adequacy Capacity shall select the price taker option, LMP-based option, or negotiated price option as the methodology for calculating the Generated Bids to be submitted by the CAISO under Section 40.6.8 for both the DAM and RTMs. If no selection is made, the CAISO will apply the price taker option to calculate the Generated Bids. For the first ninety (90) days after a resource becomes a Non-Resource-Specific System Resource, the calculation of Generated Bids for Resource Adequacy capacity is limited to the price taker option or negotiated price option.

##### 40.6.8.1.2 Price Taker Option

The price taker option is a Generated Bid of $0/MWh plus the CAISO's estimate of the applicable Grid Management Charge per MWh based on the gross amount of MWh scheduled in the DAM and RTM.

##### 40.6.8.1.3 LMP-Based Option

The LMP-based option calculates the Generated Bid as the weighted average of the lowest quartile of LMPs, at the Intertie point designated for the Non-Resource-Specific System Resource's Resource Adequacy Capacity in the Supply Plan, during periods in which the resource was dispatched in the preceding ninety (90) days for which LMPs that have passed the price validation and correction process set forth in Section 35 are available. The weighted average will be calculated based on the quantities Dispatched within each segment of the Generated Bid curve. Each Bid segment created under the LMP-

based option for Generated Bids will be subject to a feasibility test, as set forth in a Business Practice Manual, to determine whether there are a sufficient number of data points to allow for the calculation of an LMP-based Generated Bid. The feasibility test is designed to avoid excessive volatility of the Generated Bid under the LMP-based option that could result when calculated based on a relatively small number of prices. If the Scheduling Coordinator for the Non-Resource-Specific System Resource elects the LMP-based method, it must additionally select either the price taker method or the negotiated-rate method as the alternative calculation method for the Generated Bids in the event that the feasibility test fails for the LMP-based method.

**40.6.8.1.4 Negotiated Price Option**

Under the negotiated price option, a Scheduling Coordinator shall submit a proposed Generated Bid along with supporting information and documentation as described in a Business Practice Manual. Within ten (10) Business Days of receipt, the CAISO will provide a written response. If the CAISO accepts the proposed Generated Bid, it will become effective within three (3) Business Days from the date of acceptance by the CAISO and remain in effect until: (1) the Generated Bid is modified by FERC; (2) the Generated Bid is modified by mutual agreement of the CAISO and the Scheduling Coordinator; or (3) the Generated Bid expires, is terminated or is modified pursuant to any agreed upon term or condition or pertinent FERC order.

If the CAISO does not accept the proposed Generated Bid, the CAISO and the Scheduling Coordinator shall enter a period of good faith negotiations that terminates sixty (60) days following the date of submission of a proposed Generated Bid by a Scheduling Coordinator. If at any time during this period, the CAISO and the Scheduling Coordinator agree upon the Generated Bid, it will be become effective within three (3) Business Days of the date of agreement and remain in effect until: (1) the Generated Bid is modified by FERC; (2) the Generated Bid is modified by mutual agreement of the CAISO and the Scheduling Coordinator; or (3) the Generated Bid expires, is terminated or is modified pursuant to any agreed upon term or condition or pertinent FERC order.

If by the end of the sixty (60) day period the CAISO and the Scheduling Coordinator fail to agree on the Generated Bid to be used under the negotiated price option, the Scheduling Coordinator has the right to file a proposed Generated Bid with FERC pursuant to Section 205 of the Federal Power Act.

During the sixty (60) day period following the submission of a proposed negotiated Generated Bid by a Scheduling Coordinator, and pending FERC's acceptance in cases where the CAISO fails to agree on the Generated Bid for use under the negotiated price option and the Scheduling Coordinator filed a proposed Generated Bid with FERC pursuant to Section 205 of the Federal Power Act, the Scheduling Coordinator has the option of electing to use any of the other options available pursuant to this Section.

The CAISO shall make an informational filing with FERC of any Generated Bids negotiated pursuant to this Section no later than seven (7) days after the end of the month in which the Generated Bids were established.

#### 40.6.8.1.5 Partial Bids

If a Scheduling Coordinator for a Non-Resource-Specific System Resource that provides Resource Adequacy Capacity submits a Bid for a MW quantity less than the Resource Adequacy Capacity identified in the resource's Supply Plan, the CAISO will insert a Generated Bid only for the remaining Resource Adequacy Capacity by extending the last segment of the resource's bid curve to the full quantity (MWh) of the Resource Adequacy obligation.

#### 40.6.8.1.6 [Not Used]

### 40.6.9 Firm Liquidated Damages Contracts Requirements

Resource Adequacy Capacity represented by a Firm Liquidated Damages Contract and relied upon by a Scheduling Coordinator in a monthly or annual Resource Adequacy Plan shall be submitted as a Self-Schedule or Bid in the Day-Ahead IFM to the extent such scheduling right exists under the Firm Liquidated Damages Contract.

### 40.6.10 Exports of Energy from Resource Adequacy Capacity

Resource Adequacy Capacity may be utilized to serve an Export Bid. An Export Bid may be submitted into the CAISO Markets and be cleared by the Energy being provided by Resource Adequacy Capacity.

### 40.6.11 Curtailment of Exports in Emergency Situations

At its sole discretion, the CAISO may curtail exports from Resource Adequacy Capacity to prevent or alleviate a System Emergency. An Export Bid or a Self-Schedule to provide exports included in a binding Schedule accepted in the IFM or RTM will not be distinguished from a Demand Bid or Self-Schedule to serve Load within the CAISO Balancing Authority Area included in a binding Schedule accepted in the

IFM or RTM for purposes of curtailment under this Section, except as consistent with Good Utility Practice.

**40.6.12 Participating Load, PDRs, and RDRRs**

Participating Loads, Reliability Demand Response Resources, or Proxy Demand Resources that are included in a Resource Adequacy Plan and Supply Plan, if the Scheduling Coordinator for the Participating Loads, Reliability Demand Response Resources, or Proxy Demand Resources is not the same as that for the Load Serving Entity or CPE, will be administered by the CAISO in accordance with the terms and conditions established by the CPUC or the Local Regulatory Authority.

**40.7 Compliance**

The CAISO will evaluate Resource Adequacy Plans and Supply Plans as follows:

(a) The CAISO will evaluate whether each annual and monthly Resource Adequacy Plan submitted by a Scheduling Coordinator on behalf of a Load Serving Entity or CPE demonstrates Resource Adequacy Capacity sufficient to satisfy the Load Serving Entity's or CPE's (i) allocated responsibility for Local Capacity Area Resources under Section 40.3.2 and (ii) applicable Demand and Reserve Margin requirements. The CAISO will evaluate compliance with the responsibility for demonstrating Local Capacity Area Resources in two phases. Phase 1 of the Local Capacity Area Resource sufficiency evaluation will be made without regard to capacity's identification as Listed Local RA Capacity. Phase 2 of the Local Capacity Area Resource sufficiency evaluation will consider capacity to be a Local Capacity Area Resource only if it is also Listed Local RA Capacity. If the CAISO determines through the Phase 1 analysis that a Resource Adequacy Plan does not demonstrate Local Capacity Area Resources sufficient to meet its allocated responsibility under Section 40.3.2, compliance with applicable Demand and Reserve Margin requirements, or compliance with any other resource adequacy requirement in this Section 40 or adopted by the CPUC, Local Regulatory Authority, or federal agency, as applicable, then the CAISO will notify the relevant Scheduling Coordinator, CPUC, Local Regulatory Authority, or federal agency with jurisdiction over the relevant Load Serving Entity or CPE. In the case of a discrepancy between Resource

Adequacy Plan(s) and initial Supply Plan(s), the CAISO will notify the relevant Scheduling Coordinators in an attempt to resolve any deficiency in accordance with the procedures set forth in the Business Practice Manual. The notification will be made at least 40 days in advance of the first day of the month covered by the plan and will include the reasons the CAISO believes a deficiency exists. If the deficiency relates to the demonstration of Local Capacity Area Resources in a Load Serving Entity's or CPE's annual Resource Adequacy Plan, and the CAISO does not provide a written notice of resolution of the deficiency as set forth in the Business Practice Manual, the Scheduling Coordinator for the Load Serving Entity or CPE may demonstrate that the identified deficiency is cured by submitting a revised annual Resource Adequacy Plan within thirty (30) days of the beginning of the Resource Adequacy Compliance Year. For all other identified deficiencies, other than an insufficiency identified through Phase 2 of the Local Capacity Area Resource sufficiency evaluation, at least 30 days prior to the effective month of the relevant Resource Adequacy Plan, the Scheduling Coordinator for the Load Serving Entity or CPE shall: (i) demonstrate that the identified deficiency is cured by submitting a revised Resource Adequacy Plan; or (ii) advise the CAISO that the CPUC, Local Regulatory Authority, or federal agency, as appropriate, has determined that no deficiency exists. If, after providing any needed opportunity to resolve identified discrepancies as required by Section 40.7(b), the CAISO identifies an insufficiency through Phase 2 of the Local Capacity Area Resource sufficiency evaluation, then the CAISO may notify the relevant Local Regulatory Authority of the insufficiency.

(b) In the case of a discrepancy between Resource Adequacy Plan(s) and Supply Plan(s), if resolved, the relevant Scheduling Coordinator(s) must provide the CAISO with revised Resource Adequacy Plan(s) or Supply Plans, as applicable, at least 30 days prior to the effective month. If the CAISO is not advised that the deficiency or discrepancy is resolved at least 30 days prior to the effective month, the CAISO will use the information contained in the Supply Plan to set the obligations of Resource Adequacy Resources under this Section 40 and/or to assign any costs incurred under this Section 40 and

Section 43A.

### 40.7.1 Other Compliance Issues

Scheduling Coordinators representing Generating Units, System Units or System Resources supplying Resource Adequacy Capacity that fail to provide the CAISO with an annual or monthly Supply Plan, as applicable, as set forth in Section 40.7, shall be subject to Section 37.6.1. Further, Scheduling Coordinators representing Generating Units, System Units or System Resources supplying Resource Adequacy Capacity that fail to provide the CAISO with information required for the CAISO to determine Net Qualifying Capacity shall not be eligible for inclusion in the Net Qualifying Capacity annual report under Section 40.4.2 for the next Resource Adequacy Compliance Year and shall be subject to any applicable Sanctions under Section 37.6.1.

### 40.7.2 Penalties for Non-Compliance

The failure of a Resource Adequacy Resource or Resource Adequacy Capacity to be available to the CAISO in accordance with the requirements of this Section 40 or Section 9.3.1.3, and the failure to operate a Resource Adequacy Resource by placing it online or in a manner consistent with a submitted Bid or Generated Bid shall be subject to the applicable Sanctions set forth in Section 37.2.4. However, any failure of the Resource Adequacy Resource to satisfy any obligations prescribed under this Section 40 or Section 9.3.1.3 during a Resource Adequacy Compliance Year for which Resource Adequacy Capacity has been committed to a Load Serving Entity or CPE shall not limit in any way, except as otherwise established under Section 40.4.5 or requirements of the CPUC, Local Regulatory Authority, or federal agency, as applicable, the ability of the Load Serving Entity or CPE to whom the Resource Adequacy Capacity has been committed to use such Resource Adequacy Capacity for purposes of satisfying the resource adequacy requirements of the CPUC, Local Regulatory Authority, or federal agency, as applicable. In addition, an LSE or CPE shall not be subject to any sanctions, penalties, or other compensatory obligations under this Section 40 on account of a Resource Adequacy Resource's satisfaction or failure to satisfy its obligations under this Section 40 or Section 9.3.1.3.

## 40.8 CAISO Default Qualifying Capacity Criteria

### 40.8.1 Applicability of Default Criteria

The criteria in this Section 40.8 apply when the CPUC or Local Regulatory Authority has not established

and provided to the CAISO criteria to determine the types of resources that may be eligible to provide Qualifying Capacity and for calculating Qualifying Capacity for such eligible resource types.

### 40.8.2 General Qualifying Capacity Methodologies

As further specified in Section 40.8.3, the CAISO applies the following methodologies to various classes of resources. Where a methodology calls for 36 months' of historical data for an individual resource but there is no resource-specific data for part of that period, then the CAISO substitutes the missing periods of data with class average data.

#### 40.8.2.1 Effective Load Carrying Capability

The effective load carrying capability (ELCC) methodology calculates a resource's monthly Qualifying Capacity based on a percentage discount from its PMax utilizing a sequential four-step conceptual process.

Step one identifies the quantity of capacity provided to the CAISO Balancing Authority Area from each resource technology class in a probabilistic reliability analysis conducted consistent with accepted industry practices, as further specified in the BPM, that maintains a 1-day-in-ten-years loss of load expectation standard.

Step two determines a preliminary class-based discount based on the quantity of perfect capacity that would be needed to replace the capacity provided by that class of resource in the probabilistic reliability analysis as a percent of the capacity provided by that class of resource technology in the probabilistic reliability analysis. For purposes of this Section 40.8.2.1, perfect capacity is capacity from a hypothetical resource that is fully available at all times.

Step three calculates a final class-based discount. The final class-based discount scales the preliminary class-based discount based on the quantity of perfect capacity that would be needed to replace the capacity provided by all resource classes subject to ELCC in the probabilistic reliability analysis as a percent of the capacity provided by all resource classes subject to ELCC in the probabilistic reliability analysis.

Step four calculates a resource-specific adjustment to the final class-based discount. The resource-specific adjustment is based on a resource's performance over the 36-month default Qualifying Capacity

evaluation period defined in the BPM compared to the performance in that period of all resources of that resource type, as further specified in the BPM.

#### 40.8.2.2 Unforced Capacity

The unforced capacity (UCAP) methodology calculates a resource's monthly Qualifying Capacity based on a percentage discount from its PMax. The CAISO creates a separate resource-specific UCAP discount for seasons, with those seasons defined in the BPM.

For each season, the CAISO calculates a UCAP discount based on the quantity of capacity from the resource that was not on Forced Outage as a percent of the quantity of capacity that would have been available from the unit if it never had any Forced Outages. The CAISO calculates this percentage based only on Forced Outages during one of the at-risk hours on at-risk days for that season, as further specified in the BPM. The at-risk hours are the individual hours of the day during that season where reliability risks are greatest in an individual hour as determined based on projected system conditions during the period that would be covered by the resulting Qualifying Capacity value. The at-risk days are the days during that season where reliability risks were greatest across the day based on historic system conditions with the tightest supply/demand balance. The UCAP calculation does not consider a Forced Outage reported in a nature of work category relating to Generation Outages induced by transmission Outages, as further specified in the Business Practice Manual.

The UCAP discount from PMax of a resource for a year is the average of the seasonal UCAP discounts from the three prior years, weighted in the following proportions: 45 percent for seasonal UCAP from one year prior; 35 percent for seasonal UCAP from two years prior; and 20 percent for three years prior.

#### 40.8.2.3 Average Generation

The average generation methodology calculates a resource's monthly Qualifying Capacity based on historic hourly performance in that month of the year over the 36-month default Qualifying Capacity evaluation period defined in the BPM.

#### 40.8.2.4 Performance to Dispatch

The performance to Dispatch methodology calculates a resource's Qualifying Capacity, which is static for each month of a year, based on the average energy output during each hour a resource had a Dispatch over the 36-month default Qualifying Capacity evaluation period defined in the BPM as a percentage of

the average hourly Dispatch value over those 36 months. For purposes of this calculation, a resource's energy output in an hour cannot exceed its hourly Dispatch value. The CAISO calculates a resource's Qualifying Capacity under this methodology based on the aggregated performance of all resources under the same SCID.

#### 40.8.2.5 Reduction in Demand Per Dispatch

The reduction in demand per Dispatch methodology calculates a resource's Qualifying Capacity, which is static for each month of a year, based on the resource's average reduction in demand on a per-Dispatch basis over the 36-month default Qualifying Capacity evaluation period defined in the BPM.

### 40.8.3 Default Criteria for Specific Resource Classes

#### 40.8.3.1 Nuclear and Dispatchable Thermal

Nuclear and dispatchable thermal Generating Units, other than Qualifying Facilities with Existing QF Contracts addressed in Section 40.8.3.11 below, must be a Participating Generator or a System Unit. The CAISO calculates the Qualifying Capacity of nuclear and dispatchable thermal units, other than Qualifying Facilities addressed in Section 40.8.3.11, using the UCAP methodology described in Section 40.8.2.2.

#### 40.8.3.2 Non-Dispatchable Thermal

Non-dispatchable thermal Generating Units, other than Qualifying Facilities with Existing QF Contracts addressed in Section 40.8.3.11 below, must be a Participating Generator or a System Unit. The CAISO calculates Qualifying Capacity of non-dispatchable thermal units, other than Qualifying Facilities addressed in Section 40.8.3.11, using the average generation methodology described in Section 40.8.2.3.

#### 40.8.3.3 Wind and Solar

As used in this Section, wind units are those wind Generating Units without backup sources of Generation and solar units are those solar Generating Units without backup sources of Generation. Wind and solar units, other than Qualifying Facilities with Existing QF Contracts, must be Participating Intermittent Resources or subject to availability provisions of Section 40.6.4. The CAISO calculates the Qualifying Capacity of all wind or solar units, including Qualifying Facilities, using the ELCC methodology described in Section 40.8.2.1. For wind and solar units, the resource-specific adjustment for performance in the ELCC methodology is based on capacity factors during the at-risk hours determined pursuant to Section

40.8.2.2.

#### 40.8.3.4 Hydroelectric – Dispatchable, Run-of-River, and Pumped Storage

Hydroelectric Generating Units, other than Qualifying Facilities with Existing QF Contracts, must be either Participating Generators or System Units. The CAISO calculates the Qualifying Capacity of Hydroelectric Generating Units irrespective of status as a Qualifying Facility status. The CAISO calculates the Qualifying Capacity of Pumped-Storage Hydro Units using the UCAP methodology described in Section 40.8.2.2. The CAISO calculates the Qualifying Capacity of all other types of Hydroelectric Generating Units using the ELCC methodology described in Section 40.8.2.1. For dispatchable Hydroelectric Generating Units, the resource-specific adjustment for performance in the ELCC methodology is based on all Forced Outages, excluding Forced Outages reported in a nature of work category relating to Generation Outages induced by transmission Outages, as further specified in the Business Practice Manual. For Run-of-River Resources, the resource-specific adjustment for performance in the ELCC methodology is based on capacity factors during the at-risk hours determined pursuant to Section 40.8.2.2.

#### 40.8.3.5 Non-Generator Resources

Non-Generator Resources must be either Participating Generators or System Units to qualify as Resource Adequacy Capacity. The CAISO calculates Qualifying Capacity of Non-Generator Resources using the ELCC methodology described in Section 40.8.2.1. For Non-Generator Resources, the resource-specific adjustment for performance in the ELCC methodology is based on all Forced Outages, excluding Forced Outages reported in a nature of work category relating to Generation Outages induced by transmission Outages, as further specified in the Business Practice Manual.

#### 40.8.3.6 Proxy Demand Resources

A Proxy Demand Resource must have the ability to (i) be dispatched for at least twenty-four hours per month, (ii) be dispatched on at least three consecutive days, and (iii) respond for at least four hours per dispatch in order to qualify as Resource Adequacy Capacity. The CAISO calculates the Qualifying Capacity of Proxy Demand Resources using the performance to Dispatch methodology described in Section 40.8.2.4.

#### 40.8.3.7 Participating Loads

The CAISO calculates the Qualifying Capacity of Participating Loads using the reduction in demand per Dispatch methodology described in Section 40.8.2.5. Loads of Participating Loads must be available at least 48 hours, and if the Loads can only be dispatched for a maximum of two hours per event, then only 0.89 percent of a Scheduling Coordinator's portfolio may be made up of such Loads.

#### 40.8.3.8 Unit-Specific Contracts

Unit-specific contracts with Participating Generators or System Units will qualify as Resource Adequacy Capacity subject to the verification that the total MW quantity of all contracts from a specific unit do not exceed the total Net Qualifying Capacity (MW) consistent with the Net Qualifying Capacity determination for that unit.

#### 40.8.3.9 Qualifying Facilities

Qualifying Facilities must be subject to an effective Participating Generator Agreement or Net Scheduled Participating Generator Agreement or must be System Units, unless they have an Existing QF Contract. Except for hydro, wind, and solar Qualifying Facilities addressed pursuant to Sections 40.8.3.3 and 40.8.3.4, the Qualifying Capacity of Qualifying Facilities under Existing QF Contracts, will be based on historic monthly Generation output during the hours of noon to 6:00 p.m. (net of Self-provided Load) during a three-year rolling average.

#### 40.8.3.10 System Resources and Pseudo-Ties

##### 40.8.3.10.1 Dynamic System Resources and Pseudo-Ties

Dynamic System Resources and Pseudo-Ties of Generating Units to the CAISO Balancing Authority Area shall be treated similar to resources within the CAISO Balancing Authority Area, except with respect to the deliverability screen under Section 40.4.6.1 and with respect to the limitation on the Qualifying Capacity of wind and solar resources set forth in Section 40.8.3.3. However, eligibility as a Resource Adequacy Resource is contingent upon a showing by the Scheduling Coordinator that the Dynamic System Resource or Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area has secured transmission through any intervening Balancing Authority Areas for the Operating Hours that cannot be curtailed for economic reasons or bumped by higher priority transmission and that the Load Serving Entity for which the Scheduling Coordinator is submitting Demand Bids has an allocation of import capacity at the import Scheduling Point under Section 40.4.6.2 that is not less than the Resource

Adequacy Capacity provided by the Dynamic System Resource or Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area.

#### 40.8.3.10.2 Non-Dynamic System Resources

For Non-Dynamic System Resources, the Scheduling Coordinator must demonstrate that the Load Serving Entity for which the Scheduling Coordinator is scheduling Demand has an allocation of import capacity at the import Scheduling Point under Section 40.4.6.2 that is not less than the Resource Adequacy Capacity from the Non-Dynamic System Resource. The Scheduling Coordinator must also demonstrate that the Non-Dynamic System Resource is covered by Operating Reserves, unless unit contingent, in the sending Balancing Authority Area. Eligibility as Resource Adequacy Capacity is contingent upon a showing by the Scheduling Coordinator of the System Resource that it has secured transmission through any intervening Balancing Authority Areas for the Operating Hours that cannot be curtailed for economic reasons or bumped by higher priority transmission. With respect to Non-Dynamic System Resources, any inter-temporal constraints, such as multi-hour run blocks, must be explicitly identified in the monthly Resource Adequacy Plan, and no constraints may be imposed beyond those explicitly stated in the plan.

### 40.8.3.11 Reliability Demand Response Resources

The Qualifying Capacity of a Reliability Demand Response Resource, for each month, will be based on the resource's average monthly historic demand reduction performance during that same month during the Availability Assessment Hours, as described in Section 40.9.3, using a three-year rolling average. For a Reliability Demand Response Resource with fewer than three years of performance history, for all months for which there is no historic data, the CAISO will use a monthly megawatt value as certified and reported to the CAISO by the Demand Response Provider; otherwise, where available, the CAISO will use the average of historic demand reduction performance data available, by month, for a Reliability Demand Response Resource.

### 40.8.3.12 Distributed Generation Facilities

(a) Distributed Generation Facilities that meet the applicable requirements in Section 4.6 qualify as Resource Adequacy Capacity.

(b) The CAISO will determine the Net Qualifying Capacity of each Distributed Generation

Facility for each Resource Adequacy Compliance Year consistent with similar resource classifications connected to the transmission system, as provided in Section 40.4.6.1.

(c) The Scheduling Coordinator for individual Distributed Generation Facilities, with the same resource type and PMax values less than 0.5 MW, that seek to operate as a combined Distributed Generation Facility, must submit to the CAISO a request that the initial Net Qualifying Capacity be determined and approved as a combined Distributed Generation Facility.

#### 40.8.3.13 Facilities under Construction

The Qualifying Capacity for facilities under construction will be determined based on the type of resource as described elsewhere in this Section 40.8. In addition, the facility must have been in commercial operation for no less than one month to be eligible to be included as a Resource Adequacy Resource in a Scheduling Coordinator's monthly Resource Adequacy Plan.

#### 40.8.3.14 Jointly-Owned Facilities

A jointly-owned facility must be either a Participating Generator or a System Unit. The Qualifying Capacity for the entire facility will be determined based on the type of resource as described elsewhere in this Section 40.8. In addition, the Scheduling Coordinator must provide the CAISO with a demonstration of its entitlement to the output of the jointly-owned facility's Qualified Capacity and an explanation of how that entitlement may change if the facility's output is restricted.

#### 40.8.3.15 Hybrid Resources

The default Qualifying Capacity of a Hybrid Resource is the sum of the individual Qualifying Capacity values for each component, not to exceed the facility's Interconnection Service Capacity.

## 40.9 Resource Adequacy Availability Incentive Mechanism

### 40.9.1 Introduction to RAAIM

The CAISO shall use RAAIM to determine the availability of resources providing local and/or system Resource Adequacy Capacity and Flexible RA Capacity during the Availability Assessment Hours each month and then assess the resultant Availability Incentive Payments and Non-Availability Charges through the CAISO's settlements process.

### 40.9.2 Exemptions

(a) **Capacity Exempt from RAAIM – All Provisions.** The entire capacity of a resource in any of the following categories is exempt from the RAAIM provisions in Section 40.9 –

(1) Resources with a PMax less than 1.0 MW;

(2) Non-specified resources that provide Resource Adequacy Capacity under contracts for Energy delivered within the CAISO Balancing Authority Area;

(3) Participating Load that is also Pumping Load; and

(4) Legacy RMR Units.

(b) **Capacity Exempt from RAAIM – Local/System**

(1) The entire capacity of a resource in any of the following categories is exempt from the RAAIM provisions in Section 40.9 applicable to local and system Resource Adequacy Capacity –

(A) Variable Energy Resources;

(B) Combined Heat and Power Resources;

(C) Run-of-River Resources; and

(D) Hybrid Resources.

(2) The capacity of a resource with a Load-following MSS as its Scheduling Coordinator that is designated on a Load-following MSS's monthly Resource Adequacy Plan is exempt from the RAAIM provisions in Section 40.9 applicable to local and system Resource Adequacy Capacity, to the extent that the resource's capacity is also designated as Resource Adequacy Capacity on the monthly Supply Plan of that Load-following MSS or another Load-following MSS.

(3) Resources with Existing QF Contracts or Amended QF Contracts that are Resource Adequacy Resources are exempt from the RAAIM provisions in Section 40.9 applicable to local and system capacity --

(A) if the QF resource previously provided Resource Adequacy Capacity pursuant to an Existing QF Contract that was executed prior to August 22, 2010 and remained in effect pursuant to California Public Utilities Commission Decision 07-09-040 that extended the term of expiring

contracts until such time as the new contracts resulting from that decision are available; or

(B) until the QF Resource's Existing QF Contract or Amended QF Contract terminates or if requested by the Scheduling Coordinator for the resource, whichever is earlier.

(c) **Capacity Exempt from RAAIM – Flexible Capacity.**

(1) The capacity of Use-Limited Resources in a combination under Section 40.10.3.2(b), 40.10.3.3(b) or 40.10.3.4(b) is exempt from the RAAIM provisions in Section 40.9 applicable to Flexible RA Capacity to the extent that the resources are committed to provide Flexible RA Capacity as a combination on their respective monthly Supply Plans.

(2) The Capacity of a resource with a Load-following MSS as its Scheduling Coordinator that is designated on a Load-following MSS's monthly Flexible RA Plan is exempt from the RAAIM provisions in Section 40.10 applicable to Flexible RA Capacity, to the extent that the resource's capacity is also designated as Flexible RA Capacity on the monthly Supply Plan of that Load-following MSS or another Load-following MSS.

**40.9.2.1 Acquired Resources.**

(a) **Exemption.** The entire capacity of an Acquired Resource is exempt from the RAAIM provisions in Section 40.9 applicable to local and system Resource Adequacy Capacity if the resource provides Resource Adequacy Capacity under a resource-specific power supply contract that –

(1) was exempt from the prior standard capacity product in Section 40.9 as of the RAAIM effective date, and continues to meet the requirements for that exemption, under the provisions of Sections 40.9.2(1) or 40.9.2(2) contained in Appendix J.

(2) includes an availability provision, or the resource under the power supply contract is located outside of the CAISO Balancing Authority Area and jointly

operated with project participants located outside of the CAISO Balancing Authority Area, such that no single Load Serving Entity with contractual rights for the resource's output has the ability to effect changes to the resource's availability; and

(3) does not contain a provision that allows the contract to be modified for regulatory changes.

(b) **Request.** To maintain the exemption, the Scheduling Coordinator for the Acquired Resource must annually request renewal of the exemption and –

(1) for Resource Adequacy Compliance Year 2016, submit an affidavit to the CAISO, by either the Scheduling Coordinator or resource owner, demonstrating that the Acquired Resource meets the eligibility criteria in Section 40.9.2.1(a), in accordance with the process and schedule in the Business Practice Manual; and

(2) for each Resource Adequacy Compliance Year thereafter until the contract terminates, submit confirmation to the CAISO that the information in the affidavit is still accurate and the Acquired Resource continues to meet the eligibility criteria in Section 40.9.2.1(a), in accordance with the process and schedule in Business Practice Manual.

(c) **Approval.** The CAISO shall review the information submitted and –

(1) approve a request that contains the information required by Sections 40.9.2.1(a) and (b) and that demonstrates the resource meets the eligibility criteria in Section 40.9.2.1(a);

(2) advise the Scheduling Coordinator for the resource if the request does not contain all of the information required by Sections 40.9.2.1(a) and (b), and allow the opportunity for the Scheduling Coordinator to submit the additional required information, in accordance with the process and schedule in the Business Practice Manual; or

(3) deny the request and permanently terminate the exemption if --

(A) the Scheduling Coordinator for the resource does not timely submit a

request under Section 40.9.2.1(b);

(B) the Scheduling Coordinator for the resource does not submit, or does not timely submit, additional information required to complete the request under Section 40.9.2(c)(2); or

(C) the CAISO determines the resource does not meet the eligibility criteria in Section 40.9.2.1(a).

(d) **Failure to Request Renewal.** If the Scheduling Coordinator for the resource does not submit a request to renew the exemption under Section 40.9.2.1(b), the exemption shall terminate and the CAISO shall notify the Scheduling Coordinator of the termination in accordance with the process and schedule in Business Practice Manual.

(e) **Notice of Termination.** The Scheduling Coordinator for an Acquired Resource must notify the CAISO within 10 days if the contract terminates or no longer meets the eligibility criteria in Section 40.9.2.1(a).

**40.9.3 Availability Assessment**

**40.9.3.1 Local and System RA Capacity Availability**

(a) **Availability Assessment Hours**

(1) Prior to the start of each Resource Adequacy Compliance Year, the CAISO shall establish and publish in the Business Practice Manual the Availability Assessment Hours applicable for resources providing local and/or system Resource Adequacy Capacity for each month of that year.

(2) The Availability Assessment Hours shall be a pre-defined set of five consecutive hours for each month that –

(A) correspond to the operating periods when high demand conditions typically occur and when the availability of Resource Adequacy Capacity is most critical to maintaining system reliability:

(B) vary by season as necessary so that the coincident peak load hour typically falls within the five-hour range each day during the month, based on historical actual load data; and

(C) apply to each Trading Day that is a weekday and not a federal holiday.

(b) **Must-Offer Availability Assessment.** The CAISO shall determine the extent to which each resource providing local and/or system Resource Adequacy Capacity made that capacity available to the CAISO each day during the Availability Assessment Hours by comparing –

(1) the MWs of local and/or system Resource Adequacy Capacity for which the Scheduling Coordinator for the resource submitted Economic Bids or Self-Schedules in the Day-Ahead Market and the Real-Time Market on a given day; and

(2) the MWs of local and/or system Resource Adequacy Capacity for which the Scheduling Coordinator for the resource had a performance obligation to submit Economic Bids or Self-Schedules in the CAISO Markets under the must-offer requirements applicable under Section 40.6 on a given day, provided that Conditionally Available Resources will have RAAIM assessed as if the resource's performance obligation were defined in Sections 40.6.1 and 40.6.2 and irrespective of their expected available Energy or their expected as-available Energy.

(3) The CAISO's availability assessment under this Section 40.9.3.1 does not consider a RA Resource's compliance with any Imbalance Reserves or Reliability Capacity bidding obligation it holds.

**40.9.3.2 Flexible RA Capacity Availability**

(a) **Availability Assessment Hours.** The Availability Assessment Hours for a Flexible RA Resource shall be the same period as the must-offer obligation for the Flexible Capacity Category that is designated on the Resource Flexible RA Capacity Plan for that month, as set forth in Section 40.10.6.

(b) **Must-Offer Availability Assessment.** The CAISO shall determine the extent to which each Flexible RA Resource made that capacity available in each Availability Assessment Hour of the day by comparing –

(A) the MWs of Flexible RA Capacity for which the Scheduling Coordinator for the resource submitted Economic Bids in the Day-Ahead Market and the Real-Time Market on a given day; and

(B) the MWs of Flexible RA Capacity for which the Scheduling Coordinator for the resource had a performance obligation to submit Economic Bids in the CAISO Markets under the must-offer requirements applicable under Section 40.10.6 on a given day.

(C) The CAISO's availability assessment under this Section 40.9.3.2 does not consider a Flexible RA Resource's compliance with any Imbalance Reserves or Reliability Capacity bidding obligation it holds.

(c) **Flexible Capacity Category.** If a Flexible RA Resource is designated to provide Flexible RA Capacity and/or RA Substitute Capacity in more than one Flexible Capacity Category on the same day, the CAISO will assess the availability of the resource using the must-offer obligation for the highest quality of Flexible Capacity Category designated.

(d) **Start-Up Less Than 90 Minutes.** For resources with a start-up time less than 90 minutes, the CAISO will use the resource's MWs of capacity from zero to the EFC value to assess the availability of the designated Flexible RA Capacity; provided that the Scheduling Coordinator for the resource does not submit Self-Schedules for the capacity from zero to PMin or for any portion of the capacity under the must-offer obligation for Energy. If the Scheduling Coordinator for the resource submits a Self-Schedule, the CAISO will deduct the MW value of PMin from the calculation of the resource's Flexible RA Capacity availability,

(e) **Start-Up Greater Than 90 Minutes.** For resources with a start-up time greater than 90 minutes, the CAISO will use the MWs of capacity between the resource's PMin and EFC value in the availability assessment and validate whether the Scheduling Coordinator for the resource submitted Economic Bids for all MWs designated on the Resource Flexible RA Capacity Plan.

(f) **Variable Energy Resources**

(1) **Flexible RA Capacity Equal to EFC.** If the Flexible RA Capacity designated on the monthly Resource Flexible RA Capacity Plan is equal to the resource's EFC value, the CAISO will assess the availability of the designated Flexible RA Capacity based on the Economic Bids for Flexible RA Capacity the Scheduling Coordinator for the resource submitted up to the MWs in the Variable Energy Resource forecast applicable under Section 4.8.2.

(2) **Flexible RA Capacity Less Than EFC.** If the Flexible RA Capacity designated in the monthly Resource Flexible RA Capacity Plan is less than the EFC value for the resource, the CAISO will assess availability using the ratio of the amount shown on the monthly plan to the relevant EFC value, and applies that ratio to the MWs of Economic Bids and the Variable Energy Resource forecast.

(3) **VER Forecast Less Than Flexible RA Capacity.** If the MWs in the Variable Energy Resource forecast are less than the MWs of Flexible RA Capacity designated in the monthly Resource Flexible RA Capacity Plan, and the Economic Bids are greater than or equal to the forecast amount for that hour, the resource is 100 percent available up to the forecast amount.

(4) **VER Forecast Greater Than Flexible RA Capacity.** If the MWs in the Variable Energy Resource forecast are greater than the MWs of Flexible RA Capacity designated in the monthly Resource Flexible RA Capacity Plan, the Scheduling Coordinator for the resource must submit Economic Bids equal to the forecast amount. If the Scheduling Coordinator for the resource submits Economic Bids for MWs above the forecast, or the resource generates above the forecast, the CAISO will limit the calculated availability to the forecast amount.

(5) **No Day-Ahead Market Obligation.** For Variable Energy Resources that do not have an obligation to submit Economic Bids into the Day-Ahead Market, the CAISO will base the availability assessment of the Flexible RA Capacity only on the resource's Economic Bids in the Real-Time Market.

**40.9.3.3 Availability for Overlapping Local/System and Flexible RA Capacity**

(a) **Overlap Determination.** The availability assessment for overlapping Resource Adequacy commitments shall apply to those MWs subject to the must-offer obligations for local and/or system Resource Adequacy Capacity and Flexible RA Capacity in any Availability Assessment Hour. For the purpose of this Section 40.9, capacity is deemed to have an overlapping Resource Adequacy commitment if it has a must-offer obligation based on its status as local and/or system Resource Adequacy Capacity and a must-offer obligation based on its status as Flexible RA Capacity during the same Availability Assessment Hour of a day.

(b) **Must-Offer Availability Assessment.** The CAISO shall determine the extent to which each resource with overlapping Resource Adequacy commitments made that capacity available to the CAISO in each overlapping Availability Assessment Hour of the day by comparing –

(1) the MWs of local and/or system Resource Adequacy Capacity and Flexible RA Capacity for which the Scheduling Coordinator for the resource submitted Economic Bids in the Day-Ahead Market and the Real-Time Market; and

(2) the MWs of local and/or system Resource Adequacy Capacity and Flexible RA Capacity for which the Scheduling Coordinator for the resource had a performance obligation to submit Economic Bids in the CAISO Markets, in accordance with the applicable must-offer requirements in Sections 40.6 and 40.10.6.

(c) **Calculation.** The CAISO's calculation of the Availability Assessment for overlapping RA commitments shall count-

(1) any MW only once; and

(2) the total MWs of overlapping capacity as a Flexible RA Capacity commitment.

**40.9.3.4 Treatment of Outages**

(a) **RA Substitute Capacity Not Required.** The RAAIM Availability Assessment for a Resource Adequacy Resource excludes the capacity, duration, and must-offer

requirements for Resource Adequacy Capacity on an Outage during the Resource Adequacy month that does not require RA Substitution Capacity under Section 9.3.1.3.

(b) **RA Substitute Capacity Required and Provided.** For each Outage that requires RA Substitute Capacity under Section 40.9.3.6 to avoid imposition of RAAIM charges –

(1) the RAAIM Availability Assessment for the resource excludes the capacity, duration, and must-offer requirement for Resource Adequacy Capacity on outage to the extent the resource provides RA Substitute Capacity for that outage as required under Section 40.9.3.6; and

(2) the RAAIM Availability Assessment for the substitute resource includes the capacity, duration, and must-offer requirement for the RA Substitute Capacity commitment. For each day the substitute resource is committed to provide Flexible RA Capacity and/or RA Substitute Capacity in more than one Flexible Capacity Category, the RAAIM Availability Assessment applies the must-offer obligation for the highest quality Flexible Capacity Category to the total MWs of the flexible capacity requirement. For the purposes of this Section 40.9, base ramping resources (as defined in section 40.10.3.2) are considered to be a higher quality of Flexible Capacity Category than either peak ramping resources (as defined in section 40.10.3.3) or super-peak ramping resources (as defined in section 40.10.3.4). Additionally, peak ramping resources (as defined in section 40.10.3.3) are considered to be a higher quality of Flexible Capacity Category than super-peak ramping resources (as defined in section 40.10.3.4).

(c) **RA Substitute Capacity Required not Provided.** For each Outage that requires RA Substitute Capacity under Section 40.9.3.6 to avoid imposition of RAAIM charges, the RAAIM Availability Assessment for the resource includes the capacity, duration, and must-offer requirement for Resource Adequacy Capacity on an outage to the extent the resource does not provide RA Substitute Capacity for the outage as required under Section 40.9.3.6.

(d) **Exclusions from RAAIM for certain Outage types.** The RAAIM Availability

Assessment excludes the capacity, duration, and must-offer requirement for local and/or system Resource Adequacy Capacity or Flexible RA Capacity on an Outage in a nature of work category specified in the Business Practice Manual that relates to: (i) an administrative action by the resource owner; (ii) a cause outside of the control of the resource owner, (iii) or a short-term use limitation; or (iv) a non-Run-of-River Resource hydroelectric Generating Unit's management of water-related operational or regulatory limitations. Through the December 31, 2020, Trading Day, item (iv) of this Section 40.9.3.4(d) applies only to a hydroelectric Generating Unit that has limited the capacity it has shown on the monthly Supply Plan corresponding to the day of the Outage to reflect historical hydrological conditions or actual hydrological conditions in 2020. The limitations based on hydrological conditions must be mutually agreed upon with the unit's Scheduling Coordinator and the CAISO. Starting with the January 1, 2021, Trading Day, item (iv) of this Section 40.9.3.4(d) applies only to a hydroelectric Generating Unit whose Qualifying Capacity was established pursuant to a CPUC or Local Regulatory Authority methodology under which the Qualifying Capacity is calculated to reflect historical hydrological conditions.

(e) **Derates on Generating Units Providing system RA Capacity and Listed Local RA Capacity.** If a Generating Unit providing both system RA Capacity and Listed Local RA Capacity is on Forced Outage, then for purposes of RAAIM and RA Substitute Capacity the quantity of the Forced Outage will be apportioned first to the system RA Capacity provided from that Generating Unit. If the quantity of the Forced Outage exceeds the quantity of system RA Capacity provided by the Generating Unit, then the remainder of the Forced Outage shall be apportioned to the Listed Local RA Capacity provided by the Generating Unit.

**40.9.3.5 [Not Used]**

**40.9.3.6 Substitute Capacity**

**40.9.3.6.1 [Not Used]**

**40.9.3.6.2 CAISO Evaluation of Need for Substitute Capacity for Forced Outages**

A Forced Outage on a RA Resource, irrespective of whether the resource is providing RA Capacity or Flexible RA Capacity, subjects the resource's Scheduling Coordinator to RAAIM unless the Scheduling Coordinator for the resource provides RA Substitute Capacity by the deadline specified in the relevant Business Practice Manual, the outage is exempt from RAAIM as set forth in Section 9 or Section 40, the outage is cancelled, or the outage is rescheduled.

**40.9.3.6.3 General Provisions on Substitute Capacity**

(a) **Substitution**

If the Resource Adequacy Resource on Outage and the substituting resource do not have the same Scheduling Coordinator, the Scheduling Coordinator for the substituting resource must confirm and approve the proposed substitution in accordance with the process set forth in the Business Practice Manual.

(b) **Availability**

(1) RA Substitute Capacity must be operationally available to the CAISO:

(2) Capacity on, or scheduled to be on, a Forced Outage, Approved Maintenance Outage, or de-rate, is not operationally available and shall not qualify to be RA Substitute Capacity for the duration of the period that it is unavailable.

(3) RMR Capacity, including Legacy RMR Capacity, CPM Capacity, and capacity committed to be Resource Adequacy Capacity in a monthly Supply Plan shall not qualify to be RA Substitute Capacity for the duration of that commitment.

(4) RA Substitute Capacity shall not qualify to be RMR Capacity, including Legacy RMR Capacity, CPM Capacity, or Resource Adequacy Capacity in a monthly Supply Plan, for the duration of the substitution.

(5) If a resource provides RA Substitute Capacity for multiple Resource Adequacy Resources under Section 40.9.3.6.6, the same capacity committed as RA Substitute Capacity for one Resource Adequacy Resource shall not qualify as RA Substitute Capacity for a different Resource Adequacy Resource during the

same substitution period.

(6) RA Substitute Capacity will be treated as Resource Adequacy Capacity during the period of substitution for purposes of a Forced Outage or de-rate allocation.

(c) **Timing of Substitution Request**

(1) **Day-Ahead Market.** Requests for substitution for Forced Outages in the Day-Ahead Market must be submitted in accordance with the timeline specified in the Business Practice Manual and be approved by the CAISO to be included in the Day-Ahead Market for the next Trading Day. Requests for substitution for Forced Outages in the Day-Ahead Market submitted at or after the timeline specified in the Business Practice Manual and that are approved by the CAISO will be included in the Day-Ahead Market for the second Trading Day.

(2) **Real-Time Market.** Requests for substitution for Forced Outages in the Real-Time Market must be submitted in accordance with the timeline in the Business Practice Manual.

**40.9.3.6.4 RA Substitute Capacity from a Single Source**

(a) **Option.** The Scheduling Coordinator for a Resource Adequacy Resource that is on Outage may provide RA Substitute Capacity for that capacity from a single resource.

(b) **Local Capacity Area Resource Substitution**

(1) **Pre-Qualified Substitution.**

(A) **Annual Process.** The CAISO annually will conduct a process to assess the eligibility of resources to pre-qualify as RA Substitute Capacity for Local Capacity Resource Adequacy Resources that potentially could be Listed Local RA Capacity in the time period covered by the process. The CAISO will publish a list of the pre-qualified resources in accordance with the timeline in the Business Practice Manual.

(B) **Pre-Qualification Requirement.** The CAISO will pre-qualify a resource to provide RA Substitute Capacity that is located at the same bus as, or a compatible bus to, that of the Local Capacity Area Resource Adequacy

Resource for which it could substitute.

(C) **Request.** To use a pre-qualified resource in the Day-Ahead Market or Real-Time Market as RA Substitute Capacity, the Scheduling Coordinator for the Local Capacity Area Resource Adequacy Resource on Outage must submit a timely substitution request in accordance with Section 40.9.3.6.3(c).

(D) **Approval.** The CAISO will grant a request that meets the requirements in Sections 40.9.3.6.4(b)(1)(C) and 40.9.3.6.3(b).

(2) **Non-Pre-Qualified Substitution.**

(A) **Day-Ahead Market.** The Scheduling Coordinator for Listed Local RA Capacity on Outage may submit a request to substitute a non-pre-qualified resource only in the Day-Ahead Market.

(B) **Request.** To use a non-pre-qualified resource as RA Substitute Capacity, the Scheduling Coordinator for the Listed Local RA Capacity must submit a timely substitution request in accordance with Section 40.9.3.6.3(c), and the alternate resource must be located in the same Local Capacity Area.

(C) **Approval.** The CAISO will grant a request that meets the requirements in Sections 40.9.3.6.4(b)(2)(A) and (B), and 40.9.3.6.3(b).

(c) **Non-Local Capacity Area Resource Substitution**

(1) **Request.** To use a resource as RA Substitute Capacity, the Scheduling Coordinator for RA Capacity other than Listed Local RA Capacity that has an Outage must submit a timely substitution request in the Day-Ahead Market or Real-Time Market in accordance with Section 40.9.3.6.3(c).

(2) **Approval.** The CAISO will grant the request if the alternate resource has adequate deliverable capacity to provide the RA Substitute Capacity and meets the requirements in Sections 40.9.3.6.4(c)(1) and 40.9.3.6.3(b). (d)

**External Resources**

(1) **Request.** To use a Dynamic System Resource, Non-Dynamic System Resource, NRS-RA Resource, or Pseudo-Tie as RA Substitute Capacity, the Scheduling Coordinator for a Resource Adequacy Resource that has an Outage or de-rate must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6(c).

(2) **Approval.** The CAISO will grant the request if the alternate resource is external to the CAISO Balancing Authority Area (including Pseudo-Ties), the Scheduling Coordinator for the resource has an adequate available import allocation at the resource's Scheduling Point to provide the RA Substitute Capacity, and meets the requirements in Sections 40.9.3.6.1(d)(1) and 40.9.3.6(b).

(e) **Flexible RA Capacity**

(1) **Request.** To use a resource as RA Substitute Capacity, the Scheduling Coordinator for the Flexible RA Resource that has a Forced Outage must submit a timely substitution request in the Day-Ahead Market or Real-Time Market in accordance with Section 40.9.3.6.3(c) and specify the MW of RA Substitute Capacity to be provided, which may not exceed the MWs of the outage.

(2) **Approval.** The CAISO will grant the request if the alternate resource has adequate deliverable capacity to provide the RA Substitute Capacity, meets the applicable requirements in Sections 40.9.3.6.4(e) and 40.9.3.6.3(b), and is capable of meeting the must-offer obligation in Section 40.10.6 applicable to the highest quality Flexible Capacity Category for the MWs of the Flexible RA Capacity commitments of the resource on outage and the alternate resource.

**40.9.3.6.5 RA Substitute Capacity from Multiple Resources**

(a) **Option.** The Scheduling Coordinator for a Resource Adequacy Resource on Outage may submit a request to substitute that capacity with RA Substitute Capacity from multiple alternate resources, including a resource already providing RA Substitute Capacity for one or more Resource Adequacy Resources.

(b) **Local Capacity Area Resource Substitution**

(1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for Listed Local RA Capacity on Outage must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6.3(c) if any of the alternate resources are not pre-qualified to substitute for the resource on the outage; however, if all of the alternate resources are pre-qualified to provide RA Substitute Capacity for that resource, the request may be submitted in the Day-Ahead Market or Real-Time Market.

(2) **Approval.** The CAISO will grant the request if it meets the requirements in Sections 40.9.3.6.5(b)(1) and 40.9.3.6.3(c) and the alternate resources are either pre-qualified, or are not pre-qualified but are located in the same Local Capacity Area as the Resource Adequacy Resource.

(c) **Non-Local Capacity Area Resources**

(1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for RA Capacity other than Listed Local RA Capacity on Outage must submit a timely substitution request in the Day-Ahead Market or the Real-Time Market in accordance with Section 40.9.3.6.3(c).

(2) **Approval.** The CAISO will grant the request if all of the alternate resources meet the requirements in Sections 40.9.3.6.5(c)(1) and 40.9.3.6.3(c).

(d) **External Resources**

(1) **Request.** To use multiple Dynamic System Resources, Non-Dynamic System Resources, NRS-RA Resources, or Pseudo-Ties as RA Substitute Capacity, the Scheduling Coordinator for a Resource Adequacy Resource that has an Outage must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6.3(c).

(2) **Approval.** The CAISO will grant the request if the alternate resources are external to the CAISO Balancing Authority Area (including Pseudo-Ties), and the Scheduling Coordinator of each alternate resource has an adequate available import allocation at the resource's Scheduling Point to provide the RA Substitute

Capacity, and meet the requirements in Sections 40.9.3.6.5(d)(1) and 40.9.3.6.3(b).

(e) **Flexible RA Capacity**

(1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for a resource providing Flexible RA Capacity on a Forced Outage must submit a timely substitution request in the Day-Ahead Market or the Real-Time Market and the alternate resources must be located in the CAISO Balancing Authority Area, which does not include a Pseudo-Tie of a Generating Unit or a Resource-Specific System Resource.

(2) **Approval.** The CAISO will grant the request if the alternate resources meet the requirements in Sections 40.9.3.6.5(e)(1) and 40.9.3.6.3(c).

**40.9.3.6.6 Multiple Substitution by One Resource.** The Scheduling Coordinator for a resource already providing RA Substitute Capacity may provide RA Substitute Capacity for one or more additional Resource Adequacy Resources on Outage, subject to approval by the CAISO pursuant to Section 40.9.3.6.4 or 40.9.3.6.5.

**40.9.3.6.7 Resource Adequacy Obligation**

To the extent a resource provides RA Substitute Capacity, the resource must meet and comply with all requirements in Section 40 applicable to RA Substitute Capacity for the duration of the substitution; except that RA Substitute Capacity shall be released from this obligation and the substitution requirements in Section 40.9 –

(a) at the end of the approved substitution period; or

(b) upon request by either the Scheduling Coordinator for the resource on Outage or the Scheduling Coordinator for the substitute resource, and approval by the other Scheduling Coordinator, in accordance with the process set forth in the Business Practice Manual.

**40.9.3.6.8 Treatment of Unbid Capacity**

If the Scheduling Coordinator for RA Substitute Capacity does not submit Bids or Self-Schedules for all or a portion of that capacity in accordance with Section 40.6 or 40.10.6, the CAISO –

(1) will treat the unbid capacity as unavailable for purposes of Section 40.9; and

(2) will reflect that unavailability in the RAAIM availability calculation for the Resource Adequacy Resource providing the RA Substitute Capacity.

**40.9.3.6.9 Substitution Opportunity Information**

In order to make information available to Market Participants pertinent to the provisions of this Section 40.9.3.6, the CAISO will:

(a) Annually post on the CAISO Website the due dates for each month of the following Resource Adequacy compliance year the various submissions the CAISO requires under the Resource Adequacy program; and

(b) Provide the opportunity for Market Participants to post and view information on an electronic bulletin board about non-Resource Adequacy Capacity that may be needed or available as RA Substitute Capacity in the bilateral market. Use of the bulletin board is voluntary and is for informational purposes only.

**40.9.4 Additional Rules on Calculating Monthly and Daily Average Availability**

(a) The CAISO shall determine a resource's monthly average availability on a percentage basis, based on:

(1) the availability assessment of the resource's minimum daily availability of local and/or system Resource Adequacy Capacity under Section 40.9.3.1, Flexible RA Capacity under Section 40.9.3.2, and overlapping Resource Adequacy commitments under Section 40.9.3.3, in the Day-Ahead Market and Real-Time Market;

(2) separately-calculated availability assessments for local and/or system Resource Adequacy Capacity in one category and Flexible RA Capacity in a second category, with availability in an hour with overlapping commitments under Section 40.9.3.3 accounted for in the Flexible RA Capacity category availability assessment;

(3) The relative daily proportion of capacity as provided as local and/or system Resource Adequacy Capacity and Flexible RA Capacity, including both overlapping and non-overlapping commitments based on the Availability

Assessment of Hours;

(4) the capacity, duration, and must-offer requirement for local and/or system Resource Adequacy Capacity or Flexible RA Capacity on an Outage, except to the extent the resource provides RA Substitute Capacity for the outage in accordance with Section 40.9.3.6, the Outage is approved by the CAISO without requiring RA Substitute Capacity under other authority of Section 9 or Section 40, or the Outage is excluded from RAAIM under Section 40.9.3.4(d); and

(5) the capacity, duration, and must-offer requirement for any RA Substitute Capacity or CPM Capacity the resource is committed to provide.

(b) If the resource's minimum daily availability is the same in the Day-Ahead Market and the Real-Time Market, the CAISO will use the availability in the Real-Time Market in the calculation of the monthly average availability.

(c) If the resource is committed to provide local and/or system RA capacity and Flexible RA Capacity in a month, but is not committed to provide both for the full month, the CAISO prorates the number of days that local and/or system Resource Adequacy Capacity and Flexible RA Capacity was provided against the total number of days in the month.

**40.9.5 Availability Standard**

(a) **Percentage.** The Availability Standard shall be 96.5 percent each month.

(b) **Availability Range.** The CAISO shall apply the Availability Standard with a bandwidth of plus and minus two percent, which produces a range with a lower bound of 94.5 percent and an upper bound of 98.5 percent.

**40.9.6 Non-Availability Charges and Availability Incentive Payments**

(a) **Non-Availability Charges.** A resource providing local and/or system Resource Adequacy Capacity, Flexible RA Capacity, or CPM Capacity that is subject to the availability assessment in accordance with Section 40.9.3 and whose monthly availability calculation under Section 40.9.4 is below the lower bound of the monthly Availability Standard of 94.5 percent will be subject to a Non-Availability Charge for the month.

(b) **Availability Incentive Payments.** A resource providing local and/or system Resource

Adequacy Capacity, Flexible RA Capacity, or CPM Capacity that is subject to the availability assessment under Section 40.9.3 and whose availability calculation under Section 40.9.4 is above the upper bound of the monthly Availability Standard of 98.5 percent will be eligible for an Availability Incentive Payment for the month.

(c) **No Payment or Charge.** A resource providing local and/or system Resource Adequacy Capacity, Flexible RA Capacity, or CPM Capacity that is subject to the availability assessment under Section 40.9.3 and whose monthly availability calculation under Section 40.9.4 is equal to or between the lower bound of 94.5 percent and the upper bound of 98.5 percent of the Availability Standard will not be assessed a Non-Availability Charge nor paid an Availability Incentive Payment.

(d) **Advisory Period.** During an advisory period of April 1, 2018 through May 31, 2018, the CAISO will show the Non-Availability Charges and Availability Incentive Payments on Settlement Statements but will not include those Non-Availability Charges and Availability Incentive Payments on Invoices for financial settlement.

(e) **Separate Calculation of Payments and Charges for Flexible RA Capacity.** The CAISO will calculate separate Non-Availability Charges and Availability Incentive Payments for Resource Adequacy Resources providing Flexible RA Capacity. For RMR Resources, the Non-Availability Charge will be based on the RMR Contract capacity costs. RMR Capacity is otherwise treated the same way as Resource Adequacy Capacity.

**40.9.6.1 Determination of Non-Availability Charge**

(a) **Calculation**

(1) **RA Capacity.** The Non-Availability Charge for a Resource Adequacy Resource providing local, system, or Flexible RA Capacity shall be determined by the resource's average monthly RA and Flexible RA MWs multiplied by the difference between the lower bound of the monthly Availability Standard of 94.5 percent and the resource's monthly availability percentage, and multiplying the product by the RAAIM price.

(2) **CPM Capacity.** The Non-Availability Charge for a Resource Adequacy Resource providing CPM Capacity shall be determined by the resource's average monthly CPM MWs multiplied by the difference between the lower bound of the monthly Availability Standard of 94.5 percent and the resource's monthly availability percentage, and multiplying the product by the maximum of the resource's CPM price and the RAAIM price.

(b) **RAAIM Price.** The RAAIM price shall be 60 percent of the CPM Soft-Cap Price in Section 43A.4.1.1.

(c) **Separate Collection of Non-Availability Charges for Flexible RA Capacity.** Separately-calculated Non-Availability Charges collected for Resource Adequacy Resources providing Flexible RA Capacity will be held separate from other Non-Availability Charges assessed for Resource Adequacy Resources.

**40.9.6.2 Determination of Availability Incentive Payment**

(a) **Self-Funding.** The Availability Incentive Payment will be funded entirely through the monthly Non-Availability Charges assessed. Availability Incentive Payments for Resource Adequacy Resources providing Flexible RA Capacity will be funded exclusively by Non-Availability Charges assessed against Resource Adequacy Resources providing Flexible RA Capacity.

(b) **Eligible Capacity.** The capacity of a Resource Adequacy Resource providing local, system or Flexible RA Capacity that is eligible to receive an Availability Incentive Payment shall be the resource's average monthly MWs of capacity that exceed the upper bound of the Availability Standard.

(c) **Calculation.**

(1) The monthly Availability Incentive Payment rate will equal the total Non-Availability Charges assessed for the month plus any unpaid funds under Section 40.9.6.2(d), divided by the total Resource Adequacy Capacity eligible to receive the Availability Incentive Payment that month.

(2) The Availability Incentive Payment rate shall not exceed three times the Non-

Availability Charge rate.

(3) The Availability Incentive Payment the CAISO shall pay to each eligible resource shall equal the product of its eligible capacity and the Availability Incentive Payment rate.

(d) **Unpaid Funds.** Any Non-Availability Charge funds that are not distributed to Resource Adequacy Resources eligible to receive Availability Incentive Payments in a month will be added to the funds available for Availability Incentive Payments in the next month and will continue to roll over to successive months until the end of the year. The CAISO distributes any unallocated funds remaining after the CAISO settles December monthly RAAIM Non-Availability Charges and Non-Availability Incentive Payments. The separate pool of undistributed Non-Availability Charge funds collected for local and/or system Resource Adequacy Capacity will be distributed to Load Serving Entities based on their load ratio share for the year. The separate pool of undistributed Non-Availability Charge funds collected for Flexible RA Capacity will be distributed to Load Serving Entities based on their overall ratio of obligation to demonstrate Flexible RA Capacity for the year.

### 40.9.7 Reporting

By July 1 of each year, the CAISO will provide an informational report that will be posted on the CAISO Website and include information on the average actual availability each month of Resource Adequacy Resources, the total amount of Non-Availability Charges assessed and the total amount of Availability Incentive Payments made.

## 40.10 Flexible RA Capacity

### 40.10.1 Flexible Capacity Needs Assessment

The CAISO shall annually conduct a study to determine the Flexible Capacity Need of the CAISO Balancing Authority Area for each month of the next calendar year and provide the results of the study in the Flexible Capacity Needs Assessment.

#### 40.10.1.1 Process

(a) **Schedule.** The CAISO shall conduct the study pursuant to the schedule set forth in the Business Practice Manual, which shall include a process for stakeholders to review and

provide input on the study methodology and assumptions and on the draft study results.

(b) **Completion and Distribution.** The CAISO shall provide the final results of the Flexible Capacity Needs Assessment to each Local Regulatory Authority in the CAISO Balancing Authority Area and post the Flexible Capacity Needs Assessment on the CAISO Website no later than 120 days prior to the date that the annual Flexible RA Capacity Plans must be submitted under Section 40.

**40.10.1.2 Required Information from LSEs**

(a) **Submission Requirement.** The Scheduling Coordinator for each Load Serving Entity in the CAISO Balancing Authority Area shall submit the information required by this Section, no later than January 15 each year, for use in the CAISO's study to generate minute-by-minute net-load data that will be used to determine the Maximum Three-Hour Net-Load Ramp for each month.

(b) **Required Information.** The Scheduling Coordinator for each Load Serving Entity in the CAISO Balancing Authority Area must submit information that –

(1) covers the calendar year in which the information is submitted and each year in the next five-year period;

(2) identifies each wind and solar resource connected to the CAISO Controlled Grid, and distributed wind and solar resources, that is owned, in whole or in part, by the Load Serving Entity, or under contractual commitment to the Load Serving Entity or the Load-following MSS Load Serving Entity, for all or a portion of its capacity;

(3) indicates the status of the resource as either in service or in development with its expected commercial operation date;

(4) for each wind and solar resource, specifies the MWs of installed capacity, renewable energy area location, MWs of flexible capacity owned by or contractually committed to the Load Serving Entity, and other information required by the Business Practice Manual;

(5) describes the balancing services, if any, provided by another balancing authority

area for a wind or solar resource that is located outside of the CAISO Balancing Authority Area and that is owned by or contractually committed to the Load Serving Entity; and

(6) forecasts the MW of installed, behind-the-meter solar capacity in the Load Serving Entity's service area or part of its forecast served load.

(c) **Confidential Treatment.** The CAISO will treat the resource-specific information provided under Section 40.10.1.2(b) as confidential under Section 20.

(d) **Aggregated Information.** In addition to the required resource-specific information, the Scheduling Coordinator for each Load Serving Entity in the CAISO Balancing Authority Area shall submit the information required in Section 40.10.1.2(b) on an aggregated basis, as described in the Business Practice Manual, for inclusion in the Flexible Capacity Needs Assessment that will be posted on the CAISO Website.

**40.10.1.2.1 Incomplete or Inaccurate Information.**

(a) **Rerun of Study.** If the CAISO finds that a Load Serving Entity submitted incomplete or inaccurate information under Section 40.10.1.2(b), which was used in the calculation of the Flexible Capacity Need for the next calendar year, the CAISO may rerun its study using corrected information to recalculate Flexible Capacity Need for the entire year.

(b) **Criteria for Rerun.** The CAISO will not rerun its study to recalculate the Flexible Capacity Need unless:

(1) the incomplete or inaccurate information represents a net error in excess of either (i) 200 MW; or (ii) one percent of the total MWs of wind and solar capacity submitted under Section 40.10.1.2(b) for any month; and

(2) the CAISO has sufficient time to obtain corrected information and complete rerunning the study for the next calendar year by May 1.

(c) **Revised Flexible Capacity Need.** If the CAISO determines that the requirements in Sections 40.10.1.2.1(a) and (b) are met, the CAISO will recalculate the Flexible Capacity Need for the next calendar year and will no later than May 1 post a revised Flexible Capacity Needs Assessment on the CAISO Website.

**40.10.1.3 Flexible Capacity Need Methodology**

The CAISO shall conduct the study to determine the Flexible Capacity Need for the system for each month of the next calendar year as follows:

(1) forecast the minute-to-minute system load and net-load using actual load data, as adjusted for monthly peak load growth, and generation profiles for wind and solar resources that are in-service or expected to be in-service during the study period;

(2) calculate the Maximum Three-Hour Net-Load Ramp for each month using the forecasted minute-to-minute system net-load;

(3) determine the higher of the most severe single contingency or 3.5 percent of forecasted peak load for each month;

(4) may include a forecast adjustment, as described in Section 40.10.1.4; and

(5) compute the resultant Flexible Capacity Need for each month based on the sum of the Maximum Three-Hour Net-Load Ramp, and the higher of the most severe single contingency or 3.5 percent of the forecasted monthly peak load.

**40.10.1.4 Flexible Capacity Need Forecast Adjustment**

(a) The Flexible Capacity Need determination may include a positive or negative forecast adjustment to capture a systemic difference between the value determined in Section 40.10.1.3(3) and the historic amount of Operating Reserves met by Flexible Capacity;

(b) The CAISO will determine the need for a forecast adjustment in consultation with the CPUC and other Local Regulatory Authorities, and as part of the stakeholder process under Section 40.10.1.1; and

(c) The amount of the forecast adjustment calculated for each month shall not exceed the forecasted monthly peak Operating Reserves multiplied by the difference between (i) the historic percentage of Operating Reserves met by Flexible RA Capacity and (ii) the percentage calculation that results from dividing the quantity determined in Section 40.10.1.3(3) by the forecasted monthly peak Operating Reserves.

**40.10.1.5 Flexible Capacity Category Need**

(a) The CAISO shall calculate the total system amount of Flexible Capacity needed in each

Flexible Capacity Category, for each month of the next calendar year to ensure that forecast system operational needs will be met, as follows:

(1) The minimum quantity of Flexible Capacity needed in the Flexible Capacity Category for base ramping resources for each month will be calculated on a seasonal basis based on the system ramping characteristics identified in the Flexible Capacity Needs Assessment and the changes in MWs of the Maximum Secondary Three-Hour Net-Load Ramps for each month within a season, and will be specified in MW and as the percentage of total Flexible Capacity Needs.

(2) The maximum quantity of Flexible Capacity in the Flexible Capacity Category for peak ramping resources will be calculated for each month as the difference between the minimum quantity needed in the Flexible Capacity Category for base ramping resources and the total Flexible Capacity Need, and will be specified in MW and as the percentage of total Flexible Capacity Needs.

(3) The maximum quantity of Flexible Capacity in the Flexible Capacity Category for super-peak ramping resources will be five percent of the total Flexible Capacity Need.

(b) The CAISO shall provide the results of the Flexible Capacity Category need determination with the Flexible Capacity Needs Assessment.

**40.10.2 Allocation of Flexible Capacity Needs**

The CAISO will calculate each Local Regulatory Authority's allocable share of the total system Flexible Capacity Need, and the contribution of each of the Local Regulatory Authority's jurisdictional Load Serving Entities to the Maximum Three-Hour Net-Load Ramp used to calculate its share of the total system Flexible Capacity Need. The CAISO shall provide these calculations to each Local Regulatory Authority no later than 120 days prior to the date that the annual Flexible RA Capacity Plans must be submitted under Section 40. Nothing in this Section 40 obligates any individual Load Serving Entity to demonstrate that it has procured Flexible Capacity Resources to satisfy a minimum or maximum quantity needed, as applicable, within each Flexible Capacity Category.

**40.10.2.1 Calculation of LRA Allocations**

(a) **Allocation of Maximum Three-Hour Net-Load Ramp.** The CAISO will calculate the Local Regulatory Authority's allocable share of the Flexible Capacity Need as the average of the sum of its jurisdictional Load Serving Entities' change in load, minus the change in wind output, minus the change in solar PV output, minus the change in solar thermal output during the five highest three-hour net-load changes in the month.

(b) **Allocation of MSSC or Forecasted Peak Load.** The CAISO will determine the higher of the most severe single contingency or 3.5 percent of forecasted peak load for each Load Serving Entity based on the respective Load Serving Entity's peak load ratio share, and calculate each Local Regulatory Authority's allocable share based on the sum of its jurisdictional Load Serving Entities' shares.

(c) **Allocation of Forecast Adjustment.** If the CAISO includes a forecast adjustment in its draft study results, it will allocate the forecast adjustment using the same methodology set forth in Section 40.10.2.1(b).

**40.10.2.2 Allocation to Load-Following MSS**

(a) The CAISO will calculate the allocable share of the Flexible Capacity Need for each Load-following MSS as –

(1) the Local Regulatory Authority's average percent contribution to the change in wind output, minus the change in solar PV output, minus the change in solar thermal output, during the five highest three-hour net-load changes in the month, for resources not included in the Load-following MSS Load Serving Entity's resource portfolio; and

(2) plus the lesser of the MSS contribution calculated under Section 40.10.2.2(a)(1) or 3.5 percent of its forecasted peak load.

(3) plus the Load-following MSS Load Serving Entity's allocable share of any forecast adjustment under Section 40.10.1.4.

(b) The CAISO will deduct the Flexible Capacity Need allocated to each Load-following MSS from the calculation to determine whether a cumulative deficiency in Flexible RA Capacity exists under Section 43A.2.7.

(c) If the Load-following MSS Load Serving Entity's contribution to the three-hour net-load ramp calculated under Section 40.10.2.2(a)(1) is less than its contribution to the 3.5 percent of expected peak load, the CAISO will not reallocate that difference to other Local Regulatory Authorities to determine whether a cumulative deficiency in Flexible RA Capacity exists under Section 43A.2.7.

**40.10.3 Flexible Capacity Categories**

**40.10.3.1 Flexible Capacity Category Calculation**

A resource qualifies to provide Flexible RA Capacity in each Flexible Capacity Category for which it meets the qualifications set forth in this Section 40.10.3.

**40.10.3.2 Flexible Capacity Category – Base Ramping Resources**

(a) **Resource Criteria.** Base ramping resources must meet all of the following criteria, except as provided in Sections 40.10.3.2(b) and (c) –

(1) The resource must be capable of providing Flexible RA Capacity to the CAISO Markets through Economic Bids for Energy and Economic Bids for Ancillary Services that are not flagged as Contingency Only in the Day-Ahead Market, if and to the extent the resource is certified to provide Ancillary Services, submitted daily for the 17-hour period from 5:00 a.m. through 10:00 p.m.;

(2) The resource must be capable of providing Energy for a minimum of six hours up to its full Effective Flexible Capacity value including PMin;

(3) The resource must be capable of being available seven days a week;

(4) The resource must be able to provide the minimum of (i) two Start-Ups per day for every day of the month or sixty Start-Ups per month, or (ii) the number of Start-Ups allowed by its operational limits, including minimum up and minimum down time; and

(5) The resource must not have annual or monthly limitations on the number of Start-Ups or the amount of energy produced that, on a daily basis, are lower than the requirements in Section 40.10.3.2(a)(1) through (4).

(b) **Use-Limited Resource**

(1) A Use-Limited Resource may be included in this category if it meets the criteria in Section 40.10.3.2(a), except that use-limited resources providing Flexible RA Capacity are not required to submit bids for Ancillary Services in the Day-Ahead Market or the Real-Time Market.

(2) A Load Serving Entity may include in this category a combined resource consisting of two Use-Limited Resources that do not individually meet the minimum operational and availability requirements but in combination meet the criteria in Section 40.10.3.2(a).

(3) The Flexible RA Capacity amount for the combined resource will be less than or equal to the lowest Effective Flexible Capacity value shown on the Resource Flexible RA Capacity Plan for a resource in the combination.

(4) The combined resource shall be subject to the must-offer obligation in Section 40.10.6.1(e)(2) for the Flexible RA Capacity amount shown on the monthly Resource Flexible RA Capacity Plan for the combination.

(c) **Non-Generator Resource.** A Non-Generator Resource that elects to provide Flexible RA Capacity may be included in this category if it meets the criteria in Section 40.10.3.2(a). A Non-Generator Resource that elects to provide Flexible RA Capacity and Regulation Energy Management is not eligible to be included in this category.

**40.10.3.3 Flexible Capacity Category – Peak Ramping Resources**

(a) **Resource Criteria.** Peak ramping resources must meet all of the following criteria, except as provided in Sections 40.10.3.3(b) and (c) --

(1) The resource must be capable of providing Flexible RA Capacity to the CAISO Markets through Economic Bids for Energy and Economic Bids for Ancillary Services that are not flagged as Contingency Only in the Day-Ahead Market, if and to the extent the resource is certified to provide Ancillary Services, which must be submitted daily for a five-hour period to be determined by the CAISO on a seasonal basis;

(2) The resource must be capable of providing Energy for a minimum of three

continuous hours up to its full Effective Flexible Capacity value including PMin;

(3) The resource must be capable of being available seven days a week.

(4) The resource must be capable of at least one Start-Up per day; and

(5) The resource must not have annual or monthly limitations on the number of unit Start-Ups or the amount of energy produced that, on a daily basis, are lower than the requirements in Section 40.10.3.3(a)(1) through (4).

(b) **Use-Limited Resource.**

(1) A Use-Limited Resource may be included in this category if it meets the criteria in Section 40.10.3.3(a), except that use-limited resources providing Flexible RA Capacity are not required to submit bids for Ancillary Services in the Day-Ahead Market or the Real-Time Market.

(2) A Load Serving Entity may include in this category a combined resource consisting of two Use-Limited Resources that do not individually meet the minimum operational and availability requirements but in combination meet the criteria in Section 40.10.3.3(a).

(3) The Flexible RA Capacity amount for the combined resource will be less than or equal to the lowest Effective Flexible Capacity value shown on the Resource Flexible RA Capacity Plan for a resource in the combination.

(4) The combined resource shall be subject to the must-offer obligation in Section 40.10.6.1(e)(2) for the Flexible RA Capacity amount shown on the monthly Resource Flexible RA Capacity Plan for the combination.

(c) **Non-Generator Resource.** A Non-Generator Resource that elects to provide Flexible RA Capacity may be included in this category if it meets the criteria in Section 40.10.3.3(a). A Non-Generator Resource that elects to provide Flexible RA Capacity and Regulation Energy Management is not eligible to be included in this category.

(d) **Base Ramping Resource.** A resource that meets the qualifications of the Flexible Capacity Category for base ramping resources also qualifies to be included in this category as a peak ramping resource; however, a resource that meets only the

qualifications of a peak ramping resource does not qualify as a base ramping resource.

**40.10.3.4 Flexible Capacity Category – Super-Peak Ramping Resources.**

(a) **Resource Criteria.** Super-peak ramping resources must meet all of the following criteria, except as provided in Sections 40.10.3.4(b), (c) and (d) --

(1) The resource must be capable of providing Flexible RA Capacity to the CAISO Markets through Economic Bids for Energy and Economic Bids for Ancillary Services Bids that are not flagged as Contingency Only in the Day-Ahead Market, if and to the extent the resource is certified to provide Ancillary Services, which must be submitted each weekday that is not holiday, for a five-hour period to be determined by the CAISO on a seasonal basis;

(2) The resource must be capable of providing Energy for a minimum of three continuous hours up to its full Effective Flexible Capacity value including PMin;

(3) The resource must be capable of being available on weekdays that are not holidays, as defined in the Business Practice Manual;

(4) The resource must be capable of at least one Start-Up per day; and

(5) The resource must be capable of responding to at least five CAISO dispatches per month, during the five-hour period of the must offer obligation, for the resource to Start-Up.

(b) **Use-Limited Resource.**

(1) A Use-Limited Resource may be included in this category if it meets the criteria in Section 40.10.3.4(a), except that use-limited resources providing Flexible RA Capacity are not required to submit bids for Ancillary Services in the Day-Ahead Market or the Real-Time Market.

(2) A Load Serving Entity may include in this category a combined resource consisting of two Use-Limited Resources that do not individually meet the minimum operational and availability requirements but in combination meet the criteria in Section 40.10.3.4(a).

(3) The Flexible RA Capacity amount for the combined resource will be less than or

equal to the lowest Effective Flexible Capacity value shown on the Resource Flexible RA Capacity Plan for a resource in the combination.

(4) The combined resource shall be subject to the must-offer obligation in Section 40.10.6.1(e)(2) for the Flexible RA Capacity amount shown on the monthly Resource Flexible RA Capacity Plan for the combination.

(c) **Non-Generator Resource.** A Non-Generator Resource may be included in this category if it meets the criteria in Section 40.10.3.4(a) and is not registered in the CAISO's Master File as a Regulation Energy Management resource.

(d) **Non-Generator Resource, Regulation Energy Management.** A Non-Generator Resource that is a Regulation Energy Management resource may be included in this category if it meets the following criteria –

(1) The resource must be capable of providing Regulation Energy Management to the CAISO Markets through Economic Bids for Regulation Up and Regulation Down submitted daily for a 17-hour period from 5:00 a.m. through 10:00 p.m.;

(2) The resource shall not submit bids to provide Energy;

(3) The resource must be capable of being available seven days a week;

(4) The resource must be capable of unlimited Start-Ups per day; and

(5) The resource must be registered as a Non-Generator Resource providing Regulation Energy Management in the CAISO's Master File.

(e) **Base Ramping and Peak Ramping Resources.** A resource that meets the qualifications of the Flexible Capacity Category for base ramping resources or peak ramping resources also qualifies to be included in this category as a super-peak ramping resource; however, a resource that meets only the qualifications of a super-peak ramping resource does not qualify as a base ramping resource or a peak ramping resource.

**40.10.3.5 Flexible Capacity Category by Resource**

The CAISO will provide to the Scheduling Coordinator of each resource a non-binding determination of the Flexible Capacity Category with the highest qualifications for which the resource qualifies to provide Flexible Capacity, as provided in Section 40.10.4.

**40.10.3.6 Non-Eligible Resources**

Intertie resources and imports, other than Pseudo-Ties and Dynamic Scheduled resources, and Proxy Demand Resources that have elected, per Section 4.13.3, to bid and be dispatched in the Real-Time Market in Hourly Blocks or fifteen (15) minute intervals, are not eligible to provide Flexible RA Capacity.

**40.10.4 Effective Flexible Capacity**

The CAISO shall calculate the Effective Flexible Capacity value for each resource. The CAISO shall publish the draft and final lists of the Effective Flexible Capacity values for such resources and the Flexible Capacity Categories for which each resource qualifies to provide Flexible Capacity on the CAISO Website each year in accordance with the schedule for publishing the Net Qualifying Capacity values, as set forth in the BPM, for use in the next calendar year.

**40.10.4.1 Effective Flexible Capacity Calculation**

(a) **Flexible Resources.** The CAISO will calculate the Effective Flexible Capacity value of a resource, for use (i) if a Local Regulatory Authority has not established criteria for calculating the Effective Flexible Capacity value for eligible resource types, and (ii) for determining if a cumulative deficiency exists under Sections 43A.2.7(a) and (b), as follows, except as provided in Sections 40.10.4.1 (b) through (f) –

(1) If the Start-Up Time of the resource is greater than 90 minutes, the Effective Flexible Capacity value shall be the weighted average ramp rate of the resource calculated from PMin to Net Qualifying Capacity multiplied by 180 minutes. The Effective Flexible Capacity shall not exceed the difference between the PMin and PMax of the resource.

(2) If the Start-Up Time of the resource is less than or equal to 90 minutes, the Effective Flexible Capacity value shall be the resource's PMin plus the weighted average ramp rate of the resource calculated from PMin to Net Qualifying Capacity multiplied by the difference between 180 minutes and the resource's Start-Up Time. The Effective Flexible Capacity shall not exceed the Net Qualifying Capacity of the resource.

(b) **Hydroelectric Generating Unit.** The Effective Flexible Capacity of a hydroelectric

generating unit will be the amount of capacity from which the resource can produce Energy consistently for 6 hours assuming that the resource's physical storage is at maximum capacity at the beginning of that six-hour period. The Effective Flexible Capacity of a hydroelectric generation unit cannot, however, exceed its Net Qualifying Capacity.

(c) **[Not Used]**

(d) **Energy Storage Resource.** The Effective Flexible Capacity value for an energy storage resource will be determined as follows –

(1) for an energy storage resource that provides Flexible RA Capacity but not Regulation Energy Management, the Effective Flexible Capacity value will be the MW output range the resource can provide over three hours of charge/discharge while constantly ramping.

(2) for an energy storage resource that provides Flexible RA Capacity and Regulation Energy Management, the Effective Flexible Capacity value will be the resource's 15-minute energy output capability.

(e) **Multi-Stage Generating Resource.** The Effective Flexible Capacity value for a Multi-Stage Generating Resource will be calculated using the longest Start-Up Time of the resource's configuration that has the lowest PMin.

(f) **Combined Heat and Power Resource.** The Effective Flexible Capacity value of a Combined Heat and Power Resource will be the lesser of (i) the resource's Net Qualifying Capacity, or (ii) the MW difference between the CHP resource's maximum output and its RMTMax, if the resource has a RMTMax, or its minimum operating level, such quantity not to exceed the quantity of generating capacity capable of being delivered over a three-hour period.

(g) **Hybrid Resource.** The Effective Flexible Capacity value of a Hybrid Resource is the sum of what the Effective Flexible Capacity values of the constituent components of the Hybrid Resource would be if those components were each a distinct Generating Unit.

**40.10.4.2 EFC Omission or Correction**

(a) **Draft List.** The posted draft list of Effective Flexible Capacity values may be modified only as follows –

(1) If the Scheduling Coordinator for a resource that was not included on the draft list of Effective Flexible Capacity values seeks to have the resource included on the list, it must no later than the deadline set forth in the Business Practice Manual submit a request to the CAISO either showing that the resource meets the criteria in Section in 40.10.4.1 or is capable of meeting the criteria, and provide documentation to enable the CAISO to determine the resource's Effective Flexible Capacity pursuant to the criteria in Section 40.10.4.1.

(2) If the Scheduling Coordinator for a resource that was included on the draft list of Effective Flexible Capacity values seeks to change the value for that resource, it must submit documentation by the deadline set forth in the Business Practice Manual that supports such a change.

(3) The CAISO will review the information submitted and notify the Scheduling Coordinator whether the change was accepted at least 15 days prior to posting the final list of Effective Flexible Capacity values on the CAISO Website.

(b) **Final List.** The CAISO will post on the CAISO Website the final list of Effective Flexible Capacity values for resources that are in service and the Flexible Capacity Categories for which each resource qualifies to provide Flexible Capacity. The final list shall be used for the next calendar year and shall not be changed during that year, except as follows –

(1) If the Net Qualifying Capacity or PMax of a resource included on the final list increases or decreases during the year, and that value is changed in the Master File, the Scheduling Coordinator for the resource may request that the Effective Flexible Capacity value be recalculated to account for the change; or

(2) If a new resource, achieves commercial operation during the year, the Scheduling Coordinator for the resource may request that the CAISO calculate and add its Effective Flexible Capacity value and the Flexible Capacity Categories for which the resource qualifies to provide Flexible Capacity to the

final list as an in-service resource.

(c) **Disputes.** Any disputes as to the CAISO's determination regarding Effective Flexible Capacity shall be subject to the CAISO ADR Procedure.

**40.10.5 Flexible RA Capacity Plans**

**40.10.5.1 LSE Flexible RA Capacity Plans**

(a) **Submission Requirement.** A Scheduling Coordinator must submit annual and monthly LSE Flexible RA Capacity Plans for each Load Serving Entity it represents.

(b) **Annual Plan.** Each annual LSE Flexible RA Capacity Plan must –

(1) demonstrate that the Load Serving Entity has procured for each month at least 90 percent of the annual Flexible RA Capacity requirement determined by the CAISO; or the amount of Flexible RA Capacity required by the Load Serving Entity's Local Regulatory Authority, if the Local Regulatory Authority has set such requirement;

(2) identify the resources the Load Serving Entity intends to rely on to provide the Flexible RA Capacity, but need not identify the flexible resource adequacy categories; and

(3) include all information and be submitted no later than the last Business Day in October, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.

(c) **Monthly Plan.** The monthly LSE Flexible RA Capacity Plan must –

(1) demonstrate that the Load Serving Entity procured 100 percent of the total monthly Flexible RA Capacity requirement determined by the CAISO; or the monthly amount of Flexible RA Capacity required by the Local Regulatory Authority, if the Local Regulatory Authority has set such requirement;

(2) include information for purposes of the validation under Section 40.10.5.3(a) and the evaluation for cumulative deficiency under Section 40.10.5.3(c)that shows the MW of Flexible RA Capacity the Load Serving Entity designates based on the total monthly requirement determined by the CAISO within the minimum or

maximum quantity, as applicable, for each Flexible Capacity Category; or only if the Local Regulatory Authority has established its own flexible capacity requirement, shows the MW of Flexible RA Capacity the Load Serving Entity designates based on the total monthly requirement determined by the Local Regulatory Authority within the minimum or maximum quantity for each Flexible Capacity Category required by the Local Regulatory Authority, if applicable;

(3) identify all resources the Load Serving Entity will rely on to provide the Flexible RA Capacity and for each resource specify the Flexible Capacity Category in which the Flexible RA Capacity will be provided; and

(4) include all information and be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.

(d) **Correction to Monthly Plan.** The Scheduling Coordinator for the Load Serving Entity may submit at any time from 45 days through 30 days in advance of the first day of the month covered by the plan, a revision to its monthly LSE Flexible RA Capacity Plan to correct either: (i) a discrepancy between its monthly LSE Flexible RA Capacity Plan and the monthly Supply Plan of a Resource Adequacy Resource providing that Load Serving Entity with Flexible RA Capacity; or (ii) a deficiency in how much Flexible RA Capacity was provided on the monthly LSE Flexible RA Capacity Plan. From 45 days through 30 days in advance of the relevant month, the Scheduling Coordinator for a Load Serving Entity also may revise its LSE Flexible RA Capacity Plan voluntarily either to add additional Flexible RA Capacity or remove Flexible RA Capacity regardless of a discrepancy or deficiency that existed as of 45 days in advance of the relevant month. The CAISO will not accept any revisions to a monthly LSE Flexible RA Capacity Plan from 30 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Load Serving Entity demonstrates good cause for the change and explains why it was not possible to submit the change earlier.

(e) **Reporting Exemption.** Notwithstanding the above, a Load Serving Entity is not

obligated to submit a monthly LSE Flexible RA Capacity Plan for a given month if the Load Serving Entity's contribution to the three-hour net load ramp is less than 1 MW for that month. Except to the extent allowed under section 43A.8.8(e), such Load Serving Entity is not exempt for any relevant cost allocation from a CPM designation made pursuant to Section 43A associated with a monthly RA capacity obligation of less than 1 MW.

**40.10.5.1.1 Load-Following MSS**

(1) Each Load-following MSS Load Serving Entity for which the CAISO has calculated an allocable share of the Flexible Capacity Need under Section 40.10.2.2 must submit annual and monthly LSE Flexible RA Capacity Plans pursuant to this Section 40.10.5.1 to identify the Flexible RA Capacity it is using to satisfy such requirement.

(2) The Load-following MSS must increase the Flexible RA Capacity in its monthly plan by the MW amount of Capacity for a Variable Energy Resource that is initially shown as being included in the Load-following MSS Load Serving Entity's resource portfolio in the information required pursuant to Section 40.10.1.2, but is subsequently not included in the current MSS resource portfolio at the time the monthly LSE Flexible RA Capacity Plan is due for the applicable month.

**40.10.5.2 Resource Flexible RA Capacity Plans**

(a) **Submission Requirement.** A Scheduling Coordinator must submit annual and monthly Resource Flexible RA Capacity Plans for each resource it represents that provides Flexible RA Capacity; except that an annual plan is not required for 2015.

(b) **Annual Plan.** The annual Resource Flexible RA Capacity Plan shall --

(1) verify the resource's agreement to provide Flexible RA Capacity during the next Resource Adequacy Compliance Year; and

(2) include all information and be submitted no later than the last Business Day in October, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.

(c) **Monthly Plan.** The monthly Resource Flexible RA Capacity Plan shall –

(1) verify the resource's agreement to provide Flexible RA Capacity during the month;

(2) include an affirmative representation by the Scheduling Coordinator submitting the plan that the CAISO is entitled to rely on the accuracy of the information provided in the plan to perform those functions set forth in this Section 40; and

(3) include all information and be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual, provided that a Scheduling Coordinator may submit an initial monthly Resource Flexible RA Capacity Plan between 45 days through 30 days in advance of the relevant month if: (i) the Flexible RA Capacity on the initial Flexible RA Capacity Plan was procured by a Scheduling Coordinator for a Load Serving Entity to resolve a deficiency; (ii) the initial Resource Flexible RA Capacity Plan is submitted to resolve a discrepancy that arose based on a LSE Flexible RA Capacity Plan revision made to add additional Flexible RA Capacity voluntarily; or (iii) the initial Resource Flexible RA Capacity Plan solely includes a resource or resources that received an initial Effective Flexible Capacity value between 45 days through 30 days in advance of the relevant month.

(d) **Correction to Monthly Plan.** The Scheduling Coordinator for the Resource Adequacy Resource may, at any time from 45 days through 30 days in advance of the relevant month, revise its monthly Flexible RA Capacity Plan to correct a discrepancy between its monthly Flexible RA Capacity Plan and a Resource Adequacy Plan of a Load Serving Entity for which that Resource Adequacy Resource is providing Flexible RA Capacity. Such revision may be to address a discrepancy that existed as of the initial plan submissions by 45 days in advance of the relevant month or to address a discrepancy that arose between 45 days through 30 days in advance of the relevant month. The CAISO will not accept any revisions to a monthly Flexible RA Capacity Plan less than 30 days in advance of the relevant month through the end of the month, unless the

Scheduling Coordinator for the Resource demonstrates good cause for the change and explains why it was not possible to submit the change earlier.

**40.10.5.3 Review of Flexible RA Capacity Plans**

(a) **Validation for Deficiency in an Individual LSE Plan.**

(1) If the Local Regulatory Authority has not established its own flexible capacity procurement requirements, the CAISO will validate the annual and monthly LSE Flexible RA Capacity Plans for that Local Regulatory Authority's jurisdictional Load Serving Entities, and will use the Effective Flexible Capacity value for each resource calculated under Section 40.10.4. The CAISO will determine whether each Load Serving Entity met its annual or monthly total Flexible RA Capacity Requirement, and for the monthly LSE Flexible RA Capacity Plan, whether it met the total monthly requirement within the minimum or maximum quantity, as applicable, for each Flexible Capacity Category.

(2) If the Local Regulatory Authority has established its own flexible capacity procurement requirements, the CAISO will not validate the individual LSE Flexible Capacity Plans for that Local Regulatory Authority's jurisdictional Load Serving Entities.

(b) **Identification of Discrepancy.** The CAISO will compare all LSE Flexible RA Capacity Plans and Resource Flexible RA Capacity Plans to identify any discrepancy in the Resource Adequacy Resources listed or the amount of the Resource Adequacy Capacity committed.

(c) **Evaluation for Cumulative Deficiency.**

(1) The CAISO will evaluate the annual LSE Flexible RA Capacity Plans of all Load Serving Entities on a cumulative basis to determine whether the total amount of Flexible RA Capacity shown in the plans meets 90 percent of the annual Flexible Capacity Need determined by the CAISO pursuant to Section 40.10.1 or whether a cumulative deficiency may exist under Section 43A.2.7(a).

(2) The CAISO will evaluate the monthly Flexible RA Capacity Plans of all Load

Serving Entities to determine whether (i) the total amount of Flexible RA Capacity shown in the plans, limited to the maximum monthly requirement for each category, meets the applicable monthly Flexible Capacity Need determined by the CAISO pursuant to Section 40.10.1 or whether a cumulative deficiency may exist under Section 43A.2.7(b)(1); or (ii) the total amount of Flexible RA Capacity shown in the base ramping Flexible Capacity Category in the plans meets the minimum monthly requirement for the base ramping Flexible Capacity Category determined by the CAISO pursuant to Section 40.10.1.5 or whether a cumulative deficiency may exist under Section 43A.2.7(b)(2).

(d) **Calculation of Flexible RA Capacity.** The CAISO will calculate the amount of Flexible RA Capacity included in the annual and monthly Flexible RA Capacity Plans using the MW amount of Flexible RA Capacity for each resource designated in a plan as a Flexible RA Capacity Resource up to the Effective Flexible Capacity value for the resource calculated under Section 40.10.4.

(e) **Allocated Flexible RA Capacity Requirement.** The CAISO will calculate the Load Serving Entity's allocated annual and monthly Flexible RA Capacity Requirement –

(1) For Load Serving Entities within a Local Regulatory Authority that has not adopted its own allocation methodology, the CAISO will calculate the Load Serving Entity's allocated requirement based on the CAISO's allocation methodology set forth in Section 40.10.2.

(2) For Load Serving Entities within a Local Regulatory Authority that has adopted its own allocation methodology, the CAISO will use that Local Regulatory Authority's methodology for the Local Regulatory Authority's jurisdictional Load Serving Entities.

**40.10.5.4 Deficiency in LSE Flexible RA Capacity Plan**

(a) **Finding and Notification.** If the CAISO's validation under Section 40.10.5.3(a) finds either: (i) that the total amount of Flexible RA Capacity included in an annual or monthly LSE Flexible RA Capacity Plan is not sufficient to satisfy the Load Serving Entity's

allocated Flexible RA Capacity Requirement; or (ii) that the total monthly requirement in a monthly LSE Flexible RA Capacity Plan was not met within the minimum or maximum quantity, as applicable, for each Flexible Capacity Category, the CAISO will –

(1) notify the relevant Scheduling Coordinator, and the Local Regulatory Authority or federal agency with jurisdiction over the relevant Load Serving Entity, in an attempt to resolve any deficiency in accordance with the procedures set forth in the Business Practice Manual; and

(2) provide the notice at least 40 days in advance of the first day of the month covered by the plan and include the reasons the CAISO believes a deficiency exists.

(b) **Resolved Discrepancy.** If the CAISO issues a notice of deficiency under Section 40.10.5.4(a), and the deficiency is resolved, the Scheduling Coordinator for the Load Serving Entity shall -

(1) demonstrate, no less than 30 days prior to the first day of the month covered by the LSE Flexible RA Capacity Plan, that the identified deficiency is cured by submitting a revised LSE Flexible RA Capacity Plan, or

(2) advise the CAISO that the Load Serving Entity's Local Regulatory Authority, or federal agency, as appropriate, has determined that no deficiency exists.

(c) **Unresolved Deficiency.** If the CAISO issues a notice of deficiency under Section 40.10.5.4(a) and is not advised that the deficiency is resolved, the CAISO will use the information contained in the Resource Flexible RA Capacity Plan to set the obligations of resources under Section 40.10 and/or to assign any costs incurred under this Section 40 and Section 43A.

**40.10.5.5 Discrepancy Between Flexible RA Capacity Plans.**

(a) **Finding and Notification.** If the CAISO's review under Section 40.10.5.3(b) finds a discrepancy between an LSE Flexible RA Capacity Plan and a Resource Flexible RA Capacity Plan, the CAISO will –

(1) notify the relevant Scheduling Coordinators of the discrepancy in an attempt to

resolve the discrepancy in accordance with the procedures set forth in the Business Practice Manual; and

(2) provide the notice at least 40 days in advance of the first day of the month covered by the plans and include the reasons the CAISO believes a discrepancy exists.

(b) **Resolved Discrepancy.** If the CAISO issues a notice of discrepancy under Section 40.10.5.5(a) and the discrepancy is resolved, the Scheduling Coordinator must provide the CAISO with a revised LSE Flexible RA Capacity Plan or Resource Flexible RA Capacity Plan, as applicable, no less than 30 days prior to the first day of the month covered by the plans.

(c) **Unresolved Discrepancy.** If the CAISO issues a notice of discrepancy under Section 40.10.5.5(a) and is not advised that the discrepancy is resolved, the CAISO will use the information contained in the Resource Flexible RA Capacity Plan to set the obligations of resources under Section 40.10 and/or to assign any costs incurred under this Section 40 and Section 43A.

**40.10.5.6 LRA Deficiency**

(a) **Finding and Notification.** If the CAISO's evaluation under Section 40.10.5.3(c) finds a cumulative deficiency in Flexible RA Capacity, the CAISO will –

(1) identify each Local Regulatory Authority that did not meet its allocable share of the Flexible Capacity Need using the cumulative amount of Flexible RA Capacity that the Local Regulatory Authority's jurisdictional Load Serving Entities included in their annual and monthly Flexible RA Capacity Plans in total and, for the monthly Flexible RA Capacity Plans, in each Flexible Capacity Category;

(2) identify each Load Serving Entity that: (i) is subject to the jurisdiction of a Local Regulatory Authority that did not meet its allocable share of the Flexible Capacity Need under Section 40.10.5.6; and (ii) did not include sufficient Flexible RA Capacity in an annual or monthly plan to meet its allocated Flexible RA Capacity Requirement or did not meet the monthly requirement within the minimum or

maximum quantity, as applicable, for each Flexible Capacity Category, based on the allocation methodology of the Local Regulatory Authority if it has established its own methodology for allocating the Flexible Capacity Need to its jurisdictional Load Serving Entities;

(3) notify each Local Regulatory Authority identified under Section 40.10.5.6(a)(1) and the Scheduling Coordinator for each Load Serving Entity identified under Section 40.10.5.6(a)(2) of the cumulative deficiency in an attempt to resolve any deficiency in accordance with the procedures set forth in the Business Practice Manual; and

(4) provide the notice at least 40 days in advance of the first day of the month covered by the plan and include the reasons the CAISO believes a cumulative deficiency exists.

(b) **Resolved Deficiency.** If the CAISO provides a notice of cumulative deficiency under Section 40.10.5.6(a), and the deficiency is resolved, the Scheduling Coordinator for the Load Serving Entity shall demonstrate, no less than 30 days prior to the first day of the month covered by the LSE Flexible RA Capacity Plan, that the identified deficiency is cured by submitting a revised LSE Flexible RA Capacity Plan.

(c) **Unresolved Deficiency.** If the CAISO provides a notice of deficiency under Section 40.10.5.6(a) and is not advised that the deficiency is resolved, the CAISO will use the information contained in the Resource Flexible RA Capacity Plan to set the obligations of resources under Section 40.10 and/or to assign any costs incurred under this Section 40 and Section 43A.

**40.10.6 Flexible RA Capacity Must-Offer Obligation**

**40.10.6.1 Day-Ahead and Real-Time Availability**

(a) **Must-Offer Obligation.** The Scheduling Coordinator for a resource supplying Flexible RA Capacity must submit Economic Bids for Energy for the full amount of the resource's Flexible RA Capacity, Bids for IRU and IRD for the full amount of the resource's Flexible RA Capacity that is eligible to Bid for Imbalance Reserves, and Economic Bids for

Ancillary Services that are not flagged as Contingency Only in the Day-Ahead Market for the full amount of the resource's Flexible RA Capacity that is certified to provide Ancillary Services, in the Day-Ahead Market and the Real-Time Market for the applicable Trading Hours that is capable of being economically dispatched as follows, except as provided in Section 40.10.6.1(e) through(h) –

(1) Flexible Capacity Category for base ramping resources - the 17-hour period from 5:00 a.m. to 10:00 p.m., seven days a week;

(2) Flexible Capacity Category for peak ramping resources - the five-hour period determined for each season by the CAISO's Flexible Capacity Needs Assessment, seven days a week; and

(3) Flexible Capacity Category for super-peak ramping resources – the five-hour period determined for each season by the CAISO's Flexible Capacity Needs Assessment, weekdays, except holidays and as provided in Section 40.10.6.1(h), until the resource receives during the five-hour period of the must offer obligation and responds to five CAISO dispatches for Start-Up during the month, after which the resource will not be subject to a must-offer obligation as a super-peak ramping resource for the remainder of that month; however, any other must-offer obligations for Resource Adequacy Capacity will still apply.

(b) **Availability Requirement.** During the period of the applicable must-offer obligation, a Flexible RA Capacity Resource must be operationally available except for limitations specified in the Master File, legal or regulatory prohibitions or as otherwise required by this CAISO Tariff or by Good Utility Practice.

(c) **Co-optimization.** Through the IFM co-optimization process, the CAISO will utilize available Flexible RA Capacity to provide Energy, Imbalance Reserves, or Ancillary Services in the most efficient manner to clear the Energy market, manage congestion and procure required Ancillary Services.

(d) **Participation in RUC.** The Scheduling Coordinator for a Flexible RA Capacity Resource must submit RUC Availability Bids for RCU for their Flexible RA Capacity.

(e) **Use-Limited Resources.**

(1) A Use-Limited Resource providing Flexible RA Capacity must be capable of responding to Dispatch Instructions and, consistent with its use-limitations, must submit Economic Bids for Energy for the full amount of its Flexible RA Capacity in the Day-Ahead Market and the Real-Time Market for the Trading Hours applicable to the resource's Flexible Capacity Category for that month for the Trading Hours that it is capable of being economically dispatched.

(2) The Scheduling Coordinator for the Use-Limited Resources designated as a combined resource under Section 40.10.3.2(b), 40.10.3.3(b) or 40.10.3.4(b) must submit Economic Bids for Energy for either resource for the full amount of the Flexible RA Capacity required by the applicable must-offer obligation; however, Economic Bids for Energy must be submitted for only one resource in the combination per Trade Day.

(f) **Short or Long Start Units.**

(1) Short Start Units providing Flexible RA Capacity that do not have an IFM Schedule or a RUC Schedule for any of their Resource Adequacy Capacity for a given Trading Hour are required to participate in the Real-Time Market consistent with the provisions in Section 40.6.2 that apply to Short Start Units providing RA Capacity.

(2) Long Start Units providing Flexible RA Capacity that do not have an IFM Schedule or a RUC Schedule for any of their Resource Adequacy Capacity for a given Trading Hour are required to participate in the Real-Time Market consistent with the provisions in Section 40.6.2 that apply to Long Start Units providing RA Capacity.

(3) If availability is required under Section 40.6.2, the Scheduling Coordinator for the resource must submit to the RTM for that Trading hour for which the resource is capable of responding to Dispatch Instructions: (i) Economic Bids for Energy for the full amount of the available Flexible RA Capacity, including capacity for which

it has submitted Economic Bids for Ancillary Services; and (ii) Economic Bids for Ancillary Services for the full amount of its Flexible RA Capacity that is certified to provide Ancillary Services and that did not receive a day-ahead award, and for each Ancillary Service for which the resource is certified, including capacity for which it has submitted Economic Bids for Energy.

(g) **Extremely Long-Start Resources.** Flexible RA Capacity Resources that are Extremely Long-Start Resources must be available to the CAISO by complying with the Extremely Long-Start Commitment Process under Section 31.7 or otherwise committing the resource upon instruction from the CAISO, if physically capable. Once an Extremely Long-Start Resource is committed by the CAISO, it is subject to the provisions of Section 40.10.6 regarding Day-Ahead Availability and Real-Time Availability for the Trading Days for which it was committed.

(h) **Non-Generator Resources, Regulation Energy Management.** Non-Generator Resources providing Flexible RA Capacity and Regulation Energy Management must submit Economic Bids for Regulation Up and Regulation Down for Trading Hours in the 17-hour period from 5:00 a.m. to 10:00 p.m., seven days a week and shall not submit Bids for Energy or other Ancillary Services.

**40.10.6.2 Failure to Bid**

If the Scheduling Coordinator for a resource supplying Flexible RA Capacity does not submit Economic Bids for Energy for the full amount of the resource's Flexible RA Capacity, and Economic Bids for Ancillary Services for the full amount of the resource's Flexible RA Capacity that is certified to provide Ancillary Services, in the Day-Ahead Market and the Real-Time Market for the Trading Hours during the period of the applicable must-offer obligation –

(1) the CAISO will not insert Generated Bids for any Flexible RA Capacity for which the resource did not submit bids; and

(2) An Exceptional Dispatch instruction issued to the resource for all or a portion of its Flexible RA Capacity shall not be an Exceptional Dispatch CPM designation under Section 43A.2.5.

## 41. Procurement of RMR Resources

This section applies to RMR Resources, which are resources subject to an RMR Contract entered into after September 1, 2018. For Legacy RMR Units, refer to Appendix H.

### 41.1 Procurement of Reliability Must-Run Resources by the CAISO

A Reliability Must-Run Contract is a contract entered into by the CAISO with a resource owner that operates a Generating Unit or other resource giving the CAISO the right to call on the Generating Unit or Resource to generate Energy, provide Ancillary Services, Black Start, Voltage Support or similar services to maintain the reliability of the CAISO Controlled Grid.

### 41.2 Designation of Resources as Reliability Must-Run Resources

The CAISO will, subject to any existing power purchase contracts, have the right at any time based upon CAISO Controlled Grid technical analyses and studies to designate a Generating Unit or other resource as a Reliability Must-Run Resource. The CAISO will also have the right at any time based upon CAISO Controlled Grid technical analyses and studies to designate a resource for Reliability Must-Run service that is needed to provide Ancillary Services or other reliability services. A resource so designated shall then be obligated to provide the CAISO with its proposed rates for Reliability Must-Run service for negotiation with the CAISO. A pro forma Reliability Must-Run Contract applicable to resources that receive RMR designations is attached as Appendix G. Such rates shall be authorized by FERC.

#### 41.2.1 Formal Withdrawal Notice Applicable to Generating Units

If an owner of a Generating Unit plans to withdraw the Generating Unit from the CAISO markets, it must submit a formal written notice to the CAISO indicating its intent to retire or mothball the unit. The written notice must include a signed affidavit by an executive officer of the entity that owns or controls the company who has the legal authority to bind the company attesting that it intends to take the Generating Unit out of service by retiring or mothballing it. The notice and affidavit will require the unit owner to certify as follows:

[ ] In accordance with the Business Practice Manual for Generator Management, it is retiring the Generating Unit effective _____ [month],_____ [day], _____ [year]. The Generating Unit does not have a contract for Resource Adequacy Capacity for [check one or both] _____ the current year and/or _____ the upcoming year, it is uneconomic for the Generating Unit to

remain in service for such year(s), and the decision to retire is definite unless the CAISO procures the Generating Unit, the Generating Unit is sold to an unaffiliated third-party, a third-party contracts with the Generating Unit for Resource Adequacy purposes, or the Generating Unit obtains some other contract.

[ ] In accordance with the Business Practice Manual for Generator Management, it is retiring the Generating Unit effective _____ [month], _____ [day], _____ [year]. The Generating Unit does not have a contract for Resource Adequacy Capacity for [check one or both] _____ the current year and/or _____ the upcoming year, it is retiring the Generating Unit for reasons other than it is uneconomic for the unit to remain in service during such year(s).
Owner is retiring the Generating Unit for the following reason(s) (state with specificity the reason for retiring the unit):

_____

The decision to retire the Generating Unit is definite. Note: The CAISO may designate the resource for RMR service if needed for reliability.
State with specificity any legal, regulatory, or other reason(s) that might present an obstacle to providing RMR service:

_____

[ ] In accordance with the Business Practice Manual for Generator Management, it is mothballing the Generating Unit effective _____ [month], _____ [day], _____ [year]. The Generating Unit does not have a contract for Resource Adequacy Capacity for [check one and/or both] _____ _____ the current year and/or _____ the upcoming year, it is uneconomic for the Generating Unit to remain in service for such year(s), and the decision to mothball is definite unless the CAISO procures the Generating Unit, the Generating Unit is sold to an unaffiliated third-party, a third-party contracts with the Generating Unit for Resource Adequacy purposes or the Generating Unit obtains some other contract.

[ ] It is rescinding its prior notice to retire or mothball the Generating Unit before the effective date of the retirement or mothball, because the CAISO has procured the unit, the Generating Unit was sold to an unaffiliated third-party, a third-party contracted with the Generating Unit for Resource

Adequacy purposes, or the Generating Unit obtained some other contract.

State with specificity the reason(s) for rescinding the notice:

_____

[ ] It is terminating the Generating Unit's mothball status because the CAISO procured the Generating Unit, the Generating Unit was sold to an unaffiliated third-party, a third-party contracted with the Generating Unit for Resource Adequacy purposes, the Generating Unit obtained some other contract, or it is economic for the Generating Unit to return to service.

State with specificity the reason(s) for returning from mothball status:

_____

Failure to provide a complete notice may result in the CAISO requesting submission of a revised notice with deficiencies cured. A form of notice and affidavit will be included in the Business Practice Manual for Generator Management.

**41.2.2 Processing Retirement/Mothball Notices**

The CAISO will process retirement/mothball notices as follows:

(a) If the Generating Unit is not a Resource Adequacy Resource in the current Resource Adequacy Compliance Year and is planning to retire or mothball its Generating Unit, the owner may submit its written notice at any time during the year, and the CAISO will inform the owner of the study results after it completes the study specified in Section 41.3. If the owner of a non-Resource Adequacy Resource desires an earlier determination of need, it can submit its written notice to the CAISO before the 90-day deadline specified in the Participating Generator Agreement for terminating the agreement or removing a resource from the agreement. Under Section 41.3 the CAISO will study whether the Generating Unit is needed for reliability in the current Resource Adequacy Compliance Year or by the end of the upcoming Resource Adequacy Compliance Year. If the CAISO finds that a retiring Generating Unit is needed for reliability in either of these timeframes, the CAISO will designate the Generating Unit as RMR for the remainder of the current Resource Adequacy Compliance Year at the next feasible CAISO Governing Board meeting, conditioned on the Generating Unit not being

procured as Resource Adequacy Capacity. If the CAISO finds a mothballing Generating Unit is needed for reliability in the current Resource Adequacy Compliance Year, the CAISO will grant the Generating Unit an RMR designation for the remainder of the current Resource Adequacy Compliance Year at the next feasible CAISO Governing Board meeting, conditioned on the Generating Unit not being procured as Resource Adequacy Capacity.

(b) If the Generating Unit is subject to any conditions to provide Resource Adequacy Resource for the upcoming Resource Adequacy Compliance Year and the unit owner is planning to retire or mothball its Generating Unit, the unit owner may submit a notice by the deadline established in the applicable Business Practice Manual which will be in the first quarter of the current Resource Adequacy Compliance Year. The CAISO will study the Generating Unit and post the results of the reliability study to its website by the deadline established in the applicable Business Practice Manual, which will be by the end of the second quarter of the current Resource Adequacy Compliance Year. The CAISO will allow an opportunity of no less than seven (7) days for stakeholders to review and submit comments on the report and will allow Load-Serving Entities the opportunity to procure capacity from the needed Generating Unit. Under Section 41.3, the CAISO will study whether the Generating Unit is needed for reliability in the upcoming Resource Adequacy Compliance Year and may study whether the Generating Unit is needed for reliability by the end of the following Resource Adequacy Compliance Year. If the CAISO finds that a retiring Generating Unit is needed for reliability in either the upcoming Resource Adequacy Compliance Year or by the end of the following Resource Adequacy Compliance Year, the CAISO will grant the Generating Unit an RMR designation for the upcoming Resource Adequacy Compliance Year at the next feasible CAISO Governing Board meeting, conditioned on the Generating Unit not being shown on annual Resource Adequacy showings for the upcoming Resource Adequacy Compliance Year. If the CAISO finds a mothballing Generating Unit is needed for reliability in the upcoming Resource Adequacy Compliance Year, the CAISO will grant the Generating Unit an RMR

designation for the upcoming Resource Adequacy Compliance Year at the next feasible CAISO Governing Board meeting, conditioned on the Generating Unit not being shown on annual Resource Adequacy showings for the upcoming Resource Adequacy Compliance Year.

If the unit owner of a Resource Adequacy Resource provides notice after the deadline specified in the applicable Business Practice Manual, the CAISO will inform the resource of the study results 60 days prior to expiration of the Resource Adequacy contract or 90 days from the date of the notice, whichever is later.

(c) If multiple Generating Units file the requisite notice with the CAISO and can meet the reliability need identified by the CAISO, but the CAISO does not need all of the Generating Units to meet the reliability need, the CAISO will ask each unit owner to submit a proposed annual fixed requirement for its Generating Unit plus a total cost for Planned Capital Items pursuant to the rate schedules included in the pro forma RMR Contract. If the Generating Unit that would receive an RMR Contract based on cost-effectiveness criteria faces use limitations such that the unit, in the CAISO's reasonable discretion, poses the risk of being unavailable to fully meet the reliability need identified by the CAISO, then the CAISO may at its reasonable discretion, and giving due regard for meeting cost-effectiveness considerations, instead grant the designation to another unit that fully meets the reliability need. In exercising this discretion, the CAISO will not unduly discriminative against units with use-limitations. If more than one Generating Unit remain that can meet such criteria, then the CAISO will determine which Generating Unit(s) receives an RMR designation by selecting the Generating Unit(s) with the lowest combined proposed costs for RMR service including Planned Capital Items for the next RMR Contract Year provided that if the total costs of two or more Generating Units are within ten percent of each other, then the CAISO will grant the designation in its discretion based on the following criteria: (1) relative effectiveness of the Generating Units in meeting local and/or zonal constraints or other CAISO system needs; and (2) relative operating characteristics of the Generating Units including dispatch ability, ramp

rate, and load following capability. A designated Generating Unit will not be able to propose to FERC – and will not be compensated by the CAISO for any costs higher than – its proposed annual fixed cost revenue requirement, plus any Planned Capital Items provided to the CAISO, respectively. The RMR Owner will still be allowed to recover any costs for items not covered in its proposal, as permitted by the RMR Contract.

### 41.3 Reliability Studies and Determination of RMR Status

In addition to the Local Capacity Technical Study under 40.3.1, the CAISO may perform additional technical studies, as necessary, to ensure compliance with Reliability Criteria. Although the CAISO may base an RMR designation on the Local Capacity Technical Study, the CAISO does not use its RMR authority to address Resource Adequacy deficiencies. The CAISO will then determine which resources it requires to continue to be Reliability Must-Run Resources, which resources it no longer requires to be Reliability Must-Run Resources and which Generating Units it requires to become the subject of a Reliability Must-Run Contract which had not previously been so contracted to the CAISO. When making this determination, the CAISO will be evaluating whether there are any more cost-effective options that are available or may be made available to avoid the need for a Reliability Must-Run Contract.

### 41.4 [Not Used]

### 41.5 RMR Dispatch

#### 41.5.1 Day-Ahead and RTM RMR Dispatch

RMR Resources will be subject to all of the availability, dispatch, testing, reporting, verification, and any other applicable requirements imposed under Section 40.6 or Section 40.10.6, as applicable to specific types of Resource Adequacy Resources identified in Resource Adequacy Plans and Flexible RA Capacity resources identified in Resource Flexible RA Capacity Plans. RMR Resources will meet the Day-Ahead availability requirements specified in Section 40.6, the Real-Time availability requirements specified in Section 40.6.2, and the Day-Ahead and Real-Time availability requirements specified under Section 40.10.6.1 for the highest Flexible Capacity Category for which the unit qualifies under Section 40.10.3. Also in accordance with those requirements, RMR Resources that meet the definition of Short Start Units, will be obligated to meet the availability requirements of Section 40.6.2, RMR Resources that meet the definition of Long Start Units will have the rights and obligations specified in Section 40.6.2. If the CAISO

has not received an Economic Bid or Self-Schedule for capacity from an RMR Resource, the CAISO will utilize a Generated Bid in accordance with the procedures specified in Section 40.6.8. In addition to Energy Bids, RMR Resources will submit Ancillary Services Bids for the capacity to the extent the resource is certified to provide Ancillary Service.

#### 41.5.2 RMR Payments

RMR Resources will be paid in accordance with the RMR Contract and Sections 11.13 and 11.18.6.

#### 41.5.3 Provisions of Ancillary Services and other Reliability Services

The CAISO may call upon RMR Resources for Ancillary Services or any other reliability service that the RMR Resource is contracted to provide in any amounts and at any time that the CAISO has determined is necessary.

### 41.6 [Not Used]

#### 41.6.1 [Not Used]

#### 41.6.2 [Not Used]

#### 41.6.3 [Not Used]

#### 41.6.4 [Not Used]

#### 41.6.5 [Not Used]

#### 41.6.6 [Not Used]

### 41.7 Non-Availability Charges and Availability Incentive Payments

The provisions of Section 40.9 applicable to resources providing Resource Adequacy Capacity and Flexible RA Capacity also apply to RMR Resources. RMR Resources will face a resource-specific Resource Adequacy Availability Incentive Mechanism price under Section 40.9.6. The resource-specific price will be the price that the resources is being paid by the CAISO ($kW/month) under the RMR Contract. Resource Adequacy Availability Incentive Mechanism payments to RMR Resources will be capped at the general Resource Adequacy Availability Incentive Mechanism rate. RMR Resources can provide RA Substitute Capacity based on the same rules applicable to Resource Adequacy Resources under Section 40.9.

### 41.8 Allocating Resource Adequacy Credits for RMR Designations

The CAISO will provide Resource Adequacy credits to the Scheduling Coordinators of Load-Serving Entities that serve load in the applicable TAC Area(s) in which the need for the RMR Contract arose equal to the Load-Serving Entity's pro rata share of the eligible net qualifying capacity of the RMR Resource, which shall be based upon each Load-Serving Entity's proportionate share of the Load-Serving Entity's applicable TAC Area Load at the time of the CAISO's annual coincident Peak Demand set forth in the annual Peak Demand Forecast for the next Resource Adequacy Compliance Year. The credited amount will be broken down into monthly values. Each year, the CAISO will provide information to the CPUC regarding the allocation of Resource Adequacy credits to CPUC-jurisdictional Load Serving Entities to allow the CPUC to determine whether the Load Serving Entity should receive the Resource Adequacy credits the CAISO has allocated. The CAISO will provide that same information to any Local Regulatory Authority that has designated a CPE to procure RA Capacity on behalf of a Load Serving Entity under that Local Regulatory Authority's jurisdiction. The CPUC and any other Local Regulatory Authority that is so notified by the CAISO may reallocate the credits among its jurisdictional Load Serving Entities and any CPEs procuring capacity on behalf of those jurisdictional Load Serving Entities. If a Local Regulatory Authority notifies the CAISO of any adjusted initial allocation or subsequent reallocation of RMR credits, the CAISO will reflect the revised allocation in its systems prospectively at the next practicable opportunity. A Local Regulatory Authority's subsequent reallocation of RMR credits among its jurisdictional Load Serving Entities or CPEs may not exceed the total of the initial RMR credit provided by the CAISO to the Scheduling Coordinators for the Load Serving Entities under the jurisdiction of the given Local Regulatory Authority.

### 41.9 Allocation of Reliability Must-Run Contract Costs

As specified in Section 11.13.7, the CAISO will allocate Reliability Must-Run costs not recovered through market revenues to the Scheduling Coordinators for Load-Serving Entities that serve load in the TAC Area(s) in which the need for the RMR Contract arose. These amounts paid will be allocated to each Scheduling Coordinator based on the pro-rata share of each Load-Serving Entity's TAC Area Metered Demand to total metered Demand recorded in the CAISO settlement system for the actual days of any settlement month period for which the RMR Contract was in effect.

#### 41.9.1 [Not Used]

## 42. Adequacy of Facilities to Meet Applicable Reliability Criteria

### 42.1 Generation Planning Reserve Criteria

Generation planning reserve criteria shall be met as follows:

**42.1.1** On an annual basis, the CAISO shall prepare a forecast of weekly Generation capacity and weekly peak Demand on the CAISO Controlled Grid. This forecast shall cover a period of twelve months and be posted on the CAISO Website and the CAISO may make the forecast available in other forms at the CAISO's option.

#### 42.1.2 Applicable Reliability Criteria Met in Peak Demand

If the forecast shows that the Applicable Reliability Criteria can be met during peak Demand periods, then the CAISO shall take no further action.

#### 42.1.3 Applicable Reliability Criteria Not Met in Peak Demand

If the forecast shows that the Applicable Reliability Criteria cannot be met during peak Demand periods, then the CAISO shall facilitate the development of market mechanisms to bring the CAISO Controlled Grid during peak periods into compliance with the Applicable Reliability Criteria (or such more stringent criteria as the CAISO may impose). The CAISO shall solicit bids in the form of Ancillary Services, short-term Generation supply contracts of up to one (1) year with Generators, and Load curtailment contracts giving the CAISO the right to reduce the Demands of those parties that win the contracts when there is insufficient Generation capacity to satisfy those Demands in addition to all other Demands. The Load curtailment contracts shall provide that the CAISO's curtailment rights can only be exercised after all available Generation capacity has been fully utilized unless the exercise of such rights would allow the CAISO to satisfy the Applicable Reliability Criteria at lower cost, and the curtailment rights shall not be exercised to stabilize or otherwise influence prices for power in the Energy markets.

#### 42.1.4 Lowest Cost Bids Satisfying Applicable Reliability Criteria

If Ancillary Services contracts, short-term Generation supply contracts, or Load curtailment contracts are required to meet Applicable Reliability Criteria, the CAISO shall select the bids that permit the satisfaction of those Applicable Reliability Criteria at the lowest cost.

### 42.1.5 CAISO to Take Necessary Steps to Ensure Criteria Compliance

Notwithstanding the foregoing, if the CAISO concludes that it may be unable to comply with the Applicable Reliability Criteria, the CAISO shall, acting in accordance with Good Utility Practice, take such steps as it considers to be necessary to ensure compliance, including the negotiation of contracts through processes other than competitive solicitations. These steps can include the negotiation of contracts on a Real-Time basis for Generation, Ancillary Services, or unloaded resource capacity to meet Applicable Reliability Criteria. Unless otherwise specified, the contract price for Ancillary Services or unloaded resource capacity to meet Applicable Reliability Criteria is the applicable Fifteen-Minute Market Ancillary Service Marginal Price.

### 42.1.6 Long Term Forecast for Information Purposes

The CAISO may, in addition to the required annual forecast, publish a forecast of the peak Demands and Generation resources for two or more additional years. This forecast would be for information purposes to allow Market Participants to take appropriate steps to satisfy the Applicable Reliability Criteria, and would not be used by the CAISO to determine whether additional resources are necessary.

### 42.1.7 Reliance on Market Forces to Maximize Possible Extent

In fulfilling its requirement to ensure that the applicable Generation planning reserve criteria are satisfied, the CAISO shall rely to the maximum extent possible on market forces.

### 42.1.8 Allocation of Costs Incurred by CAISO in Trading Hour to SCs

Except where and to the extent costs incurred by the CAISO for any contract entered into under Section 42.1.5 are recovered from Scheduling Coordinators pursuant to Sections 11.5.8, 11.10 or 42.1.9, all costs incurred by the CAISO in any Trading Hour shall be charged to each Scheduling Coordinator pro rata based upon the same proportion as the Scheduling Coordinator’s Measured Demand bears to the total Measured Demand served in that hour.

### 42.1.9 Costs for Difference in Schedules and Real-Time Deviations

Costs incurred by the CAISO pursuant to any contract entered into under this Section for resources to meet any portion of the anticipated difference between forward Schedules and the Real-Time deviations from those Schedules shall be charged to each Scheduling Coordinator pro rata based upon the same proportion as the Scheduling Coordinator’s obligation for RUC Availability Payments.

## 42.2 Transferred Frequency Response

### 42.2.1 Procurement of Transferred Frequency Response

If the CAISO concludes that it may be unable to provide sufficient frequency response consistent with Applicable Reliability Criteria, the CAISO may, acting in accordance with Good Utility Practice, negotiate contracts for Transferred Frequency Response. The CAISO will solicit bids for contracts for Transferred Frequency Response. The CAISO shall select the bids that permit the CAISO to satisfy Applicable Reliability Criteria at lowest cost consistent with the seller's capability to provide Transferred Frequency Response and not to exceed the estimated cost of satisfying Applicable Reliability Criteria using additional procurement of Regulation Up.

### 42.2.2 Allocation of Transferred Frequency Response Costs Incurred

The costs incurred by the CAISO for any contract for Transferred Frequency Response entered into under Section 42.2.1 are recovered from Scheduling Coordinators pursuant to Section 11.34.

**43. Not Used**

## 43A. Capacity Procurement Mechanism

### 43A.1 Applicability

This Section 43A shall apply to all designations of Eligible Capacity to provide CPM Capacity services under the CPM that commence on or after November 1, 2016.

### 43A.2 Capacity Procurement Mechanism Designation

The CAISO shall have the authority to designate Eligible Capacity to provide CPM Capacity services under the CPM to address the following circumstances, as discussed in greater detail in Section 43A:

1. Insufficient Local Capacity Area Resources in an annual or monthly Resource Adequacy Plan;
2. Collective deficiency in Local Capacity Area Resources;
3. Insufficient Resource Adequacy Resources in an LSE's annual or monthly Resource Adequacy Plan;
4. A CPM Significant Event;
5. A reliability or operational need for an Exceptional Dispatch CPM;
6. A cumulative deficiency in the total Flexible RA Capacity included in the annual or monthly Flexible RA Capacity Plans, or in a Flexible Capacity Category in the monthly Flexible RA Capacity Plans.

#### 43A.2.1 SC Failure to Show Sufficient Local Capacity Area Resources

##### 43A.2.1.1 Annual Resource Adequacy Plan

Where a Scheduling Coordinator fails to demonstrate in an annual Resource Adequacy Plan, submitted separately for each represented LSE or CPE, procurement of each LSE's or CPE's share of Local Capacity Area Resources (irrespective of status as Listed Local RA Capacity), as determined in Section 40.3.2 for each month of the following Resource Adequacy Compliance Year, the CAISO shall have the authority to designate CPM Capacity; provided, however, that the CAISO shall not designate CPM Capacity under this Section 43A.2.1.1 until after the Scheduling Coordinator has had the opportunity to cure the deficiency set forth in Section 40.7. The CAISO's authority to designate CPM Capacity under this Section 43A.2.1.1 is to ensure that each Local Capacity Area in a TAC Area in which the LSE or CPE has a Local Capacity Area Resource obligation has Local Capacity Area Resources in the amounts and

locations necessary to comply with the Local Capacity Technical Study criteria provided in Section 40.3.1.1, after assessing the effectiveness of Generating Units under RMR Contracts, if any, and all Resource Adequacy Resources reflected in all submitted annual Resource Adequacy Plans and any supplements thereto, as may be permitted by the CPUC, Local Regulatory Authority, or federal agency and provided to the CAISO in accordance with Section 40.7, whether or not such Generating Units under RMR Contracts and Resource Adequacy Resources are located in the applicable Local Capacity Area.

**43A.2.1.2 Monthly Resource Adequacy Plan**

Where a Scheduling Coordinator fails to demonstrate in a monthly Resource Adequacy Plan, submitted separately for each represented LSE or CPE, procurement of each LSE's or CPE's share of Local Capacity Area Resources (irrespective of status as Listed Local RA Capacity), as determined in Section 40.3.2 for the reported month, the CAISO shall have the authority to designate CPM Capacity; provided, however, that the CAISO shall not designate CPM Capacity under this Section 43A.2.1.2 until after the Scheduling Coordinator has had the opportunity to cure the deficiency as set forth in Section 40.7. In no case is the CAISO authorized to designate CPM Capacity under this Section 43A.2.1.2 solely because a monthly Resource Adequacy Plan demonstrates procurement of a Local Capacity Area Resource that is on a Maintenance Outage at some point during the applicable month. The CAISO's authority to designate CPM Capacity under this Section 43A.2.1.2 is to ensure that each Local Capacity Area in a TAC Area in which the LSE or CPE has a Local Capacity Area Resource obligation has Local Capacity Area Resources in the amounts and locations necessary to comply with the Local Capacity Technical Study criteria provided in Section 40.3.1.1, after assessing the effectiveness of all Generating Units under RMR Contracts, if any, and all Resource Adequacy Resources reflected in all submitted monthly Resource Adequacy Plans and any supplements thereto, as may be permitted by the CPUC, Local Regulatory Authority, or federal agency and provided to the CAISO in accordance with Section 40.7.

**43A.2.2 Collective Deficiency in Local Capacity Area Resources**

The CAISO shall have the authority to designate CPM Capacity where the Local Capacity Area Resources (irrespective of status as Listed Local RA Capacity) specified in the annual Resource Adequacy Plans of all applicable Scheduling Coordinators, after the opportunity to cure under Section 43A.2.2.1 has been exhausted, fail to ensure compliance in one or more Local Capacity Areas with the

Local Capacity Technical Study criteria provided in Section 40.3.1.1, regardless of whether such resources satisfy, for the deficient Local Capacity Area, the minimum amount of Local Capacity Area Resources identified in the Local Capacity Technical Study, and after assessing during all hours the effectiveness of Generating Units under RMR Contracts, if any, and all Resource Adequacy Resources reflected in all submitted annual Resource Adequacy Plans, whether or not such Generating Units under RMR Contracts and Resource Adequacy Resources are located in the applicable Local Capacity Area. The CAISO may, pursuant to this Section 43A.2.2, designate CPM Capacity in an amount and location sufficient to ensure compliance during all hours with the Reliability Criteria applied in the Local Capacity Technical Study.

#### 43A.2.2.1 LSE and CPE Opportunity to Resolve Collective Deficiency in Local Capacity Area Resources

Where the CAISO determines that a need for CPM Capacity exists under Section 43A.2.2, but prior to any designation of CPM Capacity, the CAISO shall issue a Market Notice identifying the deficient Local Capacity Area and the quantity of capacity that would permit the deficient Local Capacity Area to comply with the Local Capacity Technical Study criteria provided in Section 40.3.1.1 and, where only specific resources are effective to resolve the Reliability Criteria deficiency, the CAISO shall provide the identity of such resources. Any Scheduling Coordinator for a LSE or CPE may submit a revised annual Resource Adequacy Plan within thirty (30) days of the beginning of the Resource Adequacy Compliance Year demonstrating procurement of additional Local Capacity Area Resources consistent with the Market Notice issued under this Section.

Any Scheduling Coordinator that provides such additional Local Capacity Area Resources consistent with the Market Notice under this Section shall have its share of any otherwise applicable CPM procurement costs under Section 43A.8.3 reduced on a proportionate basis. If the full quantity of capacity is not reported to the CAISO under revised annual Resource Adequacy Plans in accordance with this Section, the CAISO may designate CPM Capacity sufficient to alleviate the deficiency.

#### 43A.2.3 SC Failure to Show Sufficient Resource Adequacy Resources

The CAISO shall have the authority to designate CPM Capacity where a Scheduling Coordinator fails to demonstrate in an annual or monthly Resource Adequacy Plan, submitted separately for each

represented LSE, procurement of sufficient Resource Adequacy Resources to comply with each LSE's annual and monthly Demand and Reserve Margin requirements under Section 40; provided that the CAISO shall not designate CPM Capacity under this Section 43A.2.3 until after the Scheduling Coordinator has had the opportunity to cure the deficiency as set forth in Section 40.7; provided further that the CAISO shall not designate CPM Capacity under this Section 43A.2.3 unless there is an overall net deficiency in meeting the total annual or monthly Demand and Reserve Margin requirements, whichever is applicable, after taking into account all LSE demonstrations in their annual or monthly Resource Adequacy Plans. Furthermore, in no case is the CAISO authorized to designate CPM Capacity under this Section 43A.2.3 solely because a monthly Resource Adequacy Plan demonstrates procurement of a Resource Adequacy Resource that is on a Maintenance Outage at some point during the applicable month.

**43A.2.4 CPM Significant Events**

The CAISO may designate CPM Capacity to provide service on a prospective basis following a CPM Significant Event, to the extent necessary to maintain compliance with Reliability Criteria and taking into account the expected duration of the CPM Significant Event.

**43A.2.4.1 Quantity of Capacity included in a Significant Event CPM Designation and Change in Status as Committed RA Capacity or RMR Capacity**

**43A.2.4.1.1 Other Pre-existing and Effective Capacity Obligations**

A resource's capacity may already be Committed RA Capacity or RMR Capacity at the time a resource's CPM Significant Event designation becomes effective. If the amount of that pre-existing and effective obligation to serve as Committed RA Capacity or RMR Capacity is reduced during the term of the resource's CPM Significant Event designation other than because of an Outage for which the resource secures RA Substitute Capacity, then the CAISO will increase the CPM designation by the amount, if any, necessary to ensure that the post-reduction Committed RA Capacity and/or RMR Capacity is not less than PMin. The CAISO does not increase the CPM designation quantity pursuant to this Section 43A.2.4.1.1 due to a pre-existing capacity obligation other than an obligation to be Committed RA Capacity or RMR Capacity.

**43A.2.4.1.2 Other Pre-existing but not yet Effective Capacity Obligations**

During the term of a resource's CPM Significant Event designation, a resource may have a pre-existing but not yet effective obligation to be Committed RA Capacity or RMR Capacity. Upon that pre-existing obligation to be Committed RA Capacity or RMR Capacity becoming effective, the CAISO reduces the CPM Significant Event designation by the amount of pre-existing obligation from the effective date through the earlier of the: (a) expiration of the CPM Significant Event designation term; or (b) expiration of the term of the pre-existing obligation to be Committed RA Capacity or RMR Capacity.

The CAISO does not reduce the CPM Significant Event designation quantity pursuant to this Section 43A.2.4.1.2 because of either a: (i) pre-existing obligation to be Committed RA Capacity or RMR Capacity that already is in effect at the start of the CPM Significant Event designation term; or (ii) pre-existing but not yet effective capacity obligation other than an obligation to be Committed RA Capacity or RMR Capacity.

#### 43A.2.4.1.3 New Capacity Obligations

During the term of a resource's CPM Significant Event designation, a resource may enter a new obligation to be Committed RA Capacity or RMR Capacity that becomes effective during the term of the CPM Significant Event designation. Upon that new capacity obligation becoming effective, the CAISO reduces the CPM Significant Event designation by the amount of new capacity obligation from the effective date through the earlier of the: (a) expiration of the CPM Significant Event designation term; or (b) expiration of the term of the new obligation to be Committed RA Capacity or RMR Capacity. Provided, however, that during the term of a CPM Significant Event designation, a resource may not enter new obligations to be either Substitute RA Capacity or capacity outside the CAISO Balancing Authority Area that become effective during the term of the CPM Significant Event designation if the existing obligations to be Committed RA Capacity and RMR Capacity plus the quantity of the new obligations would exceed the resource's Net Qualifying Capacity.

### 43A.2.5 Exceptional Dispatch CPM

The CAISO shall designate as CPM Capacity to provide service on a prospective basis the capacity of a resource that responds to an Exceptional Dispatch if the Exceptional Dispatch is issued pursuant to Section 34.11.1, subsections (6), (9) or (10) of Section 34.11.2, or Section 34.11.3, unless the Exceptional Dispatch directs the curtailment or shut down of the resource.

**43A.2.5.1 [Not Used]**

**43A.2.5.2 Quantity of Capacity included in an Exceptional Dispatch CPM Designation**

**43A.2.5.2.1 Exceptional Dispatch of Eligible Capacity**

If Eligible Capacity receives an Exceptional Dispatch CPM designation under Section 43A.2.5, then the CAISO shall designate as CPM Capacity the greater of the PMin of the resource providing the capacity or the quantity of capacity needed from the resource providing the capacity (beyond whatever quantity of capacity is already Committed RA Capacity, capacity subject to a RMR Contract, or has been subject to a self-schedule or market-based commitment at the time of the Exceptional Dispatch) to address the reliability issue as determined in an engineering assessment.

For designations made in the post-day ahead timeframe, the CAISO will make an initial determination of the quantity of Exceptional Dispatch CPM Capacity and will subsequently make a post-day ahead reliability assessment of the amount of capacity needed to address the reliability issue, as set forth in the Business Practice Manuals. If the post-day ahead reliability assessment shows that no additional Exceptional Dispatch CPM Capacity is needed from the resource to address the reliability issue, the resource will be compensated based on the initial quantity of Exceptional Dispatch CPM Capacity designated. If the post-day ahead reliability assessment shows that additional Exceptional Dispatch CPM Capacity is needed from the resource to address the reliability issue, the CAISO will designate the incremental quantity of capacity, will treat the initial and incremental quantities of the Exceptional Dispatch CPM Capacity as a single designation effective as of the date of the initial designation, and will compensate the resource based on the sum of the initial and incremental quantities of the Exceptional Dispatch CPM Capacity for the term of the designation. Any incremental Exceptional Dispatch CPM Capacity designated under this section does not result in a new thirty (30) day term or sixty (60) -day term, as applicable.

**43A.2.5.2.2 [Not Used]**

**43A.2.5.2.3 Subsequent Exceptional Dispatch**

If the CAISO, during the term of a resource's Exceptional Dispatch CPM designation, issues a subsequent Exceptional Dispatch to the resource that exceeds the sum of the resource's CPM Capacity and RA Capacity, the subsequent Exceptional Dispatch CPM Capacity shall equal the difference between

the quantity of capacity needed from the resource to address the reliability issue, as determined in an engineering assessment conducted as set forth in the Business Practice Manuals, and the sum of the resource's CPM Capacity and RA Capacity, but not to exceed the resource's Eligible Capacity. The increase will be effective for the remainder of the initial Exceptional Dispatch CPM Term and retroactively to the beginning of the initial Exceptional Dispatch CPM Term or the first day of the month in which the increase occurs, whichever is later. Any incremental Exceptional Dispatch issued within any Exceptional Dispatch CPM Term does not result in a new 30-day term or 60-day term, as applicable. The total Exceptional Dispatch CPM Capacity shall be compensated based on the results of the Intra-monthly CSP in which the initial Exceptional Dispatch CPM Capacity was designated as CPM Capacity.

**43A.2.5.2.4 Change in Status as Committed RA Capacity or RMR Capacity**

**43A.2.5.2.4.1 Other Pre-existing and Effective Capacity Obligations**

A resource's capacity may already be Committed RA Capacity or RMR Capacity at the time a resource's Exceptional Dispatch CPM designation becomes effective. If the amount of that pre-existing and effective obligation to serve as Committed RA Capacity or RMR Capacity is reduced during the term of the resource's Exceptional Dispatch CPM designation other than because of an Outage for which the resource secures RA Substitute Capacity, then the CAISO will increase the CPM designation by the amount, if any, necessary to ensure that the post-reduction Committed RA Capacity and/or RMR Capacity is not less than PMin. The CAISO does not increase the CPM designation quantity pursuant to this Section 43A.2.5.2.4.1 due to a pre-existing capacity obligation other than an obligation to be Committed RA Capacity or RMR Capacity.

**43A.2.5.2.4.2 Other Pre-existing but not yet Effective Capacity Obligations**

During the term of a resource's Exceptional Dispatch CPM designation, a resource may have a pre-existing but not yet effective obligation to be Committed RA Capacity or RMR Capacity. Upon that pre-existing obligation to be Committed RA Capacity or RMR Capacity becoming effective, the CAISO reduces the Exceptional Dispatch CPM designation by the amount of pre-existing obligation from the effective date through the earlier of the: (a) expiration of the Exceptional Dispatch CPM designation term; or (b) expiration of the term of the pre-existing obligation to be Committed RA Capacity or RMR Capacity. The CAISO does not reduce the Exceptional Dispatch CPM designation quantity pursuant to this Section

43A.2.5.2.4.2 because of either a: (i) pre-existing obligation to be Committed RA Capacity or RMR Capacity that already is in effect at the start of the Exceptional Dispatch CPM designation term; or (ii) pre-existing but not yet effective capacity obligation other than an obligation to be Committed RA Capacity or RMR Capacity.

**43A.2.5.2.4.3 New Capacity Obligations**

During the term of a resource's Exceptional Dispatch CPM designation, a resource may enter a new obligation to be Committed RA Capacity or RMR Capacity that becomes effective during the term of the Exceptional Dispatch CPM designation. Upon that new capacity obligation becoming effective, the CAISO reduces the Exceptional Dispatch CPM designation by the amount of new capacity obligation from the effective date of the new obligation through the earlier of the: (a) expiration of the Exceptional Dispatch CPM designation term; or (b) expiration of the term of the new obligation to be Committed RA Capacity or RMR Capacity. Provided, however, that during the term of an Exceptional Dispatch CPM designation, a resource may not enter new obligations to be either Substitute RA Capacity or capacity outside the CAISO Balancing Authority Area that become effective during the term of the Exceptional Dispatch CPM designation if the existing obligations to be Committed RA Capacity and RMR Capacity plus the quantity of the new obligations would exceed the resource's Net Qualifying Capacity.

***43A.2.5.3 Consequences of Declining an Exceptional Dispatch CPM Designation***

*If capacity that was not offered into the Intra-monthly CSP is offered an Exceptional Dispatch CPM designation and declines the designation, then the resource shall be compensated based on supplemental revenues under Sections 39.10 and 11.5.6.7.*

**43A.2.6 [Not Used]**

**43A.2.7 Cumulative Deficiency in Flexible RA Capacity**

(a) **Annual Plans.** A cumulative deficiency will exist in the annual LSE Flexible RA Capacity Plans if the total amount of Flexible RA Capacity shown in the plans of all Load Serving Entities, based on the Effective Flexible Capacity value determined by the CAISO for each resource, is less than 90 percent of the annual Flexible Capacity Need determined by the CAISO pursuant to Section 40.10.1.

(b) **Monthly Plans.** A cumulative deficiency will exist in the monthly Flexible RA Capacity

Plans –

(1) if the total amount of Flexible RA Capacity shown in the plans of all Load Serving Entities, limited on a collective basis to the maximum monthly requirement for each category and based on the Effective Flexible Capacity value determined by the CAISO for each resource, is less than the applicable monthly Flexible Capacity Need determined by the CAISO pursuant to Section 40.10.1; or

(2) if the total amount of Flexible RA Capacity shown in the base ramping Flexible Capacity Category in the plans of all Load Serving Entities, based on the Effective Flexible Capacity value determined by the CAISO for each resource, on a collective basis is less than the minimum monthly requirement for the base ramping Flexible Capacity Category determined by the CAISO pursuant to Section 40.10.1.4.

**43A.2.7.1 Final Opportunity to Resolve Deficiency**

If the processes set forth in Section 40.10.5.4, 40.10.5.5, and 40.10.5.6 do not fully resolve a deficiency or discrepancy in the annual or monthly Flexible RA Capacity Plans, and if the CAISO determines that a cumulative deficiency exists under Section 43A.2.7 and that there is a need for Flexible Capacity CPM, but prior to issuing a Flexible Capacity CPM designation for the cumulative deficiency –

(1) the CAISO shall (i) issue a Market Notice that describes the cumulative deficiency and specifies the quantity of Flexible RA Capacity necessary to meet the applicable Flexible Capacity Need, and (ii) notify the Load Serving Entities that are deficient and the Local Regulatory Authority with jurisdiction over each deficient Load Serving Entity;

(2) a Scheduling Coordinator for a Load Serving Entity that is deficient, or for a Load Serving Entity subject to the jurisdiction of a Local Regulatory Authority that is deficient, may submit a revised annual or monthly Flexible RA Capacity Plan to demonstrate procurement of additional Flexible RA Capacity consistent with the Market Notice issued under this Section; but shall not include any other revisions in a plan submitted under this Section. A revised annual Flexible RA Capacity Plan must be submitted no later than December 31 for the following calendar year. A revised monthly Flexible RA Capacity

Plan must be submitted no less than five days prior to the first day of the applicable month.

**43A.2.7.2 Designation**

After the opportunity to resolve the cumulative deficiency under Section 40.10.5.4 has been exhausted, if total required Flexible RA Capacity reported to the CAISO in revised annual or monthly Flexible RA Capacity Plans does not meet the Flexible RA Capacity Need in accordance with this Section, the CAISO may issue a Flexible Capacity CPM designation in an amount sufficient to alleviate the deficiency. In no case, however, is the CAISO authorized to designate CPM Capacity under this Section 43A.2.7.2 solely because a monthly Resource Adequacy Plan demonstrates procurement of a Flexible RA Capacity resource that is on a Maintenance Outage at some point during the applicable month.

**43A.3 Terms of CPM Designation**

**43A.3.1 SC Annual Plan Failure to Show Local Capacity Area Resources**

CPM Capacity designated under Section 43A.2.1.1 shall have a minimum commitment term of one (1) month and a maximum commitment term of one (1) year, based on the period(s) of overall shortage as reflected in the annual Resource Adequacy Plans that have been submitted. The term of the designation may not extend into a subsequent Resource Adequacy Compliance Year.

**43A.3.2 SC Month Plan Failure to Show Local Capacity Area Resources**

CPM Capacity designated under Section 43A.2.1.2 shall have a minimum commitment term of one (1) month. The term of the designation may not extend into a subsequent Resource Adequacy Compliance Year.

**43A.3.3 Annual Plan Collective LCA Resources Insufficient**

CPM Capacity designated under Section 43A.2.2 shall have a minimum commitment term of one (1) month and a maximum commitment term of one year, based on the period(s) of overall shortage as reflected in the annual Resource Adequacy Plans that have been submitted. The term of the designation may not extend into a subsequent Resource Adequacy Compliance Year.

**43A.3.4 SC Failure to Show Sufficient Resource Adequacy Resources**

CPM Capacity designated under Section 43A.2.3 shall: (a) have a minimum commitment term of one (1) month and a maximum commitment term equal to the maximum annual procurement period established

by the Local Reliability Authority based on the period of the deficiency reflected in the annual Resource Adequacy Plan or (b) have a commitment term of one (1) month if the deficiency is in the monthly Resource Adequacy Plan. The term of the designation may not extend into a subsequent Resource Adequacy Compliance Year.

**43A.3.5 Term – CPM Significant Event**

CPM Capacity designated under Section 43A.2.4 shall have a default initial term of thirty (30) days. The Scheduling Coordinator for capacity that did not submit an offer to the CSP but can meet the minimum designation criteria may request a single continuous term shorter than thirty (30) days pursuant to the procedures established in the Business Practice Manual. If the CAISO designates such capacity requesting a shorter designation term, then the term of designation will be for the number of days specified in the Scheduling Coordinator's request.

If the CAISO determines that the CPM Significant Event is likely to extend beyond the thirty (30) day period, the CAISO may offer to extend the designation for another sixty (60) days to capacity that held an initial term of thirty (30) days. This offer of extension to the Scheduling Coordinator may be accepted or denied. If the Scheduling Coordinator declines an offer to extend the designation for an additional sixty (60) days, then the CAISO shall re-run the Intra-monthly CSP based on the existing offers. The Scheduling Coordinator for the resource declining an extension of the CPM designation shall be given the opportunity to provide an offer to that re-run Intra-monthly CSP, provided the offer is below the offer price at which its initial thirty (30) day designation was granted. If the Scheduling Coordinator accepts an offer to extend the designation for an additional sixty (60) days, then the CPM Capacity shall continue to be compensated on the same terms as it was during the initial thirty (30) day designation. During this additional sixty (60) day period, the CAISO will provide Market Participants with an opportunity to provide alternative solutions to meet the CAISO's operational and reliability needs in response to the CPM Significant Event, rather than rely on the CAISO's designation of capacity under the CPM. The CAISO shall consider and implement, if acceptable to the CAISO in accordance with Good Utility Practice, such alternative solutions provided by Market Participants in a timely manner. If Market Participants do not submit any alternatives to the designation of CPM capacity that are fully effective in addressing the deficiencies in Reliability Criteria resulting from CPM Significant Event, the CAISO shall extend the term

of the designation under Section 43A.2.4 for the expected duration of the CPM Significant Event. If the solutions offered by Market Participants are only partially effective in addressing the CAISO's operational and reliability needs resulting from the CPM Significant Event, the CAISO shall extend the designation under Section 43A.2.4 for the expected duration of the CPM Significant Event, but only as to the amount of CPM Capacity necessary to satisfy the CAISO's operational and reliability needs after taking into account the effective capacity provided by the alternative solution. If there is a reasonable alternative solution that fully resolves the CAISO's operational and reliability needs, the CAISO will not extend the designation under Section 43A.2.4.

**43A.3.6 Term – Exceptional Dispatch CPM**

The CAISO shall make an explicit determination for each initial Exceptional Dispatch CPM designation as to whether it was necessary to address an Exceptional Dispatch CPM System Reliability Need or an Exceptional Dispatch CPM Non-System Reliability Need. Exceptional Dispatch CPM Capacity designated under Section 43A.2.5 for an Exceptional Dispatch CPM System Reliability Need shall have an Exceptional Dispatch CPM Term of thirty (30) days. If the CAISO determines that the circumstances that led to the Exceptional Dispatch are likely to extend beyond the initial thirty (30) day period, the CAISO shall issue an Exceptional Dispatch CPM or other CPM designation for an additional thirty (30) days.

Exceptional Dispatch CPM Capacity designated under Section 43A.2.5 for an Exceptional Dispatch CPM Non-System Reliability Need shall have an Exceptional Dispatch CPM Term of sixty (60) days. If the CAISO determines that the circumstances that led to the Exceptional Dispatch are likely to extend beyond the initial sixty (60) day period, the CAISO shall issue an Exceptional Dispatch CPM or other CPM designation for an additional sixty (60) days.

**43A.3.7 [Not Used]**

**43A.3.8 Term – Flexible Capacity CPM Designation**

(a) **Annual Plan.** A Flexible Capacity CPM designation under Section 43A.2.7 for the failure to show sufficient Flexible RA Capacity in an annual Flexible RA Capacity Plan shall have a minimum commitment term of one month and a maximum commitment term of one year, based on the period(s) of overall shortage reflected in the annual plans. The term

of a Flexible Capacity CPM designation under this Section must begin and end during the same calendar year.

(b) **Monthly Plan.** A Flexible Capacity CPM designation under Section 43A.2.7 for the failure to show sufficient Flexible RA Capacity in a monthly Flexible RA Capacity Plan shall have a commitment term of one month. The term of a Flexible Capacity CPM designation under this Section must begin and end during the same calendar month.

## 43A.4 Selection of Eligible Capacity Under the CPM through Competitive Solicitation Processes (CSP) and General Eligibility Rules

In accordance with Good Utility Practice, the CAISO shall designate and compensate Eligible Capacity as CPM Capacity based on the results of either the Annual CSP, the Monthly CSP, or the Intra-monthly CSP.

The CAISO shall designate CPM Capacity through the Annual CSP to meet designations triggered under sections 43A.2.1.1, 43A.2.2, or 43A.2.3 (if the failure is to demonstrate sufficient Resource Adequacy capacity in an annual Resource Adequacy Plan), and 43A.2.7(a) (if the failure is to demonstrate sufficient Flexible Resource Adequacy capacity in an annual Flexible Resource Adequacy Plan).

The CAISO shall designate CPM Capacity through the Monthly CSP to meet designations triggered under sections 43A.2.1.2, 43A.2.3 (if the failure is to demonstrate sufficient Resource Adequacy capacity in a monthly Resource Adequacy Plan), or 43A.2.7(b) (if the failure is to demonstrate sufficient Flexible Resource Adequacy capacity in a monthly Flexible Resource Adequacy Plan).

The CAISO shall designate CPM Capacity through the Intra-monthly CSP to meet designations triggered under sections 43A.2.4 or 43A.2.5.

### 43A.4.1 Offer Rules to the CSPs

#### 43A.4.1.1 Price Component of a CSP Offer

Offers of capacity to a CSP shall contain a single price denoted in units of $/kW-month. The price offered into a CSP shall not be less than zero. Offer prices are subject to the CPM Soft Offer Cap. CPM Capacity will not be compensated by the CAISO at a rate higher than the CPM Soft Offer Cap unless a Resource Owner of Eligible Capacity makes the required resource-specific cost filing with FERC pursuant to Section 43A.4.1.1.1.

#### 43A.4.1.1.1 Exceeding CPM Soft Offer Cap through a Resource-Specific Cost Filing with FERC

A Scheduling Coordinator for a resource may offer a price in excess of the CPM Soft Offer Cap. The resource owner whose capacity is offered in excess of the CPM Soft Offer Cap must justify in a filing to FERC a price above the CPM Soft Offer Cap, which shall be determined in accordance with the following formula: fixed operation & maintenance costs, plus ad valorem taxes, plus insurance, provided such costs will be converted to a fixed $/kW-year amount. For a resource whose sales are under FERC jurisdiction that is providing CPM Capacity to be compensated at a rate higher than the CPM Soft Offer Cap, the resource owner must make a limited resource-specific filing before FERC to determine the just and reasonable capacity price for the resource as calculated under this formula. The resource owner must serve its filing on the CAISO within five business days of submitting its filing to FERC.

If the sales from the resource are not under the jurisdiction of FERC, the resource owner shall make a non-jurisdictional filing with FERC to determine the just and reasonable capacity price for the going forward costs for the resource as calculated in accordance with the following formula: fixed operation and maintenance costs, plus ad valorem taxes, plus insurance, provided such costs will be converted to a fixed $/kW-year amount. The resource owner must serve its filing on the CAISO within five business days of submitting its filing to FERC.

A resource owner may make a cost justification filing at FERC either before it offers a resource into the competitive solicitation process or after having capacity designated as CPM Capacity. If the resource owner has not made the cost justification filing before the capacity was designated as CPM Capacity, then the resource owner must make its cost justification filing with FERC within 30 days of the CPM designation. If the resource owner fails to make such cost justification filing within 30 days, then the CAISO shall deem the effective CPM Capacity price for the resource to be the CPM Soft Offer Cap. The resource owner may not propose – and shall not be compensated based upon – an offer price higher than the price submitted in its bid to the CAISO for the designated capacity.

A FERC-approved resource-specific CPM Capacity price shall remain in effect for the remainder of the calendar year in which it is approved and for the subsequent two calendar years, unless superseded by a subsequent FERC-approved CPM Capacity price during that period. Although a FERC-approved resource-specific CPM Capacity price will be denoted in units of $/kW-year, that $/kW-year figure will be

divided by 12 so that compensation will be in terms of $/kW-month.

A resource that has obtained the appropriate FERC authorization in response to the cost justification filing described in this Section 43A.4.1.1.1 for a rate higher than the CPM Soft Offer Cap is not precluded from submitting a bid into the competitive solicitation process that is below the FERC-authorized rate and, if selected pursuant to such a bid, will be compensated based on that lower bid.

**43A.4.1.1.2 Periodic Updates to the CPM Soft Offer Cap**

For the purposes of this Section 43A.4.1.1.2, the reference resource shall be a merchant-constructed mid-cost, 550 MW combined cycle with duct firing or similar advanced combined cycle resource.

The CAISO shall open a stakeholder process at least every four years to consider updating the CPM Soft Offer Cap. If the CEC has posted a new draft of its Cost of Generation Study and Model (or similar study or model) that includes results for the reference resource in the forty-six months since the last draft of the Cost of Generation Study and Model (or similar study or model) was published, then the stakeholder process will commence within 10 days of that posting. If the CEC has not posted draft results within that 46-month period, then the CAISO shall commence the stakeholder process by the end of that four-year review period and administer or commission a study of the levelized going-forward fixed costs of the reference resource. The CAISO shall use its best efforts to complete the stakeholder process within six (6) months of its commencement.

The stakeholder process shall consider whether the CPM Soft Offer Cap adequately reflects 120% of the levelized going-forward fixed costs of the reference resource at the time of the stakeholder initiative. The basis of such consideration shall be the final results from the CEC Cost of Generation Study and Model (or similar study or model). If final results are not available for use in the stakeholder initiative, then the CAISO shall use published draft results. If there are no final or draft CEC study results available, then the CAISO shall use the results of a study it administered or commissioned of the levelized going-forward fixed costs of the reference resource.

The stakeholder process also may consider, but would not reassess automatically, either what resource serves as the reference resource, the components of fixed costs that are considered in setting the CPM Soft Offer Cap, or the use of a 20% adder to costs to set the CPM Soft Offer Cap.

If the CAISO has determined through the stakeholder initiative that the value of the CPM Soft Offer Cap

warrants amendment, then, subject to any necessary action(s) by the CAISO Governing Board, the CAISO shall petition FERC under section 205 of the Federal Power Act to change the CPM Soft Offer Cap.

If the CAISO, through that section 205 filing, does not alter either the reference resource, the components of fixed costs that are considered in setting the CPM Soft Offer Cap, or the use of a 20% adder to costs to set the CPM Soft Offer Cap, then any party that wishes to challenge the CAISO's retention of those elements of the CPM Soft Offer Cap shall bear the burden of showing that maintaining the unaltered element would be unjust, unreasonable, unduly discriminatory or preferential, or otherwise contrary to law.

#### 43A.4.1.2 Quantity Component of a CSP Offer

Offers to a CSP shall contain a single quantity denoted in units of kW-month representing the quantity of capacity being offered as RA Capacity and a single quantity denoted in units of kW-month representing the quantity of capacity being offered as Flexible RA Capacity. The entire quantity of capacity included in a Scheduling Coordinator's offer must be capacity over which the Scheduling Coordinator either: (1) holds ownership or contractual rights to offer into a CSP; or (2) has been authorized to offer into a CSP by the entity that holds ownership or contractual rights to that capacity.

The quantity of capacity offered into a CSP from a generating resource located outside the CAISO Balancing Authority Area shall not exceed the lesser of: (1) the Pmax of the resource providing the capacity; and (2) the allocated import capability held by the Scheduling Coordinator of the resource less any capacity of the resource that is Committed RA Capacity for the term covered by the CSP to which the capacity has been offered. If an offer is for both Flexible Capacity and RA Capacity and the resource receives an annual or monthly CPM designation for one type of capacity, then in any following CSPs that overlap in time with the CPM designation, the CAISO, on behalf of the resource, automatically will offer the non-designated type of RA capacity into the overlapping CSP(s) at $0/kW-month up to the minimum of the amount available as non-RA capacity and the amount of capacity originally designated.

#### 43A.4.1.3 Exception to Offer Rules for Annual CSP – Different Prices for Different Months

A Scheduling Coordinator for Eligible Capacity may offer into the Annual CSP varying prices in the form of $/kW-month for different months of the Annual CSP if the Scheduling Coordinator wishes the CAISO to

consider varying offer prices for individual months in the Annual CSP.

### 43A.4.2 Administering the CSPs

#### 43A.4.2.1 Identifying Effective Resources

In making a CPM designation the CAISO shall first establish the minimum criteria needed to meet the requirements for the type of CPM to be issued to resolve the underlying reliability need. The CAISO shall then identify all resources with offers into the CSP that can meet the minimum criteria. In determining whether a particular resource can meet the minimum criteria, the CAISO shall consider how any known or scheduled outages on the resource during the potential CPM designation period would impact the resource's ability to meet the minimum criteria.

If there is insufficient capacity offered into the CSP to meet the minimum designation criteria, then the CAISO shall evaluate whether any Eligible Capacity not offered into the CSP would allow the CAISO to meet the minimum designation criteria. If the CAISO must designate capacity not offered in to the CSP to meet the minimum designation criteria, then for the purposes of operating the CSP, the CAISO shall consider the offer price for any such capacity to be the CPM Soft Offer Cap. A resource whose capacity was not offered into the CSP but nevertheless is deemed necessary to meet the minimum designation criteria shall have the option to request from FERC a resource-specific CPM Capacity price pursuant to Section 43A.4.1.1.1 or, in the case of a potential Exceptional Dispatch CPM, the resource's Scheduling Coordinator may decline the CPM designation and be paid under the supplemental revenues option pursuant to Section 39.10.

In the event that there is insufficient capacity to meet the minimum designation criteria from both resources offered into the CSP and resources not offered into the CSP, then the CAISO may reassess and lower the minimum criteria.

#### 43A.4.2.2 Minimizing the Overall Cost of Meeting the Reliability Need

Once the CAISO has identified the pool of resources that can meet the designation criteria, the CAISO shall then designate Eligible Capacity from that pool of resources in order to minimize the overall cost of meeting the designation criteria. Aside from considering the respective offer prices from the Eligible Capacity, as part of this cost minimization the CAISO also may consider: the quantity of a resource's available Eligible Capacity, based on a resource's PMin, relative to the remaining amount of capacity

needed; and the quantity of a resource's available Eligible Capacity, based on outages and substitute daily RA Capacity.

For a potential Exceptional Dispatch CPM, the CAISO also shall consider the overall costs to the CAISO of issuing the Exceptional Dispatch to RA Capacity rather than to Eligible Capacity. If the CAISO determines it would minimize overall costs to issue the Exceptional Dispatch to RA Capacity, then the CAISO shall issue the Exceptional Dispatch to RA Capacity and not designate Eligible Capacity as CPM Capacity to meet the designation criteria.

If capacity would receive a CPM designation based on the cost minimization criteria but the resource from which the capacity would be provided faces use limitations such that the capacity, in the CAISO's reasonable discretion, poses the risk of being unavailable to fully meet the reliability need creating the CPM event, then the CAISO may, at its reasonable discretion and giving due regard for meeting cost minimization considerations, not grant that capacity a CPM designation and instead grant the designation to the next-best capacity at meeting the CAISO cost minimization process defined in this Section 43A.4.2.2. In exercising this discretion, the CAISO shall not unduly discriminate against resources with use limitations.

Additionally, if capacity would receive a CPM designation based on the cost minimization criteria but the resource from which the capacity would be provided is already going to be RA Capacity at some point during the CPM designation period and, in the CAISO's reasonable discretion, poses the risk of the capacity being unavailable fully to meet the reliability need creating the need for a CPM designation, then the CAISO may, at its reasonable discretion and giving due regard for meeting cost minimization considerations, not grant that capacity a CPM designation and instead grant the designation to the next-best capacity at meeting the CAISO cost minimization process defined in this Section 43A.4.2.2.

**43A.4.2.3 Additional Permissible Considerations**

In either the Annual CSP or Monthly CSP, if two or more offers would meet the cost minimization criteria identified in Section 43A.4.2.2 equally, then the CAISO shall grant the designation in its discretion based on criteria A and B, below. In the Intra-monthly CSP, if two or more offers are within 10% of each other in terms of total cost to designate the capacity, then the CAISO shall grant the designation in its discretion based on criteria A and B, below.

*Criterion A* – Relative effectiveness of the resources in meeting local and/or zonal constraints or other ISO system needs.

*Criterion B* – Relative operating characteristics of the resources, including dispatchability, ramp rate, and load-following capability.

**43A.4.2.4 Timeline and Procedures for Annual CSP**

The CAISO shall conduct an initial offer period for the Annual CSP and an offer adjustment period for the Annual CSP according to the schedules published in the Business Practice Manual.

During the Annual CSP initial offer period Scheduling Coordinators shall have the opportunity to submit offers to the Annual CSP. Scheduling Coordinators submitting offers in the Annual CSP initial offer period that do not conform with the offer rules defined in Section 43A.4.1 shall have the opportunity to resubmit offers during the Annual CSP initial offer period.

During the Annual CSP offer adjustment period, Scheduling Coordinators have the option to remove capacity that was offered in the Annual CSP initial offer period or lower the offer price of capacity that was offered in the Annual CSP initial offer period. If an offer is withdrawn during the Annual CSP offer adjustment period, the Scheduling Coordinator for Eligible Capacity must provide a reason for the withdrawal. This information will be used by the CAISO for tracking and market evaluation purposes only.

After the Annual CSP offer adjustment period closes, the CAISO shall validate that capacity offered in the Annual CSP from a given resource is not on a Resource Adequacy Plan in any applicable month of the annual RA showing. As long as a resource has sufficient capacity between the relevant NQC or EFC and the amount shown on any Resource Adequacy Plan for any day for which it potentially would hold a CPM designation, this capacity is eligible to participate in the CSP. Upon completion of the validation process offers to the CSP cannot be removed or altered until after the Annual CSP is complete.

**43A.4.2.5 Timeline and Procedures for Monthly CSP**

The CAISO shall conduct an initial offer period for the Monthly CSP and an offer adjustment period for the Monthly CSP according to the schedules published in the Business Practice Manual.

During the Monthly CSP initial offer period Scheduling Coordinators shall have the opportunity to submit offers to the Monthly CSP. Scheduling Coordinators submitting offers in the Monthly CSP initial offer period that do not conform with the offer rules defined in Section 43A.4.1 shall have the opportunity to

resubmit offers during the Monthly CSP initial offer period.

During the Monthly CSP offer adjustment period, Scheduling Coordinators have the option to remove capacity that was offered in the Monthly CSP initial offer period or lower the offer price of capacity that was offered in the Monthly CSP initial offer period. If an offer is withdrawn during the Monthly CSP offer adjustment period, the Scheduling Coordinator for Eligible Capacity must provide a reason for the withdrawal. This information will be used by the CAISO for tracking and market evaluation purposes only.

After the Monthly CSP offer adjustment period closes, the CAISO shall validate that capacity offered in the Monthly CSP from a given resource is not Committed RA Capacity for that month. As long as a resource has sufficient capacity between the relevant NQC or EFC and the Committed RA Capacity amount for any day for which it potentially would hold a CPM designation, this capacity is eligible to participate in the CSP. The Monthly CSP validation process shall not validate whether the resource was or was not shown with overlapping capacity in an Annual Resource Adequacy Plan. Upon completion of the validation process offers to the CSP cannot be removed or altered until after the Monthly CSP is complete.

**43A.4.2.6 Timeline and Procedures for Intra-monthly CSP**

The CAISO shall conduct an offer period for the Intra-monthly CSP according to the schedule published in the Business Practice Manual.

During the Intra-monthly CSP offer period Scheduling Coordinators shall have the opportunity to submit offers to the Intra-monthly CSP. Scheduling Coordinators submitting offers in the Intra-monthly CSP offer period that do not conform with the offer rules defined in Section 43A.4.1 shall have the opportunity to resubmit offers during the Intra-monthly CSP offer period.

After the Intra-monthly CSP offer period closes Scheduling Coordinators have the option to remove capacity that was offered in the Intra-monthly CSP offer period or lower the offer price of capacity that was offered in the Intra-monthly CSP offer period.

After the Intra-monthly CSP offer period closes, on a day that an Exceptional Dispatch CPM or Significant Event CPM would be made, any offers in the system will be locked through the assessment and designation period. The CAISO shall validate that capacity offered in the Intra-monthly CSP from a given resource is not Committed RA Capacity on the day that the CPM designation would begin. Where an

Intra-monthly CSP would be conducted to grant an Exceptional Dispatch CPM, the offer price for any capacity offered from a resource that currently has Exceptional Dispatch CPM Capacity will be the offer price at which the existing Exceptional Dispatch CPM was granted. The CAISO will only grant an intra-monthly CPM to capacity that is not Committed RA Capacity on the day that the CPM designation would begin.

If an Exceptional Dispatch CPM is offered to a resource whose Scheduling Coordinator did not submit an offer to the Intra-monthly CSP, then the scheduling coordinator for that resource has 24 hours to reject the designation. If the resource rejects the designation, then the CAISO shall settle payments to the resource's Scheduling Coordinator under the supplemental revenues option per Section 39.10.

**43A.4.3 Designation Amount.**

While the CAISO does not have to designate the full capability of a resource, the CAISO may designate under the CPM an amount of CPM Capacity from a resource that exceeds the amount of capacity identified to ensure compliance with the Reliability Criteria set forth in Section 40.3 due to the PMin or other operational requirements/limits of a resource that has available capacity to provide CPM service. The CAISO shall not designate the capacity of a resource for an amount of capacity that is less than the resource's PMin.

**43A.4.3.1 Simultaneous Designations.**

In the event the CAISO determines that a CPM designation must be issued to resolve a collective deficiency of system RA Capacity under Section 43A.2.3 and that a Flexible Capacity CPM designation must be issued to resolve a cumulative deficiency of Flexible RA Capacity under Section 43A.2.7 for annual or monthly plans covering the same or overlapping time periods, the CAISO will apply the criteria in Section 43A.4.2 and endeavor to designate capacity that will be effective in resolving both underlying reliability needs –

(1) If the MW amount of the simultaneous or overlapping designation is sufficient to resolve both underlying reliability needs, no further designation of CPM Capacity will be issued.

(2) If the MW amount of the simultaneous or overlapping designation is not sufficient to resolve both underlying reliability needs, the CAISO may designate additional CPM Capacity to cover the remaining deficiency.

### 43A.5 Obligations of a Resource Designated Under the CPM

#### 43A.5.1 Availability Obligations.

CPM Capacity shall be subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed under Section 40.6 or Section 40.10.6 as applicable to Resource Adequacy Resources identified in Resource Adequacy Plans and Flexible RA Capacity resources identified in Resource Flexible RA Capacity Plans. In accordance with those requirements, CPM Capacity designated under the CPM shall meet the Day-Ahead availability requirements specified in Section 40.6.1 and the Real-Time availability requirements of Section 40.6.2, and Flexible Capacity CPM shall meet the Day-Ahead and Real-Time availability requirements specified in Section 40.10.6.1. If the CAISO has not received an Economic Bid or a Self-Schedule for CPM Capacity, the CAISO shall utilize a Generated Bid in accordance with the procedures specified in Section 40.6.8. In addition to Energy Bids, resources designated under the CPM shall submit Ancillary Service Bids for their CPM Capacity to the extent that the resource is certified to provide the Ancillary Service.

#### 43A.5.2 Obligation to Provide Capacity and Termination

The decision to accept a designation as CPM Capacity shall be voluntary for the Scheduling Coordinator for any resource. If the Scheduling Coordinator for a resource accepts a CPM designation, it shall be obligated to perform for the full quantity and full period of the designation with respect to the amount of CPM Capacity for which it has accepted a CPM designation. If the Scheduling Coordinator for a resource accepts a Flexible Capacity CPM designation, the resource shall be obligated to perform for the full quantity and full period of the designation, subject to the must-offer obligation in Section 40.10.6 that applies to the Flexible Capacity Category of the resource that was designated. Except as permitted under Section 43A.2.4.1 or Section 43A.2.5.2.4, a resource that accepts a CPM designation may not enter into any other new capacity obligations, whether those obligations are within or outside the CAISO Balancing Authority Area, that conflict with the resource's ability to meet its obligations to perform for the full quantity and full period of the designation. If a Participating Generator's or Participating Load's Eligible Capacity is designated under the CPM after the Participating Generator or Participating Load has filed notice to terminate its Participating Generator Agreement, Net Scheduled PGA, Pseudo-Tie Participating Generator Agreement, or Participating Load Agreement or withdraw the Eligible Capacity

from its Participating Generator Agreement, Net Scheduled PGA, Pseudo-Tie Participating Generator Agreement, or Participating Load Agreement, and the Scheduling Coordinator for the resource agrees to provide service under the CPM, then the Scheduling Coordinator shall enter into a new Participating Generator Agreement, Net Scheduled PGA, Pseudo-Tie Participating Generator Agreement, or Participating Load Agreement, as applicable, with the CAISO.

**43A.5.3 Availability Obligations for Simultaneous Designations.**

To the extent a resource accepts simultaneous or overlapping designations as CPM Capacity and Flexible Capacity CPM under Section 43A.4.3, that resource shall be subject to the must-offer obligations for both designations.

**43A.5.4 Individualized Non-Availability Charges and Availability Incentive Payments**

The provisions of Section 40.9 applicable to Resource Adequacy Resources apply to CPM Capacity. Capacity accepting a designation as CPM Capacity will face a resource-specific Availability Incentive Mechanism Price under section 40.9.6. The resource-specific price will be the higher of: (a) the price that the resource was paid by the CAISO ($/kW-month) as a result of receiving the designation; and (b) the RA Availability Incentive Mechanism rate. Availability Incentive Mechanism payments to a resource designated under the CPM will be capped at the general Availability Incentive Mechanism rate.

For a resource requesting a resource-specific CPM Capacity price pursuant to Section 43A.4.1.1.1, the CAISO shall use that resource-specific CPM capacity price for calculating the Availability Incentive Mechanism only if that resource-specific CPM capacity price has been approved in time for inclusion on the Recalculation Settlement Statement T+70B. Otherwise, for resources that have sought a resource-specific CPM Capacity price pursuant to Section 43A.4.1.1.1, the CAISO shall use the CPM Soft Offer Cap price for calculating the Availability Incentive Mechanism price.

**43A.6 Reports**

The CAISO shall publish the following reports and notices.

**43A.6.1 CPM Designation Market Notice**

The CAISO shall issue a Market Notice within five (5) Business Days of a CPM designation under Sections 43A.2.1 through 43A.2.6. CPM designations as a result of Exceptional Dispatches shall be subject to the reporting requirement set forth in Section 34.11.4. The Market Notice shall include a

preliminary description of what caused the CPM designation, the name of the resource(s) procured, the preliminary expected duration of the CPM designation, and the initial designation period. For Exceptional Dispatch CPM designations, the market notice shall additionally indicate whether the designation was made to address an Exceptional Dispatch CPM System Reliability Need or an Exceptional Dispatch CPM Non-System Reliability Need, specify the quantity of the Exceptional Dispatch CPM capacity that was procured and the Exceptional Dispatch CPM Term, and identify the engineering assessment the CAISO used to determine the quantity of capacity needed from the resource to address the reliability issue.

**43A.6.2 Designation of a Resource Under the CPM**

The CAISO shall post a designation report to the CAISO Website within the earlier of thirty (30) days of procuring a resource under Sections 43A.2.1 through 43A.2.6 or ten (10) days after the end of the month; provided that if the CAISO makes a CPM designation under Sections 43A.2.1.1, 43A.2.1.2, 43A.2.2.2, 43A.2.3, 43A.2.4 or 43A.2.7 that takes effect on the first day of the succeeding month, the CAISO will post the designation report by the earlier of 30 days after the CAISO selects the resource it will be designating or the tenth day of the month in which the designation takes effect. The designation report shall include the following information:

(1) A description of the reason for the designation (LSE procurement shortfall, Local Capacity Area Resource effectiveness deficiency, or CPM Significant Event), and an explanation of why it was necessary for the CAISO to utilize the CPM authority);

(2) The following information would be reported for all backstop designations:

(a) the resource name;

(b) the amount of CPM Capacity or Flexible Capacity CPM designated (MW),

(c) the date CPM Capacity was designated,

(d) the duration of the designation; and

(e) the accepted offer price of the resource.

**43A.6.3 [Not Used]**

**43A.6.4 Publication of Offers Submitted to the Competitive Solicitation Process**

The CAISO shall publish all final offers into a CSP on a rolling quarterly basis with a five-quarter-delay. Published information shall include: (a) technology or fuel type of the resource; (b) kW-month of capacity

offered; (c) for Annual and Monthly CSPs, capacity type offered (i.e., flexible, RA, or both); (d) CSP into which the capacity was offered; and (e) flexible capacity category, if applicable. Published information shall not include the identity of the party offering capacity into a CSP. If fewer than three resources of a particular technology or fuel type have offered into a CSP, then the CAISO shall consolidate reporting for multiple technology or fuel types.

### 43A.7 Payments to Capacity Designated Under the CPM

#### 43A.7.1. Calculation of Monthly CPM Capacity Payment

Scheduling Coordinators representing resources receiving payment for a CPM designation shall receive a monthly CPM Capacity Payment for each month of CPM designation equal to the product of the kW-month of designated CPM Capacity and the CPM Capacity price per kW-month (based on the capacity's CSP bid, the CPM Soft Offer Cap, or the resource-specific CPM rate authorized by FERC, as applicable), with a deduction pro-rated for days the capacity was Committed RA Capacity other than CPM Capacity. Provided, however, that CPM Capacity designated to respond to a CPM Significant Event or an Exceptional Dispatch CPM shall receive payment based proportionately on the actual number of days the resource was designated as CPM Capacity during the month to the total number of days in the month.

#### 43A.7.2 Payments for Overlapping CPM Designations to the Same Resource

For the purpose of this Section 43A.7.2, a MW of capacity holds an overlapping obligation if that MW has a flexible RA obligation and another form of RA obligation. If a resource accepts separate CPM designations resulting in overlapping obligations, then the MW amount of the CPM capacity payments for the period the designations overlap shall be the higher of: (a) the higher MW amount of either designation; or (b) the quantity of Flexible Capacity CPM plus the quantity of capacity, if any, below the resource's PMin that is ineligible to count toward the resource's EFC per Section 40.10.4.1(a)(1). The resource shall not be provided with two CPM payments for the same capacity.

#### 43A.7.3 Market Payments

In addition to the CPM Capacity Payment identified in Section 43A.7, CPM resources, including Flexible Capacity CPM resources, shall be entitled to retain any revenues received as a result of their selection in the CAISO Markets, provided, however, that CPM resources required to participate in the RUC process will be optimized using a zero ($0) dollar RUC Availability Bid and are not eligible to receive

compensation through the RUC process.

### 43A.8 Allocation of CPM Capacity Payment Costs

For each month, the CAISO shall allocate the costs of CPM Capacity Payments made pursuant to Section 43A.7 as follows:

#### 43A.8.1 LSE or CPE Shortage of Local Capacity Area Resources in Annual Plan

If the CAISO makes CPM designations under Section 43A.2.1.1 to address a shortage resulting from the failure of a Scheduling Coordinator for an LSE or CPE to identify sufficient Local Capacity Area Resources to meet its applicable Local Capacity Area capacity requirements in its annual Resource Adequacy Plan, then the CAISO shall allocate the total costs of the CPM Capacity Payments for such CPM designations (for the full term of those CPM designations) pro rata to each Scheduling Coordinator for an LSE or CPE based on the ratio of its Local Capacity Area Resource Deficiency to the sum of the deficiency of Local Capacity Area Resources in the deficient Local Capacity Area(s) within a TAC Area. The Local Capacity Area Resource Deficiency under this Section shall be computed on a monthly basis and the CPM Capacity Payments allocated based on deficiencies during the month(s) covered by the CPM designation(s).

#### 43A.8.2 LSE or CPE Shortage of Local Capacity Area Resources in Month Plan

If the CAISO makes CPM designations under Section 43A.2.1.2 to address a shortage resulting from the failure of a Scheduling Coordinator for an LSE or CPE to identify sufficient Local Capacity Area Resources to meet its applicable Local Capacity Area capacity requirements in its monthly Resource Adequacy Plan, then the CAISO shall allocate the total costs of the CPM Capacity Payments for such CPM designations (for the full term of those CPM designations) pro rata to each Scheduling Coordinator for an LSE or CPE based on the ratio of its Local Capacity Area Resource Deficiency to the sum of the deficiency of Local Capacity Area Resources in the deficient Local Capacity Area(s) within a TAC Area.

#### 43A.8.3 Collective Deficiency in Local Capacity Area Resources

If the CAISO makes designations under Section 43A.2.2 the CAISO shall allocate the costs of such designations to all Scheduling Coordinators for LSEs serving Load in the TAC Area(s) in which the deficient Local Capacity Area was located. The allocation will be based on the Scheduling Coordinators' proportionate share of Gross Load in such TAC Area(s) as determined in accordance with Section 40.3.2,

excluding Scheduling Coordinators for LSEs that procured additional capacity in accordance with Section 43A.2.1.2 on a proportionate basis, to the extent of their additional procurement. The CAISO shall not allocate the costs of designations under Section 43A.2.2 to a Scheduling Coordinator for a CPE in its role serving as such Scheduling Coordinator; provided, however, if a Scheduling Coordinator represents both a LSE and CPE, then the CAISO shall allocate the costs of designations under Section 43A.2.2 to the Scheduling Coordinator based on the LSE's proportionate share of Gross Load in the relevant TAC Area, as described above in this Section 43A.8.3.

**43A.8.4 LSE Shortage of Demand or Reserve Margin Requirement in Plan**

If the CAISO makes CPM designations under Section 43A.2.3, then the CAISO will allocate the total costs of the CPM Capacity Payments for such CPM designations (for the full term of those CPM designations) pro rata to each LSE based on the proportion of its deficiency to the aggregate deficiency.

**43A.8.5 Allocation of CPM Significant Event Costs**

If the CAISO makes any CPM Significant Event designations under Section 43A.2.4, the CAISO shall allocate the costs of such designations to all Scheduling Coordinators for LSEs that serve Load in the TAC Area(s) in which the CPM Significant Event caused or threatened to cause a failure to meet Reliability Criteria based on the percentage of actual Gross Load of each LSE represented by the Scheduling Coordinator in the TAC Area(s) to total Gross Load in the TAC Area(s) as recorded in the CAISO Settlement system for the actual days during any Settlement month period over which the designation has occurred.

**43A.8.6 Allocation of Exceptional Dispatch CPMs**

If the CAISO makes any Exceptional Dispatch CPM designations under Section 43A.2.5, the CAISO shall allocate the costs of such designations to all Scheduling Coordinators for LSEs that serve Load in the TAC Area(s) in which the need for the Exceptional Dispatch CPM arose based on the percentage of actual Gross Load of each LSE represented by the Scheduling Coordinator in the TAC Area(s) to total Gross Load in the TAC Area(s) as recorded in the CAISO Settlement system for the actual days during any Settlement month period over which the designation has occurred.

**43A.8.7 [Not Used]**

**43A.8.8 Allocation of Flexible Capacity CPM Costs**

(a) **Calculation of Deficiency by LRA.**

(1) The CAISO will determine whether each Local Regulatory Authority met its allocable share of the Flexible Capacity Need based on the cumulative amount of Flexible RA Capacity that Local Regulatory Authority's jurisdictional Load Serving Entities included in their annual and monthly Flexible RA Capacity Plans in total, and included in their monthly Flexible RA Capacity Plans for each Flexible Capacity Category.

(2) The CAISO will calculate the total amount of Flexible RA Capacity included in the annual and monthly Flexible RA Capacity Plans collectively for all Load Serving Entities within the Local Regulatory Authority, and the total amount included in the monthly Flexible RA Capacity Plans for each Flexible Capacity Category using the minimum or maximum quantity, as applicable, for each category, and using the Effective Flexible Capacity value calculated under Section 40.10.4 for each resource designated in a plan as a Flexible RA Capacity Resource.

(b) **Allocation by CAISO Method.**

(1) If the amount of Flexible RA Capacity the jurisdictional Load Serving Entities included in their annual Flexible RA Capacity Plans or monthly Flexible RA Capacity Plans, in total and in each Flexible Capacity Category, meets or exceeds the applicable Flexible Capacity Need allocated to their Local Regulatory Authority, the CAISO will not allocate any of the Flexible Capacity CPM costs to the Scheduling Coordinators for those Load Serving Entities.

(2) If the amount of Flexible RA Capacity the jurisdictional Load Serving Entities included in their annual Flexible RA Capacity Plans or monthly Flexible RA Capacity Plans, either in total or for a Flexible Capacity Category, is less than the applicable Flexible Capacity Need allocated to their Local Regulatory Authority, and that Local Authority has not established its own methodology for allocating the Flexible Capacity Need to its jurisdictional Load Serving Entities, the CAISO

will allocate the Flexible Capacity CPM costs proportionately to the Scheduling Coordinator of each jurisdictional Load Serving Entity that failed to meet its procurement obligation.

(c) **Allocation by Local Regulatory Authority Method.** If Load Serving Entities jurisdictional to a Local Regulatory Authority have a cumulative deficiency under Section 43A.8.8(a) and the Local Regulatory Authority has established its own methodology for allocating the Flexible Capacity Need to its jurisdictional Load Serving Entities, the CAISO will use the Local Regulatory Authority's methodology to allocate the Flexible Capacity CPM costs to the Scheduling Coordinator of each Load Serving Entity that is jurisdictional to that Local Regulatory Authority and that failed to meet its procurement obligation. If the Local Regulatory Authority does not notify the CAISO of its allocation method by the deadline established in the relevant Business Practice Manual, then the CAISO allocates Flexible Capacity CPM costs using its default allocation methodology under Section 43A.8.8(b)(2).

(d) **Reduction of Cost Allocation.** If the CAISO issues a Flexible Capacity CPM designation, a Scheduling Coordinator for a Load Serving Entity that was deficient, but provided additional Flexible RA Capacity in a revised annual or monthly Flexible RA Capacity Plan consistent with the Market Notice under Section 43A.2.7.1 –

(1) will be not be allocated a share of the Flexible Capacity CPM procurement costs if the additional Flexible RA Capacity included in that LSE's revised LSE Flexible RA Capacity Plan resolved the total deficiency of that Load Serving Entity; or

(2) will be allocated a share of the Flexible Capacity CPM procurement costs on a proportionate basis to the extent that Load Serving Entity has a remaining partial deficiency.

### 43A.9 Crediting of CPM Capacity

The CAISO shall credit CPM designations to the resource adequacy obligations of Scheduling Coordinators for Load Serving Entities and CPEs as follows:

(a) To the extent the cost of CPM designation under Section 43A.2.1.1 is allocated to a

Scheduling Coordinator on behalf of a LSE under Section 43A.8.1, the CAISO shall provide the Scheduling Coordinator on behalf of the LSE, for the term of the designation, credit towards (1) the LSE's Local Capacity Area Resource obligation under Section 40.3.2 in an amount equal to the LSE's pro rata share of the CPM Capacity designated under Section 43A.2.1.1 and (2) the LSE's Demand and Reserve Margin requirements determined under Section 40 in an amount equal to the LSE's pro rata share of the CPM Capacity designated under Section 43A.2.1.1.

To the extent the cost of CPM designation under Section 43A.2.1.1 is allocated to a Scheduling Coordinator on behalf of a CPE under Section 43A.8.1, the CAISO shall provide the Scheduling Coordinator on behalf of the CPE and the Scheduling Coordinators on behalf of the LSEs represented by the CPE, for the term of the designation, credit towards Local Capacity Area Resource obligations under Section 40.3.2 and Demand and Reserve Margin requirements determined under Section 40 based on allocations provided by the CPE's LRA. The total credits allocated by the LRA towards Local Capacity Area Resource obligations cannot exceed the CPE's pro rata share of the CPM Capacity designated under Section 43A.2.1.1. The total credits allocated by the LRA towards Demand and Reserve Margin requirements cannot exceed the CPE's pro rata share of the CPM Capacity designated under Section 43A.2.1.1. If the total LRA-provided credits toward Local Capacity Area Resource obligations or toward Demand and Reserve Margin requirements exceed the CPE's pro rata share of the CPM Capacity designated under Section 43A.2.1.1, or if the LRA fails to notify the CAISO of its desired allocation of credits by the deadline established in the Business Practice Manual, then the CAISO will credit the Scheduling Coordinator on behalf of the CPE, for the term of the designation, credit towards the CPE's Local Capacity Area Resource obligation under Section 40.3.2 in an amount equal to the CPE's pro rata share of the CPM Capacity designated under Section 43A.2.1.1 and the CAISO will credit the Scheduling Coordinators on behalf of the LSEs represented by the CPE, for the term of the designation, the LSEs' Demand and Reserve Margin requirements determined under

Section 40 based on the proportions provided by the relevant Local Regulatory Authority under Section 40.3.2(d).

(b) To the extent the cost of CAISO designation under Section 43A.2.2 is allocated to a Scheduling Coordinator on behalf of a LSE under Section 43A.8.3, the CAISO shall provide the Scheduling Coordinator on behalf of the LSE, for the term of the designation, credit towards the LSE's Demand and Reserve Margin requirements determined under Section 40 in an amount equal to the LSE's pro rata share of the CPM Capacity designated under Section 43A.2.2.

(c) To the extent the cost of CPM designation under Section 43A.2.3 is allocated to a Scheduling Coordinator on behalf of a LSE under Section 43A.8.4, and the designation is for greater than one month under Section 43A.3.4, the CAISO shall provide the Scheduling Coordinator on behalf of the LSE, for the term of the designation, credit towards the LSE's Demand and Reserve Margin requirements determined under Section 40 in an amount equal to the LSE's pro rata share of the CPM Capacity designated under Section 43A.2.3.

(d) The credit provided in this Section shall be used for determining the need for the additional designation of CPM Capacity under Section 43A.2 and for allocation of CPM costs under Section 43A.8.

(e) For each Scheduling Coordinator that is provided credit pursuant to this Section, the CAISO shall provide information, including the quantity of capacity procured in MW, necessary to allow the CPUC, other Local Regulatory Authority, or federal agency with jurisdiction over the LSE or CPE on whose behalf the credit was provided to determine whether the LSE or CPE should receive credit toward its resource adequacy requirements adopted by such agencies or authorities.

(f) To the extent the cost of Flexible Capacity CPM designation under Section 43A.2.7 is allocated to a Scheduling Coordinator for an LSE under Section 43A.8.8, and the designation is for greater than one month under Section 43A.3.8, the CAISO shall provide the Scheduling Coordinator on behalf of the LSE, for the term of the designation,

credit towards the LSE's Flexible Capacity requirements determined under Section 40 in an amount equal to the LSE's pro rata share of the Flexible Capacity CPM designated under Section 43A.2.7.

**43A.10 [Not Used]**

# 44. Flexible Ramping Product

## 44.1 In General.

The CAISO may enforce flexible ramping constraints in the Real-time Market to meet Forecasted Movement and Uncertainty Requirements, using tools as further described in the Business Practice Manual that estimate the Demand Forecast and Supply forecast error, as set forth in this Section 44.

## 44.2 Uncertainty Awards

### 44.2.1 Optimization.

#### 44.2.1.1 Generally.

The CAISO will optimize the procurement of Uncertainty Awards in the Real-Time Market simultaneously with the procurement of Energy and Ancillary Services, as applicable. Uncertainty Awards do not overlap with Ancillary Services Awards or Available Balancing Capacity.

#### 44.2.1.2 Nodal Procurement of Uncertainty Awards

The CAISO will optimize procurement of Uncertainty Awards such that, in the event modeled uncertainty arises fully for either the upward or downward directions, Energy that would be dispatched from resource capacity corresponding to the Uncertainty Awards would not result in flows exceeding Transmission Constraints and scheduling limits, including EIM transfer limits.

#### 44.2.1.3 Optimization for Balancing Authority Areas with Distinct Uncertainty Requirements

For Balancing Authority Areas with a distinct Uncertainty Requirement per Section 44.2.4.1, the CAISO will optimize procurement of Uncertainty Awards assuming that the Balancing Authority Area would be limited to its final hourly Real-Time EIM Base Schedule or the CAISO equivalent in the event modeled uncertainty arises fully in the direction for which there is a distinct Uncertainty Requirement.

### 44.2.2 Variable Energy Resources.

The CAISO will use the CAISO's own forecast (Independent Third Party Forecast) to determine the Uncertainty Awards and Forecast Movement for Variable Energy Resources.

### 44.2.3 Eligibility for Uncertainty Award.

#### 44.2.3.1 Generally.

All resources that have Economic Bids in the RTM that can be dispatched on a five-minute basis by RTD are eligible for receiving Uncertainty Awards.

**44.2.3.2 Suspension.**

If the CAISO deems the resource to be non-compliant, the CAISO will suspend the resource's eligibility as specified in Section 34.13.2.

**44.2.3.3 Ineligible Operating States.**

A resource is not eligible for an Uncertainty Award if it is in a Forbidden Operating Region or during an MSG Transition.

**44.2.4 Determination of Uncertainty Requirement.**

**44.2.4.1 Requirement.**

For each Real-Time Market run, the CAISO determines a distinct upward Uncertainty Requirement for each Balancing Authority Area that fails either the: (a) capacity test specified in Section 29.34(l) because the incremental offers in the Energy Bid range above the EIM Base Schedule (or equivalent for the CAISO) are not sufficient; or (b) flexibility test specified in Section 29.34(m) because of insufficient upward Ramping capacity. For each Real-Time Market run, the CAISO determines an upward Uncertainty Requirement for the group of Balancing Authority Areas that passes both the capacity test and flexibility tests in the upward direction.

For each Real-Time Market run, the CAISO determines a distinct downward Uncertainty Requirement for each Balancing Authority Area that fails either the: (a) capacity test specified in Section 29.34(l) because the decremental offers in the Energy Bid range below the EIM Base Schedule (or equivalent for the CAISO) are not sufficient; or (b) flexibility test specified in Section 29.34(m) because of insufficient downward Ramping capacity. For each Real-Time Market run, the CAISO determines a downward Uncertainty Requirement for the group of Balancing Authority Areas that passes both the capacity test and flexibility tests in the downward direction.

**44.2.4.2 Procurement Curve.**

(a) **Generally.** Based on statistical analysis of the Uncertainty Requirement, the CAISO will calculate constraint relaxation parameters to ensure the total cost of the Uncertainty Awards will not exceed the cost of expected power balance violations in absence of the Uncertainty Award, by each Balancing Authority Area and for the EIM Area overall, as set forth in the Business Practice Manual.

(b) **Procurement Curve Cap.** The CAISO will establish in the Business Practice Manual a limit on the procurement curve –

(1) at an amount less than the contingency relaxation penalty pricing parameter specified in the Business Practice Manual for market operations, in the case of an upward demand curve; and

(2) at an amount more than the regulation down relaxation penalty pricing parameter specified in the Business Practice Manual for market operations, in the case of a downward demand curve.

#### 44.2.4.3 Nodal Distribution of Requirements

The CAISO will distribute the upward and downward Uncertainty Requirement to the Demand and Variable Energy Resources Locations within each Balancing Authority Area in the EIM Area based on allocation factors derived from historical and/or forecasted information that reflect the relative contributions of Demand and Variable Energy Resources to overall Uncertainty Requirement.

## 44.3 Forecasted Movement

### 44.3.1 Generally

The CAISO will determine the Forecasted Movement for each EIM Participating Resource, Generating Unit, System Resource, Pumped Storage, Pseudo-Tie, Non-generating Resource, PDR, Participating Load, and any other resource that has a schedule or dispatch change in the Day-Ahead Market or Real-Time Market as described below.

### 44.3.2 RTD Forecasted Movement

For the RTD, the Forecasted Movement for the resource is the MW difference between the resource's non-binding dispatch instruction in the first five-minute advisory RTD interval and its Dispatch Instruction in the financially binding RTD interval, in the same RTD run.

### 44.3.3 FMM Forecasted Movement

For FMM, the Forecasted Movement is the difference between the resource's advisory FMM schedule in the first advisory FMM interval and its FMM Schedule in the financially binding FMM interval for the same applicable FMM run.

### 44.3.4 DAM Forecasted Movement

For DAM, the Forecasted Movement is the algebraic difference of the Day-Ahead Schedule between consecutive hours.

**44.3.5 Virtual Forecasted Movement**

For Virtual Awards, the Forecasted Movement is the algebraic difference of the Virtual Award between consecutive hours.

**44.3.6 Base Schedule Forecasted Movement**

For EIM Base Schedules, the Forecasted Movement is the algebraic difference of the submitted EIM Base Schedule, as adjusted in real time, between consecutive hours.

# Appendix A

## Master Definition Supplement

**- Access Charge**

A charge paid by all Utility Distribution Companies, Small Utility Distribution Companies, and MSS Operators with Gross Load in a PTO Service Territory, as set forth in Article II. The Access Charge includes the Regional Access Charge and the Local Access Charge. The Access Charge will recover the Participating TO's Transmission Revenue Requirement in accordance with Appendix F, Schedule 3.

**- ACE**

Area Control Error

**- ACH**

Automated Clearing House

**- Acquired Resource**

A resource providing Resource Adequacy Capacity under a resource-specific power supply contract that was exempt from the provisions of the standard capacity product at the time RAAIM became effective.

**- Actual Settlement Quality Meter Data**

Settlement Quality Meter Data gathered, edited, validated, and submitted by the Scheduling Coordinators on behalf of Scheduling Coordinator Metered Entities.

**- Adjusted Load Metric**

A Load Serving Entity's Load Metric minus the megawatts of Load served using Existing Transmission Contracts, Converted Rights, and Transmission Ownership Rights.

**- Adjusted Verified CRR Source Quantity**

The MW amount eligible for nomination by an LSE or Qualified OBAALSE in a verified tier of the CRR Allocation process, determined by reducing a Verified CRR Source Quantity to account for circumstances where the ownership or contract right to a generating resource is effective only for a portion of a particular season or month for which CRRs are being nominated.

**- Administrative Price**

The market results determined according to Section 7.7.9.

**- ADNU**

Area Delivery Network Upgrade

**- ADR**

Alternative Dispute Resolution

**- ADS**

Automated Dispatch System

**- Adverse System Impact**

The negative effects due to technical or operational limits on conductors or equipment being exceeded that may compromise the safety and reliability of the electric system.

**- Affected System**

An electric system other than the CAISO Controlled Grid that may be affected by the proposed interconnection, including the Participating TOs' electric systems that are not part of the CAISO Controlled Grid.

**- Affected System Facilities Construction Agreement**

The agreement contained in Appendix 13 to the RIS between the CAISO and Affected System Interconnection Customer to facilitate the construction of and to set forth cost responsibility for necessary Affected System Network Upgrades on the CAISO Controlled Grid.

**- Affected System Interconnection Customer**

Any entity that submits an interconnection request for a generating facility to a transmission system other than the CAISO's Transmission System that may cause the need for Affected System Network Upgrades on the CAISO Controlled Grid.

**- Affected System Network Upgrades**

The additions, modifications, and upgrades to the CAISO Controlled Grid required to accommodate Affected System Interconnection Customer's proposed interconnection to a transmission system other than the CAISO Controlled Grid.

**- Affected System Operator**

The entity that operates an Affected System.

**- Affected System Queue Position**

The queue position of an Affected System Interconnection Customer in the CAISO's interconnection queue relative to the CAISO's Interconnection Customers' Queue Positions.

**- Affected System Study**

The evaluation of Affected System Interconnection Customers' proposed interconnection(s) to a transmission system other than the CAISO Controlled Grid that have an impact on the CAISO Controlled Grid, as described in Section 14.5 of the RIS.

**- Affected System Study Agreement**

The agreement contained in Appendix 11 to the RIS between the CAISO and Affected System Interconnection Customer to conduct an Affected System Study pursuant to Section 14.5 of the RIS.

**- Affected System Study Report**

The report issued following completion of an Affected System Study pursuant to Section 14.5.6 of the RIS.

**- Affiliate**

With respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with, such corporation, partnership or other entity.

**- AGC**

Automatic Generation Control

**- Aggregate Capability Constraint**

A constraint that reflects the combined maximum and the combined minimum capability of Generating Units that comprise a single Generating Facility so that the capability does not exceed the Generating Facility's Interconnection Service Capacity or charging capacity specified in its Generator Interconnection Agreement. For EDAM Resource Facilities, a constraint that reflects the combined maximum and the combined minimum capability of individual EDAM Resource Facilities that constitute a single resource. In the case of EIM Resources, a constraint that reflects the combined maximum and the combined minimum capability of individual EIM Resources or non-participating resources that constitute a single resource.

**- Aggregate Credit Limit**

The sum of a Market Participant's or CRR Holder's Unsecured Credit Limit and its Financial Security

Amount, as provided for in Section 12.

**- Aggregated Participating Load**

An aggregation at one or more Participating Load Locations, created by the CAISO in consultation with the relevant Participating Load, for the purposes of enabling participation of the Participating Load in the CAISO Markets like Generation by submitting Supply Bids when offering Curtailable Demand and as non-Participating Load by submitting Demand Bids to consume in the Day-Ahead Market only.

**- Aggregated Pricing Node (Aggregated PNode)**

A Load Aggregation Point, Trading Hub or any group of Pricing Nodes as defined by the CAISO.

**- Amended QF Contract**

A Legacy PPA, as defined in the settlement approved by the CPUC in Decision D. 10-12-035 (December 16, 2010), as modified in Decision D.11-07-010 (July 15, 2011), that became effective on or prior to December 20, 1995 or, in the case of a Participating Generator employing landfill gas technology, on or prior to December 31, 1996, that has been amended to include terms that conform with a Legacy PPA Amendment or a Legacy PPA C1 Amendment, as defined by said settlement, but also in a manner that (a) requires compliance with the CAISO Tariff; (b) does not extend the term of the agreement or provide for an increase in the generating capacity of the resource; and (c) does not change the electrical characteristics of the resource.

**- Ancillary Service Award or AS Award**

The notification by the CAISO indicating that a Bid to supply an Ancillary Service has been selected to provide such service in the DAM or RTM.

**- Ancillary Service Bid Cost or AS Bid Cost**

An amount equal to the product of the AS Award from each accepted AS Bid, reduced by any applicable No Pay capacity, and the relevant AS Bid price.

**- Ancillary Service Bid or AS Bid**

The Bid component that indicates the quantity in MW and a price in dollars per MW for a specific Ancillary Service, including Regulation Up, Regulation Down, Spinning Reserve and Non-Spinning Reserve, that a Scheduling Coordinator is offering to supply in a CAISO Market from a Generating Unit or System Resource, and only for Non-Spinning Reserve from the Load of a Participating Load or Proxy Demand

Resource.

**- Ancillary Service Marginal Price (ASMP)**

The marginal cost of providing an Ancillary Service as further provided in Section 27.1.2.

**- Ancillary Service Obligation or AS Obligation**

A Scheduling Coordinator's hourly obligation for Regulation Down, Regulation Up, Spinning Reserves, and Non-Spinning Reserves calculated pursuant to Sections 11.10.2.1.3, 11.10.2.2.2, 11.10.3.3, and 11.10.4.3, respectively.

**- Ancillary Service Provider**

A Participating Generator, System Resource operator, Participating Load, or Proxy Demand Resource that is certified to provide an Ancillary Service.

**- Ancillary Service Region or AS Region**

The System Region, the Expanded System Region, or any Sub-Region identified by the CAISO for procurement of Ancillary Services.

**- Ancillary Service Regional Limit**

A maximum or a minimum, or both a maximum and a minimum, amount of (or boundary of) Ancillary Services to be obtained within an AS Region. Limits can be expressed as either megawatt amounts or percentages.

**- Ancillary Services (AS)**

Regulation, Spinning Reserve, Non-Spinning Reserve, and Voltage Support with such other interconnected operation services as the CAISO may develop in cooperation with Market Participants to support the transmission of Energy from Generation resources to Loads while maintaining reliable operation of the CAISO Controlled Grid in accordance with WECC standards and Good Utility Practice.

**- Ancillary Service Schedule or AS Schedule**

The notification by the CAISO indicating that a Submission to Self-Provide an Ancillary Service has been selected to provide such service in the DAM or RTM.

**- Annual Interregional Coordination Meeting**

Shall have the meaning set forth in Section 24.18.2.

**- Annual Interregional Information**

Shall have the meaning set forth in Section 24.18.1.

**- Annual Peak Demand Forecast**

A Demand Forecast of the highest Hourly Demand in a calendar year, in MW.

**- Applicable Reliability Criteria**

The Reliability Standards and reliability criteria established by NERC and WECC and Local Reliability Criteria, as amended from time to time, including any requirements of the NRC.

**- Applicant Participating Transmission Owner Agreement (APTOA)**

An agreement between an applicant to be a Subscriber Participating TO and the CAISO.

**- Approved Load Profile**

Local Regulatory Authority approved Load profiles applied to cumulative End-Use Meter Data in order to allocate consumption of Energy to Settlement Periods.

**- Approved Maintenance Outage**

A Maintenance Outage that has been approved by the CAISO.

**- Approved Project Sponsor**

The person or entity designated under the CAISO Tariff to construct, finance and own transmission additions or upgrades.

**- Approved Project Sponsor Agreement**

An agreement between an Approved Project Sponsor and the CAISO establishing the terms and conditions under which the Approved Project Sponsor will complete the siting and construction of the transmission facilities that the Approved Project Sponsor was selected to construct and own under Section 24. Among other terms, the Agreement shall include any binding cost control measures, including cost caps, that the Approved Project Sponsor specified in its proposal.

**- Approved Project Sponsor Tariff**

A tariff specifying the rates and charges of an Approved Project Sponsor that is not a Participating TO to recover the costs of transmission facilities that are not yet in operation but have been approved under Section 24 and assigned to the Approved Project Sponsor, and associated terms and conditions.

**- Area Control Error (ACE)**

The sum of the instantaneous difference between the actual net Interchange and the scheduled net

Interchange between the CAISO Balancing Authority Area and all interconnected Balancing Authority Areas, taking into account the effects of the CAISO Balancing Authority Area's frequency bias, correction of meter error, and time error correction obligations.

**- Area Delivery Network Upgrade**

A transmission upgrade or addition identified by the CAISO to relieve an Area Deliverability Constraint.

**- Area Deliverability Constraint**

A transmission system operating limit, that would constrain the deliverability of a substantial number of generators if the CAISO were to assign full capacity or partial capacity deliverability status to additional generating facilities in one or more specified geographic or electrical areas of the CAISO Controlled Grid in a total amount that is greater than the TP Deliverability for those areas. May also be a transmission system operating limit that constrains a quantity of generation in a local area of the grid that is larger than the generation amount identified in the applicable Transmission Planning Process portfolio for the entire portfolio area. May also be a transmission system operating limit that constrains all or most of the same generation already constrained by a previously identified Area Deliverability Constraint.

**- Area Off-Peak Constraints**

A transmission system operating limit that would cause excessive curtailment to a substantial number of Generating Facilities during Off-Peak Load conditions, as described in Section 6.3.2.2 of Appendix DD and the CAISO Off-Peak Deliverability Assessment posted on the CAISO Website,

**- Area Off-Peak Network Upgrades (AOPNUs)**

A transmission upgrade or addition the CAISO identifies in the Transmission Planning Process to relieve an Area Off-Peak Constraint.

**- AS**

Ancillary Services

**- ASMP**

Ancillary Service Marginal Price

**- Assigned Network Upgrade (ANU)**

Reliability Network Upgrades, Local Off-Peak Network Upgrades, and Local Delivery Network Upgrades currently assigned to the Interconnection Customer. Assigned Network Upgrades exclude (1)

Conditionally Assigned Network Upgrades unless they become Assigned Network Upgrades, and (2) Precursor Network Upgrades.

**- Asynchronous Generating Facility**

An induction, doubly-fed, or electronic power generating unit(s) that produces 60 Hz (nominal) alternating current.

**- Attaining Balancing Authority Area**

The Balancing Authority Area where the output of a Pseudo-Tie generating unit is fully included for purposes of calculation of Area Control Error and meeting Balancing Authority Area load responsibilities.

**- ATC**

Available Transfer Capability

**- Automated Clearing House (ACH)**

An electronic network for financial transactions in the United States.

**- Automated Dispatch System (ADS)**

The CAISO systems application to communicate Dispatch Instructions to Scheduling Coordinators.

**- Automated Generation Control (AGC)**

Generation equipment that automatically responds to signals from the CAISO's EMS control in Real-Time to control the Power output of Generating Units within a prescribed area in response to a change in system frequency, tie-line loading, or the relation of these to each other, so as to maintain the target system frequency and the established Interchange with other Balancing Authority Areas within the predetermined limits.

**- Available Import Capability**

The Maximum Import Capability of an Intertie into the CAISO Balancing Authority Area in MW deliverable to the CAISO Balancing Authority Area based on CAISO study criteria minus the sum in MW of all Existing Contracts and Transmission Ownership Rights over that Intertie held by load serving entities that do not serve Load within the CAISO Balancing Authority Area.

**- Available Transfer Capability (ATC)**

The available capacity of a given transmission path, in MW, after subtraction from that path's Total Transfer Capability of capacity associated with Existing Contracts and Transmission Ownership Rights

and any Transmission Reliability Margin, as established consistent with CAISO and WECC transmission capacity rating guidelines, as further described in Appendix L-1.

**- Availability Assessment Hours**

The hours of the month specified in accordance with Section 40.9.3 which the CAISO will utilize for applying the Availability Standards program of Section 40.9.

**- Availability Incentive Payment**

The monthly payment that the CAISO may make to a Resource Adequacy Resource under the Availability Standards program in accordance with Section 40.9.

**- Availability Incentive Rate**

The monthly dollars per MW rate calculated by dividing the total Non-Availability Charges assessed for a given month by the total Resource Adequacy Capacity that is eligible to receive the Availability Incentive Payment for that month.

**- Availability Standard**

The standard used to determine if a Resource Adequacy Resource is subject to Non-Availability Charges or Availability Incentive Payments.

**- [Not Used]**

**- Backup CAISO Control Center**

The alternate CAISO Control Center.

**- Backup Meter**

A redundant revenue quality meter which is identical to and of equal accuracy to the primary revenue quality meter connected at the same metering point which must be certified in accordance with the CAISO Tariff.

**- BAID**

Business Associate Identification

**- Balancing Account**

An account set up to allow periodic balancing of financial transactions that, in the normal course of business, do not result in a zero balance of cash inflows and outflows.

**- Balancing Authority**

The responsible entity that integrates resource plans ahead of time, maintains load-interchange-generation balance within a Balancing Authority Area, and supports Interconnection frequency in real time.

**- Balancing Authority Area**

The collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.

**- Balancing Authority Area Gross Load**

For the purpose of calculating and billing Minimum Load Costs, Emission Costs, and Start-Up Costs, Balancing Authority Area Gross Load is all Demand for Energy within the CAISO Balancing Authority Area. Balancing Authority Area Gross Load shall not include Energy consumed by:

(a) Station Power that is netted pursuant to Section 10.1.3; and

(b) Load that is isolated electrically from the CAISO Balancing Authority Area (i.e., Load that is not synchronized with the CAISO Balancing Authority Area).

**- Base Case**

The base case power flow, short circuit, and stability data bases used for the Interconnection Studies.

**- Base Market Model**

A computer based model of the CAISO Controlled Grid, and for purposes of the Extended Day-Ahead Market, including the prospective EDAM Entity and EDAM Entity Balancing Authority Area(s), and for purposes of the Energy Imbalance Market, including the prospective EIM Entity and EIM Entity Balancing Authority Area(s), that is derived from the Full Network Model as described in Section 27.5.1 and that, as described further in Section 27.5.6, is used as the basis for formulating the market models used in the operation of each of the CAISO Markets.

**- BCR**

Bid Cost Recovery

**- Bid**

Either (1) an offer, including a Self-Schedule, submitted by a Scheduling Coordinator for a specific resource, conveyed through several components that apply differently to the different types of service offered to or demanded from any of the CAISO Markets for the Demand of Energy or the supply of

Energy, Imbalance Reserves, Reliability Capacity, or Ancillary Services; or (2) a Virtual Bid.

**- Bid Adder**

A dollar amount added to the Bid of a Frequently Mitigated Unit.

**- Bid Cost Recovery (BCR)**

The CAISO settlements process through which Eligible Resources recover their Bid Costs.

**- Bid Cost Recovery (BCR) Eligible Resource**

Those resources eligible to participate in the Bid Cost Recovery as specified in Section 11.8, which include Generating Units, System Units, System Resources, Participating Loads, Reliability Demand Response Resources, and Proxy Demand Resources. A System Resource that has a Schedule that results from Bids submitted in violation of Section 30.5.5 shall not be a Bid Cost Recovery Eligible Resource for any Settlement Interval that occurs during the time period covered by the Schedule that results from Bids submitted in violation of Section 30.5.5.

**- Bid Costs**

The costs for resources manifested in the Bid components submitted, which include the Start-Up Bid Cost, Minimum Load Bid Cost, Energy Bid Cost, Transition Bid Cost, Pump Shut-Down Cost, Pumping Cost, Ancillary Services Bid Cost, RUC Availability Payment, and Imbalance Reserves Costs.

**- Bid Segment Fee**

The Grid Management Charge fee described at Section 11.22.5.

**- Black Start**

The procedure by which a Generating Unit self-starts without an external source of electricity thereby restoring a source of power to the CAISO Balancing Authority Area following system or local area blackouts.

**- Black Start Agreement**

An agreement entered into between the CAISO, a Participating Transmission Owner, and a Participating Generator (other than a Reliability Must-Run Contract) for the provision by the Participating Generator of Black Start capability and Black Start Energy.

**- Black Start Generating Unit**

A Generating Unit under a system restoration plan for the PTO or CAISO and providing Black Start service under a Black Start Agreement.

**- Black Start Generator**

A Participating Generator in its capacity as party to a Black Start Agreement with the CAISO for the provision of Black Start services, but shall exclude Participating Generators in their capacity as providers of Black Start services under their Reliability Must-Run Contracts.

**- BPM**

Business Practice Manual

**- BPM PRR**

Business Practice Manual Proposed Revision Request

**- Bulk Supply Point**

A Utility Distribution Company or Small Utility Distribution Company metering point.

**- Business Associate**

Any entity with whom the CAISO interacts related to the CAISO Markets.

**- Business Associate Identification (BAID)**

Identification characters assigned to each Business Associate by the CAISO.

**- Business Day**

Monday through Friday, excluding federal holidays and the day after Thanksgiving Day. The undefined term 'business day' as used in some subsections of Section 11.29 refers to all days on which the CAISO is open for business, including certain days that are recognized as federal holidays but remain regular operation days for the CAISO. Please see the Business Practice Manual for the most current list of affected holidays.

**- Business Practice Manual Proposed Revision Request (BPM PRR)**

A request to make any change to a BPM, including any attachments thereto, as described in Section 22.11.1.

**- Business Practice Manuals (BPMs)**

A collection of documents made available by the CAISO on the CAISO Website that contain the rules, policies, procedures and guidelines established by the CAISO for operational, planning, accounting and

settlement requirements of CAISO Market activities, consistent with the CAISO Tariff.

**- CAISO**

The California Independent System Operator Corporation, a state chartered, California non-profit public benefit corporation that operates the transmission facilities of all Participating TOs and dispatches certain Generating Units and Loads.

**- CAISO Account**

The CAISO Clearing Account, the CAISO Reserve Account or such other accounts as the CAISO deems necessary or convenient for the purpose of efficiently implementing the funds transfer system under the CAISO Tariff.

**- CAISO ADR Procedures**

The procedures for resolution of disputes or differences set out in Section 13.

**- CAISO Alternative Dispute Resolution Coordinator**

The individual designated by the CAISO CEO to perform functions assigned to the CAISO ADR Coordinator in the CAISO ADR Procedures in Section 13.

**- CAISO Audit Committee**

A committee of the CAISO Governing Board appointed pursuant to the CAISO bylaws to (1) review the CAISO's annual independent audit, (2) report to the CAISO Governing Board on such audit, and (3) monitor compliance with the CAISO Code of Conduct.

**- CAISO Authorized Inspector**

A person authorized by the CAISO to certify, test, inspect and audit meters and Metering Facilities in accordance with the procedures established by the CAISO pursuant to Section 10.

**- CAISO Bank**

The bank appointed by the CAISO from time to time for the purposes of operating the Settlement process.

**- CAISO Cash-Funded Capital and Project Costs**

Costs for projects or studies undertaken during the year or over several years, determination of requirements for capital, projects or assets with a useful life of more than one (1) year and project office

labor devoted to capital that are funded from the Grid Management Charge instead of being financed.

**- CAISO CEO**

The Chief Executive Officer of the CAISO.

**- CAISO Clearing Account**

The account in the name of the CAISO with the CAISO Bank and owned by the CAISO to which payments are transferred.

**- CAISO Code of Conduct**

The codes of conduct for governors and employees approved by the CAISO Governing Board.

**- CAISO Commitment Period**

The portion of a Commitment Period that is not a Self-Commitment Period.

**- CAISO Control Center**

The control center established by the CAISO pursuant to Section 7.1.

**- CAISO Controlled Grid**

The system of transmission lines and associated facilities of the Participating TOs that have been placed under the CAISO's Operational Control.

**- CAISO Creditor**

A Business Associate to which amounts are payable under the terms of the CAISO Tariff and agreements with the CAISO.

**- CAISO Debtor**

A Business Associate that is required to make a payment to the CAISO under the CAISO Tariff and agreements with the CAISO.

**- CAISO Demand**

Power delivered to Load internal to CAISO Balancing Authority Area.

**- CAISO Documents**

The CAISO Tariff, CAISO bylaws, and any agreement entered into between the CAISO and a Scheduling Coordinator, a Participating TO or any other Market Participant pursuant to the CAISO Tariff.

**- CAISO Emissions Cost Trust Account**

The CAISO Account established pursuant to Section 11.18.2.

**- CAISO Estimated Settlement Quality Meter Data**

Settlement Quality Meter Data estimated by the CAISO in accordance with Sections 10.3.6.2 and 11.29.7.1.1.

**- CAISO Financing Costs**

The CAISO's financing costs that are approved by the CAISO Governing Board, including capital expenditures that may be financed over such period as the CAISO Governing Board shall decide. These costs include the requirement to collect an amount in excess of the annual debt service obligations as specified in the rate covenants of the official statements for each CAISO bond offering.

**- CAISO Forecast of BAA Demand**

The forecast of a Balancing Authority Area's Demand for the CAISO and EDAM Entities made by the CAISO in conjunction with EDAM Entities for use in the CAISO Markets.

**- CAISO Governing Board**

The Board of Governors established to govern the affairs of the CAISO.

**- CAISO IFM Commitment Period**

The portion of a Commitment Period in the IFM that is not a Self-Commitment Period.

**- CAISO IFM Curtailed Quantity**

In each Trading Hour for each Scheduling Coordinator (a) the maximum of zero or the submitted Day-Ahead Self-Schedule for Demand minus the Day-Ahead Schedule for Demand in each applicable LAP, or (b) in the event a LAP price equals the Hard Energy Bid Cap, the maximum of zero or the submitted Day-Ahead Self-Schedule for Demand plus the quantity of Demand bid at the maximum price for Energy Bids specified in Section 39.6.1.1 minus the Day-Ahead Schedule for Demand in the relevant LAP.

**- CAISO Markets**

Any of the markets administered by the CAISO under the CAISO Tariff, including, without limitation, the DAM, EDAM, RTM, EIM, transmission, and Congestion Revenue Rights market.

**- CAISO Markets Process**

The MPM, IFM, RUC, HASP, STUC, FMM, RTUC, and RTD.

**- CAISO Metered Entity**

Pursuant to Section 10.1, an eligible entity that has elected that the CAISO will collect and process its Revenue Quality Meter Data directly from CAISO certified revenue quality meters. Eligible entities include:

(a) any one of the following entities that is directly connected to the CAISO Controlled Grid:

i. a Generator other than a Generator that sells all of its Energy (excluding any Station Power that is netted pursuant to Section 10.1.3) and Ancillary Services to the Utility Distribution Company or Small Utility Distribution Company in whose Service Area it is located;

ii. an MSS Operator; or

iii. a Utility Distribution Company or Small Utility Distribution Company; and

(b) any one of the following entities:

i. a Participating Generator;

ii. a Participating TO in relation to its Tie Point Meters with other TOs or Balancing Authority Areas;

iii. a Participating Load;

iv. a Participating Intermittent Resource;

v. an EDAM Resource;

vi. an EIM Participating Resource; or

vii. a utility that requests that Unaccounted For Energy for its Service Area be calculated separately, in relation to its meters at points of connection of its Service Area with the systems of other utilities.

**- CAISO Operating Costs**

The CAISO's budgeted annual operating costs, which shall include all staffing costs including remuneration of contractors and consultants, salaries, benefits and any incentive programs for employees, costs of operating, replacing and maintaining CAISO systems, lease payments on facilities and equipment necessary for the CAISO to carry out its business, and annual costs of financing the CAISO's working capital and other operating costs.

**- CAISO Operating Cost Reserve**

The CAISO Operating Cost Reserve requirement is fifteen (15) percent of annual CAISO Operating Costs, unless otherwise specified by (1) the rate covenants of the official statements for each CAISO bond offering, (2) the CAISO Governing Board or (3) the FERC. The CAISO Operating Cost Reserve consists of the projected CAISO Operating Cost Reserve balance for December 31 of the prior year less the reserve requirement, as calculated according to the formula set forth in Appendix F, Schedule 1, Part C. If such amount is negative, the amount may be divided by two, so that the reserve is replenished within a two-year period.

**- CAISO Operations Date**

March 31, 1998.

**- CAISO Other Costs and Revenues**

Other costs and revenues that are recovered through, or are offsets to, the CAISO revenue requirement, including special charges, fines, penalties, other interest expenses, reimbursements, and interest earnings.

**- CAISO Payments Calendar**

A calendar published by the CAISO showing the dates on which Settlement Statements will be published by the CAISO and the Payment Dates by which Invoices issued under the CAISO Tariff must be paid.

**- CAISO Penalty Reserve Account**

The account established by the CAISO pursuant to Section 11.29.9.6.4.

**- CAISO Planning Standards**

Reliability Criteria that: (1) address specifics not covered in the NERC and WECC planning standards; (2) provide interpretations of the NERC and WECC planning standards specific to the CAISO Controlled Grid; and (3) identify whether specific criteria should be adopted that are more stringent than the NERC and WECC planning standards.

**- CAISO Protocols**

The rules, protocols, procedures and standards promulgated by the CAISO (as amended from time to time) to be complied with by the CAISO, Scheduling Coordinators, Participating TOs and all other Market Participants in relation to the operation of the CAISO Controlled Grid and the participation in the CAISO

Markets in accordance with the CAISO Tariff.

**- CAISO Register**

The register of all the transmission lines, associated facilities and other necessary components that are at the relevant time being subject to the CAISO's Operational Control.

**- CAISO Reserve Account**

The account established for the purpose of holding cash which may be used in or towards clearing the CAISO Clearing Account.

**- CAISO Surplus Account**

The account established by the CAISO pursuant to Section 11.29.9.6.3.

**- CAISO Tariff**

The California Independent System Operator Corporation Operating Agreement and Tariff, dated March 31, 1997, as it may be modified from time to time.

**- CAISO Website**

The CAISO internet home page at http://www.caiso.com or such other internet address as the CAISO shall publish from time to time.

**- CAISO-WECC Billing Services Agreement**

The agreement between the CAISO and the WECC entered into by those parties in August 2007, as it may be amended from time to time, regarding the CAISO's performance of certain billing services to facilitate the WECC's collection of NERC/WECC Charges.

**- Calculated Energy Bid**

The Energy Bid utilized in the IFM and RTM on behalf of a COG calculated by dividing its Minimum Load Cost by the MW quantity of its PMax.

**- Candidate CRR Holder**

An entity that is registered and qualified by the CAISO to participate in the CRR Allocation, the CRR Auction, or the Secondary Registration System to become a CRR Holder and is a party to a fully executed CRR Entity Agreement, and therefore must comply with the requirements for Candidate CRR Holders under the CAISO Tariff.

**- Capacity Benefit Margin (CBM)**

The factor defined in Appendix L-1.

**- Capacity Procurement Mechanism (CPM)**

The Capacity Procurement Mechanism, as set forth in Section 43A.

**- CBEA**

Convergence Bidding Entity Agreement

**- CBM**

Capacity Benefit Margin

**- CDWR-SWP**

The California Department of Water Resources, State Water Project.

**- CDWR- SWP Participating Generating Units**

The Generating Units operated by the California Department of Water Resources, State Water Project, that are subject to a Participating Generator Agreement with the CAISO.

**- CEC**

The California Energy Commission or its successor.

**- Central Procurement Entity (CPE)**

An entity that has been designated by a Local Regulatory Authority to: (a) procure Local Capacity Area Resources on behalf of at least one Load Serving Entity under that LRA's jurisdiction; and (b) through its Scheduling Coordinator, demonstrate such procurement to the CAISO pursuant to the RA showings process in Section 40.2.

**- Certificate of Compliance**

A certificate issued by the CAISO which states that the Metering Facilities referred to in the certificate satisfy the certification criteria for Metering Facilities contained in the CAISO Tariff.

**- C.F.R.**

Code of Federal Regulations.

**- Charge Code**

A numeric identifier used to specify Settlement calculations in the Business Practice Manual.

**- Charging Constraint**

A constraint that reflects a storage resource's election not to charge beyond the output of its co-located

Variable Energy Resource.

**- Charter for WEIM and EDAM Governance**

The Charter adopted by the CAISO Governing Board pursuant to CAISO bylaws Article IV § 1 that establishes and governs the operation of the WEM Governing Body.

**- CHP Resource**

A Combined Heat and Power Resource.

**- Clean Bid**

A valid Bid submitted by a Scheduling Coordinator that requires no modification, a Default Modified Bid, or a Generated Bid deemed to be acceptable for submission to the CAISO Market applications.

**- Cluster Application Window**

The time period for submitting Interconnection Requests as set forth in Section 3.3 of Appendix KK.

**- Cluster Restudy**

A restudy of a Cluster Study conducted pursuant to Section 7.4 of the RIS.

**- Cluster Restudy Report**

The report issued following completion of a Cluster Restudy pursuant to Section 7.4 of the RIS.

**- Cluster Study Agreement**

The pro forma agreement between the CAISO and the Interconnection Customer for conducting Interconnection Studies for a proposed Generating Facility under Appendix KK.

**- Cluster Study Process**

The following processes, conducted in sequence: the Cluster Application Window; the Customer Engagement Window and Scoping Meetings therein; the Cluster Study; any needed Cluster Restudies; and the Interconnection Facilities Study.

**- Cluster Study Report Meeting**

The meeting held to discuss the results of a Cluster Study pursuant to Section 7 of the RIS.

**- Clustering**

The process whereby a group of Interconnection Requests is studied together, instead of serially, for the purpose of conducting the Interconnection System Impact Study.

**- COG**

Constrained Output Generator

**- Co-located Resource**

A Generating Unit with a unique Resource ID that is part of a Generating Facility with other Generating Units, an EDAM Resource Facility with a unique Resource ID that is part of a single resource with other EDAM Resource Facilities, or an EIM Resource with a unique Resource ID that is part of a single resource with other EIM Resources.

**- Combined Heat and Power Resource**

A Generating Unit that produces electric energy and forms of useful thermal energy used by an industrial or commercial host for industrial, commercial, heating or cooling purposes or a Generating Unit that produces electricity from waste heat from an industrial or commercial host.

**- Commercial Operation**

The status of a Generating Unit or project phase at a Generating Facility that has commenced generating electricity for sale, excluding electricity generated during Trial Operation.

**- Commercial Operation Date**

The date on which a Generating Unit or project phase at a Generating Facility commences Commercial Operation as agreed to by the applicable Participating TO, the CAISO, and the Interconnection Customer pursuant to Appendix E to the Large Generator Interconnection Agreement, and in accordance with the implementation plan agreed to by the Participating TO and the CAISO for multiple individual Generating Units or project phases at a Generating Facility where an Interconnection Customer intends to establish separate Commercial Operation Dates for those Generating Units or project phases.

**- Commercial Readiness Deposit**

A deposit paid as set forth in Sections 3.5.1, 7.5, and 8.1.1 of the RIS.

**- Commitment Interval**

The fifteen minute period of time for which the CAISO commits resources or procures Ancillary Services through the FMM.

**- Commitment Cost Multiplier**

The percentage amount by which the Proxy Costs are multiplied in calculating the Default Commitment

Cost Bids, which is equal to one hundred twenty five percent (125%).

**- Commitment Period**

The consecutive Time Periods within a Trading Day with an "On" Commitment Status.

**- Commitment Status**

The “On” or “Off” state for each unit in each Time Period.

**- Committed RA Capacity**

Capacity that is either RA Capacity, Flexible RA Capacity, RA Substitute Capacity, CPM Capacity, or Flexible Capacity CPM.

**- Competitive LMP**

An LMP calculated in the MPM process minus the Congestion component relating to non-competitive Transmission Constraints, as calculated in accordance with Section 31.2.3.

**- Competitive LMP Parameter**

A cost added to the Competitive LMP used in the MPM process in accordance with Section 34.1.5.5.

**- Competitive Locational IRU Price**

The Locational IRU Price minus the non-competitive Congestion components in the upward deployment scenario, as calculated pursuant to Section 31.2.1.

**- Competitive RUC Price for RCU**

The RUC Price for RCU minus the non-competitive Congestion components in the upward deployment scenario, as calculated pursuant to Section 31.9.1.

**- Competitive Solicitation Process (CSP)**

One of the Competitive Solicitation Processes, as set forth in Section 43A.4.

**- Compliance Monitoring and Enforcement Program (CMEP)**

The program used by NERC and the Regional Entities to monitor, assess and enforce compliance with the NERC Reliability Standards. As part of this program, NERC and the Regional Entities may, among other functions, conduct investigations, determine fault and assess monetary penalties.

**- Condition 1 Legacy RMR Unit**

A resource operating pursuant to Condition 1 of its Legacy RMR Contract.

**- Condition 2 Legacy RMR Unit**

A resource operating pursuant to Condition 2 of its Legacy RMR Contract.

**- Conditionally Assigned Network Upgrade (CANU)**

Reliability Network Upgrades, Local Off-Peak Network Upgrades, and Local Delivery Network Upgrades currently assigned to an earlier Interconnection Customer, but which may be assigned to the Interconnection Customer.

**- Conditionally Available Resource**

A resource that has demonstrated to the CAISO's reasonable satisfaction that it has one or more regulatory or operational limits that are not eligible use limits pursuant to Section 30.4.6.1.1 and that faces frequent and recurring periods of unavailability because of those limitations. A resource can be both a Conditionally Available Resource and a Use-Limited Resource if it has eligible use limits and also meets the definition of a Conditionally Available Resource.

**- Congestion**

A characteristic of the transmission system produced by a binding Transmission Constraint to the optimum economic dispatch to meet Demand such that the LMP, exclusive of Marginal Cost of Losses, at different Locations of the transmission system is not equal.

**- Congestion Charge**

A charge attributable to the Marginal Cost of Congestion at a given pricing PNode.

**- Congestion Data Summary**

A report issued by the CAISO on the schedule set forth in the Business Practice Manual that sets forth historic Congestion on the CAISO Controlled Grid.

**- Congestion Management**

The alleviation of Congestion in accordance with applicable CAISO procedures, the CAISO Tariff, and Good Utility Practice.

**- Congestion Revenue Right (CRR)**

A CRR Obligation or CRR Option.

**- Congestion-Supported Value**

As provided in Section 11.2.4.4, a value, specific to a given Transmission-Constraint and Settlement

period, that a CRR Holder is paid or charged for its CRRs based on Net Modeled CRR Flow.

**- Connected Entity**

A Participating TO or any party that owns or operates facilities that are electrically interconnected with the CAISO Controlled Grid, or, for purposes of scheduling and operating the Day-Ahead Market only, electrically connected with the transmission system of an EDAM Transmission Service Provider, or, for purposes of scheduling and operating the Real-Time Market only, electrically connected with the transmission system of an EIM Transmission Service Provider.

**- Constrained Output Generator (COG)**

A Generating Unit with an operating range (PMax - PMin) that is no greater than the higher of three (3) MW or five percent (5%) of its PMax that elects, on an annual basis, to utilize a Calculated Energy Bid in the IFM and RTM as described in Section 27.7.

**- Constraint Relaxation Threshold**

A MW threshold value used to determine when the parameters specified in Section 27.4.3.3.4 will trigger in each Balancing Authority Area participating in the CAISO Markets to account for small supply shortfalls configured based on the Balancing Authority Area's BAL-001-2 Requirement R2, calculated by the CAISO annually. The CAISO will post the annual values for each Balancing Authority Area on the CAISO Website or its OASIS.

**- Construction Activities**

Actions by a Participating TO that result in irrevocable financial commitments for the purchase of major electrical equipment or land for Participating TO's Interconnection Facilities or Network Upgrades assigned to the Interconnection Customer that occur after receipt of all appropriate governmental approvals needed for the Participating TO's Interconnection Facilities or Network Upgrades.

**- Contingency**

A potential Outage that is unplanned, viewed as possible or eventually probable, which is taken into account when considering approval of other requested Outages or while operating the CAISO Balancing Authority Area, an EDAM Entity Balancing Authority Area, or an EIM Entity Balancing Authority Area. Contingencies include potential Outages due to Remedial Action Schemes.

**- Contingency Flag**

The daily Bid component that indicates that the Spinning Reserves and Non-Spinning Reserves being offered in the CAISO Market are Contingency Only reserves.

**- Contingency Only**

A resource providing Operating Reserve capacity that may be dispatched by the CAISO only in the event of a Contingency or an imminent or actual System Emergency.

**- Contract Reference Number (CRN)**

The Bid component that indicates the specific contract identification number issued by the CAISO to Scheduling Coordinators transactions under Existing Contracts or TORs.

**- Control Area**

Balancing Authority Area

**- Control Area Gross Load**

Balancing Authority Area Gross Load

**- Control Area Operator**

Balancing Authority

**- Convergence Bidding Entity (CBE)**

An entity which has undertaken in writing by execution of a Convergence Bidding Entity Agreement to comply with all applicable provisions of the CAISO Tariff.

**- Convergence Bidding Entity Agreement (CBEA)**

An agreement between the CAISO and a Convergence Bidding Entity, a pro forma version of which is set forth in Appendix B.

**- Converted Rights**

Those transmission service rights as defined in Section 4.3.1.6.

**- CPM**

Capacity Procurement Mechanism

**- CPM Availability Factor**

A factor as set forth in Appendix F, Schedule 6 that is used in calculating a resource's monthly CPM Capacity Payment.

**- CPM Capacity**

Capacity of Generating Units, System Units, System Resources, PDR or Participating Load that is designated under the CPM in accordance with Section 43A during the term of the designation. Flexible Capacity CPM is one form of CPM Capacity.

**- CPM Capacity Payment**

The payment provided pursuant to Section 43A.6 or 43A.7.

**- CPM Significant Event**

A substantial event, or a combination of events, that is determined by the CAISO to either result in a material difference from what was assumed in the resource adequacy program for purposes of determining the Resource Adequacy Capacity requirements, or produce a material change in system conditions or in CAISO Controlled Grid operations, that causes, or threatens to cause, a failure to meet Reliability Criteria absent the recurring use of a non-Resource Adequacy Resource(s) on a prospective basis.

**- CPM Soft Offer Cap**

A capacity price of $7.34/kW-month ($88.09/kW-year), as described in Section 43A.4.1.1.

**- CPUC**

The California Public Utilities Commission, or its successor.

**- CPUC Load Serving Entity**

Any entity serving retail Load in the CAISO Balancing Authority Area under the jurisdiction of the CPUC, including an electrical corporation under section 218 of the California Public Utilities Code, an electric service provider under section 218.3 of the California Public Utilities Code, and a community choice aggregator under section 331.1 of the California Public Utilities Code.

**- Credit Margin**

The quantity equal to Expected Congestion Revenue minus Fifth Percentile Congestion Revenue.

**- Credit Related Information**

Credit risk management or mitigation information received from, or provided to, a market operator in accordance with 18 C.F.R. § 35.47(h)(1). The types of Credit Related Information include, but are not limited to, the following:

(a) lists of participants with positions in that market;

(b) reports and metrics around risk and credit exposures;

(c) disclosure that a market participant or affiliate has defaulted on any of its financial or contractual obligations, failed to pay invoices on a timely basis, or failed to meet a collateral call;

(d) information regarding a market participant's or its affiliate's unresolved credit/collateral issues;

(e) information indicating that a market participant or its affiliate has an increased risk of default, such as instances where a market participant or its affiliate has experienced a material adverse condition or material adverse change under a market operator's FERC-approved OATT or related agreement; and

(f) any other information on a market participant or its affiliate that indicates a possible material adverse change in creditworthiness or financial status or an unreasonable credit risk.

**- Critical Energy Infrastructure Information (CEII)**

Critical Energy Infrastructure Information shall have the meaning given the term in the regulations of FERC at 18 C.F.R. § 388.113, et seq.

**- Critical Protective System**

Facilities and sites with protective relay systems and Remedial Action Schemes that the CAISO determines may have a direct impact on the ability of the CAISO to maintain system security and over which the CAISO exercises Operational Control.

**- CRN**

Contract Reference Number

**- CRR**

Congestion Revenue Rights

**- CRR Allocation**

The process of nominations and awards held monthly and annually through which the CAISO will distribute CRRs to Candidate CRR Holders.

**- CRR Annual Cycle**

Time period covered by all the CRRs released in an annual CRR Allocation and CRR Auction processes.

**- CRR Auction**

The annual and monthly market process that will follow CRR Allocation through which the CAISO makes CRRs available to Candidate CRR Holders that submit offers to purchase CRRs.

**- CRR Auction Price**

The positive or negative price to pay or be paid for a CRR at auction.

**- CRR Balancing Account**

The financial account held by the CAISO for CRRs that is administered in accordance with Section 11.2.4.

**- CRR Eligible Quantity**

The Seasonal CRR Eligible Quantity or the Monthly CRR Eligible Quantity.

**- CRR Entity Agreement**

An agreement between the CAISO and a Candidate CRR Holder or CRR Holder that must be fully executed in order for such an entity to participate in the CRR Allocation, CRR Auction, or Secondary Registration System, a pro forma version of which is set forth in Appendix B.11.

**- CRR Holder**

A Candidate CRR Holder that has acquired CRR(s) either through the CRR Allocation, the CRR Auction, or through a transaction registered in the Secondary Registration System.

**- CRR Load Metric**

The Seasonal CRR Load Metric or Monthly CRR Load Metric.

**- CRR Obligation**

A financial instrument that entitles the CRR Holder to payments or charges as specified in Section 11.2.4.

**- CRR Option**

A financial instrument that entitles its holder to payments as specified in Section 11.2.4.

**- CRR Services Charge**

The Grid Management Charge component described in Section 11.22.2.5.5.

**- CRR Sink**

A PNode or a Trading Hub specified as the point of withdrawal for a Congestion Revenue Right.

**- CRR Source**

A PNode or a Trading Hub specified as the point of receipt for a Congestion Revenue Right.

**- CRR Term**

Set of hours for which a given CRR is effective, based on the CRR specifications in Section 36.3, which is either the season multiplied by the time of use specifications or the month multiplied by the time of use specifications.

**- CRR Transaction Fee**

The Grid Management Charge fee described in Section 11.22.6.

**- CRR Transmission Maintenance Outage**

An Outage that may have a significant effect upon CRR revenue adequacy as defined in Section 36.4.3.

**- CRR Year Four**

Second, third and fourth quarters of calendar year 2011 and first quarter of calendar year 2012.

**- CRR Year One**

Second, third and fourth quarters of calendar year 2008 and first quarter of calendar year 2009.

**- CRR Year Three**

Second, third and fourth quarters of calendar year 2010 and first quarter of calendar year 2011.

**- CRR Year Two**

Second, third and fourth quarters of calendar year 2009 and first quarter of calendar year 2010.

**- Current Cost Responsibility (CCR)**

The Interconnection Customer's current allocated costs for Assigned Network Upgrades, not to exceed the Maximum Cost Responsibility. This cost is used to calculate the Interconnection Customer's Interconnection Financial Security, Commercial Readiness Deposit, and GIA Deposit requirements, as applicable.

**- Custom Generation Aggregation Point (CGAP)**

A pricing location modeled outside of the CAISO Balancing Authority Area that corresponds to the physical location of a single Dynamic Resource-Specific System Resource.

**- Curtailable Demand**

Demand from a Participating Load or Aggregated Participating Load that can be curtailed at the direction of the CAISO in the Real-Time Dispatch of the CAISO Controlled Grid, or, for purposes of scheduling and operating the Day-Ahead Market only, in the EDAM Area, or, for purposes of scheduling and operating the Real-Time Market only, in the EIM Area.

**- Customer Engagement Window**

The time period set forth in Section 3.5.2 of the RIS.

**- Customer Load Baseline**

A value or values based on historical or statistically relevant Load meter data.

**- Custom Load Aggregation Point (Custom LAP)**

An aggregation of Load PNodes created by the CAISO based on a set of custom LDFs submitted by a Scheduling Coordinator, at which such Scheduling Coordinator may submit a single Bid and settle Demand consistent with the CAISO Tariff rules, and for which the Scheduling Coordinator is required to submit to the CAISO Meter Data for the nodal Load represented in such aggregation.

**- Cyber Exigency**

A suspicious electronic act or event that has the potential to compromise the ongoing operation of the CAISO, the CAISO Markets, or reliability within the CAISO Balancing Authority Area or other electrical facilities directly or indirectly connected to the CAISO Controlled Grid and whose severity reasonably requires that the CAISO obtain expert assistance from federal agencies not normally called upon to counter such an electronic act or to resolve such an event.

**- Daily Additional Cost Settlement**

Exceptional Dispatch revenues determination for RMR Resources as described in Section 11.13.4.

**- Daily Availability Payment**

A component of the Daily RMR Capacity Payment as described in Section 11.13.2 and Schedule B of the applicable RMR Contract.

**- Daily CRR Congestion Fund**

The pool of funds, corresponding to a specific Transmission Constraint, held by the CAISO, that the CAISO uses to make Daily CRR Surplus Distribution Payments corresponding to that Transmission

Constraint.

**- Daily CRR Surplus Distribution Payment**

A payment, corresponding to a specific Transmission Constraint, the CAISO makes available to a CRR Holder as described in Section 11.2.4.4.2.

**- Daily RMR Capacity Payment**

Description of daily capacity payment for RMR Resources described in Section 11.13.2.

**- Daily RMR Excess Revenues**

The determination of the amount of Exceptional Dispatch revenues, if any, will be used to reduce the RMR Capacity Payment as described in Section 11.13.5.

**- Daily RMR Settlement**

Description of daily settlement for RMR Resources as described in Section 11.13.1.

**- Daily Surcharge Payment**

A component of the Daily RMR Capacity Payment as described in Section 11.13.2 and Schedule B of the applicable RMR Contract.

**- Daily Variable Cost Payment**

Description of the amount of variable costs recoverable by RMR Resources as described in Section 11.13.3.

**- DAM**

Day-Ahead Market

**- DAME Transition Period**

The three-year period that starts on the first Trading Day for which the CAISO procures either Imbalance Reserves or Reliability Capacity.

**- DAME Transitional Measures**

As specified in Section 11.2.6, the settlement provisions through which the CAISO shares the revenue of an Imbalance Reserves Award or Reliability Capacity Award to a Resource Adequacy Resource with the Scheduling Coordinator of the resource and the Scheduling Coordinator for the LSE that showed that resource on its Supply Plan

**- Day 0**

The Trading Day to which the Settlement Statement or Settlement calculation refers. For example "Day 41" shall mean the 41st day after that Trading Day and similar expressions shall be construed accordingly.

**- Day-Ahead**

The twenty-four hour time period prior to the Trading Day.

**- Day-Ahead Bid Awarded Energy**

The Day-Ahead Scheduled Energy above the Day-Ahead Total Self-Schedule and below the Day-Ahead Schedule. The Day-Ahead Bid Awarded Energy is also indexed against the relevant Day-Ahead Energy Bid and sliced by the Energy Bid price. The Day-Ahead Energy Bid Awarded Energy slices are settled as described in Section 11.2.1.1, and they are included in BCR as described in Section 11.8.2.1.5.

**- Day-Ahead Inter-SC Trade Period**

The period commencing seven (7) days prior to the applicable Trading Day and ending at 11:00 Hours Pacific Time on the day prior to that Trading Day, during which time the CAISO will accept Inter-SC Trades of Energy for the DAM from Scheduling Coordinators.

**- Day-Ahead Marginal GHG Cost Offset**

The amount calculated pursuant to Section 33.11.3.9.2 for purposes of determining the non-zero offset amount allocation.

**- Day-Ahead Market (DAM)**

A series of processes conducted in the Day-Ahead that includes the Market Power Mitigation, the Integrated Forward Market and the Residual Unit Commitment.

**- Day-Ahead Metered Energy Adjustment Factor**

A factor calculated for the purposes of determining the portions of a Scheduling Coordinator's resource's relevant Day-Ahead Schedule to be included in the Bid Cost Recovery calculations as further specified in the CAISO Tariff based on the resource's actual performance reflected in the Metered Energy which is calculated as set forth in Section 11.8.2.5.

**- Day-Ahead Minimum Load Energy**

Day-Ahead Scheduled Energy below the registered Minimum Load, or if applicable, as modified pursuant to Section 9.3.3, which applies to Generating Units with non-zero Minimum Load. Day-Ahead Minimum

Load Energy is settled as provided in Section 11.2.1.1, and it is included in Bid Cost Recovery (BCR) at the relevant IFM Minimum Load Cost as described in Section 11.8.2.1.2.

**- Day-Ahead Pumping Energy**

Negative Day-Ahead Scheduled Energy consumed by Participating Load Pumped-Storage Hydro Units and Pumping Load scheduled in pumping mode in the IFM. When Day-Ahead Pumping Energy is present, there are no other Day-Ahead Scheduled Energy subtypes present. Day-Ahead Pumping Energy is settled as provided in Section 11.2.1.3 and it is included in BCR as described in Sections 11.8.2.1.4 and 11.8.2.2.

**- Day-Ahead Schedule**

A Schedule issued by the CAISO one day prior to the target Trading Day indicating the levels of Supply and Demand for Energy cleared through the IFM and scheduled for each Settlement Period, for each PNode or Aggregated Pricing Node, including Scheduling Points of that Trading Day.

**- Day-Ahead Scheduled Energy**

Hourly Energy that corresponds to the flat portions of the hourly Day-Ahead Schedule. It is composed of Day-Ahead Minimum Load Energy, Day-Ahead Self-Scheduled Energy, and Day-Ahead Bid Awarded Energy. It does not include the Day-Ahead Energy that corresponds to the flat schedule when a resource is committed in the Day-Ahead in pumping mode. Expected Energy committed in Day-Ahead pumping mode is accounted for as Day-Ahead Pumping Energy. Day-Ahead Scheduled Energy is settled as specified in Section 11.2.1.1.

**- Day-Ahead Self-Scheduled Energy**

Day-Ahead Scheduled Energy above the Minimum Load as defined in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and below the lower of the Day-Ahead Total Self-Schedule or the Day-Ahead Schedule. Day-Ahead Self-Scheduled Energy is settled as described in Section 11.2.1.1, and, as indicated in Section 11.8.2.1.5, it is not included in BCR.

**- Day-Ahead Total Self-Schedule**

The sum of all Day-Ahead Self-Schedules (except Pumping Load Self-Schedules) in the relevant Clean Bid.

**- Default Commitment Cost Bids**

Default Commitment Cost Bids are Default Start-Up Bids, Default Minimum Load Bids, and Default Transition Bids.

**- Default Election**

The cost-based Energy Bid Curve calculated by the CAISO pursuant to Section 39, and used, among other things, in Local Market Power Mitigation pursuant to Section 11.29.17.2.4.

**- Default Energy Bid**

The Energy Bid Curve used in Local Market Power Mitigation pursuant to Section 39.

**- Default Energy Bid Multiplier**

The percentage amount by which the variable costs used to calculate the Default Energy Bid under Variable Cost Option are multiplied, which is equal to one hundred ten percent (110%).

**- Default Generation Aggregation Point (DGAP)**

The aggregation of Supply PNodes in a single Balancing Authority Area, with Generation Distribution Factors that are proportional to the maximum capacity of the Supply resources at the Supply PNodes in that Balancing Authority Area.

**- Default-Invoiced SCID(s)**

The SCID(s) selected by an entity pursuant to the Default Election procedures set forth in Section 11.29.17.2.4 that are to be allocated a portion of any payment default amount pursuant to Section 11.29.17.2.1.

**- Default LAP**

The LAP defined for the TAC Area at which all Bids for Demand shall be submitted and settled, except as provided in Sections 27.2.1 and 30.5.3.2.

**- Default Look-Back Period**

The retrospective time period determined pursuant to Section 11.29.17.2.6 for the purpose of allocating payment default amounts.

**- Default Minimum Load Bid**

The CAISO's calculation of a resource's Minimum Load Cost pursuant to Section 30.4.

**- Default Modified Bid**

A Bid that is submitted by a Scheduling Coordinator and is deemed valid and qualifies for modification

under the provisions of Section 40.

**- Default Start-Up Bid**

The CAISO's calculation of a resource's Start-Up Cost Curve pursuant to Section 30.4.

**- Default Transition Bid**

A resource's Transition Costs calculated by the CAISO pursuant to Section 30.4.

**- Deliverability**

Transmission capacity enabling the delivery of Energy to the aggregate of Load on the CAISO Controlled Grid at peak Load, under a variety of modeled stressed conditions. Deliverability includes (1) the annual Net Qualifying Capacity of a Generating Facility, as verified through a Deliverability Assessment and measured in MW, which specifies the amount of resource adequacy capacity the Generating Facility is eligible to provide; (2) the annual Maximum Import Capability of an Intertie, which specifies the amount of resource adequacy capacity, measured in MW, that Load Serving Entities collectively can procure from imports at that Intertie to meet their resource adequacy requirements; and (3) TP Deliverability.

**- Deliverable Option**

An election by an Interconnection Customer seeking Deliverability to interconnect in a Deliverable Zone, and receive cash reimbursement or Merchant Transmission CRRs for Network Upgrades, but without any guarantee of Deliverability.

**- Deliverable Zone**

A Transmission Zone with at least 50 MW of available Deliverability before the Cluster Application Window.

**- Deliverability Assessment**

The On-Peak Deliverability Assessment and the Off-Peak Deliverability Assessment.

**- Deliverability Status**

Attributes of a Generating Facility requested by an Interconnection Customer, assigned by the CAISO to the Generating Facility through the GIP, GIDAP, or other process specified in the CAISO tariff, indicating its studied ability to deliver its Energy to Load during different modeled conditions, which affects its maximum Net Qualifying Capacity.

**- Delivery Network Upgrades**

Transmission facilities at or beyond the Point of Interconnection, other than Reliability Network Upgrades, identified in the Interconnection Studies to relieve Transmission Constraints on the CAISO Controlled Grid.

**- Delivery Point**

The point where a transaction between Scheduling Coordinators is deemed to take place. It can be either the Generation input point, a Demand Take-Out Point, or a transmission bus at some intermediate Location.

**- Demand**

The instantaneous amount of Energy that is delivered to Loads and Scheduling Points by Generation, transmission or distribution facilities. It is the product of voltage and the in-phase component of alternating current measured in units of watts or standard multiples thereof, e.g., 1,000W=1kW, 1,000kW=1MW, etc.

**- Demand Bid**

The Bid component in a Bid submitted in the DAM that indicates the MWh of Energy the Scheduling Coordinator is willing to purchase, the price at which it is willing to purchase the specified Energy and the applicable Trading Hours for the next day.

**- Demand Forecast**

An estimate of Demand over a designated period of time.

**- Demand Response Energy Measurement**

The resulting Energy quantity calculated by comparing the applicable performance evaluation methodology of a Proxy Demand Resource or Reliability Demand Response Resource against its actual underlying performance for a Demand Response Event.

**- Demand Response Monitoring Data**

The actual underlying consumption or Energy relevant to a Proxy Demand Resource, Reliability Demand Response Resource, or Distributed Curtailment Resource during all hourly intervals for the forty-five days prior to the day on which a Demand Response Event occurred.

**- Demand Response Event**

A time period, deadline, and transition during which a Proxy Demand Resource or Reliability Demand Response Resource provides Demand Response Services.

**- Demand Response Provider**

An entity that is responsible for delivering Demand Response Services from a Proxy Demand Resource or Reliability Demand Response Resource providing Demand Response Services, which has undertaken in writing by execution of the applicable agreement to comply with all applicable provisions of the CAISO Tariff.

**- Demand Response Provider Agreement**

An agreement between the CAISO and a Demand Response Provider, a pro forma version of which is set forth in Appendix B.14.

**- Demand Response Resource**

A resource, including but not limited to a Proxy Demand Resource, providing Demand Response Services. Participating Load is not a Demand Response Resource within the meaning of this definition.

**- Demand Response Services**

Demand from a Proxy Demand Resource or Reliability Demand Response Resource that can be bid into the Day-Ahead Market and Real-Time Market and dispatched at the direction of the CAISO.

**- Demand Response System**

A collective name for a set of functions of a CAISO application used to collect, approve, and report on information and measurement data for Proxy Demand Resources and Reliability Demand Response Resources.

**- Department of Market Monitoring**

The department of the CAISO established under Section 1 of Appendix P.

**- Deployment Factor**

As specified in Section 31.3.1.6.3.1 and further specified in the Business Practice Manual, the percentage of Imbalance Reserves Awards the CAISO models as being deployed for Energy for the purpose of modeling the deployment of Imbalance Reserves against Transmission Constraints. The CAISO establishes distinct Deployment Factors for Imbalance Reserves Up and Imbalance Reserves Down.

**- DG Deliverability Assessment**

The annual Deliverability Assessment the CAISO will perform to determine nodal MW amounts of Potential DGD that will be available to Utility Distribution Companies and Metered Subsystems for

assigning Deliverability Status to Distributed Generation Facilities, as set forth in Section 40.4.6.3.

**- Direct Access End-User**

An Eligible Customer located within the Service Area of a Utility Distribution Company who purchases Energy and Ancillary Services through a Scheduling Coordinator.

**- Discrete Real-Time Dispatch Option**

The option selected by a Reliability Demand Response Resource pursuant to Section 30.6.2.1.2 to be dispatched as a discrete resource in the Real-Time Market.

**- Dispatch**

The activity of controlling an integrated electric system to: i) assign specific Generating Units and other sources of supply to effect the supply to meet the relevant area Demand taken as Load rises or falls; ii) control operations and maintenance of high voltage lines, substations, and equipment, including administration of safety procedures; iii) operate interconnections; iv) manage Energy transactions with other interconnected Balancing Authority Areas; and v) curtail Demand.

**- Dispatch Instruction**

An instruction by the CAISO for an action with respect to specific equipment, or to a resource for increasing or decreasing its Energy Supply or Demand to a specified Dispatch Operating Target pertaining to Real-Time operations.

**- Dispatch Interval**

The Time Period, which may range between five (5) and thirty (30) minutes, or as described in Section 34.3.2, a ten (10) minute interval for the Real-Time Contingency Dispatch, over which the Real-Time Dispatch measures deviations in Generation and Demand, and selects Ancillary Service and supplemental Energy resources to provide balancing Energy in response to such deviations. The Dispatch Interval shall be five (5) minutes. Following a decision by the CAISO Governing Board, the CAISO may, by seven (7) days' notice published on the CAISO Website, increase or decrease the Dispatch Interval within the range of five (5) to thirty (30) minutes.

**- Dispatch Interval LMP**

The price of imbalance energy determined at each Dispatch Interval in accordance with Section 11.5.4.

**- Dispatch Operating Point**

The expected trajectory of the resource as it ramps from one Dispatch Operating Target to the next, taking into account any relevant Ramp Rate and time delays. Energy expected to be produced or consumed above or below the Day-Ahead Schedule in response to a Dispatch Instruction constitutes FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy. For resources that have not received a Dispatch Instruction, the Dispatch Operating Point defaults to the corresponding Day-Ahead Schedule.

**- Dispatch Operating Target**

The expected operating point of a resource that has received a Dispatch Instruction, which is the optimal Dispatch of a resource as calculated by CAISO based on telemetry and representing a single point on the Dispatch Operating Point trajectory in the middle of the Dispatch Interval. The resource is expected to operate at the Dispatch Operating Target after completing the Dispatch Instruction, taking into account any relevant Ramp Rates and time delays.

**- Distributed Curtailment Resource**

A Distributed Energy Resource providing Demand curtailment as part of a Distributed Energy Resource Aggregation.

**- Distributed Energy Resource**

Any resource located on the distribution system, any subsystem thereof, or behind a customer meter in a Utility Distribution Company or a Metered Subsystem.

**- Distributed Energy Resource Aggregation**

A resource comprised of one or more Distributed Energy Resources.

**- Distributed Energy Resource Provider**

The owner/operator of one or more Distributed Energy Resource Aggregations that participates in the CAISO markets as such.

**- Distributed Energy Resource Provider Agreement**

An agreement between the CAISO and a Distributed Energy Resource Provider, a pro forma version of which is set forth in Appendix B.21.

**- Distributed Generation Facility**

A Generating Facility connected to the Distribution System of a Utility Distribution Company.

**- Distribution System**

The distribution assets of an IOU or Local Publicly Owned Electric Utility.

**- Distribution Upgrades**

The additions, modifications, and upgrades to the Participating TO's electric systems that are not part of the CAISO Controlled Grid. Distribution Upgrades do not include Interconnection Facilities.

**- Diversity Benefit**

The quantity by which procurement requirements for Balancing Authority Areas that pass either the EDAM RSE or the EIM RSE can be relaxed, as described in Section 31.3.1.6.1 and Section 29.34(m)(2)-(5), respectively.

**- DMM**

Department of Market Monitoring

**- Documentation of Contemporaneously Available Information**

Documents that exist when a Reference Level Change Request is submitted that show the price of fuel or fuel-equivalent is based on next-day procurement for the Day-Ahead Market, and is based on same-day or next-day procurement for the Real-Time Market, except for non-standard gas trading days, in which case the documents must show the price of procurement for fuel or fuel-equivalent no sooner than the most recent standard gas trading day. Such documentation may include: quotes from natural gas suppliers; gas purchase invoices; evidence of a bid price that was part of an unsuccessful good faith effort to purchase fuel or fuel-equivalent; or other appropriate documentation demonstrating fuel costs or fuel-equivalent costs.

**- Downward Imbalance Reserves Requirement**

The extreme percentile of downward forecast error of the confidence interval described in Section 31.3.1.6.1.

**- [Not Used]**

**- [Not Used]**

**- DRPA**

Demand Response Provider Agreement

**- DSHBAOA**

Dynamic Scheduling Host Balancing Authority Operating Agreement

**- Dynamic Resource-Specific System Resource**

A Dynamic System Resource that is a specific generation resource outside the CAISO Balancing Authority Area.

**- Dynamic Schedule**

A telemetered reading or value which is updated in Real-Time and which is used as an Interchange Schedule in the CAISO Energy Management System calculation of Area Control Error and the integrated value of which is treated as an Interchange Schedule for Interchange accounting purposes.

**- Dynamic Scheduling Agreement for Scheduling Coordinators**

An agreement between the CAISO and a Scheduling Coordinator regarding the terms by which a Scheduling Coordinator may submit Dynamic Schedules, a pro forma version of which is set forth in Appendix B.5.

**- Dynamic Scheduling Host Balancing Authority Operating Agreement**

An agreement entered into between the CAISO and a Balancing Authority governing the terms of dynamic scheduling between the two Balancing Authorities where one of the Balancing Authorities is designated as the Host Balancing Authority in accordance with the Dynamic Scheduling Protocol set forth in Appendix M, a pro forma version of which agreement is set forth in Appendix B.9.

**- Dynamic System Resource**

A System Resource that has satisfied the CAISO's contractual and operational requirements for submitting a Dynamic Schedule, and for which a Dynamic Schedule has been submitted, including a Dynamic Resource-Specific System Resource.

**- E&P Agreement**

Engineering & Procurement Agreement

**- EAL**

Estimated Aggregate Liability

**- Economic Bid**

A Bid that includes quantity (MWh or MW) and price ($) for specified Trading Hours.

**- Economic Planning Study**

A study performed to provide a preliminary assessment of the potential cost effectiveness of mitigating specifically identified Congestion.

**- EDAM Access Charge**

The Access Charge that balances historical transmission revenue cost allocation through the Extended Day-Ahead Market pursuant to Section 33.26.

**- EDAM Addendum to EIM Entity Agreement**

An addendum to an EIM Entity Agreement between an EDAM Entity and the CAISO that constitutes an agreement to join and participate in the EDAM. A *pro forma* version of the EDAM Addendum to EIM Entity Agreement is set forth in Appendix B.

**- EDAM Addendum to EIM Entity Scheduling Coordinator Agreement**

An addendum to an EIM Entity Scheduling Coordinator Agreement that constitutes an agreement between an EDAM Entity Scheduling Coordinator and the CAISO. A *pro forma* version of the EDAM Addendum to EIM Entity Scheduling Coordinator Agreement is set forth in Appendix B.

**- EDAM Addendum to EIM Participating Resource Agreement**

An addendum to an EIM Participating Resource Agreement that constitutes an agreement between an EDAM Resource and the CAISO. A *pro forma* version of the EDAM Addendum to EIM Participating Resource Agreement is set forth in Appendix B.

**- EDAM Addendum to EIM Participating Resource Scheduling Coordinator Agreement**

An addendum to an EIM Participating Resource Scheduling Coordinator Agreement that constitutes an agreement between an EDAM Resource Scheduling Coordinator and the CAISO. A *pro forma* version of the EDAM Addendum to EIM Participating Resource Scheduling Coordinator Agreement is set forth in Appendix B.

**- EDAM Administrative Charge**

The fee imposed on transactions in the EDAM, as described in Section 33.11.6.

**- EDAM Area**

The combined CAISO Balancing Authority Area and all EDAM Entity Balancing Authority Areas.

**- EDAM Demand**

Energy delivered to Load in an EDAM Entity Balancing Authority Area.

**- EDAM Downward Pool**

A pool comprised of each Balancing Authority Area in the EDAM Area that satisfies the downward components of the EDAM Resource Sufficiency Evaluation described in Section 33.31.1.3 in each hour of the Day-Ahead Market, together with each Balancing Authority Area in the EDAM Area that has cured its downward failure of the EDAM Resource Sufficiency Evaluation through the IFM and incurred the EDAM RSE Downward Failure Surcharge.

**- EDAM Entity**

A Balancing Authority that enters into an EDAM Addendum to EIM Entity Agreement with the CAISO to enable the operation of the Day-Ahead Market in addition to the Real-Time Market in the EDAM Entity Balancing Authority Area. The CAISO is not an EDAM Entity.

**- EDAM Entity Implementation Agreement**

An agreement between an EIM Entity seeking to become an EDAM Entity, or a Balancing Authority seeking to become an EDAM Entity concurrently with participation in the Energy Imbalance Market as an EIM Entity, and the CAISO, a *pro forma* version of which is set forth in Appendix B.

**- EDAM Entity Implementation Date**

The first Trading Day for an EDAM Entity in the Day-Ahead Market.

**- EDAM Entity Scheduling Coordinator**

An EDAM Entity, or a third party designated by the EDAM Entity, that is certified by the CAISO and has entered into an EDAM Entity Addendum to EIM Entity Scheduling Coordinator Agreement under which it is a Scheduling Coordinator and Market Participant and is responsible for meeting the requirements specified in Section 33 on behalf of the EDAM Entity.

**- EDAM External Intertie**

A point of interconnection between the CAISO Balancing Authority Area or an EDAM Entity Balancing Authority Area and a Balancing Authority Area other than a Balancing Authority Area in the EDAM Area.

**- EDAM Internal Intertie**

A point of interconnection between the CAISO Balancing Authority Area or an EDAM Entity Balancing Authority Area and another Balancing Authority Area in the EDAM Area.

**- EDAM Intertie**

An EDAM Internal Intertie or EDAM External Intertie.

**- EDAM Legacy Contract**

A transmission service contract entered into with the EDAM Transmission Service Provider prior to the effective date of the EDAM Transmission Service Provider tariff or otherwise not governed by the terms of that tariff (including any contract entered into pursuant to such transmission service contract) as may be amended in accordance with its terms or by agreement between the parties thereto from time to time.

**- EDAM Load Serving Entity**

A Load Serving Entity other than the EDAM Entity within an EDAM Entity Balancing Authority Area that enters into an EDAM Load Serving Entity Agreement with the CAISO.

**- EDAM Load Serving Entity Agreement**

An agreement between an EDAM Load Serving Entity and the CAISO, a *pro forma* version of which is set forth in Appendix B.

**- EDAM Load Serving Entity Scheduling Coordinator**

An EDAM Load Serving Entity, or a third party designated by the EDAM Load Serving Entity, that is certified by the CAISO and has entered into a Scheduling Coordinator Agreement under which it is a Scheduling Coordinator and Market Participant and is responsible for meeting the requirements specified in Section 33 on behalf of the EDAM Entity.

**- EDAM Market Participant**

An EDAM Entity, EDAM Entity Scheduling Coordinator, EDAM Resource, EDAM Resource Scheduling Coordinator, EDAM Load Serving Entity, EDAM Load Serving Entity Scheduling Coordinator, or EDAM Transmission Service Provider.

**- EDAM Measured Demand**

The metered CAISO Demand and metered EDAM Demand plus Real-Time Interchange Export Schedules from the Balancing Authority Areas in the EDAM Area, excluding that portion of Demand of Non-Generator Resources dispatched as Regulation through Regulation Energy Management and EDAM Transfers out of a Balancing Authority Area.

**- EDAM Recoverable Revenue**

Eligible revenues recovered by EDAM Entities through the EDAM Access Charge pursuant to Section

33.26.

**- EDAM Resource**

An owner of, operator of, or seller of Energy from an EDAM Resource Facility located in an EDAM Entity Balancing Authority Area.

**- EDAM Resource Facility**

A resource that (1) can deliver Energy, Curtailable Demand, Demand Response Services, or similar services; (2) is a Generating Unit, a Load of a Participating Load, or a Demand Response Resource or other CAISO-qualified resource; (3) is located within an EDAM Entity Balancing Authority Area; and (4) is listed in, and subject to, an EDAM Addendum to EIM Participating Resource Agreement.

**- EDAM Resource Scheduling Coordinator**

The EDAM Resource, or a third party designated by the EDAM Resource, that is certified by the CAISO and enters into an EDAM Resource Scheduling Coordinator Agreement under which it is a Scheduling Coordinator and Market Participant and is responsible for meeting the requirements specified in Section 33 on behalf of the EDAM Resource.

**- EDAM Resource Sufficiency Evaluation (EDAM RSE)**

A set of tests that determines whether a Balancing Authority Area in the EDAM Area, including the CAISO Balancing Authority Area, has sufficient supply and reserves to satisfy the resource sufficiency requirements described in Section 33.31.1.

**- EDAM RSE Downward Failure Insufficiency Surcharge**

The surcharge assessed to a Balancing Authority Area in the EDAM Area due to a failure of the EDAM RSE in the downward direction on any day and in any hour, as provided in Section 33.31.1.5.3.

**- EDAM RSE Failure Multiplier**

A tiered component of the EDAM RSE On-Peak Upward Failure Insufficiency Surcharge and the EDAM RSE Off-Peak Upward Failure Insufficiency Surcharge. Where a Balancing Authority Area's EDAM RSE Hourly Upward Deficiency Quantity is *de minimis* (a tier 1 EDAM RSE failure), such threshold determined as the higher of 10 MW or one percent of the Balancing Authority Area's upward imbalance reserve requirement for that hour, the EDAM RSE Failure Multiplier is zero. Where a Balancing Authority Area's EDAM RSE Hourly Upward Deficiency Quantity is less than or equal to fifty percent of the Balancing

Authority Area's upward Imbalance Reserve requirement (a tier 2 EDAM RSE failure), the EDAM RSE Failure Multiplier is 1.25. Where a Balancing Authority Area's EDAM RSE Hourly Upward Deficiency Quantity is greater than fifty percent of the Balancing Authority Area's upward Imbalance Reserve requirement (a tier 3 EDAM RSE failure), the EDAM RSE Failure Multiplier is 2. With respect to tier 2 or tier 3 EDAM RSE failure in the upward direction, the EDAM RSE Failure Multiplier is subject to an adder consisting of the EDAM RSE Failure Scaling Factor.

**- EDAM RSE Failure Scaling Factor**

An adder to the EDAM RSE Failure Multiplier calculated on a rolling basis to account for hours in which a Balancing Authority Area in the EDAM Area persistently fails the EDAM RSE in the upward direction over the preceding thirty days, with the EDAM RSE Failure Scaling Factor adding one percent to the EDAM RSE Failure Multiplier for every additional day during the preceding thirty-day period in which the Balancing Authority Area experienced a tier 2 or tier 3 failure of the EDAM RSE in the upward direction.

**- EDAM RSE Hourly Downward Deficiency Quantity**

The MW sum total of the downward failures during any single operating hour inclusive of the downward demand deficiency described in Section 33.31.1.3, the downward imbalance reserve deficiency described in Section 33.31.1.2, or the downward Ancillary Services deficiency described in Section 33.31.1.4.

**- EDAM RSE Hourly Upward Deficiency Quantity**

The MW sum total of the upward failures during any single operating hour inclusive of the upward demand deficiency described in Section 33.31.1.3.1, the upward imbalance reserve deficiency described in Section 33.31.1.2, or the upward ancillary services deficiency described in Section 33.31.1.4.

**- EDAM RSE Off-Peak Upward Failure Insufficiency Surcharge**

The surcharge assessed to a Balancing Authority Area in the EDAM Area due to a tier 2 or tier 3 failure of the EDAM RSE in the upward direction on any day Monday through Saturday in the off-peak hours of midnight to 6 a.m. or 10 p.m. to midnight, pacific time, and all hours on Sunday or any legal public holiday, as provided in Section 33.31.1.5.2.

**- EDAM RSE On-Peak Upward Credit**

A component of the EDAM RSE On-Peak Upward Failure Insufficiency Surcharge to account for hours during the sixteen-hour on-peak period in which the Balancing Authority Area satisfies the upward

requirements of the demand evaluation described in Section 33.31.1.3.1, the Imbalance Reserve evaluation described in Section 33.31.1.3.2, and the ancillary services evaluation described in Section 33.31.1.3.3, and determined as the product of the highest EDAM RSE Hourly Upward Deficiency Quantity of the day and the load-weighted average LMP of the LAP within that Balancing Authority Area in each passed hour.

**- EDAM RSE On-Peak Upward Failure Insufficiency Surcharge**

The surcharge assessed to a Balancing Authority Area in the EDAM Area due to a tier 2 or tier 3 failure of the EDAM RSE in the upward direction on any day Monday through Saturday during the sixteen-hour on-peak block from 6 a.m. to 10 p.m., pacific time, as provided in Section 33.31.1.5.1.

**- EDAM System Operations Charge**

The System Operations Charge for the Extended Day-Ahead Market described in Section 33.11.6.

**- EDAM Trade Location**

The major bilateral trading hubs where energy is traded day-ahead for sixteen-hour on-peak blocks and at which there is sufficient liquidity to allow the CAISO to utilize the day-ahead hub price for the sixteen-hour on-peak block as a means to index the EDAM RSE On-Peak Upward Failure Insufficiency Surcharge, as identified in the Business Practice Manuals for the Extended Day-Ahead Market.

**- EDAM Transfer**

The scheduled transfer of Energy, Imbalance Reserves, or Reliability Capacity in the Day-Ahead Market between an EDAM Entity Balancing Authority Area and the CAISO Balancing Authority Area, or between EDAM Entity Balancing Authority Areas, using transmission capacity made available through the Extended Day-Ahead Market.

**- EDAM Transfer System Resource**

A Transfer System Resource used to model an Energy and/or capacity Market Transfer between two Balancing Authority Areas in the Extended Day-Ahead Market.

**- EDAM Transmission Ownership Right**

Ownership rights by a third-party on transmission facilities within an EDAM Entity Balancing Authority Area that are not subject to an EDAM Transmission Service Provider tariff.

**- EDAM Transmission Service Information**

Information provided by an EDAM Entity to the CAISO about transmission capacity available for use in the Extended Day-Ahead Market.

**- EDAM Transmission Service Provider**

An EDAM Entity or other party that owns transmission or has transmission service rights on an EDAM Intertie or within an EDAM Entity Balancing Authority Area, provides transmission service, and that makes transmission service available for use in the Day-Ahead Market through an EDAM Entity. This definition does not include network integration transmission service customers or other transmission customers of an EDAM Transmission Service Provider, EDAM Legacy Contract Rights or EDAM Transmission Ownership Rights.

**- EDAM Transmission Service Provider Agreement**

An agreement between an EDAM Transmission Service Provider and the CAISO, a *pro forma* version of which is set forth in Appendix B.

**- EDAM Upward Pool**

A pool comprised of each Balancing Authority Area in the EDAM Area that satisfies the upward components of the EDAM Resource Sufficiency Evaluation described in Section 33.31.1.3 in each hour of the Day-Ahead Market, together with each Balancing Authority Area in the EDAM Area that has cured its upward failure of the EDAM Resource Sufficiency Evaluation through the IFM and incurred the EDAM RSE On-Peak Upward Failure Surcharge or the EDAM RSE Off-Peak Upward Failure Surcharge. The CAISO Balancing Authority Area will be included in the EDAM Upward Pool upon satisfaction of the upward components of the EDAM Resource Sufficiency Evaluation described in Section 33.31.1.3 in each hour of the Day-Ahead Market or upon cure through the IFM and incurrence of the EDAM RSE On-Peak Upward Failure Surcharge or the EDAM RSE Off-Peak Upward Failure Surcharge.

**- EEP**

Electrical Emergency Plan

**- Effective Day-Ahead Scheduled Energy**

The minimum of the Expected Energy and the Day-Ahead Scheduled Energy.

**- Effective Economic Bid**

An Economic Bid that is not an Ineffective Economic Bid.

**- Effective Flexible Capacity**

The maximum MWs of Flexible Capacity a resource has the capability to provide based on the counting criteria set forth in Section 40.10.4.2.

**- EIM Administrative Charge**

The fee imposed on transactions in the Energy Imbalance Market as described in Section 29.11(i)(1).

**- EIM Area**

The combined CAISO Balancing Authority Area and all EIM Entity Balancing Authority Areas.

**- EIM Assistance Energy Transfer Surcharge**

An after-the-fact charge of $1,000/MWh when the Soft Energy Bid Cap is in effect that will increase to $2,000/MWh when the Hard Energy Bid Cap is in effect and is paid by a participating Balancing Authority Area in the EIM Area pursuant to Section 29.11(t)(1)(A).

**- EIM Auto-Match**

The automatic matching of an EIM Entity's intertie schedule change outside the Market Clearing of the Real-Time Market because of changes to Interchange E-Tags at a designated EIM Intertie or Scheduling Point with matching changes to an associated EIM non-participating resource EIM Base Schedule.

**- EIM Available Balancing Capacity**

Any EIM Upward Available Balancing Capacity or EIM Downward Available Balancing Capacity.

**- EIM Base Load Schedule**

A forward Energy Schedule prepared by the CAISO that provides hourly Demand Forecasts for EIM Demand, as adjusted for transmission losses and any unbalanced EIM Base Schedule.

**- EIM Base Schedule**

An hourly forward Energy Schedule that does not take into account Dispatches from the Real-Time Market and is submitted by an EIM Entity Scheduling Coordinator, EIM Sub-Entity Scheduling Coordinator, or EIM Participating Resource Scheduling Coordinator for use in the Real-Time Market.

**- EIM Base Schedule of Supply**

That portion of an EIM Base Schedule that represents Energy from resources and interchange.

**- [Not Used]**

**- EIM Demand**

Energy delivered to Load internal to an EIM Entity Balancing Authority Area.

**- EIM Downward Available Balancing Capacity**

Any downward capacity from an EIM Resource or a non-participating resource that an EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator has identified in the EIM Resource Plan as available to address power balance and transmission constraint violations in the EIM Balancing Authority Area.

**- EIM Entity**

A Balancing Authority that represents one or more EIM Transmission Service Providers and that enters into an EIM Entity Agreement with the CAISO to enable the operation of the Real-Time Market in its Balancing Authority Area.

**- EIM Entity Agreement**

An agreement between an EIM Entity and the CAISO, a pro forma version of which is set forth in Appendix B.

**- EIM Entity Implementation Date**

The first Trading Day for an EIM Entity in the Real-Time Market.

**- EIM Entity Scheduling Coordinator**

The EIM Entity, or a third party designated by the EIM Entity, that is certified by the CAISO and that enters into an EIM Entity Scheduling Coordinator Agreement under which it is a Scheduling Coordinator and a Market Participant and is responsible for meeting the requirements specified in Section 29 on behalf of the EIM Entity.

**- EIM Entity Scheduling Coordinator Agreement**

An agreement between an EIM Entity Scheduling Coordinator and the CAISO, a pro forma version of which is set forth in Appendix B.

**- EIM External Intertie**

A point of interconnection between an EIM Entity Balancing Authority Area and an interconnected Balancing Authority Area other than a Balancing Authority Area in the EIM Area.

**- EIM Implementation Agreement**

An agreement between a Balancing Authority seeking to become an EIM Entity and the CAISO, the

primary terms of which are set forth in Section 29.2(b).

**- EIM Internal Intertie**

A point of interconnection between an EIM Entity Balancing Authority Area and another Balancing Authority Area in the EIM Area.

**- EIM Intertie**

An EIM External Intertie or EIM Internal Intertie.

**- EIM Manual Dispatch**

A Dispatch by an EIM Entity or EIM Sub-Entity to an EIM Resource or a non-participating resource for which it is responsible, outside of Market Clearing of the Real-Time Market.

**- EIM Market Participant**

An EIM Entity, EIM Entity Scheduling Coordinator, EIM Sub-Entity, EIM Sub-Entity Scheduling Coordinator, EIM Participating Resource, or EIM Participating Resource Scheduling Coordinator.

**- EIM Measured Demand**

The metered CAISO Demand and metered EIM Demand plus Real-Time Interchange Export Schedules, excluding that portion of Demand of Non-Generator Resources dispatched as Regulation through Regulation Energy Management and EIM Transfers out of an EIM Entity Balancing Authority Area.

**- EIM Mirror**

The process by which an EIM Entity balances a CAISO intertie schedule associated with Energy that originates, is consumed in, or wheels through the EIM Entity Balancing Authority Area with an intertie schedule for the EIM Mirror System Resource. CAISO imports are mirrored as EIM Entity Balancing Authority Area exports and CAISO exports are mirrored as EIM Entity Balancing Authority Area imports.

**- EIM Mirror System Resource**

A System Resource at a Scheduling Point registered to an EIM Entity for mirroring CAISO or EDAM Entity intertie schedules at that Scheduling Point, when the associated Energy is generated at, wheeled through, or consumed at the corresponding EIM Entity Balancing Authority Area.

**- EIM Participating Resource**

An owner of, operator of, or seller of Energy from an EIM Resource that elects to participate in the Real-Time Market and enters into the EIM Participating Resource Agreement under which it is responsible for

meeting the requirements specified in Section 29.

**- EIM Participating Resource Agreement**

An agreement between an EIM Participating Resource and the CAISO, a pro forma version of which is set forth in Appendix B.

**- EIM Participating Resource Scheduling Coordinator**

The EIM Participating Resource, or a third party designated by the EIM Participating Resource, that is certified by the CAISO and enters into an EIM Participating Resource Scheduling Coordinator Agreement under which it is a Scheduling Coordinator and Market Participant and is responsible for meeting the requirements specified in Section 29 on behalf of the resource.

**- EIM Participating Resource Scheduling Coordinator Agreement**

An agreement between the EIM Participating Resource Scheduling Coordinator and the CAISO, a pro forma version of which is set forth in Appendix B.

**- EIM Reserves to Meet NERC-WECC Contingency Reserves Requirements**

Any capacity that an EIM Entity Scheduling Coordinator has designated, in the EIM Resource Plan, as necessary to meet its NERC/WECC contingency reserves requirements in the applicable Trading Hour and which does not overlap with capacity designated in other parts of the EIM Resource Plan specified in Section 29.34(e)(3).

**- EIM Resource**

A resource that (1) can deliver Energy, Curtailable Demand, Demand Response Services, or similar services; (2) is a Generating Unit, a Load of a Participating Load, or a Demand Response Resource or other CAISO qualified resource; and (3) is located within an EIM Entity Balancing Authority Area, and that is listed in and subject to an EIM Participating Resource Agreement.

**- EIM Resource Plan**

The combination of EIM Base Schedules for Demand, Generation, and Interchange, the ancillary services plans of the EIM Entity, and the Bid ranges of EIM Resources, as specified in more detail in Section 29.34(e)(4).

**- EIM Resource Sufficiency Evaluation**

A test that determines whether the CAISO Balancing Authority Area and each EIM Entity Balancing

Authority Areas has sufficient supply and reserves to meet forecasted Demand and uncertainty for the EIM, as described in Section 29.34(l)-(n).

**- EIM Sub-Entity**

An electric utility that meets the criteria in Section 29.2(c)(1) and that enters into an EIM Sub-Entity Agreement with the CAISO to enable the operation of the Real-Time Market in its service territory.

**- EIM Sub-Entity Agreement**

An agreement between an EIM Sub-Entity and the CAISO, a pro forma version of which is set forth in Appendix B.

**- EIM Sub-Entity Implementation Agreement**

An agreement between an electric utility seeking to become an EIM Sub-Entity and the CAISO, a pro forma version of which is set forth in Appendix B.

**- EIM Sub-Entity Implementation Date**

The first Trading Day when an electric utility becomes an EIM Sub-Entity.

**- EIM Sub-Entity Scheduling Coordinator**

The EIM Sub-Entity, or a third party designated by the EIM Sub-Entity, that is certified by the CAISO and that enters into an EIM Sub-Entity Scheduling Coordinator Agreement under which it is a Scheduling Coordinator and a Market Participant and is responsible for meeting the requirements in Section 29 on behalf of the EIM Sub-Entity.

**- EIM Sub-Entity Scheduling Coordinator Agreement**

An agreement between an EIM Sub-Entity Scheduling Coordinator and the CAISO, a pro forma version of which is set forth in Appendix B.

**- EIM Transfer**

The transfer of Energy in Real-Time between an EIM Entity Balancing Authority Area and the CAISO Balancing Authority Area, or between EIM Entity Balancing Authority Areas, using transmission capacity made available to the Real-Time Market through the Energy Imbalance Market. The EIM Transfer is not a Real-Time Interchange Export Schedule or a Real-Time Interchange Import Schedule.

**- EIM Transmission Service Information**

Information provided by an EIM Entity or EIM Sub-Entity to the CAISO about transmission capacity

available for use in the Real-Time Market through the Energy Imbalance Market.

**- EIM Transmission Service Provider**

An EIM Entity, or EIM Sub-Entity or third party that owns transmission or has transmission service rights on an EIM Intertie that makes transmission service available for use in the Real-Time Market through an EIM Entity.

**- EIM Upward Available Balancing Capacity**

Any upward capacity from an EIM Resources or a non-participating resource that an EIM Entity Scheduling Coordinator or EIM Sub-Entity Scheduling Coordinator has identified in the EIM Resource Plan as available to address power balance and transmission violations in the EIM Balancing Authority Area.

**- ELC Process**

Extremely Long-Start Commitment Process

**- Electric Reliability Organization**

The North American Electric Reliability Corporation (NERC) and the Western Electricity Coordinating Council (WECC) or their successor organizations.

**- Electrical Emergency Plan (EEP)**

A plan to be developed by the CAISO in consultation with Utility Distribution Companies to address situations when Energy reserve margins are forecast to be below established levels.

**- Electric Facility**

An electric resource, including a Generating Unit, System Unit, Participating Load, Reliability Demand Response Resource, or Proxy Demand Resource.

**- Electric Vehicle Supply Equipment (EVSE)**

Load, Energy, and storage resources consisting of charging stations, charging docks, or other facilities used to interconnect and supply Energy to electric vehicles.

**- Eligible Aggregated PNode**

An Aggregated PNode where either aggregated physical supply, a Default LAP, or a Trading Hub are located and where virtual bidding is permitted.

**- Eligible Capacity**

Capacity of Generating Units, System Units, System Resources, PDRs, or Participating Loads that, on any day for which it potentially would hold a CPM designation, is not Committed RA Capacity and not under an RMR Contract. Capacity offered to a CSP will have its status as Eligible Capacity validated by the CAISO after close of the Annual CSP offer adjustment period, Monthly CSP offer adjustment period, and Intra-monthly CSP offer period for the Annual CSP, Monthly CSP, and Intra-monthly CSP, respectively. Capacity on, or scheduled to be on, a Forced Outage, Approved Maintenance Outage, or de-rate, is not operationally available and, for the duration of that unavailability, shall not be Eligible Capacity for purposes of potentially receiving a CPM Capacity designation.

**- Eligible Customer**

(i) any utility (including Participating TOs, Market Participants and any power marketer), federal power marketing agency, or any person generating Energy for sale or resale; Energy sold or produced by such entity may be Energy produced in the United States, Canada or Mexico; however, such entity is not eligible for transmission service that would be prohibited by Section 212(h)(2) of the Federal Power Act; and (ii) any retail customer taking unbundled transmission service pursuant to a state retail access program or pursuant to a voluntary offer of unbundled retail transmission service by the Participating TO.

**- Eligible Intermittent Resource**

A Variable Energy Resource that is a Generating Unit or Dynamic System Resource subject to a Participating Generator Agreement, Net Scheduled PGA, Dynamic Scheduling Agreement for Scheduling Coordinators, or Pseudo-Tie Participating Generator Agreement.

**- Eligible PNode**

A PNode, not including scheduling points, where either physical supply or demand is located and where virtual bidding is permitted.

**- ELS Resource**

Extremely Long-Start Resource

**- Emergency Notice**

An electronic notice issued by the CAISO regarding a System Emergency as set forth in the Business Practice Manual.

**- Emissions Cost Demand**

The level of Demand specified in Section 11.18.3.

**- Emissions Cost Invoice**

The invoice submitted to the CAISO in accordance with Section 11.18.6.

**- Emissions Cost**

The mitigation fees, excluding capital costs, assessed against a Generating Unit by a state or federal agency, including air quality districts, for exceeding applicable NOx emission limitations.

**- Emissions Eligible Generator**

A Generator with a Generating Unit that is a BCR Eligible Resource.

**- EMS**

Energy Management System

**- Encumbrance**

A legal restriction or covenant binding on a Participating TO that affects the operation of any transmission lines or associated facilities and which the CAISO needs to take into account in exercising Operational Control over such transmission lines or associated facilities if the Participating TO is not to risk incurring significant liability. Encumbrances shall include Existing Contracts and may include: (1) other legal restrictions or covenants meeting the definition of Encumbrance and arising under other arrangements entered into before the CAISO Operations Date, if any; and (2) legal restrictions or covenants meeting the definition of Encumbrance and arising under a contract or other arrangement entered into after the CAISO Operations Date.

**- End-Use Customer or End-User**

A consumer of electric power who consumes such power to satisfy a Load directly connected to the CAISO Controlled Grid, a Distribution System, or, for purposes of scheduling and operating the Day-Ahead Market only, the transmission system of an EDAM Transmission Service Provider who does not resell the power, or, for purposes of scheduling and operating the Real-Time Market only, the transmission system of an EIM Transmission Service Provider and who does not resell the power.

**- End-Use Meter**

A metering device collecting Meter Data with respect to the Energy consumption of an End-User.

**- End-Use Meter Data**

Meter Data that measures the Energy consumption in respect of End-Users gathered, edited and validated by Scheduling Coordinators and submitted to the CAISO in Settlement quality form.

**- Energy**

The electrical energy produced, flowing or supplied by generation, transmission or distribution facilities, being the integral with respect to time of the instantaneous power, measured in units of watt-hours or standard multiples thereof, e.g., 1,000 Wh=1kWh, 1,000 kWh=1MWh, etc.

**- Energy Bid**

A Demand Bid, an Energy Supply Bid, or a Virtual Bid.

**- Energy Bid Cost**

An amount equal to the integral of the Energy Bid for resources operating above PMin.

**- Energy Bid Curve**

The Bid component that indicates the prices and related quantity at which a resource offers Energy in a monotonically increasing (decreasing for Participating Load) staircase function, consisting of no more than 10 segments defined by 11 pairs of MW operating points and $/MWh, which may be different for each Trading Hour of the applicable Bid time period. If the resource has Forbidden Operating Regions, each Forbidden Operating Region must be reflected as a single, separate Energy Bid Curve segment.

**- Energy Export**

For purposes of calculating the Grid Management Charge, Energy included in an Interchange Schedule submitted to the CAISO, or dispatched by the CAISO, to serve a load located outside the CAISO's Balancing Authority Area, whether the Energy is produced by a Generator in the CAISO Balancing Authority Area or a resource located outside the CAISO Balancing Authority Area.

**- Energy Imbalance Market (EIM)**

The rules and procedures in Section 29 governing the CAISO’s operation of the Real-Time Market in Balancing Authority Areas outside of the CAISO Balancing Authority Area and the participation of EIM Market Participants in the Real-Time Market.

**- Energy Limit**

The Bid component that indicates the maximum and minimum daily Energy limits for the Generating Unit. Energy Limit applies to net pumping Demand and Generation over the Operating Day for a Pumped-

Storage Hydro Unit.

**- Energy Management System (EMS)**

A computer control system used by electric utility dispatchers to monitor the real-time performance of the various elements of an electric system and to control Generation and transmission facilities.

**- Energy-Only Deliverability Status (Energy Only)**

A condition elected by an Interconnection Customer for a Generating Facility interconnected with the CAISO Controlled Grid the result of which is that the Interconnection Customer is responsible only for the costs of Reliability Network Upgrades and is not responsible for the costs of Delivery Network Upgrades, but the Generating Facility will be deemed to have a Net Qualifying Capacity of zero, and, therefore, cannot be considered to be a Resource Adequacy Resource.

**- Energy Resource Area (ERA)**

A geographic region certified by the California Public Utilities Commission and the California Energy Commission as an area in which multiple LCRIGs could be located, provided that, for the interim period before those agencies certify such areas and for LCRIFs that are proposed to connect LCRIGs located outside the State of California, an Energy Resource Area shall mean a geographic region that would be connected to the CAISO Controlled Grid by an LCRIF with respect to which the CAISO Governing Board determines that all of the requirements of Section 24.4.6.3 are satisfied, except for the requirement that the LCRIGs to which the LCRIF would connect are located in an area certified as an ERA by those agencies.

**- Energy Supply Bid**

The quantity (MWh) and a price ($) at or above which a resource has agreed to sell the next increment of Energy for a specified interval of time.

**- Engineering & Procurement (E&P) Agreement**

An agreement that authorizes the Participating TO to begin engineering and procurement of long lead-time items necessary for the establishment of the interconnection in order to advance the implementation of the Interconnection Request.

**- Entitlements**

The right of a Participating TO obtained through contract or other means to use another entity's

transmission facilities for the transmission of Energy.

**- Environmental Dispatch**

Dispatch designed to meet the requirements of air quality and other environmental legislation and environmental agencies having authority or jurisdiction over the CAISO.

**- ERA**

Energy Resource Area

**- Estimated Aggregate Liability (EAL)**

The sum of a Market Participant's known and reasonably estimated potential liabilities for a specified time period arising from charges described in the CAISO Tariff, as provided for in Section 12.

**- E-Tag**

An electronic tag associated with an Interchange Schedule in accordance with the requirements of WECC.

**- ETC**

Existing Transmission Contract

**- ETC Self-Schedule**

A Self-Schedule submitted by a Scheduling Coordinator pursuant to Existing Rights as reflected in the TRTC Instructions.

**- Exceptional Dispatch**

A Dispatch Instruction issued for the purposes specified in Section 34.11. Energy from Exceptional Dispatches shall not set any FMM or RTD LMP.

**- Exceptional Dispatch CPM**

An Exceptional Dispatch CPM under Section 43A.2.5 with a term of 30 or 60 days.

**- Exceptional Dispatch CPM Non-System Reliability Need**

The existence of a reliability issue where resolution depends on a resource in a specific geographic area within the CAISO Balancing Authority Area, which may include, but is not limited to, a local reliability area, zone, or region.

**- Exceptional Dispatch CPM System Reliability Need**

The existence of a reliability issue where resolution does not require a resource to be in a specific

geographic area within the CAISO Balancing Authority Area, which may include, but is not limited to, a forced outage of a major transmission line or a forced outage at a large generating unit.

**- Exceptional Dispatch Instruction**

A Dispatch Instruction issued pursuant to Exceptional Dispatch.

**- Exceptional Dispatch Term**

The term of each Exceptional Dispatch CPM designation, as determined pursuant to Section 43A.3.6.

**- Excess Cost Payments**

The payments made by the CAISO for costs associated with Exceptional Dispatches for 1) emergency conditions, to avoid Market Disruption and avoid an imminent System Emergency as provided in Section 11.5.6.1.1; 2) transmission-related modeling limitations as provided in Section 11.5.6.2.3; 3) Condition 2 Legacy RMR Units as provided in Section 11.5.6.3.2; and 4) emergency Energy as provided in Section 11.5.8.1.1.

**- Excess Behind the Meter Production**

Energy from an End-Use Customer in excess of its onsite Demand.

**- Existing Contract Import Capability**

The quantity of Available Import Capability reserved for Existing Contracts and Transmission Ownership Rights held by Load Serving Entities that serve Load within the CAISO Balancing Authority Area under Step 3 of Section 40.4.6.2.

**- Existing QF Contract**

A Legacy PPA, as defined in the settlement approved by the CPUC in Decision D. 10-12-035 (December 16, 2010), as modified in Decision D.11-07-010 (July 15, 2011), that became effective on or prior to December 20, 1995 or, in the case of a Generator employing landfill gas technology, on or prior to December 31, 1996, and (1) has not been amended subsequent to November 23. 2011 or (2) has been amended in a manner that (a) does not extend the term of the Legacy Contract, (b) does not increase the capacity subject to the PPA, and (c) does not require compliance with the CAISO Tariff.

**- Existing Rights**

The transmission service rights and obligations of non-Participating TOs or Subscriber Participating TOs under Existing Contracts or Subscriber Encumbrances, including all terms, conditions, and rates of the

Existing Contracts or Subscriber Encumbrances, as they may change from time to time under the terms of the Existing Contracts or Subscriber Encumbrances. Subscriber Rights will be treated as Existing Rights.

**- Existing Transmission Contracts (ETC) or Existing Contracts**

The contracts which grant transmission service rights in existence on the CAISO Operations Date (including any contracts entered into pursuant to such contracts) as may be amended in accordance with their terms or by agreement between the parties thereto from time to time. Subscriber Encumbrances will be treated as Existing Contracts even though they include legal restrictions or covenants meeting the definition of an Encumbrance arising under a contract or agreement entered into after the CAISO Operations Date.

**- Existing Zone**

A region formerly referred to as NP15, SP15, or ZP26 prior to implementation of the CAISO LMP market design.

**- Existing Zone Generation Trading Hub**

Trading Hubs specifically developed to represent the average price paid to generation resources within Existing Zones.

**- Expanded System Region**

The System Region and Intertie Scheduling Points with interconnected Balancing Authority Areas.

**- Expected Congestion Revenue**

The mean value based on the probability distribution of the historic Congestion revenue of a CRR.

**- Expected Energy**

The total Energy that is expected to be generated or consumed by a resource, based on the Dispatch of that resource, as calculated by the Real-Time Market (RTM), and as finally modified by any applicable Dispatch Operating Point corrections. Expected Energy includes the Energy scheduled in the IFM, and it is calculated for the applicable Trading Day. Expected Energy is calculated for Generating Units, System Resources, Resource-Specific System Resources, Participating Loads, and Proxy Demand Resources. The calculation is based on the Day-Ahead Schedule and the Dispatch Operating Point trajectory for the three-hour period around the target Trading Hour (including the previous and following hours), the

applicable Real-Time LMP for each Dispatch Interval of the target Trading Hour, and any Exceptional Dispatch Instructions. Energy from Non-Dynamic System Resources is converted into HASP Intertie Schedules. Expected Energy is used as the basis for Settlements.

**- Export Bid**

A Demand Bid submitted to a CAISO Market at a Scheduling Point.

**- Exporting Participating Intermittent Resource**

A Participating Intermittent Resource with a PIR Export Percentage greater than zero (0).

**- Extended Day-Ahead Market (EDAM)**

The Day-Ahead Market for EDAM Market Participants, as set forth in Section 33 of the CAISO Tariff.

**- Extremely Long-Start Commitment Process (ELC Process)**

The CAISO process for Unit Commitment for Extremely Long-Start Resources, as set forth in Section 31.7.

**- Extremely Long-Start Resource (ELS Resource)**

A Generating Unit that has a Start-Up Time greater than 18 hours or a System Resource that is either: (1) a Non-Resource-Specific System Resource with contractual limitations that require the Energy be transacted (i.e., committed) prior to the publishing time of the Day-Ahead Market results (1300 hours on the day before the Trading Day); or (2) a Resource-Specific System Resource that has a Start-Up Time greater than 18 hours.

**- Facility Study**

An engineering study conducted by a Participating TO to determine required modifications to the Participating TO's transmission system, including the cost and scheduled completion date for such modifications that will be required to provide needed services.

**- Facility Study Agreement**

An agreement between a Participating TO and either a Market Participant, Project Sponsor, or identified principal beneficiaries pursuant to which the Market Participants, Project Sponsor, and identified principal beneficiaries agree to reimburse the Participating TO for the cost of a Facility Study.

**- [Not Used]**

**- Fast Track Process**

The GIP or GIDAP procedure for evaluating an Interconnection Request for a certified Small Generating Facility no larger than 5 MW that includes application of screens, customer options meetings, and optional supplemental review.

**- Feasibility Index**

A test used to evaluate whether a supplier or set of suppliers is pivotal in relieving congestion on a transmission path for the purposes of determining if a path is deemed to be competitive.

**- Fedwire**

The Federal Reserve Transfer System for electronic funds transfer.

**- FERC**

The Federal Energy Regulatory Commission or its successor.

**- FERC Annual Charge Recovery Rate**

The rate to be paid by Scheduling Coordinators for recovery of FERC Annual Charges assessed against the CAISO for transactions on the CAISO Controlled Grid.

**- FERC Annual Charges**

Those charges assessed against a public utility by the FERC pursuant to 18 C.F.R. § 382.201 and any related statutes or regulations, as they may be amended from time to time.

**- FERC Annual Charge Trust Account**

An account to be established by the CAISO for the purpose of maintaining funds collected from Scheduling Coordinators for FERC Annual Charges and disbursing such funds to the FERC.

**- Fifteen-Minute Market (FMM)**

A Real-Time market procedure conducted throughout the Operating Day in fifteen-minute increments prior to the RTD, to clear Bids for Energy and Ancillary Services from imports and exports, internal Supply and CAISO Forecast of CAISO Demand, as further specified in Section 34.5.

**- Fifth Percentile Congestion Revenue**

The fifth percentile value based on the probability distribution of the historic Congestion revenue of a CRR.

**- Final Approval**

A statement of consent by the CAISO Control Center to initiate a scheduled Outage.

**- Final NERC/WECC Charge Invoice**

A final invoice issued by the CAISO that reflects an allocation of NERC/WECC Charges to a Scheduling Coordinator based on the Final NERC/WECC Charge Rate for the NERC/WECC Charge Assessment Year.

**- Final NERC/WECC Charge Rate**

The rate to be paid by Scheduling Coordinators for NERC/WECC Charges based on the WECC invoice to the CAISO for NERC/WECC Charges for a given year and on the NERC/WECC Metered Demand for the NERC/WECC Charge Assessment Year.

**- Financial Security**

Any of the types of financial instruments listed in Section 12 that are posted by a Market Participant, CRR Holder or Candidate CRR Holder.

**- Financial Security Amount**

The level of Financial Security posted in accordance with Section 12 by a Market Participant, Candidate CRR Holder or CRR Holder.

**- Firm Liquidated Damages Contract**

A contract utilizing or consistent with Service Schedule C of the Western Systems Power Pool Agreement or the Firm Liquidated Damages product of the Edison Electric Institute pro forma agreement, or any other similar firm Energy contract that does not require the seller to source the Energy from a particular unit, and specifies a delivery point internal to the CAISO Balancing Authority Area.

**- Five-Minute Imbalance Reserve Quantity**

For a resource with an Imbalance Reserves Award, the five-minute ramp capable portion of the award measured as the MW quantity of the resource's ramp capability above the Day-Ahead hourly Energy schedule, in the case of IRU, or below that schedule, in the case of IRD. The ramp capability is determined based on the Master File-registered ramp rate used to optimize the day-ahead market.

**- Fixed CRRs**

Congestion Revenue Rights that are used in the running of an SFT to represent known encumbrances on the transmission system and which may include some or all of the following: previously allocated or awarded Monthly CRRs, Seasonal CRRs, Long Term CRRs, and Merchant Transmission CRRs, Existing

Transmission Contracts, and Converted Rights.

**- Flexible Capacity**

The capacity of a resource that is operationally able to respond to Dispatch Instructions to manage variations in load and variable energy resource output.

**- Flexible Capacity Category**

The classification of Flexible Capacity as base ramping, peak ramping, or super-peak ramping based on the resource's operational characteristics and ability to meet minimum availability requirements.

**- Flexible Capacity CPM**

Flexible Capacity designated under the Capacity Procurement Mechanism, for the term of the designation. Flexible Capacity CPM is a subset of CPM Capacity.

**- Flexible Capacity Need**

The MW of Flexible Capacity that the CAISO forecasts will be needed in the next Resource Adequacy Compliance Year to reliably operate the CAISO Controlled Grid.

**- Flexible Capacity Needs Assessment**

The study performed by the CAISO to forecast the Flexible Capacity Need.

**- Flexible RA Capacity**

The Flexible Capacity of a resource listed on an LSE Flexible RA Capacity Plan and a Resource Flexible RA Capacity Plan.

**- Flexible RA Resource**

A resource designated to provide Flexible RA Capacity.

**- Flexible Ramp Down Price**

The Shadow Price of the downward Uncertainty Requirement constraint, which is the cost sensitivity of relaxing the downward Uncertainty Requirement constraint ($/MWh), by Location.

**- Flexible Ramp Up Price**

The Shadow Price of the upward Uncertainty Requirement constraint, which is the cost sensitivity of relaxing the upward Uncertainty Requirement constraint ($/MWh), by Location.

**- Flexible Ramping Product**

The product procured pursuant to Section 44 to meet flexible ramping needs to meet Forecasted

Movement and Uncertainty Requirements.

**- Flow Impact**

The combined impact of the CRR Holder's portfolio of Virtual Awards from the IFM on the power flows of a Constraint. The Flow Impact is calculated by multiplying the CRR Holder's Virtual Awards at a Node by the shift factor of that Node relative to the Constraint. This product is computed for each Node for which the Convergence Bidding Entity had Virtual Awards, and the Flow Impact is the sum of those products. In this definition, shift factor means the factor to be applied to a resource's expected change in output to determine the amount of flow contribution that change in output will impose on an identified transmission facility or flowgate. The shift factor used in calculating a Flow Impact will be subject to the effectiveness threshold set forth in Section 27.4.3.6.

**- FMM AS Award**

An award of Ancillary Services established through the Fifteen Minute Market.

**- FMM Derate Energy**

Extra-marginal FMM IIE, exclusive of FMM Minimum Load Energy, consumed due to PMax derates, that is consumed below the Day-Ahead Schedule and above the higher of the derated PMax or the FMM Schedule. FMM Derate Energy does not overlap with FMM Minimum Load Energy, FMM Exceptional Dispatch Energy, or FMM Optimal Energy, but it may overlap with Day-Ahead Scheduled Energy and MSS Load Following Energy. FMM Derate Energy is settled as described in Section 11.5.1, and it is not included in BCR as described in Section 11.8.4. FMM Derate Energy also includes Residual Imbalance Energy incurred due to the Ramping up towards or Ramping down from a Minimum Load rerated pursuant to Section 9.3.3 as specified in Section 11.5.5.

**- FMM Exceptional Dispatch Energy**

Extra-marginal FMM IIE, exclusive of FMM Minimum Load Energy, and FMM Derate Energy, produced or consumed due to FMM Exceptional Dispatch Instructions that are binding in the relevant Dispatch Interval. Without MSS Load following, FMM Exceptional Dispatch Energy is produced above the LMP index and below the lower of the FMM Schedule or the FMM Exceptional Dispatch Instruction, or consumed below the LMP index and above the higher of the FMM Schedule or the FMM Exceptional Dispatch Instruction. The LMP index is the capacity in the relevant Energy Bid that corresponds to a Bid

price equal to the relevant LMP. FMM Exceptional Dispatch Energy does not overlap with FMM Minimum Load Energy, FMM Derate Energy, or FMM Optimal Energy, but it may overlap with Day-Ahead Scheduled Energy, RTD Optimal Energy, and MSS Load Following Energy. FMM Exceptional Dispatch Energy is settled as described in Section 11.5.6, and it is not included in BCR as described in Section 11.8.4.

**- FMM IIE Settlement Amount**

The payment due a Scheduling Coordinator for positive FMM Instructed Imbalance Energy or the charge assessed on a Scheduling Coordinator for negative FMM Instructed Imbalance Energy, as calculated pursuant to Section 11.5.1.1.

**- FMM Instructed Imbalance Energy or FMM IIE**

The accounted for energy resulting from the difference between a resource's Day-Ahead Schedules or EIM Base Schedules and FMM Schedules determined pursuant to Section 11.5.1.1.

**- FMM LAP PRICE**

The marginal price for a particular LAP calculated pursuant to Section 27.2.2.2.

**- FMM Minimum Load Energy**

FMM IIE produced due to the Minimum Load of a Generating Unit that is committed in the RUC or the FMM and does not have a Day-Ahead Schedule or of a Constrained Output Generator (COG) that is committed in the IFM with a Day-Ahead Schedule below the Minimum Load, as defined in the Master File, or if applicable, as modified pursuant to Section 9.3.3. If the resource is committed in the FMM for Load following by an MSS Operator, the FMM Minimum Load Energy is accounted as MSS Load Following Energy instead. FMM Minimum Load Energy is FMM IIE above the Day-Ahead Schedule (or zero if there is no Day-Ahead Schedule of Energy) and equal to or below the Minimum Load, as defined in the Master File, or if applicable, as modified pursuant to Section 9.3.3. FMM Minimum Load Energy does not overlap with any other Expected Energy type. FMM Minimum Load Energy is settled as described in Section 11.5.1, and it is included in BCR as described in Section 11.8.4.1.2. FMM IIE that is consumed when a resource that is scheduled in the DAM is shut down in the FMM is accounted as FMM Optimal Energy and not as FMM Minimum Load Energy.

**- FMM MSS Price**

1) The Hourly LAP price for the MSS when the MSS internal metered Demand exceeds the MSS internal measured Generation; or 2) the weighted average of the FMM LMPs for all applicable PNodes within the relevant MSS when MSS internal measured Generation exceeds MSS internal Measured Demand where weighting factors for computing the weighted average are based on the measured Energy of all Generation at the corresponding PNodes.

**- FMM Non-Overlapping Optimal Energy**

The portions of FMM Optimal Energy that are not FMM Overlapping Optimal Energy, which are indexed against the relevant Energy Bid and sliced by Energy Bid price.

**- FMM Optimal Energy**

Any remaining FMM IIE after accounting for all other FMM IIE subtypes. FMM Optimal Energy does not overlap with FMM Minimum Load Energy, FMM Derate Energy, and FMM Exceptional Dispatch Energy, but it may overlap with Day-Ahead Scheduled Energy, and MSS Load Following Energy. FMM Optimal Energy is indexed against the relevant Energy Bid and sliced by service type, depending on the AS capacity allocation on the Energy Bid. FMM Optimal Energy is also divided into FMM Overlapping Optimal Energy and FMM Non-Overlapping Optimal Energy. Any FMM Optimal Energy slice below or above the Energy Bid has no associated Energy Bid price, and it is not included in BCR as described in Section 11.5.

**- FMM Overlapping Optimal Energy**

The portion of FMM Optimal Energy that overlaps with MSS Load Following Energy.

**- FMM Schedule**

The binding output of the FMM resulting from Bids submitted to the RTM. The portion of an Hourly Block Schedule or HASP Block Intertie Schedule for either Energy or Ancillary Services that becomes financially binding shall constitute a FMM Schedule.

**- FNM**

Full Network Model

**- Forbidden Operating Region**

A pair of lower and higher operating levels between which a resource cannot operate stably. The

Forbidden Operating Regions lie between a resource's Minimum Operating Limit and Maximum Operating Limit and cannot overlap.

**- Forced Outage**

An Outage for which sufficient notice cannot be given to allow the Outage to be factored into the Day-Ahead Market or RTM bidding processes.

**- Forecast Fee**

The charge imposed on an Eligible Intermittent Resource pursuant to the terms of Appendix F, Schedule 4.

**- Forecasted Movement**

A resource's change or Virtual Award's change in forecasted output between market intervals as described in Section 44.3.

**- FPA**

Parts II and III of the Federal Power Act, 16 U.S.C. § 824 et seq., as they may be amended from time to time.

**- Frequently Mitigated Unit**

A Generating Unit that is eligible for a Bid Adder pursuant to Section 39.8.

**- Full Capacity Deliverability Status**

Full Capacity Deliverability Status entitles a Generating Facility to a Net Qualifying Capacity amount that could be as large as its Qualifying Capacity and may be less pursuant to the assessment of its Net Qualifying Capacity by the CAISO.

**- Full Network Model (FNM)**

A computer-based model that includes all CAISO Balancing Authority Area transmission network (Load and Generating Unit) busses, Transmission Constraints, and Intertie busses between the CAISO Balancing Authority Area and interconnected Balancing Authority Areas. The FNM models the transmission facilities internal to the CAISO Balancing Authority Area as elements of a looped network and models the CAISO Balancing Authority Area Interties with interconnected Balancing Authority Areas in a radial fashion as specified in Section 27.5.

**- GADS**

Generating Availability Data System

**- GDF**

Generation Distribution Factor

**- General Reliability Network Upgrade (GRNU)**

Reliability Network Upgrades that are not Interconnection Reliability Network Upgrades.

**- Generated Bid**

A post-market Clean Bid generated by the CAISO, using the applicable Default Energy Bid and Default Commitment Cost Bids, in accordance with the provisions of Section 40 or other applicable provisions of the CAISO Tariff when a Bid is not submitted by a Scheduling Coordinator and is required for a Resource Adequacy requirement, an Ancillary Services Award, a RUC Award, a Day-Ahead Schedule, or as required by Section 30.7.3.5.

**- Generation**

Energy delivered from a Generating Unit.

**- Generation Aggregation Point (GAP)**

A CGAP or DGAP.

**- Generation Distribution Factor (GDF)**

The Bid template component that indicates the proportions of how the Bid is distributed for the resources participating in Physical Scheduling Plants, System Units, or Distributed Energy Resource Aggregations.

**- Generating Facility**

An Interconnection Customer's Generating Unit(s) used for the production and/or storage for later injection of electricity identified in the Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

**- Generating Facility Capacity**

The net capacity of the Generating Facility or the aggregate net capacity of the Generating Facility where it includes more than one Generating Unit for the production and/or storage for later injection of electricity.

**- Generating Unit**

An individual electric generator, or storage for later injection of electricity, and its associated plant and apparatus whose electrical output is capable of being separately identified and metered or a Physical

Scheduling Plant that, in either case, is: (a) located within the CAISO Balancing Authority Area (which includes a Pseudo-Tie of a generating unit to the CAISO Balancing Authority Area), or, for purposes of scheduling and operating the Day-Ahead Market only, an EDAM Entity Balancing Authority Area, or, for purposes of scheduling and operating the Real-Time Market only, an EIM Entity Balancing Authority Area; (b) connected to the CAISO Controlled Grid, either directly or via interconnected transmission, or distribution facilities or via a Pseudo-Tie; and (c) capable of producing or storing and then delivering net Energy (Energy in excess of a generating station's internal power requirements).

**- Generator**

The seller of Energy, Imbalance Reserves, Reliability Capacity, or Ancillary Services produced by a Generating Unit.

**- [Not Used]**

**- [Not Used]**

**- [Not Used]**

**- [Not Used]**

**- [Not Used]**

**- Generator Interconnection and Deliverability Allocation Procedures**

The Interconnection procedures applicable to an Interconnection Request pertaining to a Generating Facility processed under Appendix DD.

**- Generator Interconnection Agreement (GIA)**

A pro forma Interconnection Agreement applicable to an Interconnection Request for a Generating Facility processed under the interconnection procedures set forth in Appendices Y, DD, or KK. Includes the Large Generator Interconnection Agreement and the Small Generator Interconnection Agreement.

**- Generator Interconnection Procedures (GIP)**

The interconnection procedures applicable to an Interconnection Request pertaining to a Generating Facility processed under Appendix Y.

**- Generator Interconnection Study Process Agreement (GISPA)**

The pro forma agreement between the CAISO and the Interconnection Customer for conducting Interconnection Studies for a proposed Generating Facility under Appendices Y and DD.

**- Generator Output Baseline**

A value or values based on historically relevant Energy output meter data from behind-the-meter generation.

**- GHG Bid Adder**

A component of a Bid from a Supply resource located outside of a GHG Regulation Area composed of a MW quantity and price that provides the Supply resource an opportunity to recover costs of compliance with GHG regulations adopted by the California Air Resources Board and the Washington Department of Ecology. There can be different GHG Bid Adders for different GHG Regulation Areas.

**- GHG Regulation Area**

The Nodes of the CAISO Balancing Authority Area, an EDAM Entity Balancing Authority Area, or an EIM Entity Balancing Authority Area within the GHG boundary as defined by a state jurisdiction that has priced greenhouse gas emissions as part of a state carbon reduction law or regulation.

**- GHG Transfer**

The algebraic difference (positive for imports and negative for exports) between Energy Demand and Supply in a GHG Regulation Area as modeled by the CAISO in its Integrated Forward Market, Fifteen-Minute Market, and Real-Time Dispatch.

**- GIA**

Generator Interconnection Agreement

**- GIA Deposit**

The deposit Interconnection Customer submits when returning the executed GIA, or within ten (10) Business Days of requesting that the GIA be filed unexecuted at the Commission, in accordance with Section 11 of the RIS.

**- GIDAP**

Generator Interconnection and Deliverability Allocation Procedures

**- GIP**

Generator Interconnection Procedures

**- GMC**

Grid Management Charge

**- Good Utility Practice**

Any of the practices, methods, and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods, and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety, and expedition. Good Utility Practice is not intended to be limited to any one of a number of the optimum practices, methods, or acts to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region, including those practices required by Federal Power Act section 215(a)(4).

**- Governmental Authority**

Any federal, state, local or other governmental, regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the Interconnection Customer, CAISO, or Participating TO, or any Affiliate thereof.

**- Greenhouse Gas (GHG)**

Carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), sulfur hexafluoride (SF6), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and other fluorinated greenhouse gases as defined by regulations of the California Air Resources Board and the Washington Department of Ecology.

**- Greenhouse Gas Allowance Price**

A price calculated by the CAISO pursuant to Section 39.7.1.1.1.4.

**- Greenhouse Gas Emission Cost Revenue**

The revenues associated with the MWh compensation paid to a resource that has Energy supporting a GHG Transfer to a GHG Regulation Area priced at the Marginal Greenhouse Gas Cost multiplied by -1.

**- Grid Management Charge (GMC)**

The CAISO charge on all Scheduling Coordinators that provides for the recovery of the CAISO's costs listed in Section 11.22.2 through the service charges described in Section 11.22.2.5 calculated in

accordance with the formula rate set forth in Appendix F, Schedule 1, Part A.

**- Gross Load**

Demand (adjusted for distribution losses) of End-Use Customer Loads directly connected to the transmission facilities or directly connected to the Distribution System of a Utility Distribution Company or MSS Operator located in a PTO Service Territory, or End Use Customer Loads directly connected to the Distribution System or transmission facilities of an EDAM Transmission Service Provider in an EDAM Entity Balancing Authority Area. Gross Load includes Load served by Excess Behind the Meter Production. Excess Behind the Meter Production shall not be netted against End-Use Customer Load in determining Gross Load. Gross Load excludes:

(1) Load with respect to which the Wheeling Access Charge is payable;

(2) Load that is exempt from the Access Charge pursuant to Section 4.1 of Appendix I;

(3) Load of an individual retail customer served by its own onsite Generating Unit or energy storage device, or as authorized by Section 218 of the California Public Utilities Code;

(4) Onsite Load served by a qualifying small power production facility or qualifying cogeneration facility, as those terms are defined in the FERC's regulations implementing Section 201 of the Public Utility Regulatory Policies Act of 1978; and

(5) Load secured by Standby Service from a Participating TO under terms approved by a Local Regulatory Authority or FERC, as applicable, or can be curtailed concurrently with an Outage of the Generating Unit serving the Load.

Gross Load forecasts consistent with filed Transmission Revenue Requirements will be provided by each Participating TO to the CAISO. For purposes of this definition, Generating Units, storage devices, and Loads will be considered onsite where they share, or are sub-metered behind, the same meter.

**- Group Study**

The process whereby more than one Interconnection Request is studied together, instead of individually, for the purpose of conducting one or more of the Interconnection Studies or analyses therein.

**- Hard Energy Bid Cap**

The maximum Energy Bid price the CAISO will use for purposes of clearing the CAISO Market Processes. The Hard Energy Bid Cap is $2,000 per MWh.

**- HASP**

Hour-Ahead Scheduling Process

**- HASP Advisory Schedule**

The output of the HASP that is not a HASP Block Intertie Schedule.

**- HASP Block Intertie Schedule**

The output of the HASP resulting from accepted Self-Schedule Hourly Blocks and awarded Economic Hourly Block Bids (but excluding an Economic Hourly Block Bid with Intra-Hour option). A HASP Block Intertie Schedule can include Energy and AS. HASP Block Intertie Schedules, as modified after accepted, are settled at the applicable FMM LMP and FMM ASMPs. HASP Block Intertie Schedules are advisory only in that they may be curtailed by the CAISO for Reliability reasons. Otherwise, the MWH quantity of a HASP Block Intertie Schedule is financially binding.

**- Henry Hub**

The pricing point for natural gas futures contracts.

**- High Priority Economic Planning Study**

An Economic Planning Study performed by the CAISO for inclusion in the Transmission Plan and for which the CAISO assumes cost responsibility.

**- High Sustainable Limit**

The instantaneous generating capability of a variable Generating Unit (or component thereof), provided to the CAISO through telemetry at the Generating Unit.

**- High Voltage Access Charge (HVAC)**

When used in documents that adopt the definitions in this Appendix A of the ISO Tariff, HVAC means Regional Access Charge.

**- High Voltage Transmission Facility**

When used in documents that adopt the definitions in this Appendix A of the ISO Tariff, High Voltage Transmission Facility means Regional Transmission Facility.

**- High Voltage Transmission Revenue Requirement (HVTRR)**

When used in documents that adopt the definitions in this Appendix A of the ISO Tariff, HVTRR means

Regional Transmission Revenue Requirement.

**- Historic Regulation Performance Accuracy**

The monthly calculation to determine the accuracy of a resource's response to CAISO EMS signals. The CAISO will base this calculation on a thirty (30) day simple average of fifteen (15) minute accuracy measurements. In the event that the resource does not provide Mileage in a fifteen (15) minute interval, the CAISO will not include the fifteen (15) minute interval in calculating the resource's Historic Regulation Performance Accuracy. In the event that a resource has not provided Regulation over the prior thirty (30) days, the CAISO will use the resource's last Historic Regulation Performance Accuracy as an adjustment factor. For newly certified or recertified resources, the CAISO will use the simple average Historic Regulation Performance Accuracy for all resources from the prior thirty (30) days as an initial adjustment factor.

**- Historical Expected Value**

The expected value of a CRR, as calculated by the CAISO, based on monthly historical market operation data for the applicable month. Such values will be established based on at least one (1) year and up to three (3) years of historical market operations data.

**- Host Balancing Authority**

The Balancing Authority for a Host Balancing Authority Area.

**- Host Balancing Authority Area**

The Balancing Authority Area in which a System Resource is connected to the electric grid. The Host Balancing Authority Area may, or may not, be directly interconnected with the CAISO Balancing Authority Area.

**- Hour-Ahead Scheduling Process (HASP)**

The process conducted by the CAISO beginning at seventy-five minutes prior to the Trading Hour through which the CAISO conducts the activities specified in Section 34.2.

**- Hourly Block**

A Bid or Schedule in the Real-Time Market from eligible resources for the same MWh quantity over an entire Trading Hour. Binding Hourly Block Schedules result in contiguous FMM Schedules.

**- Hourly CRR Congestion Fund**

The pool of funds the CAISO collects and holds pursuant to Section 11.2.4.1.2, corresponding to a specific Transmission Constraint and Settlement Period, that the CAISO has available to pay CRR Holders for the portion of their CRRs modeled as having a PTDF on that Transmission Constraint.

**- Hourly Demand**

The average of the instantaneous Demand integrated over a single clock hour, in MWh.

**- Hourly Real-Time LAP Price**

The load deviation weighted average of the hourly average of the Dispatch Interval LMPs for the LAP in the relevant Trading Hour used for the Settlement of UIE.

**- HVAC**

When used in documents that adopt the definitions in this Appendix A of the ISO Tariff, HVAC means RAC.

**- HVTRR**

High Voltage Transmission Revenue Requirement

**- Hybrid Dynamic Limit**

A Real-Time Market Bid parameter representing the real-time capabilities of Hybrid Resources, used to ensure feasible Schedules.

**- Hybrid Resource**

A Mixed-fuel Resource with a single Resource ID at a single Point of Interconnection.

**- Hydro Default Energy Bid**

A Default Energy Bid for an eligible hydroelectric resource in accordance with Section 39.7.1.1.

**- Hydro Spill Generation**

Hydroelectric Generation in existence prior to the CAISO Operations Date that: i) has no storage capacity and that, if backed down, would spill; ii) has exceeded its storage capacity and is spilling even though the generators are at full output; iii) has inadequate storage capacity to prevent loss of hydroelectric Energy either immediately or during the forecast period, if hydroelectric Generation is reduced; or iv) has increased regulated water output to avoid an impending spill.

**- IBAA**

Integrated Balancing Authority Area

**- IBAAOA**

Integrated Balancing Authority Area Operating Agreement

**- ICAOA**

Interconnected Control Area Operating Agreement

**- Identification Code**

An identification number or set of letters assigned to each Scheduling Coordinator by the CAISO.

**- Identified Affected System**

An Affected System Operator that responds affirmatively to CAISO notification.

**- IFM**

Integrated Forward Market

**- IFM AS Bid Cost**

The Bid Cost for Ancillary Service capacity a Scheduling Coordinator may be eligible to recover through the Bid Cost Recovery process, calculated pursuant to Section 11.8.2.1.6.

**- IFM Bid Cost**

The sum of a BCR Eligible Resource's IFM Start-Up Cost, IFM Minimum Load Cost , IFM Pump Shut-Down Cost, IFM Transition Cost, IFM Pumping Cost, IFM Energy Bid Cost, IFM AS Bid Cost and IFM Imbalance Reserves Bid Cost.

**- IFM Bid Cost Shortfall**

For each Settlement Interval, for any BCR Eligible Resource, the positive amount resulting from the difference between the IFM Bid Cost and the IFM Market Revenue.

**- IFM Bid Cost Surplus**

For each Settlement Interval, for any BCR Eligible Resource, the positive amount resulting from the difference between the IFM Bid Cost and the IFM Market Revenue.

**- IFM Bid Cost Uplift**

The net of the IFM Bid Cost Shortfalls and IFM Bid Cost Surpluses system-wide for a Settlement Interval of all Bid Cost Recovery Eligible Resources with Unrecovered Bid Cost Uplift Payments as specified in Section 11.8.6.2.

**- IFM Commitment Period**

A Commitment Period determined by the IFM.

**- IFM Congestion Charge**

The Congestion Charge calculated by the CAISO for each Settlement Period of the IFM as the IFM MCC for Demand minus the IFM MCC for Supply.

**- IFM Congestion Credit**

A credit provided to Scheduling Coordinators to offset any IFM Congestion Charges that would otherwise be applied to the valid and balanced portions of any ETC, TOR or Converted Rights Self-Schedule in the IFM as provided in Section 11.2.1.5.

**- IFM Energy Bid Cost**

The Energy Bid Costs a Scheduling Coordinator may be eligible to recover through the Bid Cost Recovery process, calculated pursuant to Section 11.8.2.1.5.

**- IFM Imbalance Reserves Bid Cost**

The Bid Costs of a Bid for Imbalance Reserves, as calculated pursuant to Section 11.8.2.1.8.

**- IFM LAP Price**

The marginal price for a particular LAP calculated pursuant to Section 27.2.2.1.

**- IFM Load Uplift Obligation**

The obligation of a Scheduling Coordinator for its share of unrecovered IFM Bid Costs paid to resources through Bid Cost Recovery.

**- IFM MCL Credit for Eligible TOR Self-Schedules**

A credit provided to Scheduling Coordinators pursuant to Section 17.3.3 to offset any IFM Marginal Cost of Losses that would otherwise be applied to the valid and balanced portions of any TOR Self-Schedule in the IFM as provided in Section 11.2.1.5.

**- IFM Marginal Losses Surplus**

For each Settlement Period of the IFM, the IFM Marginal Losses Surplus will equal: the applicable hourly Locational Marginal Price less (1) the Net Hourly Energy Charge; (2) the total IFM Congestion Charges which do not include IFM Congestion Credits collected by the CAISO as specified in Section 11.2.1.5; and (3) the total hourly marginal GHG cost charges, if applicable.

**- IFM Marginal Losses Surplus Credit**

The amount of money distributed to a Scheduling Coordinator in the allocation of IFM Marginal Losses Surplus in proportion to the Scheduling Coordinator's Measured Demand in accordance with Section 11.2.1.6.

**- IFM Market Revenue**

The amount received by BCR Eligible Resource from Energy scheduled and Ancillary Services awarded in the IFM for the purposes of Bid Cost Recovery, as calculated pursuant to Section 11.8.2.2.

**- IFM Minimum Load Cost**

The Minimum Load Bid Costs a Scheduling Coordinator may be eligible to recover through the Bid Cost Recovery process, calculated pursuant to Section 11.8.2.1.2.

**- IFM MSS Price**

Either (1) the IFM LAP price for the MSS when the MSS scheduled internal Demand exceeds the MSS scheduled internal Supply; or (2) the weighted average of the IFM LMPs for all applicable PNodes within the relevant MSS when MSS scheduled internal Supply exceeds MSS scheduled internal Demand where weighting factors for computing the weighted average are based on the scheduled Supply at the corresponding PNodes.

**- IFM Pump Shut-Down Cost**

The Pump Shut-Down Costs a Scheduling Coordinator may be eligible to recover through the Bid Cost Recovery process, calculated pursuant to Section 11.8.2.1.3.

**- IFM Pumping Bid Cost**

For the applicable Settlement Interval, the Pumping Cost submitted to the CAISO in the IFM divided by the number of Settlement Intervals in a Trading Hour as further provided in Section 11.8.2.1.4.

**- IFM Pumping Cost**

The Pumping Costs a Scheduling Coordinator may be eligible to recover through the Bid Cost Recovery process, calculated pursuant to Section 11.8.2.1.4.

**- IFM Self-Commitment Period**

A Time Period determined by the CAISO pursuant to the rules in Section 11.8.1.1 for the purposes of deriving any Bid Cost Recovery amounts, related to the IFM.

**- IFM Start-Up Cost**

The Start-Up Bid Costs a Scheduling Coordinator may be eligible to recover through the Bid Cost Recovery process, calculated pursuant to Section 11.8.2.1.1

**- IFM Transition Cost**

The Transition Bid Costs a Scheduling Coordinator may be eligible to recover through the Bid Cost Recovery process, calculated pursuant to Section 11.8.2.1.7.

**- Imbalance Reserves**

IRU and IRD

**- Imbalance Reserves Award**

IRD and IRU awarded to a resource for a given fifteen-minute interval.

**- Imbalance Reserves Bid**

The quantity (MW) and price ($/MW per hour) at or above which a Generating Unit, System Resource, System Unit, Participating Load, or Proxy Demand Resource has agreed to sell IRU or IRD for a specified interval of time to the CAISO to meet the Imbalance Reserves Requirement.

**- Imbalance Reserves Cost**

The costs included in a bid to provide Imbalance Reserves submitted per Section 30.5.2.9 and as modified pursuant to Section 30.7.3

**- Imbalance Reserves Down (IRD)**

Decremental capacity procured to meet the Downward Imbalance Reserves Requirement.

**- Imbalance Reserves Requirement**

The Upward Imbalance Reserves Requirement and the Downward Imbalance Reserves Requirement.

**- Imbalance Reserves Up (IRU)**

Incremental capacity procured to meet the Upward Imbalance Reserves Requirement.

**- Import Bid**

A Supply Bid submitted to a CAISO Market at a Scheduling Point.

**- Import Capability Load Share**

A Load Serving Entity's proportionate share of the forecasted Resource Adequacy Compliance Year coincident peak Demand for the CAISO Balancing Authority Area relative to the total coincident peak Demand for the CAISO Balancing Authority Area as determined by the California Energy Commission.

**- Import Capability Load Share Ratio**

A Load Serving Entity's Import Capability Load Share divided by the sum of the Import Capability Load Shares of all Load Serving Entities with unfulfilled requests for Available Import Capability on a particular Intertie.

**- Import Capability Transfer Registration Process**

The electronic means by which Load Serving Entities and Market Participants must register with the CAISO any bilateral transfers of Existing Contract Import Capability, Pre-RA Import Commitment Capability, or Remaining Import Capability.

**- Independent Study Process**

The GIP or GIDAP procedure for evaluating an Interconnection Request for a Generating Facility independently of the process applicable to a Generating Facility assigned to a Queue Cluster or the Fast Track Process.

**- Independent System Operator (ISO)**

See California Independent System Operator Corporation.

**- Ineffective Economic Bid**

An Economic Bid that is not accepted in a CAISO market because its impact on the value of the CAISO Markets objectives, as specified in Section 31.3 and 34.5, would exceed the impact of adjusting a Non-priced Quantity. The CAISO maintains in the Business Practice Manuals the current values of the scheduling parameters that specify the thresholds, including the provisions of Section 27.4.3.1, whereby the market software determines whether to adjust a Non-priced Quantity rather than accept Economic Bids.

**- Initial Settlement Statement T+3B**

A Settlement Statement generated by the CAISO for the calculation of Settlements for a given Trading Day, which is published on the third Business Day from the relevant Trading Day (T+3B) and is prior to the Invoice or Payment Advice published for the relevant bill period.

**- Initial Settlement Statement T+9B**

A Settlement Statement generated by the CAISO for the calculation of Settlements for a given Trading Day, which is scheduled to publish on the ninth Business Day from the relevant Trading Day (T+9B) and

is prior to the Invoice or Payment Advice published for the relevant bill period.

**- In-Service Date**

The date upon which the Interconnection Customer reasonably expects it will be ready to begin use of the Participating TO Interconnection Facilities to obtain back feed power.

**- Instructed Mileage**

Instructed Mileage is the absolute change in Automatic Generation Control set points between each four (4) second interval.

**- Integrated Balancing Authority Area (IBAA)**

A Balancing Authority Area as provided in Section 27.5.3 that has been determined to have one or more direct interconnections with the CAISO Balancing Authority Area, such that power flows within the IBAA significantly affect power flows within the CAISO Balancing Authority Area, and whose network topology is therefore modeled in further detail in the CAISO's Full Network Model beyond the simple radial modeling of interconnections between the IBAA and the CAISO Balancing Authority Area.

**- Integrated Forward Market (IFM)**

The pricing run conducted by the CAISO using SCUC in the Day-Ahead Market, after the MPM process, which includes Unit Commitment, Ancillary Service procurement, Congestion Management and Energy procurement based on Supply and Demand Bids.

**- Interchange**

Imports and exports between the CAISO Balancing Authority Area and other Balancing Authority Areas, and, for purposes of scheduling and operating the Day-Ahead Market only, between an EDAM Entity Balancing Authority Area and another Balancing Authority Area, and, for purposes of scheduling and operating the Real-Time Market only, between an EIM Entity Balancing Authority Area and another Balancing Authority Area.

**- Interchange Schedule**

A final agreed-upon schedule of Energy to be transferred between the CAISO Balancing Authority Area and another Balancing Authority Area, including an EDAM Entity Balancing Authority Area or an EIM Entity Balancing Authority Area, and, for purposes of scheduling and operating the Day-Ahead Market only, between an EDAM Entity Balancing Authority Area and another EDAM Entity Balancing Authority

Area, and, for purposes of scheduling and operating the Real-Time Market only, between an EIM Entity Balancing Authority Area and another Balancing Authority Area.

**- Interconnected Balancing Authority Operating Agreement**

An agreement entered into between the CAISO and a Balancing Authority of a Balancing Authority Area interconnected to the CAISO Balancing Authority Area to govern operation of their interconnected electric systems.

**- Interconnected Control Area Operating Agreement (ICAOA)**

An agreement entered into between the CAISO and a Balancing Authority of a Balancing Authority Area interconnected to the CAISO Balancing Authority Area to govern operation of their interconnected electric systems, a pro forma version of which has been accepted by FERC as a CAISO rate schedule in 87 FERC ¶ 61,231 (1999).

**- Interconnection**

Transmission facilities, other than additions or replacements to existing facilities that: i) connect one system to another system where the facilities emerge from one and only one substation of the two systems and are functionally separate from the CAISO Controlled Grid facilities such that the facilities are, or can be, operated and planned as a single facility; or ii) are identified as radial transmission lines pursuant to contract; or iii) produce Generation at a single point on the CAISO Controlled Grid; provided that such interconnection does not include facilities that, if not owned by the Participating TO, would result in a reduction in the CAISO's Operational Control of the Participating TO's portion of the CAISO Controlled Grid.

**- Interconnection Agreement**

A contract among a party requesting interconnection, the CAISO, and the Participating TO that owns the transmission facility with which the requesting party wishes to interconnect.

**- Interconnection Base Case Data**

Data including, but not limited to, base power flow, short circuit and stability databases, underlying Load, Generation, and transmission facility assumptions, Contingency lists and automated contingency files, including relevant Remedial Action Schemes, Operating Procedures, per unit costs, and transmission diagrams used to perform Phase I Interconnection Studies and Phase II Interconnection Studies.

Interconnection Base Case Data may include Critical Energy Infrastructure Information (as that term is defined by FERC). The Interconnection Base Case Data shall include transmission facilities approved by the CAISO under Section 24 and Network Upgrades associated with Generation Facilities in (iv) below and Generating Facilities that (i) are directly interconnected to the CAISO Controlled Grid; (ii) are interconnected to Affected Systems and may have an impact on the Interconnection Request; (iii) have a pending request to interconnect to an Affected System; or (iv) are not interconnected to the CAISO Controlled Grid, but are subject to a fully executed LGIA (or its equivalent predecessor agreement) or for which an unexecuted LGIA (or its equivalent predecessor agreement) has been requested to be filed with FERC. To the maximum extent practicable, the Interconnection Base Case Data shall utilize the Unified Planning Assumptions developed pursuant to Section 24.3.

**- Interconnection Customer**

Any entity, including a Participating TO or any of its Affiliates or subsidiaries, that proposes to interconnect its Generating Facility, or modify its existing interconnection, with the CAISO Controlled Grid.

**- Interconnection Customer's Interconnection Facilities**

All facilities and equipment, as identified in Appendix A of the Large Generator Interconnection Agreement, that are located between the Generating Facility and the Point of Change of Ownership, including any modification, addition, or upgrades to such facilities and equipment necessary to physically and electrically interconnect the Generating Facility to the CAISO Controlled Grid. Interconnection Customer's Interconnection Facilities are sole use facilities.

**- Interconnection Facilities**

Collectively, Interconnection Facilities include all facilities and equipment between the Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Generating Facility to the transmission system. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

**- Interconnection Facilities Study**

A study conducted by the Participating TO(s), CAISO, or a third party consultant for the Interconnection Customer to determine a list of facilities (including the Participating TO's Interconnection Facilities,

Network Upgrades, and Distribution Upgrades), as identified in the Cluster Study, the cost of those facilities, and the time required to interconnect the Generating Facility with the CAISO Controlled Grid. The scope of the study is defined in Section 8 of the RIS (Appendix KK).

**- Interconnection Facilities Study Agreement**

The form of agreement accepted by FERC and posted on the CAISO Website for conducting the Interconnection Facilities Study.

**- Interconnection Facilities Study Report**

The report issued following completion of an Interconnection Facilities Study pursuant to Section 8 of the RIS.

**- Interconnection Feasibility Study**

A preliminary evaluation conducted by the Participating TO(s), CAISO, or a third party consultant for the Interconnection Customer of the system impact and cost of interconnecting the Generating Facility to the CAISO Controlled Grid, the scope of which is described in Section 6 of the Standard Large Generator Interconnection Procedures.

**- Interconnection Feasibility Study Agreement**

The form of agreement accepted by FERC and posted on the CAISO Website for conducting the Interconnection Feasibility Study.

**- Interconnection Financial Security (IFS)**

Any of the financial instruments listed in Section 9.1 of Appendix Y and Section 11.1 of Appendix DD that are posted by an Interconnection Customer to finance the construction of facilities or Network Upgrades.

**- Interconnection Handbook**

A handbook, developed by the Participating TO and posted on the Participating TO's website or otherwise made available by the Participating TO, describing technical and operational requirements for wholesale generators and loads connected to the Participating TO's portion of the CAISO Controlled Grid, as such handbook may be modified or superseded from time to time. Participating TO's standards contained in the Interconnection Handbook shall be deemed consistent with Good Utility Practice and Applicable Reliability Criteria. In the event of a conflict between the terms of the LGIP or SGIP and the

terms of the Participating TO's Interconnection Handbook, the terms in the LGIP or SGIP shall apply.

**- Interconnection Reliability Network Upgrade (IRNU)**

Reliability Network Upgrades at the Point of Interconnection to accomplish the physical interconnection of the Generating Facility to the CAISO Controlled Grid. IRNUs are treated as Reliability Network Upgrades unless otherwise noted.

**- Interconnection Request**

An Interconnection Customer's request, in the form of Appendix 1 to Appendix KK, in accordance with Section 25.1 of the CAISO Tariff.

**- Interconnection Service**

The service provided by the Participating TO and CAISO associated with interconnecting the Interconnection Customer's Generating Facility to the CAISO Controlled Grid and enabling it to receive electric Energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of the Large Generator Interconnection Agreement, the Participating TO's TO Tariff, and the CAISO Tariff.

**- Interconnection Service Capacity**

The approved maximum instantaneous Power output at the Point of Interconnection for the Interconnection Customer, as set forth in its Interconnection Studies.

**- Interconnection Study**

Any of the following studies: the Interconnection Feasibility Study, the Interconnection System Impact Study, the Interconnection Facilities Study, the Phase I Interconnection Study, the Phase II Interconnection Study, the Cluster Study, the Cluster Restudy, the Surplus Interconnection Service Study, the Affected System Study, or the reassessment of any of these.

**- Interconnection Study Cycle**

All requirements, actions, and respective obligations of the CAISO, Participating TO, and Interconnection Customer applicable to an Interconnection Request submitted in the applicable annual Cluster Application Window and including execution by the parties or submission to FERC by one or more parties of a GIA.

**- Interconnection Study Deposit**

The cash deposit provided to the CAISO by Interconnection Customers as a requirement of a valid

Interconnection Request to be used to offset the cost of the Interconnection Studies.

**- Interconnection System Impact Study**

An engineering study conducted by the Participating TO(s), CAISO, or a third party consultant for the Interconnection Customer that evaluates the impact of the proposed interconnection on the safety and reliability of the CAISO Controlled Grid and, if applicable, an Affected System. The study shall identify and detail the system impacts that would result if the Generating Facility were interconnected without project modifications or system modifications, focusing on the Adverse System Impacts identified in the Interconnection Feasibility Study, or to study potential impacts, including but not limited to those identified in the Scoping Meeting as described in the Standard Large Generator Interconnection Procedures.

**- Interconnection System Impact Study Agreement**

The form of agreement accepted by FERC and posted on the CAISO Website for conducting the Interconnection System Impact Study.

**- Interest**

Interest shall be calculated in accordance with the methodology specified for interest on refunds in the regulations of FERC at 18 C.F.R. §35.19a(a)(2)(iii) (1996). Interest on delinquent amounts shall be calculated from the due date of the bill to the date of payment, except as provided in Section 11.29.13.1. When payments are made by mail, bills shall be considered as having been paid on the date of receipt.

**- Interim Deliverability Status**

An interim designation that allows an Interconnection Customer that has requested Full Capacity Deliverability Status or Partial Capacity Deliverability Status to obtain non-zero Net Qualifying Capacity, as determined annually by the CAISO pursuant to the provisions of the CAISO Tariff and the applicable Business Practice Manual, pending the in-service date of all the required Network Upgrades required for its requested Deliverability Status.

**- Intermediary Balancing Authority**

The Balancing Authority that operates an Intermediary Balancing Authority Area.

**- Intermediary Balancing Authority Area**

Any Balancing Authority Area between a Host Balancing Authority Area and the CAISO Balancing Authority Area. An Intermediary Balancing Authority Area may, or may not, be directly interconnected

with the CAISO Balancing Authority Area.

**- Interregional Cost Allocation**

Means the assignment of Interregional Transmission Project costs between or among Planning Regions as described in Section 24.18.5.

**- Interregional Transmission Project (ITP)**

Means a proposed new transmission project that would directly interconnect electrically to existing or planned transmission facilities in two or more Planning Regions and that is submitted into the regional transmission planning processes of all such Planning Regions in accordance with Section 24.18.4.

**- Interruptible Imports**

Non-firm Energy sold into the CAISO Balancing Authority Area from a resource located outside the CAISO Balancing Authority Area which by contract can be interrupted or reduced at the discretion of the seller. Interruptible Imports must be submitted through Self-Schedules in the Day-Ahead Market.

**- Inter-SC Trade**

A trade between Scheduling Coordinators of Energy, Ancillary Services, or IFM Load Uplift Obligation in accordance with the CAISO Tariff.

**- Inter-SC Trade Period**

Either the Day-Ahead Inter-SC Trade Period or the RTM Inter-SC Trade Period.

**- Inter-SC Trade Transaction Fee**

The Grid Management Charge fee described in Section 11.22.7.

**- Intertie**

A transmission corridor that interconnects the CAISO Balancing Authority Area with another Balancing Authority Area.

**- Intertie Block Bid**

A Bid from a System Resource in the DAM that offers the same quantity of Energy across multiple, contiguous hours of the Trading Day.

**- Invoice**

A document published as a result of an invoicing run pursuant to the CAISO Payments Calendar in which a Business Associate's current net financial obligation is a positive Settlement amount.

**- IOU**

An investor owned electric utility.

**- IRU Default Availability Bid**

The price to which an Imbalance Reserves Bid for IRU is mitigated, as specified in Section 39.7.4.

**- IRU Negotiated Availability Bid**

A method of calculating an IRU Default Availability Bid based on a negotiation with the CAISO pursuant to Section 39.7.4.1.

**- ISO**

Independent System Operator

**- Joint Powers Agreement**

An agreement governing a Joint Powers Authority that is subject to the California Joint Exercise of Powers Act (California Government Code, Section 6500, et seq.).

**- Joint Powers Authority**

An authority authorized by law through which two or more public entities jointly exercise their powers.

**- LAC**

Local Access Charge

**- LAP**

Load Aggregation Point

**- LAP Price**

The marginal price for a particular LAP calculated as specified in Section 27.2.2.

**- Large Generating Facility**

A Generating Facility having a Generating Facility Capacity of more than 20 MW.

**- Large Generator Interconnection Agreement (LGIA)**

The pro forma Interconnection Agreement applicable to an Interconnection Request fora Large Generating Facility.

**- Large Generator Interconnection Procedures (LGIP)**

The interconnection procedures applicable to an Interconnection Request pertaining to a Large Generating Facility processed under Appendix U.

**- Large Project**

A transmission upgrade or addition that exceeds $200 million in capital costs and consists of a proposed transmission line or substation facilities capable of operating at voltage levels greater than 200 kV. Location Constrained Resource Interconnection Facilities are not included in this definition, regardless of the capital cost or voltage level of the transmission upgrade or addition. A Large Project may also be a project that does not meet the dollar or voltage level requirement, but that the CAISO determines raises significant policy issues warranting a separate planning process.

**- LCRIF**

Location Constrained Resource Interconnection Facility

**- LCRIG**

Location Constrained Resource Interconnection Generator

**- LDF**

Load Distribution Factor

**- LDNU**

Local Delivery Network Upgrade.

**- Legacy Reliability Must-Run Contract (RMR Contract)**

A Must-Run Service Agreement between the owner of a Legacy Reliability Must-Run Unit and the CAISO.

**- Legacy Reliability Must-Run Unit (Legacy RMR Unit)**

A Generating Unit of a Participating Generator which is the subject of a Legacy Reliability Must-Run Contract.

**- Legacy RMR Capacity**

The MNDC reflected in Schedule A of a Legacy RMR Contract and maintained in the CAISO Master File.

**- Legacy RMR Contract**

A Reliability Must-Run Contract that a Generating Unit or other resource entered into before September 1, 2018.

**- Legacy RMR Unit**

Legacy Reliability Must-Run Unit

**- LFDP**

Load Following Deviation Penalty

**- LGIA**

Standard Large Generator Interconnection Agreement or Large Generator Interconnection Agreement

**- LGIP**

Standard Large Generator Interconnection Procedures or Large Generator Interconnection Procedures

**- LGISPA**

Large Generator Interconnection Study Process Agreement

**- Line Loss Correction Factor**

The line loss correction factor as set forth in the technical specifications contained in the applicable Business Practice Manual.

**- Listed Local RA Capacity**

The capacity of Local Capacity Area Resources that, subject to resolution of a potential discrepancy as provided in Section 40.7(b), is identified on a Load Serving Entity's Resource Adequacy Plan and a supplier's corresponding Supply Plan as being obligated (for the purposes of sections 40.9.3.6.7 and 40.9.3.6.8) to provide RA Substitute Capacity from the same Local Capacity Area as the Listed Local RA Capacity.

**- LMP**

Locational Marginal Price

**- LMPM**

Local Market Power Mitigation

**- LMP Option**

A method of calculating Default Energy Bids based on Locational Marginal Prices.

**- Load**

An end-use device of an End-Use Customer that consumes Power. Load should not be confused with Demand, which is the measure of Power that a Load receives or requires.

**- Load Aggregation Point (LAP)**

A set of Pricing Nodes as specified in Section 27.2 that are used for the submission of Bids and Settlement of Demand.

**- Load Distribution Factor (LDF)**

A number that reflects the relative amount of Load at each PNode within a Load Aggregation Point. Load Distribution Factors determine how the aggregated Load at a given LAP is distributed to the associated power system Nodes. The sum of all Load Distribution Factors for a single Load Aggregation Point equals one.

**- Load Following Deviation Penalty (LFDP)**

The penalty assignable to an MSS Operator for deviations from Expected Energy outside the MSS Deviation Band.

**- Load Metric**

A Load Serving Entity's level of Load in megawatts for a defined time period that is exceeded in only 0.5% of the hours of that time period based on historical or forecast Load data.

**- Load Migration**

The transfer of the responsibility to serve Load from one Load Serving Entity to another.

**- Load Serving Entity (LSE)**

Any entity (or the duly designated agent of such an entity, including, e.g., a Scheduling Coordinator), including a load aggregator or power marketer, that (a) (i) serves End Users within the CAISO Balancing Authority Area or the EDAM Area and (ii) has been granted authority or has an obligation pursuant to state or local law, regulation, or franchise to sell electric energy to End Users located within the CAISO Balancing Authority Area or the EDAM Area; (b) (i) is an End User, (ii) has been granted authority pursuant to state or local law or regulation to serve its own Load through the purchase of electric energy from an entity that does not qualify as a Load Serving Entity, and (iii) serves its own Load through purchases of electric energy from an entity that does not qualify as a Load Serving Entity with respect to such purchases of electric energy, or (c) is a federal power marketing authority that serves End Users. Notwithstanding the above, an entity is not a Load Serving Entity under this definition solely because it provides electric energy at no cost to its tenants or because it purchases or sells electric energy from a generating resource pursuant to a state or local law or regulation that permits the generating resource to make direct sales of electric energy to an End User, the rates, terms, and conditions of which sale are not subject to regulation by a Local Regulatory Authority.

**- Load Share Quantity**

The product of Total Import Capability and Import Capability Load Share.

**- Load Shedding**

The systematic reduction of system Demand by temporarily decreasing the Supply of Energy to Loads in response to transmission system or area capacity shortages, system instability, or voltage control considerations.

**- Local Access Charge (LAC)**

The Access Charge applicable under Section 26.1 to recover the Local Transmission Revenue Requirement of a Participating TO.

**- Local Capacity Area**

Transmission constrained area as defined in the study referenced in Section 40.3.1.

**- Local Capacity Area Resource Deficiency**

The monthly difference in MW between any applicable Local Capacity Area requirements for an LSE as established pursuant to Section 40.3.2 and the quantity of monthly MW shown in the LSE's Resource Adequacy Plan.

**- Local Capacity Area Resource**

Resource Adequacy Capacity from a Generating Unit listed in the technical study or Participating Load or Proxy Demand Resource or Reliability Demand Response Resource that is located within a Local Capacity Area capable of contributing toward the amount of capacity required in a particular Local Capacity Area.

**- Local Capacity Technical Study**

The study performed by the CAISO pursuant to Section 40.3.

**- Local Deliverability Constraint**

A transmission system operating limit modeled in the GIDAP study process that would be exceeded if the CAISO were to assign Full Capacity Deliverability Status or Partial Capacity Deliverability Status to one or more additional Generating Facilities interconnecting to the CAISO Controlled Grid in a specific local area, and that is not an Area Deliverability Constraint.

**- Local Delivery Network Upgrade**

A transmission upgrade or addition identified by the CAISO in the GIDAP interconnection study process to relieve a Local Deliverability Constraint.

**- Local Furnishing Bond**

Tax-exempt bonds utilized to finance facilities for the local furnishing of electric energy, as described in section 142(f) of the Internal Revenue Code, 26 U.S.C. § 142(f).

**- Local Furnishing Participating TO**

Tax-exempt bonds utilized to finance facilities for the local furnishing of electric energy, as described in section 142(f) of the Internal Revenue Code, 26 U.S.C. § 142(f).

**- Local Market Power Mitigation (LMPM)**

The mitigation of market power that could be exercised by an entity when it is needed for local reliability services due to its location on the grid and a lack of competitive supply at that location pursuant to Section 39.7.

**- Local Off-Peak Constraints**

A transmission system operating limit modeled in the generator interconnection study process that would be exceeded or lead to excessive curtailment, as described in the Off-Peak Deliverability Assessment methodology, if the CAISO were to assign Off-Peak Deliverability Status to one or more Generating Facilities interconnecting to the CAISO Controlled Grid in a specific local area, and that is not an Area Off-Peak Constraint.

**- Local Off-Peak Network Upgrades (LOPNUs)**

A transmission upgrade or addition the CAISO identifies in the generator interconnection study process to relieve a Local Off-Peak Constraint.

**- Local Publicly Owned Electric Utility**

A municipality or municipal corporation operating as a public utility furnishing electric services, a municipal utility district furnishing electric services, a public utility district furnishing electric services, an irrigation district furnishing electric services, a state agency or subdivision furnishing electric services, a rural cooperative furnishing electric services, or a Joint Powers Authority that includes one or more of these agencies and that owns Generation or transmission facilities, or furnishes electric services over its own or its members' electric Distribution System.

**- Local Regulatory Authority (LRA)**

The state or local governmental authority, or the board of directors of an electric cooperative, responsible for the regulation or oversight of a utility.

**- Local Reliability Criteria**

Reliability Criteria unique to the transmission systems of each of the Participating TOs established at the later of: (1) CAISO Operations Date, or (2) the date upon which a New Participating TO places its facilities under the control of the CAISO.

**- Local Transmission Facility**

A transmission facility that is (1) under the CAISO Operational Control, (2) is owned by a Participating TO or to which a Participating TO has an Entitlement that is represented by a Converted Right, (3) operates at a voltage below 200 kilovolts, and (4) only in the case of a transmission facility approved in the final 2013/2014 comprehensive Transmission Plan and thereafter, is located entirely within a Participating Transmission Owner's footprint or PTO Service Territory.

**- Local Transmission Revenue Requirement (LTRR)**

The portion of a Participating TO's TRR associated with and allocable to the Participating TO's Local Transmission Facilities and Converted Rights associated with Local Transmission Facilities that are under the CAISO Operational Control or, in the case of an Approved Project Sponsor that is a Participating Transmission Owner, Transmission Facilities not yet in operation, but approved under Section 24 and assigned to the Approved Project Sponsor, that will be Local Transmission Facilities when placed under the CAISO's Operational Control.

**- Local Wheeling Access Charge**

The Wheeling Access Charge associated with the recovery of a Participating TO's Local Transmission Revenue Requirement in accordance with Section 26.1.

**- Location**

A reference to either a Pricing Node or an Aggregated Pricing Node.

**- Location Code**

The code assigned by the CAISO to Generation input points, and Demand Take-Out Points from the CAISO Controlled Grid, and transaction points from trades between Scheduling Coordinators. This will

be the information used by the CAISO Controlled Grid, and transaction points for trades between Scheduling Coordinators. This will be the information used by the CAISO to determine the location of the input, output, and trade points of Energy Schedules. Each Generation input and Demand Take-Out Point will have a designated Location Code identification.

**- Location Constrained Resource Interconnection Facility**

A Transmission Facility that has been determined by the CAISO to satisfy all of the requirements of Section 24.4.6.3.

**- Location Constrained Resource Interconnection Generator**

A Generating Unit that (a) uses a primary fuel source or source of energy that is in a fixed location and cannot practicably be transported from that location; and (b) is located in an Energy Resource Area. Generating Units meeting criterion (a) shall include, but not be limited to, wind, solar, geothermal, hydroelectric, digester gas, landfill gas, ocean wave and ocean thermal tidal current Generating Units.

**- Locational IRD Price**

The marginal cost ($/MWh) of providing the next increment of IRD at a PNode consistent with binding Transmission Constraints.

**- Locational IRU Price**

The marginal cost ($/MWh) of providing the next increment of IRU at a PNode consistent with binding Transmission Constraints.

**- Locational Marginal Price (LMP)**

The marginal cost ($/MWh) of serving the next increment of Demand at that PNode consistent with existing Transmission Constraints and the performance characteristics of resources.

**- Locational RCD Price**

The marginal cost ($/MWh) of providing the next increment of RCD at a PNode consistent with binding Transmission Constraints.

**- Locational RCU Price**

The marginal cost ($/MWh) of providing the next increment of RCU at a PNode consistent with binding Transmission Constraints.

**- Long Start Unit**

A Generating Unit that has a cycle time of more than 255 minutes (Start-Up Time plus Minimum Run Time is more than 255 minutes) and requires up to 18 hours to Start-Up and synchronize to the grid.

**- Long Term Congestion Revenue Right (Long Term CRR)**

A Congestion Revenue Right differentiated by season and time-of-use period (on-peak and off-peak) with a term of ten years.

**- Low Voltage Access Charge (LVAC)**

When used in documents that adopt the definitions in this Appendix A of the ISO Tariff, LVAC means Local Access Charge.

**- Low Voltage Transmission Facility**

When used in documents that adopt the definitions in this Appendix A of the ISO Tariff, Low Voltage Transmission Facility means Local Transmission Facility.

**- Low Voltage Transmission Revenue Requirement (LVTRR)**

When used in documents that adopt the definitions in this Appendix A of the ISO Tariff, LVTRR means Local Transmission Revenue Requirement.

**- Low Voltage Wheeling Access Charge**

When used in documents that adopt the definitions in this Appendix A of the ISO Tariff, Low Voltage Wheeling Access Charge means Local Wheeling Access Charge.

**- Lower Economic Limit**

The higher of a resource's Self-Schedule quantity or Minimum Load. For a Non-Generator Resource, the Lower Economic Limit is the MW quantity at the bottom of the submitted Energy Bid Curve.

**- LRA**

Local Regulatory Authority

**- LSE**

Load Serving Entity

**- LSE Flexible RA Capacity Plan**

A submission by a Scheduling Coordinator for a Load Serving Entity in the form required by the Business Practice Manual to satisfy the requirements of Section 40.10.

**- LTRR**

Local Transmission Revenue Requirement

**- LVAC**

When used in documents that adopt the definitions in this Appendix A of the ISO Tariff, LVAC means LAC.

**- LVTRR**

When used in documents that adopt the definitions in this Appendix A of the ISO Tariff, LVTRR means LTRR.

**- Maintenance Outage**

A period of time during which an Operator (i) takes its transmission facilities out of service for the purposes of carrying out routine planned maintenance, or for the purposes of new construction work or for work on de-energized and live transmission facilities (e.g., relay maintenance or insulator washing) and associated equipment; or (ii) limits the capability of or takes its Generating Unit or System Unit out of service for the purposes of carrying out routine planned maintenance, or for the purposes of new construction work.

**- Manual RMR Dispatch**

An RMR Dispatch Notice issued by the CAISO other than as a result of the MPM process.

**- Marginal Cost of Congestion (MCC)**

The component of LMP, Locational IRU Price, Locational IRD Price, Locational RCU Price, or Locational RCD Price at a PNode that accounts for the cost of congestion, as measured between that Node and a Reference Bus.

**- Marginal Cost of Losses (MCL)**

The component of LMP at a PNode that accounts for the marginal real power losses, as measured between that Node and a Reference Bus.

**- Marginal Energy Cost (MEC)**

The component of the LMP that reflects the marginal cost of providing Energy from a designated reference Location.

**- Marginal Greenhouse Gas Cost (Marginal GHG Cost)**

The marginal cost of compliance with GHG regulations for a GHG Transfer into a GHG Regulation Area.

**- Marginal Losses**

The transmission system marginal real power losses that arise from changes in demand at a Node which are served by changes in generation at a Reference Bus.

**- Marginal Real-Time Dispatch Option**

The option selected by a Reliability Demand Response Resource pursuant to Section 30.6.2.1.2 to be dispatched as a marginal resource in the Real-Time Market.

**- Market Area**

The EDAM Area for purposes of the Day-Ahead Market and the EIM Area for purposes of the Real-Time Market.

**- Market Area Intertie**

An EDAM Intertie or EIM Intertie.

**- Market Behavior Rules**

Those rules established by FERC under Docket No. EL01-118.

**- Market Clearing**

The act of conducting any of the processes used by the CAISO to determine LMPs, Day-Ahead Schedules, RUC Awards or AS Awards, HASP Block Intertie Schedules, FMM Schedules and Dispatch Instructions based on Supply Bids and Demand Bids or CAISO Demand Forecast.

**- Market Clearing Price**

The price in a market at which supply equals demand. All demand prepared to pay at least this price has been satisfied and all supply prepared to operate at or below this price has been purchased.

**- Market Close**

The time after which the CAISO is no longer accepting Bids for its CAISO Markets which: 1) for the DAM is 10:00 A.M. Pacific Time of the Day-Ahead; and 2) for RTM is approximately seventy-five minutes prior to the Operating Hour.

**- Market Disruption**

An action or event that causes a failure of a CAISO Market, related to system operation issues or System Emergencies referred to in Sections 7.6, 7.7, and 34.10, including actions taken by the CAISO to prevent,

manage, or minimize the extent of a Market Disruption.

**- Market Efficiency Enhancement Agreement (MEEA)**

An agreement between the CAISO and the Balancing Authority of an IBAA, or any entity or group of entities that use the transmission system of an IBAA, which provides for an alternative modeling and pricing arrangement to the default IBAA modeling and pricing provisions provided in Section 27.5.3. The CAISO may enter into such an agreement subject to FERC review and acceptance. Creation and modification of such an agreement will be pursuant to the process set forth in Section 27.5.3 and will be posted on the CAISO Website.

**- Market Manipulation**

Market Manipulation has the meaning set forth in 18 C.F.R. § 1c.

**- Market Monitoring Unit**

The component of the CAISO organization (currently the "Department of Market Monitoring") that is assigned responsibility in the first instance for the functions of a Market Monitoring Unit, as that term is defined in 18 CFR § 35.28(b)(7).

**- Market Notice**

An electronic notice issued by the CAISO that the CAISO posts on the CAISO Website and provides by e-mail to those registered with the CAISO to receive CAISO e-mail notices.

**- Market Participant**

An entity, including a Scheduling Coordinator, who: (1) participates in the CAISO Markets through the buying, selling, transmission, or distribution of Energy, capacity, or Ancillary Services into, out of, or through the CAISO Controlled Grid; (2) is a CRR Holder or Candidate CRR Holder; (3) is a Convergence Bidding Entity; (4) for purposes of scheduling and operating the Day-Ahead Market only, is an EDAM Market Participant; or (5) for purposes of scheduling and operating the Real-Time Market only, is an EIM Market Participant.

**- Market Services Charge**

The Grid Management Charge component described in Section 11.22.2.5.1.

**- Market Surveillance Committee (MSC)**

The committee established under Appendix O.

**- Market Transfer**

The exchange of Energy or a capacity product (Regulation, contingency reserves, Imbalance Reserves, or Reliability Capacity) in the Market Area. A Market Transfer is modeled as a pair of logical intertie resources at the relevant intertie that consist of an export resource on the source Balancing Authority Area side of the Market Transfer and an import resource on the sink Balancing Authority Area side of the Market Transfer. Market Transfers include EDAM Transfers and EIM Transfers.

**- Market Violation**

A CAISO Tariff violation, violation of a FERC-approved order, rule or regulation, market manipulation, or inappropriate dispatch that creates substantial concerns regarding unnecessary market inefficiencies.

**- Master File**

A file containing information regarding Generating Units, Loads and other resources, or its successor.

**- Material Change in Financial Condition**

A change in or potential threat to the financial condition of a Market Participant that increases the risk that the Market Participant will be unlikely to meet some or all of its financial obligations. The types of Material Change in Financial Condition include but are not limited to the following:

(a) a credit agency downgrade;

(b) being placed on a credit watch list by a major rating agency;

(c) a bankruptcy filing;

(d) insolvency;

(e) the filing of a material lawsuit that could significantly and adversely affect past, current, or future financial results; or

(f) any change in the financial condition of the Market Participant which exceeds a five (5) percent reduction in the Market Participant's Tangible Net Worth or Net Assets for the Market Participant's preceding fiscal year, calculated in accordance with generally accepted accounting practices.

**- Material Modification**

A modification that has a material impact on the cost or timing of any Interconnection Request or any other valid interconnection request with an equal or later Queue Position.

**- Maximum Cost Exposure (MCE)**

The sum of (1) the Interconnection Customer's Maximum Cost Responsibility and (2) the Conditionally Assigned Network Upgrades from its Interconnection Studies.

**- Maximum Cost Responsibility (MCR)**

The sum of the Interconnection Customer's (1) full cost of assigned Interconnection Reliability Network Upgrades and (2) allocated costs for all other Assigned Network Upgrades, from its Interconnection Facilities Study, not to exceed the Maximum Cost Exposure.

**- Maximum Daily Start-Ups**

The maximum number of times a Generating Unit can be started up within one day, due to environmental or physical operating constraints.

**- Maximum Import Bid Price**

An index-based price used to screen Bids by Non-Resource-Specific System resources that are Resource Adequacy Resources that exceed the Soft Energy Bid Cap.

**- Maximum Import Capability**

A quantity in MW determined by the CAISO for each Intertie into the CAISO Balancing Authority Area to be deliverable to the CAISO Balancing Authority Area based on CAISO study criteria.

**- Maximum Net Dependable Capacity (MNDC)**

A term defined in and used in association with a Legacy RMR Contract.

**- Maximum Operating Limit (MOLmax)**

The lower of the maximum allowable output when the resource is operating or the upper bound of the Regulating Range if the resource is providing Regulation service.

**- Maximum Secondary Three-Hour Net-Load Ramp**

The second highest daily increase in CAISO system load, net of wind and solar output, measured over a consecutive three-hour time period that does not correspond with the time period for the Maximum Three-Hour Net-Load Ramp.

**- Maximum Three-Hour Net-Load Ramp**

The highest daily increase in CAISO system load within a month, net of wind and solar output, measured

over a consecutive three-hour time period.

**- MCC**

Marginal Cost of Congestion

**- MCL**

Marginal Cost of Losses

**- MDT**

Minimum Down Time

**- Measured Demand**

The metered CAISO Demand plus Real-Time Interchange Export Schedules, excluding that portion of Demand of Non-Generator Resources dispatched as Regulation through Regulation Energy Management.

**- [Not Used]**

**- MEEA**

Market Efficiency Enhancement Agreement

**- Merchant Option**

An election by an Interconnection Customer seeking Deliverability to interconnect in a Merchant Zone and forgo any cash reimbursement for any Area Delivery Network Upgrade costs and instead receive Merchant Transmission CRRs under Section 36.11 of the CAISO Tariff.

**- Merchant Transmission CRRs**

Incremental CRRs that are created by the addition of a Merchant Transmission Facility. Merchant Transmission CRRs are effective for thirty (30) years or for the pre-specified intended life of the facility, whichever is less.

**- Merchant Transmission Facility**

A transmission facility or upgrade that is part of the CAISO Controlled Grid and whose costs are paid by a Project Sponsor that does not recover the cost of the transmission investment through the CAISO's Access Charge or WAC or other regulatory cost recovery mechanism.

**- Merchant Zone**

A Transmission Zone with less than 50 MW of available Deliverability before the Cluster Application Window.

**- Meter Data**

Either (1) Energy usage or generation data collected by a metering device or as may be otherwise derived by the use of Approved Load Profiles or (2) a statistical sampling of Energy usage data that is derived pursuant to a methodology approved by the CAISO pursuant to Section 10.1.7 in cases where interval metering is not available for the entire population of underlying service accounts for a Reliability Demand Response Resource or a Proxy Demand Resource.

**- Meter Data Exchange Format**

A format for submitting Meter Data to the CAISO which will be published by the CAISO on the CAISO Website or available on request.

**- Metered Balancing Authority Area Load**

For purposes of calculating and billing the Grid Management Charge, Metered Balancing Authority Area Load is: (a) all metered Demand for Energy of Scheduling Coordinators for the supply of Loads in the CAISO's Balancing Authority Area, plus (b) all Energy for exports by Scheduling Coordinators from the CAISO Balancing Authority Area; less (c) Energy associated with the Load of a retail customer of a Scheduling Coordinator, Utility Distribution Company, Small Utility Distribution Company or Metered Subsystem that is served by a Generating Unit that: (i) is located on the same site as the customer's Load or provides service to the customer's Load through arrangements as authorized by Section 218 of the California Public Utilities Code; (ii) is a qualifying small power production facility or qualifying cogeneration facility, as those terms are defined in FERC's regulations implementing Section 201 of the Public Utility Regulatory Policies Act of 1978; and (iii) the customer secures Standby Service from a Participating TO under terms approved by a Local Regulatory Authority or FERC, as applicable, or the customer's Load can be curtailed concurrently with an Outage of the Generating Unit.

**- Metered Control Area Load**

Metered Balancing Authority Area Load.

**- Metered Quantities**

For each Direct Access End-User, the actual metered amount of MWh and MW; for each Participating

Generator the actual metered amounts of MWh, MW, MVar and MVarh.

**- Metered Subsystem (MSS)**

A geographically contiguous system located within a single zone which has been operating as an electric utility for a number of years prior to the CAISO Operations Date as a municipal utility, water district, irrigation district, state agency or federal power marketing authority subsumed within the CAISO Balancing Authority Area and encompassed by CAISO certified revenue quality meters at each interface point with the CAISO Controlled Grid and CAISO certified revenue quality meters on all Generating Units or, if aggregated, each individual resource, Participating Load, Reliability Demand Response Resource, and Proxy Demand Resource internal to the system, which is operated in accordance with a MSS Agreement described in Section 4.9.1.

**- Metered Subsystem Agreement (MSS Agreement)**

A negotiated agreement between the CAISO and an MSS Operator regarding the operation of an MSS in relation to the CAISO entered into pursuant to Section 4.9, which MSS Agreement will incorporate the provisions of Section 4.9, unless otherwise agreed.

**- Metering Facilities**

Revenue quality meters, instrument transformers, secondary circuitry, secondary devices, meter data servers, related communication facilities and other related local equipment.

**- Meter Points**

Locations on the CAISO Controlled Grid at which the CAISO requires the collection of Meter Data by a metering device.

**- Meter Service Agreement for CAISO Metered Entities**

An agreement entered into between the CAISO and a CAISO Metered Entity consistent with the provisions of Section 10, a pro forma version of which is set forth in Appendix B.6.

**- Meter Service Agreement for Scheduling Coordinators (MSA SC)**

An agreement entered into between the CAISO and a Scheduling Coordinator consistent with the provisions of Section 10, a pro forma version of which is set forth in Appendix B.7.

**- Mileage**

The service provided by a resource with a Regulation Up and Regulation Down capacity award in

response to the CAISO's EMS signal.

**- Minimum Dispatchable Level**

Either (1) for resources that are not Multi-Stage Generating Resources, the lower limit of the fastest segment of a Generating Unit's Operational Ramp Rate, as adjusted for the Generating Unit's Forbidden Operating Regions, if any, or (2) for Multi-Stage Generating Resources, the minimum MW level of the fastest operational ramp rate across all configurations.

**- Minimum Down Time (MDT)**

The minimum amount of time that a Generating Unit must stay off-line after being Shut-Down, due to physical operating constraints.

**- Minimum Load**

For a Generating Unit, the minimum sustained operating level at which it can operate at a continuous sustained level, as defined in the Master File, or if applicable, as modified pursuant to Section 9.3.3. For a Participating Load, the operating level at reduced consumption pursuant to a Dispatch Instruction. For a Proxy Demand Resource, the smallest discrete load reduction possible for the Proxy Demand Resource.

**- Minimum Load Bid**

The Bid component that indicates the Minimum Load Cost for the Generating Unit, Participating Load, Reliability Demand Response Resource, or Proxy Demand Resource specified by a non-negative number in dollars per hour ($/hr), which applies for the entire Trading Day for which it is submitted. Minimum Load Bids are subject to modification pursuant to the rules specified in Sections 30.7.10 and 30.11.

**- Minimum Load Bid Cost**

The Minimum Load Costs submitted in a Minimum Load Bid as modified pursuant to Sections 30.7.10 and 30.11 used for purposes of clearing the applicable CAISO Market Process and for Bid Cost Recovery.

**- Minimum Load Costs**

The costs a Generating Unit, Resource-Specific System Resource, Participating Load, Reliability Demand Response Resource, or Proxy Demand Resource incurs operating at Minimum Load, which in the case of Participating Load, Reliability Demand Response Resource, or Proxy Demand Resource must be non-

negative and may be adjusted pursuant to Section 30.7.10.2, if applicable.

**- Minimum Load Cost Hard Cap**

The maximum Minimum Load Cost used in the CAISO Markets. The Minimum Load Cost Hard Cap is $2,000 per MWh. The CAISO will calculate this limit by dividing a resource's Minimum Load Cost by its Minimum Load. Where a resource's Minimum Load is less than 1 MW, the CAISO will set its Minimum Load to 1 MW for the purpose of this calculation.

**- Minimum Load Energy**

The product of the relevant Minimum Load, as defined in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and the duration of the Settlement Interval. The CAISO will determine the Minimum Load Energy for Multi-Stage Generating Resources based on the applicable MSG Configuration.

**- Minimum Load Opportunity Costs**

An adder consisting of the estimated profits foregone by a Use-Limited Resource with a limitation on its number of run-hours that satisfies the definition of a Use-Limited Resource and applies for a time period that satisfies the requirements of Section 30.4.6.1, if the Use-Limited Resource had one less run-hour in the time period.

**- Minimum Operating Limit (MOLmin)**

The greater of the Minimum Load or the lower bound of the Regulating Range if the resource offers Regulation service.

**- Minimum Run Time**

The minimum amount of time that a Generating Unit must stay on-line after being started-up prior to being Shut-Down, due to physical operating constraints.

**- Minimum State of Charge (MSOC) Tool**

A functionality in the RTM that limits awards for a Non-Generator Resource that has selected a primary fuel type in Master File of "Limited Energy Storage Resource" and is an RA Resource such that they will have sufficient charge to meet the discharge elements of their Day-Ahead Schedule.

**- Mitigation Frequency**

The percent of the Generating Unit's run hours where the unit had one or more Bid segments mitigated

under the CAISO Local Market Power Mitigation.

**- Mitigation Measures**

The CAISO market power mitigation measures under the CAISO Tariff.

**- Mixed-fuel Resource**

A Generating Facility with components that use different fuel sources or technologies, participating as a Hybrid Resource or Co-located Resources.

**- MNDC**

Maximum Net Dependable Capacity

**- Modified Reserve Sharing LSE**

A Load Serving Entity whose Scheduling Coordinator has informed the CAISO in accordance with Section 40.1 of its election to be a Modified Reserve Sharing LSE.

**- MOLmax**

Maximum Operating Limit

**- MOLmin**

Minimum Operating Limit

**- Monthly Available CRR Capacity**

The upper limit of network capacity that will be used in the monthly CRR Allocation and monthly CRR Auctions calculated by using TTC adjusted for Outages, derates, and Transmission Ownership Rights for the relevant month in accordance with Section 36.4.

**- Monthly CRR**

A Congestion Revenue Right whose term is one calendar month in length and distributed in the monthly CRR Allocation and monthly CRR Auction.

**- Monthly CRR Congestion Fund**

The pool of funds the CAISO collects and holds, corresponding to a specific Transmission Constraint, to make Monthly CRR Surplus Distribution Payments corresponding to that Transmission Constraint.

**- Monthly CRR Eligible Quantity**

The MW quantity of CRRs a CRR Holder or Candidate CRR Holder is eligible to nominate for the relevant

month in a monthly CRR Allocation.

**- Monthly CRR Load Metric**

The load metric used for determining eligibility for CRR Allocation as provided in Section 36.8.2.2.

**- Monthly CRR Surplus Distribution Payment**

A payment, corresponding to a specific Transmission Constraint, the CAISO makes to a CRR Holder as described in Section 11.2.4.4.2.

**- Moody's Analytics Equivalent Rating**

The rating derived by Moody's Analytics from the Moody's Analytics Estimated Default Frequency that effectively translates the Moody's Estimated Default Frequency into a comparable credit agency rating. The Moody's Analytics Equivalent Rating may correspond to the Moody's Analytics Spot Credit Rating (CreditEdge Plus), Bond Default Rate Mapping or Dynamic Rating (RiskCalc), or other rating established by Moody's Analytics or an alternative rating agency for this purpose.

**- MPM**

Market Power Mitigation

**- MSA CAISOME**

Metered Service Agreement for CAISO Metered Entities

**- MSA SC**

Metered Service Agreement for Scheduling Coordinators

**- MSC**

Market Surveillance Committee

**- MSG Configuration**

A qualified and registered operating mode of a Multi-Stage Generating Resource, with a distinct set of operating characteristics such that only one such MSG Configuration can be operated in any given Dispatch Interval. All MSG Configurations for Multi-Stage Generating Resources are operable on-line modes.

**- MSG Transition**

A feasible operation from one MSG Configuration to another as registered in the Transition Matrix associated with a specific Transition Time and a specific Transition Cost, if applicable.

**- MSS**

Metered Subsystem

**- MSS Aggregation**

Either (1) a Metered Subsystem or (2) a collection of Metered Subsystems represented by a single MSS Aggregator.

**- MSS Aggregation Net Measured Demand**

The sum of the net metered CAISO Demand from all the Net-Load MSSs in the MSS Aggregation plus any exports out of the CAISO Balancing Authority Area from the MSS Aggregation. Net metered CAISO Demand of a MSS is defined as the algebraic difference between the gross CAISO Demand and Generation internal to the MSS.

**- MSS Aggregation Net Non-ETC/TOR Measured Demand**

The sum of the net metered non-ETC/TOR CAISO Demand from all of the non-ETC/TOR Net-Load MSSs in the MSS Aggregation plus any non-ETC/TOR exports out of the CAISO Balancing Authority Area from the MSS Aggregation. Net metered non-ETC/TOR CAISO Demand of an MSS is defined as the algebraic difference between the non-ETC/TOR CAISO Demand and the non-ETC/TOR Generation within the MSS.

**- MSS Aggregator**

An entity that has executed an agreement with the CAISO that enables it to represent individual MSS Operators in the CAISO Markets on an aggregated basis, which agreement has been accepted by FERC.

**- MSS Aggregator CRR Entity Agent Agreement**

An agreement between the CAISO and an MSS Aggregator by which the MSS Aggregator commits to act as agent for aggregation of MSS Operators in the CRR Allocation, CRR Auction, and Secondary Registration System process, a pro forma version of which is set forth in Appendix B.12.

**- MSS Demand**

CAISO Demand specified in an MSS Agreement as being within the MSS.

**- MSS Deviation Band**

The amount by which a Load following MSS Operator can deviate from Expected Energy without

incurring a Load Following Deviation Penalty, equal to three percent (3%) of an MSS Operator's gross metered Demand in the MSS and exports from the MSS, adjusted for Forced Outages and any CAISO directed firm Load Shedding for the MSS's portfolio as a whole.

**- MSS Load Following Energy**

RTD IIE, exclusive of Standard Ramping Energy, Ramping Energy Deviation, and Residual Imbalance Energy, produced or consumed due to Load following by an MSS. MSS Load Following Energy is the RTD IIE that corresponds to the algebraic Qualified Load Following Instruction, relative to the Day-Ahead Schedule. MSS Load Following Energy does not coexist with FMM Optimal Energy, and it does not overlap with Standard Ramping Energy, Ramping Energy Deviation, or Residual Imbalance Energy, but it may overlap with Day-Ahead Scheduled Energy, RTD Derate Energy, RTD Exceptional Dispatch Energy, and RTD Optimal Energy. MSS Load Following Energy is settled as provided in Section 11.5.1, and it is not included in BCR as described in Section 11.8.4.

**- MSS Net Negative Uninstructed Deviation**

Net Negative Uninstructed Deviation for an MSS, with MSS Load Following Energy included in the netting.

**- MSS Operator**

An entity that owns an MSS and has executed a MSS Agreement.

**- MSS Supply**

Supply specified in an MSS Agreement as supplying an MSS.

**- Multiparty Affected System Facilities Construction Agreement**

The agreement contained in Appendix 14 to the RIS that is made between the Participating TO and multiple Affected System Interconnection Customers to facilitate the construction of and to set forth cost responsibility for necessary Affected System Network Upgrades on the CAISO Controlled Grid.

**- Multiparty Affected System Study Agreement**

The agreement contained in Appendix 12 to the RIS that is made among the CAISO, Participating TO, and multiple Affected System Interconnection Customers to conduct an Affected System Study pursuant to Section 14 of the RIS.

**- Multi-Point CRR**

The CAISO does not support Multi-Point CRRs. A CRR Obligation specified according to one or more CRR Sources and one or more CRR Sinks and a flow from the CRR Source(s) to the CRR Sink(s), provided that at least the CRR Sink or the CRR Source identifies more than one point.

**- Multi-Stage Generating Resources**

A Generating Unit is a Multi-Stage Generating Resource if it: (1) is a combined cycle resource, excluding those that are one-by-one combined cycle resources without bypassing, duct firing capability or power augmentation capability; (2) has more than one Forbidden Operating Region; (3) has multiple operating modes, including Regulating Ranges associated with different Ancillary Services capability; (4) has hold times before or after a Transition through a Forbidden Operating Region; or (5) any other resource that has multiple operating modes such that only one of those modes can be operated in any given Dispatch Interval. For the purposes of item (4), a hold time is an operational restriction that requires the resource to stay in or out of a specific operating mode for a given period of time, derived from the physical characteristics registered in the Master File for the resource, which may be in the form of a requirement that the resource stay in a particular operating mode for a period of time once it is in, or that the resource must stay out of a particular operating mode for a period of time once it is out of that operating mode. Notwithstanding the above, by definition Metered Subsystems in their entirety, Pumped-Storage Hydro Units, Pumping Loads, Non-Generator Resources, and System Resources are not Multi-Stage Generating Resources.

**- Municipal Tax Exempt Debt**

An obligation the interest on which is excluded from gross income for federal tax purposes pursuant to Section 103(a) of the Internal Revenue Code of 1986 or the corresponding provisions of prior law without regard to the identity of the holder thereof. Municipal Tax Exempt Debt does not include Local Furnishing Bonds.

**- Nationally Recognized Statistical Rating Organizations**

National credit rating agencies as designated by the U.S. Securities & Exchange Commission.

**- Native Balancing Authority Area**

The Balancing Authority Area where a Pseudo-Tie generating unit is physically interconnected to the electric grid.

**- Native Load**

Load required to be served by a utility within its Service Area pursuant to applicable law, franchise, or statute.

**- Negative Operating Reserve Obligation Adjustment Factor**

The adjustment factor specified in Section 11.10.5.

**- Negotiated Availability Bid**

Either an IRU Negotiated Availability Bid or an RCU Negotiated Availability Bid.

**- Negotiated Rate Option**

A method of calculating Default Energy Bids based on a negotiation with the CAISO.

**- NERC**

The North American Electric Reliability Corporation or its successor.

**- NERC Functional Model**

The model used by NERC to define and establish the set of functions that must be performed to ensure the reliability of the bulk power system.

**- NERC Generating Availability Data System (GADS)**

The NERC standard for determination of generation resource net dependable capacity.

**- NERC Reliability Standards**

The standards that have been developed by NERC and/or a Regional Entity, and have been approved by FERC, to ensure the reliability of the bulk power system. The NERC Reliability Standards set forth the specific requirements that responsible entities must perform with respect to the functions defined in NERC's Functional Model.

**- NERC Reliability Standards for Modeling, Data, and Analysis**

A set of NERC Reliability Standards applicable to the transmission planning process.

**- NERC Rules of Procedure**

A set of rules and procedures developed by NERC and approved by FERC that establish processes that NERC, NERC members, and Regional Entities must follow. The NERC Rules of Procedure include the process through which a responsible entity that is to perform a set of functions to ensure reliability of the bulk power system must register with NERC as a Registered Entity.

**- NERC/WECC Charge Assessment Year**

A given year for which NERC/WECC Charges will be assessed by the WECC based on data from the calendar year two years prior to the year of the NERC/WECC Charge assessment.

**- NERC/WECC Charges**

The charges approved by FERC, pursuant to Section 215 of the FPA and FERC issuances related thereto, that provide funding for the statutory-related functions performed by NERC, the WECC, and regional advisory bodies that serve the WECC, or their successors or assignees.

**- NERC/WECC Charge Trust Account**

An account to be established by the CAISO for the purpose of maintaining funds collected from Scheduling Coordinators and disbursing such funds to the WECC.

**- NERC/WECC Metered Demand**

For purposes of calculating NERC/WECC Charges, a Scheduling Coordinator's net metered CAISO Demand plus Unaccounted for Energy for net metered CAISO Demand and Transmission Losses for metered CAISO Demand. A Scheduling Coordinator's net metered CAISO Demand equals the Scheduling Coordinator's metered CAISO Demand (which adds Energy associated with imports from and subtracts Energy associated with exports to other Balancing Authority Areas), less metered CAISO Demand for Station Power and for Energy required for storage at electric energy storage facilities, such as pumped storage. For purposes of calculating NERC/WECC Metered Demand, Unaccounted for Energy and Transmission Losses allocable to net metered CAISO Demand will be allocated pro rata to each Scheduling Coordinator based on the Scheduling Coordinator's net metered CAISO Demand.

**- Net Assets**

For governmental and not-for-profit entities, as defined in Step 4(b) of Section 12.1.1.1.2.

**- Net Energy for Load**

Net Balancing Authority Area generation, plus energy received from other Balancing Authority Areas, less energy delivered to Balancing Authority Areas through interchange. It includes Balancing Authority Area losses but excludes energy required for storage at energy storage facilities. Net Energy for Load equals NERC/WECC Metered Demand for the CAISO Balancing Authority Area.

**- Net Generation**

Net power available from a Generating Facility to be fed into the power system at the high side of the Generating Facility transformer(s). Net generation is equal to gross generation minus the generator's internal power usage (station service).

**- Net Hourly Energy Charge**

Total charges to all Demand and Virtual Demand Awards minus total payments to all Supply and Virtual Supply Awards both based on the product of MWh amounts specified in all Day-Ahead Schedules and Virtual Awards and the relevant Day-Ahead LMPs at the applicable PNodes or Aggregated Pricing Node. This also includes any amounts associated with price corrections for Virtual Awards in accordance with Section 11.21.2.

**- Net IFM Bid Cost Uplift**

The amount of IFM-related Bid Costs resulting from the sequential netting in Section 11.8.6.2 and allocated to Scheduling Coordinators in accordance with Section 11.8.6.4.

**- Net Imbalance Energy Export**

The Net Imbalance Energy Export is the net Imbalance Energy imported into the CAISO Balancing Authority Area from EDAM Entity Balancing Authority Areas or EIM Entity Balancing Authority Areas.

**- Net Load Forecast**

The demand forecast for a BAA minus the forecast of wind and solar output for the BAA during the interval.

**- Net-Load MSS**

An MSS with positive net metered CAISO Demand of the MSS within the MSS Aggregation.

**- Net Market Transfer**

The net of all import and export Market Transfers between a Balancing Authority Area in the Market Area and all other Balancing Authority Areas in the Market Area. Each Net Market Transfer consists of a positive net export amount and a corresponding negative net import amount, with the sum of the Net Market Transfers of all Balancing Authority Areas in the Market Area netting to zero. A Net Market Transfer does not include imports from or exports to Balancing Authority Areas outside of the Market Area.

**- Net Modeled CRR Flow**

For CRR Obligations, the net MW quantity from CRR Obligations within a CRR Holder's portfolio that the CAISO models as flowing over a particular binding Transmission Constraint (accounting both for prevailing flow and counter-flow modeled over that binding Transmission Constraint).

For CRR Options, the net MW quantity from a given CRR Option that the CAISO models as flowing over a particular binding Transmission Constraint. The CAISO does not net the MWs of modeled flow from a given CRR Obligation with MWs of modeled flow from CRR Obligations or other CRR Options in a CRR Holder's portfolio.

**- Net Negative CAISO Demand**

The difference between metered CAISO Demand and the total CAISO Demand scheduled in the Day-Ahead Schedule, if positive.

**- Net Negative Uninstructed Deviation**

The real-time change in Generation or Demand associated with underscheduled Demand (i.e., Demand that appears unscheduled in Real-Time) and overscheduled Generation (i.e., Generation that is scheduled in the DAM and does not appear in Real-Time), which are netted for each Settlement Interval, apply to a Scheduling Coordinator's entire portfolio, and include Demand, Generation, imports and exports.

**- Net Output**

The gross Energy output from a Generating Unit less the Station Power requirements for such Generating Unit during the Netting Period, or the Energy available to provide Remote Self-Supply from a generating facility in another Balancing Authority Area during the Netting Period.

**- Net Procurement**

The awarded amount (MW) of a given Ancillary Service in the Day-Ahead and Real-Time Markets, minus the amount of that Ancillary Service associated with payments rescinded pursuant to any of the provisions of Section 8.10.2.

**- Net Qualifying Capacity**

Qualifying Capacity reduced, as applicable, based on: (1) testing and verification; (2) application of performance criteria; and (3) deliverability restrictions. The Net Qualifying Capacity determination shall be made by the CAISO pursuant to the provisions of this CAISO Tariff and the applicable Business

Practice Manual.

**- Net RTM Bid Cost Uplift**

The amount of RTM-related Bid Costs resulting from the sequential netting in Section 11.8.6.2 and allocated to Scheduling Coordinators in accordance with Section 11.8.6.6.

**- Net RUC Bid Cost Uplift**

The amount of RUC-related Bid Costs resulting from the sequential netting in Section 11.8.6.2 and allocated to Scheduling Coordinators in accordance with Section 11.8.6.5.

**- Net Scheduled Generating Unit**

A Generating Unit identified in a Net Scheduled PGA operated as a single unit such that the Energy bid or self-scheduled with the CAISO is the net value of the aggregate electrical net output of the Generating Unit and the Self-provided Load.

**- Net Scheduled Participating Generator Agreement**

An agreement between the CAISO and a Generator eligible to execute such an agreement under Section 4.6.3.3, a pro forma version of which is set forth in Appendix B.3.

**- Net Scheduled PGA**

A Net Scheduled Participating Generator Agreement.

**- Netting Period**

A calendar month, representing the interval over which the Net Output of one or more generating resources in a Station Power Portfolio is available to be attributed to the self-supply of Station Power in that Station Power Portfolio.

**- Network Upgrades**

The additions, modifications, and upgrades to the CAISO Controlled Grid or EDAM transmission system at or beyond the Point of Interconnection and Distribution System. Network Upgrades do not include Distribution Upgrades or Interconnection Facilities.

**- New High Voltage Facility**

A High Voltage Transmission Facility of a Participating TO that is placed in service after the beginning of the TAC Transition Period described in Section 4 of Schedule 3 of Appendix F, or a capital addition made and placed in service after the beginning of the TAC Transition Period described in Section 4.2 of

Schedule 3 of Appendix F to an Existing High Voltage Facility.

**- New Participating TO**

Any Participating TO that is not an Original Participating TO. A Subscriber Participating TO is a type of New Participating TO.

**- New Use Import Commitment**

Any power purchase agreement, ownership interest, or other commercial arrangement, that meets all the Tariff and applicable Business Process Manual requirements to lock import capability received as Remaining Import Capability at the branch group level and does not already qualify as Pre-RA Import Commitment, entered into by a Load Serving Entity serving Load in the CAISO Balancing Authority Area for the procurement of capacity from a resource specific or aggregation, consisting of Pseudo-Tie Generating Units; Dynamic Resource-Specific System Resources; or Generating Units connected to the CAISO Controlled Grid, while subject to CAISO Appendix DD 8.9.1 (b) or (c). The New Use Import Commitment shall be deemed to terminate upon the expiration of the initial term of the New Use Import Commitment, notwithstanding any "evergreen" or other renewal provision exercisable at the option of either party to the agreement.

**- New Use Import Commitment Capability**

The quantity in MW assigned to a particular Intertie into the CAISO Balancing Authority Area based on a New Use Import Commitment.

**- Node**

A point in the Full Network Model representing a physical location within the CAISO Balancing Authority Area, the CAISO Controlled Grid, the EDAM Area, or the EIM Area, which includes the Load and Generating Unit busses in the EDAM Area or EIM Area (which includes a Pseudo-Tie of a Generating Unit to a Balancing Authority Area in the EDAM Area or EIM Area), and at the Intertie busses between (i) the CAISO Balancing Authority Area, an EDAM Entity Balancing Authority Area, or an EIM Entity Balancing Authority Area and (ii) an interconnected Balancing Authority Area.

**- Nomogram**

A set of operating or scheduling rules which are used to ensure that simultaneous operating limits are respected, in order to meet NERC and WECC reliability standards and any requirements of the NRC.

**- Non-Availability Charge**

The monthly charge that the CAISO may assess to a Resource Adequacy Resource under the Availability Standards program in accordance with Section 40.9.

**- Non-CPUC Load Serving Entity**

Any entity serving retail Demand in the CAISO Balancing Authority Area not within the jurisdiction of the CPUC, including (i) a local publicly owned electric utility under section 9604 of the California Public Utilities Code and (ii) any federal entities, including but not limited to federal power marketing authorities, that serve retail Load.

**- Non-Dispatchable Resource**

A resource that cannot be increased or curtailed at the direction of the CAISO in the Real-Time Dispatch to Supply or consume Energy, such as certain Qualifying Facilities.

**- Non-Dynamic Resource-Specific System Resource**

A Non-Dynamic System Resource that is a specific generation resource outside the CAISO Balancing Authority Area.

**- Non-Dynamic System Resource**

A System Resource that is not capable of submitting a Dynamic Schedule, or for which a Dynamic Schedule has not been submitted, which may be a Non-Dynamic Resource-Specific System Resource.

**- Non-Generator Resource**

Resources that operate as either Generation or Load and that can be dispatched to any operating level within their entire capacity range but are also constrained by a MWh limit to (1) generate Energy, (2) curtail the consumption of Energy in the case of demand response, or (3) consume Energy.

**- Non-Generator Resource Generic Modeling**

Non-Generator Resource Generic Modeling is a functionality used by the CAISO to recognize that a resource or aggregation of resources may be dispatched to any operating level within a continuous generating operating range from a negative PMin to a positive PMax.

**- Non-Load Serving Participating TO**

A Participating TO that (1) is not a UDC, MSS Operator or Scheduling Coordinator serving End-Use Customers and (2) does not have Gross Load in accordance with Section 9 of Schedule 3 of Appendix F.

**- Non-Participating TO**

A TO that is not a party to the Transmission Control Agreement or, for the purposes of Section 16.1, the holder of transmission service rights under an Existing Contract that is not a Participating TO.

**- Non-Resource-Specific System Resource**

A System Resource that is not a Resource-Specific System Resource.

**- Non-Priced Quantity**

As set forth in Section 27.4.3, a quantitative value in a CAISO Market that may be adjusted by the SCUC or SCED in the CAISO market optimizations but that does not have an associated bid price submitted by a Scheduling Coordinator. The Non-priced Quantities that may be so adjusted are: Energy Self-Schedules, Transmission Constraints, market energy balance constraints, Ancillary Service requirements, conditionally qualified and conditionally unqualified Ancillary Service self-provision, limits in RUC on minimum load energy, quick start capacity and minimum generation, Day-Ahead Energy Schedules resulting from the IFM, and estimated FMM Self-Schedules used in RUC.

**- Non-Spinning Reserve**

The portion of resource capacity that is capable of being synchronized and Ramping to a specified load in ten minutes (or that is capable of being interrupted in ten (10) minutes) and that is capable of running (or being interrupted) for at least thirty (30) minutes from the time it reaches its award capacity.

**- Non-Spinning Reserve Cost**

The revenues paid to the suppliers of the total awarded Non-Spinning Reserve capacity in the Day-Ahead Market and Real-Time Market, minus, the payments rescinded due to either the failure to conform to CAISO Dispatch Instructions or the unavailability of the Non-Spinning Reserves under Section 8.10.8.

**- Non-Spinning Reserve Obligation**

The obligation of a Scheduling Coordinator for its share of costs incurred by the CAISO in procuring Non-Spinning Reserve.

**- Non-Subscriber**

An entity, or its designee, that schedules as a Market Participant on transmission assets or Entitlements of a Subscriber Participating TO not being used by a Subscriber exercising Subscriber Rights, including Subscribers that schedule beyond their Subscriber Rights.

**- Non-Subscriber Usage Payment Amount**

An amount paid by a Non-Subscriber and provided by the CAISO to a Subscriber Participating TO for the Non-Subscriber's use of the Subscriber Participating TO's transmission assets and Entitlements and Subscriber Encumbrances used to provide Subscriber Rights.

**- Non-Subscriber Usage Rate**

A component of the calculation of the Non-Subscriber Usage Payment Amount. The Non-Subscriber Usage Rate, and any updates thereto, is developed in accordance with the CAISO Tariff and the Subscriber Participating TO Tariff and is approved by FERC.

**- Non-VER Physical Supply**

The physical supply of Energy available to the CAISO net of potential Supply from VERs electrically located in a BAA in the EDAM Area.

**- No Pay**

The rescission of a payment made for provision of Spinning Reserve and/or Non-Spinning Reserve when, subsequent to the AS Award for such Ancillary Service and payment, the Ancillary Service becomes Undispatchable Capacity, Unavailable Capacity, Undelivered Capacity, or, in certain circumstances, unsynchronized capacity.

**- Notional CRR Value**

For a given CRR in a Settlement Period, the sum of: (1) the product of: (a) the MCC of Energy at the CRR Sink minus the MCC of Energy at the CRR Source and (b) the MW quantity for that Settlement Period; (2) the product of (a) the MCC of Locational IRU Price at the CRR Sink minus the MCC of Locational IRU Price at the CRR Source and (b) the MW quantity for that Settlement Period; and (3) the product of (a) the MCC of Locational IRD Price at the CRR Sink minus the MCC of Locational IRD Price at the CRR Source and (b) the MW quantity for that Settlement Period. The Notional CRR Value for a CRR Obligation can be a non-positive value for a Settlement Period but cannot be less than zero (0) for a CRR Option.

**- NOROCAF**

Negative Operating Reserve Obligation Credit Adjustment Factor

**- NRC**

The Nuclear Regulatory Commission or its successor.

**- NRC Standards**

The reliability standards published by the NRC from time to time.

**- NRS-RA Resource**

A Non-Resource-Specific System Resource that provides Resource Adequacy Capacity.

**- OASIS**

Open Access Same-Time Information System

**- OBAALSE**

Out-of-Balancing Authority Area Load Serving Entity

**- Off**

A unit is Off when it is offline or in the process of starting up or shutting down.

**- Off-Peak Deliverability Assessment**

The technical study performed in Interconnection Studies to study if Generating Facilities can provide expected Energy to the CAISO Controlled Grid during modeled off-peak Load conditions without excessive curtailment due to transmission constraints.

**- Off-Peak Deliverability Constraints**

A transmission system operating limit that constrains Generating Facilities in an area, leading to the excessive curtailment of expected Energy.

**- Off-Peak Deliverability Status**

Status for a Generating Facility indicated it can provide expected Energy to the CAISO Controlled Grid during modeled off-peak Load conditions without excessive curtailment due to transmission constraints.

**- Off-Peak Energy Only**

Status for a Generating Facility indicating its expected Energy to the CAISO Controlled Grid during modeled off-peak Load conditions will be subject to curtailment due to transmission constraints.

**- Off-Peak Flexible Ramp Hours**

Trading Hours from hour ending 1 through hour ending 6 and from hour ending 23 through hour ending 25.

**- Off-Peak Opportunity RA Maintenance Outage**

A Maintenance Outage at a Resource Adequacy Resource that is approved by the CAISO to be initiated and completed during off-peak hours (as specified in the Business Practice Manual) without RA Substitute Capacity for the Resource Adequacy Capacity on Outage.

**- Off-Peak Network Upgrades**

Network Upgrades needed to relieve Off-Peak Deliverability Constraints. Area Off-Peak Network Upgrades address Area Off-Peak Constraints. Local Off-Peak Network Upgrades address Local Off-Peak Constraints.

**- Offsetting CRR**

One of the pair of new equal and opposite CRRs created and allocated by the CAISO to reflect Load Migration between two LSEs pursuant to the provisions in Section 36.8.5, which is allocated to the Load losing LSE and is opposite in direction to the corresponding CRR previously allocated to that LSE and is denominated in a MW quantity that reflects the net amount of Load Migration between the two LSEs.

**- On**

A unit is On when it is online, synchronized with the grid, and available for Dispatch.

**- On-Peak Deliverability Assessment**

The technical study performed in Interconnection Studies to determine if a Generating Facility or a group of Generating Facilities requesting Full Capacity Deliverability Status or Partial Capacity Deliverability Status can provide Energy to the CAISO Controlled Grid and be delivered to the aggregate of Load on the CAISO Controlled Grid at peak Load, under a variety of modeled stressed conditions.

**- On-Site Self-Supply**

Energy from a Generating Unit that self-supplies all or a portion of its contemporaneous Station Power Load that is netted pursuant to Section 10.1.3 or is deemed to have self-supplied all or a portion of its associated non-contemporaneous Station Power Load without use of the CAISO Controlled Grid during the Netting Period pursuant to Section 3.1 of the Station Power Protocol in Appendix I.

**- Open Access Same-Time Information System (OASIS)**

The electronic posting system for transmission access data that the CAISO maintains on the CAISO Website that allows all Market Participants to view the data simultaneously.

**- Operating Day**

The day when the Real-Time Market runs and Energy is supplied to Load.

**- Operating Hour**

The hour during the day when the Real-Time Market runs and Energy is supplied to Load.

**- Operating Instruction**

A command by operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System or the facilities of a Participating Generator. An Operating Instruction will be communicated consistent with the practices described in NERC Reliability Standard COM-002-4.

**- Operating Procedures**

Procedures governing the operation of the CAISO Controlled Grid as the CAISO may from time to time develop, and/or procedures that Participating TOs currently employ which the CAISO adopts for use.

**- Operating Reserve**

The combination of Spinning and Non-Spinning Reserve required to meet NERC and WECC reliability standards and any requirements of the NRC for reliable operation of the CAISO Balancing Authority Area.

**- Operating Reserve Obligation**

The obligation of a Scheduling Coordinator for its share of costs incurred by the CAISO in procuring Operating Reserves.

**- Operating Reserve Ramp Rate**

A single number included in Ancillary Service Bids and Submissions to Self-Provide Ancillary Services for Spinning Reserve and Non-Spinning Reserve that represents the Ramp Rate of a resource used in the procurement of Operating Reserve capacity.

**- Operational Adjustment**

The difference between the Energy scheduled in the Balancing Authority Area check-out process for Scheduling Points and the FMM Schedule for Non-Dynamic System Resources.

**- Operational Control**

The rights of the CAISO under the Transmission Control Agreement and the CAISO Tariff to direct Participating TOs how to operate their transmission lines and facilities and other electric plant affecting

the reliability of those lines and facilities for the purpose of affording comparable non-discriminatory transmission access and meeting Applicable Reliability Criteria.

**- Operational Flexibility**

The latitude allowed the CAISO necessary to provide reasonable assurance that the transmission network is designed in such a way that it will be secure considering the inherent uncertainty in system conditions or unforeseen circumstances, based on the current system configuration and available generation.

**- Operational Ramp Rates**

A staircase function of up to 4 segments (in addition to Ramp Rate segments needed for modeling Forbidden Operating Regions). Operational Ramp Rates are submitted with Energy Bid data.

**- Operator**

The operator of facilities that comprise the CAISO Controlled Grid or a Participating Generator.

**- Opportunity Costs**

Start-Up Opportunity Costs, Minimum Load Opportunity Costs, or Variable Energy Opportunity Costs.

**- Option (A) Generating Facility**

A Generating Facility for which the Interconnection Customer has selected Option (A) as the Deliverability option under Section 7.2 of Appendix DD or KK.

**- Option (B) Generating Facility**

Generating Facilities for which the Interconnection Customer has selected Option (B) as the Deliverability option under Section 7.2 of Appendices DD or KK.

**- Optional Interconnection Study**

A sensitivity analysis based on assumptions specified by the Interconnection Customer in the Optional Interconnection Study Agreement.

**- Optional Interconnection Study Agreement**

The form of agreement accepted by FERC and posted on the CAISO Website for conducting the Optional Interconnection Study.

**- Order No. 888**

The final rule issued by FERC entitled “Promoting Wholesale Competition through Open Access Non-

discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities," 61 Fed. Reg. 21,540 (May 10, 1996), FERC Stats. & Regs., Regulations Preambles [1991-1996] ¶ 31,036 (1996), Order on Rehearing, Order No. 888-A, 78 FERC ¶ 61,220 (1997), as it may be amended from time to time

**- Order No. 889**

The final rule issued by FERC entitled "Open Access Same-Time Information System (formerly Real Time Information Networks) and Standards of Conduct," 61 Fed. Reg. 21,737 (May 10, 1996), FERC Stats. & Regs., Regulations Preambles [1991-1996] ¶ 31,035 (1996), Order on Rehearing, Order No. 889-A, 78 FERC ¶ 61,221 (1997), as it may be amended from time to time.

**- Order 1000 Common Interregional Coordination and Cost Allocation**

Means Section 24.18, which relates to Order 1000 interregional provisions.

**- Original Participating TO**

A Participating TO that was a Participating TO as of January 1, 2000.

**- Outage**

Disconnection, separation or reduction in capacity, planned or forced, of one or more elements of an electric system.

**- Out-Of-Balancing Authority Area Load Serving Entity**

An entity serving end-users located outside the CAISO Balancing Authority Area and that has been granted authority or has an obligation pursuant to federal, state or local law, or under contracts to provide electric service to such end-users located outside the CAISO Balancing Authority Area.

**- Overgeneration**

A condition that occurs when total Supply exceeds total Demand in the CAISO Balancing Authority Area.

**- Partial Capacity Deliverability Status**

Partial Capacity Deliverability Status entitles a generating facility to a Net Qualifying Capacity amount that cannot be larger than a specified fraction of its Qualifying Capacity, and may be less pursuant to the assessment of its Net Qualifying Capacity by the CAISO. An Interconnection Customer requesting Partial Capacity Deliverability Status must specify the fraction of Full Capacity Deliverability Status it is seeking in its Interconnection Request.

**- Partial Deliverability Status**

The condition whereby a Large Generating Facility interconnected with the CAISO Controlled Grid can deliver an elected amount of output that is less than the full output of the Large Generating Facility to the aggregate of Load on the CAISO Controlled Grid, consistent with the CAISO's Reliability Criteria and procedures and the CAISO On-Peak Deliverability Assessment.

**- Partial Resource Adequacy Resource**

A Resource Adequacy Resource that has capacity that is designated by its Scheduling Coordinator as Resource Adequacy Capacity in its monthly or annual Resource Adequacy Plan and has a related availability obligation to the CAISO, but also has capacity that is not committed to meet a resource adequacy obligation in the CAISO Balancing Authority Area.

**- Participating Generator**

A Generator or other seller of Energy, Imbalance Reserves, Reliability Capacity, or Ancillary Services through a Scheduling Coordinator over the CAISO Controlled Grid (1) from a Generating Unit with a rated capacity of 1 MW or greater, (2) from a Generating Unit with a rated capacity of 500 kW up to 1 MW for which the Generator elects to be a Participating Generator, (3) from a storage resource with a rated capacity of 100 kW or greater, or (4) from a Generating Unit providing Ancillary Services or submitting Energy Bids through an aggregation arrangement approved by the CAISO, which has undertaken to be bound by the terms of the CAISO Tariff, in the case of a Generator through a Participating Generator Agreement, Net Scheduled PGA, or Pseudo-Tie Participating Generator Agreement.

**- Participating Generator Agreement (PGA)**

An agreement between the CAISO and a Participating Generator, a pro forma version of which is set forth in Appendix B.2.

**- Participating Intermittent Resource**

One or more Eligible Intermittent Resources that meets the requirements of the technical standards for Participating Intermittent Resources adopted by the CAISO and set forth in a Business Practice Manual.

**- Participating Intermittent Resource Fees**

Fees set forth in Section 11.12.3.

**- Participating Load**

An entity, including an entity with Pumping Load or Aggregated Participating Load, providing Curtailable Demand, which has undertaken in writing by execution of a Participating Load Agreement to comply with all applicable provisions of the CAISO Tariff.

**- Participating Load Agreement (PLA)**

An agreement between the CAISO and a Participating Load, a pro forma version of which is set forth in Appendix B.4.

**- Participating TO or Participating Transmission Owner (PTO)**

A party to the Transmission Control Agreement whose application under Section 2.2 of the Transmission Control Agreement has been accepted and who has placed its transmission assets and Entitlements under the CAISO's Operational Control in accordance with the Transmission Control Agreement. A Participating TO may be an Original Participating TO or a New Participating TO.

**- Participating TO (PTO) Service Territory**

The area in which an IOU, a Local Public Owned Electric Utility, or federal power marketing authority that has turned over its transmission facilities and/or Entitlements to CAISO Operational Control is obligated to provide electric service to Load. A PTO Service Territory may be comprised of the Service Areas of more than one Local Publicly Owned Electric Utility, if they are operating under an agreement with the CAISO for aggregation of their MSS and their MSS Operator is designated as the Participating TO.

**- Participating TO's Interconnection Facilities**

All facilities and equipment owned, controlled, or operated by the Participating TO from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to the Large Generator Interconnection Agreement, including any modifications, additions or upgrades to such facilities and equipment. Participating TO's Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

**- Path 15 Upgrade**

The upgraded transmission facilities on Path 15 that have been turned over to CAISO Operational Control.

**- Payment Advice**

A document published as a result of an invoicing run pursuant to the CAISO Payments Calendar in which

a Business Associate's current net financial obligation is a negative Settlement Amount.

**- Payment Date**

The date by which invoiced amounts are to be paid under the terms of the CAISO Tariff.

**- PDR**

Proxy Demand Resource

**- Peak Flexible Ramp Hours**

Trading Hours from hour ending 7 through hour ending 22.

**- Performance Metric Tolerance Band**

The tolerance band applied to the Day-Ahead Metered Energy Adjustment Factor and the Real-Time Performance Metric as specified in Section 11.8.2.5 and 11.8.4.4, respectively. This tolerance band is the Tolerance Band as defined in this Appendix A plus an additional ramping tolerance. For each Settlement Interval, the ramping tolerance is the difference between (1) the Energy calculated based on the linear curve between two applicable Dispatch Operating Targets; and (2) Expected Energy over the two applicable Dispatch Intervals.

**- Permissible Technological Advancements**

Changes to Generating Facilities that do not require a Material Modification assessment, new Interconnection Request, re-study, or other substantial evaluation because they have little or no potential to substantially change Generating Unit electrical characteristics or affect other Interconnection Customers or Affected Systems.

**- Persistence Deviation Metric**

A threshold metric used to evaluate a resource's change in output between Settlement Intervals relative to the change in Dispatch by the CAISO between Settlement Intervals. The Persistent Deviation Metric is applied by Settlement Interval and is applied for the twelve ten-minute Settlement Intervals that comprise the previous two Trading Hours. Thus, the evaluation window is a rolling two hours, incrementing in hourly Settlement Intervals. The Persistent Deviation Metric for each Settlement Interval (t) is measured as the ratio of: (1) Metered Energy in the prior Settlement Interval (t-1), less the Metered Energy in the given Settlement Interval (t); and (2) Metered Energy in the prior Settlement Interval (t-1), less the Expected Energy in the given Settlement Interval (t), and less the Regulation Energy in the given

Settlement Interval (t).

**- Persistent Deviation Metric Threshold**

The CAISO will calculate the Persistent Deviation Metric and will flag the interval based on the threshold described in Section 11.17.

**-PGA**

Participating Generator Agreement

**- Phased Generating Facility**

A Generating Facility that is structured to be completed and to achieve Commercial Operation in two or more successive phases that are specified in a GIA, such that each phase comprises a portion of the total megawatt generation capacity of the entire Generating Facility.

**- Phase I Interconnection Study**

The engineering study conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), that evaluates the impact of the proposed interconnection on the safety and reliability of the CAISO Controlled Grid and, if applicable, an Affected System. The study shall identify and detail the system impacts that would result if the Generating Facility (ies) were interconnected without identified project modifications or system modifications, as provided in the On-Peak Deliverability Assessment or Off-Peak Deliverability Assessment, and other potential impacts, including but not limited to those identified in the Scoping Meeting as described in the Generator Interconnection Procedures set forth in Appendix Y. The study will also identify the approximate total costs, based on per unit costs, of mitigating these impacts, along with an equitable allocation of those costs to Interconnection Customers for their individual Generating Facilities.

**- Phase II Interconnection Study**

An engineering and operational study conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), to determine the Point of Interconnection and a list of facilities (including the Participating TO's Interconnection Facilities, Network Upgrades, Distribution Upgrades, and Stand Alone Network Upgrades), the cost of those facilities, and the time required to interconnect the Generating Facility(ies) with the CAISO Controlled Grid.

**- Physical Scheduling Plant**

A group of two or more related Generating Units, each of which is individually capable of producing Energy, but which either by physical necessity or operational design must be operated as if they were a single Generating Unit and any Generating Unit or Units containing related multiple generating components which meet one or more of the following criteria: i) multiple generating components are related by a common flow of fuel which cannot be interrupted without a substantial loss of efficiency of the combined output of all components; ii) the Energy production from one component necessarily causes Energy production from other components; iii) the operational arrangement of related multiple generating components determines the overall physical efficiency of the combined output of all components; iv) the level of coordination required to schedule individual generating components would cause the CAISO to incur scheduling costs far in excess of the benefits of having scheduled such individual components separately; or v) metered output is available only for the combined output of related multiple generating components and separate generating component metering is either impractical or economically inefficient.

**- Physical Trade**

An Inter-SC Trade of Energy at an individual Generating Unit's PNode or at the unique Aggregated Pricing Node of a Physical Scheduling Plant that is submitted to the CAISO for Settlement through the CAISO Market and is subject to physical validation.

**- PIR Export Percentage**

The PIR Export Percentage will be calculated for each Participating Intermittent Resource as the ratio of the Participating Intermittent Resource's PMax in the CAISO Master File minus the MW subject to an exemption under Section 5.3.2 of the EIRP in Appendix Q on a MW basis to the Participating Intermittent Resource's PMax in the CAISO Master File.

**- PLA**

Participating Load Agreement

**- Planned Transmission Outage Maintenance**

A Maintenance Outage for transmission facilities that comprise the CAISO Controlled Grid that is requested by a Participating TO at least seven (7) days in advance of the start date for the Outage.

**- Planning Region**

Means each of the following Order 1000 transmission planning regions insofar as they are within the Western Interconnection: CAISO, NorthernGrid, and WestConnect.

**- PMax**

The maximum normal capability of the Generating Unit, as measured at the Point of Interconnection or Point of Delivery, as applicable. PMax may not exceed the Interconnection Service Capacity, as documented in the Interconnection Study or Generator Interconnection Agreement.

**- PMin**

Equivalent to Minimum Load.

**- PMS**

Power Management System

**- PNode**

Pricing Node

**- PNP**

Priority Nomination Process

**- PNP Eligible Quantity**

The maximum MW quantity of CRRs an LSE is eligible to nominate in the Priority Nomination Process of the CRR Allocation.

**- POD**

Point(s) of Delivery

**- Point of Change of Ownership**

The point, as set forth in Appendix A to the Large Generator Interconnection Agreement, where the Interconnection Customer's Interconnection Facilities connect to the Participating TO's Interconnection Facilities.

**- Point of Demarcation**

For a Net Scheduled Generating Unit, the point (1) where the electrical conductors from the Net Scheduled Generating Unit contact an electric utility system or the CAISO Controlled Grid; or (2) if dedicated utility distribution facilities are employed, where the dedicated facilities contact the electric utility

system or the CAISO Controlled Grid.

**- Point of Interconnection**

The point, as set forth in Appendix A to the Large Generator Interconnection Agreement or Attachment 3 to the Small Generator Interconnection Agreement, where the Interconnection Facilities connect to the CAISO Controlled Grid. For Generating Facilities connected to the Distribution System, the Point of Interconnection is the point at which the Generating Facility connects to the CAISO Controlled Grid. For an EDAM Resource Facility, the Point of Interconnection is the point at which the EDAM Resource Facility connects to the EDAM Transmission Service Provider's transmission facilities. For an EIM Resource or non-participating resource, the Point of Interconnection is the point at which the EIM Resource or non-participating resource connects to an EIM Transmission Service Provider's transmission facilities.

**- Point(s) of Delivery (POD) or Withdrawal**

Point(s) within the CAISO Balancing Authority Area, or for purposes of scheduling and operating the Day-Ahead Market only, the EDAM Area where Energy and Ancillary Services are made available to a receiving party under this CAISO Tariff, or, for purposes of scheduling and operating the Real-Time Market only, the EIM Area where Energy and Ancillary Services are made available to a receiving party under this CAISO Tariff.

**- Point(s) of Receipt (POR) or Injection**

Point(s) within the CAISO Balancing Authority Area, or for purposes of scheduling and operating the Day-Ahead Market only, the EDAM Area where Energy and Ancillary Services are made available to a delivering party under this CAISO Tariff, or, for purposes of scheduling and operating the Real-Time Market only, the EIM Area where Energy and Ancillary Services are made available by a delivering party under this CAISO Tariff.

**- Point-To-Point CRR**

A CRR Option or CRR Obligation with a single CRR Source to a single CRR Sink.

**- POR**

Point(s) of Receipt

**- Potential DGD**

Potential Distributed Generation Deliverability.

**- Potential Distributed Generation Deliverability**

The capability of the CAISO Controlled Grid, measured in MW and determined through a CAISO Deliverability Assessment, to support the interconnection with Full Capacity Deliverability Status or Partial Capacity Deliverability Status of additional Distributed Generation Facilities.

**- Power**

The electrical work produced by a Generating Unit that is absorbed by the resistive components of Load or other network components, measured in units of watts or standard multiples thereof, e.g., 1,000 Watt = 1 kW; 1,000 kW = 1 MW, etc.

**- Power Flow Model**

A network model used by the CAISO to model the voltages, power injections and power flows on the CAISO Controlled Grid and adjacent Balancing Authority Areas.

**- Power Management System (PMS)**

The CAISO computer control system used to monitor the real-time performance of the various elements of the CAISO Controlled Grid, control Generation, and perform operational power flow studies.

**- Power System Stabilizers (PSS)**

An electronic control system applied on a Generating Unit that helps to damp out dynamic oscillations on a power system. The Power System Stabilizers senses Generator variables, such as voltage, current and shaft speed, processes this information and sends control signals to the Generator voltage regulator.

**- Power Transfer Distribution Factor (PTDF)**

The percentage of a power transfer that flows on a transmission facility as a result of the injection of power at a specific bus and the withdrawal of power at another bus or a Reference Bus.

**- Pre-Construction Activities**

Actions by a Participating TO, other than those required by an Engineering and Procurement Agreement, undertaken prior to Construction Activities in order to prepare for the construction of Participating TO's Interconnection Facilities or Network Upgrades assigned to the Interconnection Customer, including, but not limited to, preliminary engineering, permitting activities, environmental analysis, or other activities specifically needed to obtain governmental approvals for the Participating TO's Interconnection Facilities or Network Upgrades.

**- Precursor Network Upgrades (PNU)**

Network Upgrades required for the Interconnection Customer consisting of (1) Network Upgrades assigned to an Interconnection Customer in an earlier Queue Cluster, Independent Study Process, or Fast Track Process, that has executed its GIA pursuant to Section 14.2.2 of the GIDAP; and (2) Network Upgrades in the approved CAISO Transmission Plan.

**- Preliminary NER/WECC Charge Invoice**

An initial invoice issued by the CAISO that reflects an allocation of NERC/WECC Charges to a Scheduling Coordinator for a NERC/WECC Charge Assessment Year based on (i) the Scheduling Coordinator's NERC/WECC Metered Demand for the NERC/WECC Charge Assessment Year as described in Section 11.20.4, multiplied by (ii) the Preliminary NERC/WECC Charge Rate for the NERC/WECC Charge Assessment Year.

**- Preliminary NERC/WECC Charge Rate**

The preliminary rate to be paid by Scheduling Coordinators for NERC/WECC Charges for a NERC/WECC Charge Assessment Year based on (i) the portions of the proposed budgets of NERC, WECC, and regional advisory bodies that serve the WECC that the WECC notifies the CAISO in writing are allocable to the CAISO for the NERC/WECC Charge Assessment Year or, alternatively, if the WECC does not provide such written notification to the CAISO in accordance with the CAISO-WECC Billing Services Agreement, the portions of the budgets of NERC, WECC, and regional advisory bodies that serve that WECC that the WECC informed the CAISO were allocable to the CAISO for the immediately preceding NERC/WECC Charge Assessment Year divided by (ii) the total of all Scheduling Coordinators' NERC/WECC Metered Demand for the NERC/WECC Charge Assessment Year as described in Section 11.20.4, including any adjustments to the calculation of NERC/WECC Metered Demand, as reported to the WECC pursuant to Section 11.20.4(b), and including any additional adjustments to the calculation of NERC/WECC Metered Demand, based on decisions by the WECC to permit such adjustments, that the WECC provides to the CAISO in a written statement in accordance with the CAISO-WECC Billing Services Agreement.

**- Pre-RA Import Commitment**

Any power purchase agreement, ownership interest, or other commercial arrangement entered into on or

before March 10, 2006, by a Load Serving Entity serving Load in the CAISO Balancing Authority Area for the procurement of Energy or capacity from a resource or resources located outside the CAISO Balancing Authority Area. The Pre-RA Import Commitment shall be deemed to terminate upon the expiration of the initial term of the Pre-RA Import Commitment, notwithstanding any "evergreen" or other renewal provision exercisable at the option of the Load Serving Entity. Notwithstanding the above, a contract for delivery entered under Schedule A or B of 43 USC § 619a is a Pre-RA Import Commitment, the term of which does not expire with the expiration of any contractual arrangements entered into to implement such entitlements.

**- Pre-RA Import Commitment Capability**

The quantity in MW assigned to a particular Intertie into the CAISO Balancing Authority Area based on a Pre-RA Import Commitment.

**- Previously-Released CRRs**

CRRs that were released based on a CRR FNM that did not include a particular IBAA change and that will continue to be in effect, either as active financial instruments or as allocated CRRs eligible for renewal nomination in the Priority Nomination Process, when the particular IBAA change is implemented in the CAISO Markets.

**- Price Correction Derived LMP**

The applicable resource specific settlement LMP calculated pursuant to Section 11.21 for resources impacted by price corrections in the upward direction consistent with Section 35.

**- Price Taker**

A quantity only Energy Bid with no associated price.

**- Pricing Node (PNode)**

A single network Node or subset of network Nodes where a physical injection or withdrawal is modeled and for which a Locational Marginal Price is calculated and used for financial settlements.

**- Primary CAISO Control Center**

The CAISO Control Center.

**- Priority Nomination Process (PNP)**

The step in an annual CRR Allocation in years beyond CRR Year One through which CRR Holders re-nominate (1) Seasonal CRRs they were allocated in the prior year (less any Long Term CRRs awarded in the Allocation of the immediately preceding year), (2) Long Term CRRs that are expiring, and (3) Existing Transmission Contracts and Converted Rights that are expiring.

**- Priority Type**

The Bid component that indicates if applicable the scheduling priority for the Settlement Period for Reliability Must-Run Generation, if applicable.

**- Priority Wheeling Through**

A Wheeling Through Self-Schedule that has obtained a priority under Section 23.

**- Projected Proxy Cost**

A calculation of a resource's Default Start-Up Bids and Default Minimum Load Bids for a prospective period used to determine the maximum Registered Cost for the resource, as set forth in Section 39.6.1.6 for a thirty (30)-day period pursuant to Section 30.4.

**- Project Sponsor**

A Market Participant, group of Market Participants, a Participating TO or a project developer who is not a Market Participant or Participating TO that proposes the construction of a transmission addition or upgrade in accordance with Section 24.

**- Proposal for Installation**

A written proposal submitted by a CAISO Metered Entity to the CAISO describing a proposal for the installation of additional Metering Facilities.

**- Protected Data**

Information provided to parties that have executed a Non-Disclosure Agreement as further defined in Section 6.5.10.

**- Proxy Cost**

The Proxy Start-Up Costs, Proxy Transition Costs, or Proxy Minimum Load Costs of a generating resource for which the operating cost is calculated as an approximation of the actual operating cost pursuant to Section 30.4.5.

**- Proxy Demand Resource (PDR)**

A Load or aggregation of Loads that has the characteristics of a Proxy Demand Resource set forth in Section 4.13.5, satisfies all other requirements applicable to a Proxy Demand Resource set forth in the CAISO Tariff, and is capable of measurably and verifiably providing Demand Response Services pursuant to the Demand Response Provider Agreement, including but not limited to Sections 4.1 and 4.2 of the Demand Response Provider Agreement and excluding Section 4.3 of the Demand Response Provider Agreement.

**- Proxy Minimum Load Cost**

A resource's Minimum Load Costs, calculated pursuant to the methodology specified in Section 30.4.5.

**- Proxy Start-Up Cost**

A resource's Start-Up Costs, calculated pursuant to the methodology specified in Section 30.4.5.

**- Proxy Transition Cost**

A resource's Transition Costs, calculated pursuant to the methodology specified in Section 30.4.5.

**- PSS**

Power System Stabilizers

**- Pseudo-Tie**

A functionality by which the output of a generating unit physically interconnected to the electric grid in a Native Balancing Authority Area is telemetered to and deemed to be produced in an Attaining Balancing Authority Area that provides Balancing Authority services for and exercises Balancing Authority jurisdiction over the Pseudo-Tie generating unit.

**- Pseudo-Tie Participating Generator Agreement**

An agreement between the CAISO and a Participating Generator with a Pseudo-Tie Generating Unit, a pro forma version of which is set forth in Appendix B.16.

**- PTDF**

Power Transfer Distribution Factor

**- PTO**

Participating TO or Participating Transmission Owner

**- PTO Service Territory**

Participating TO Service Territory.

**- Public Utility Regulation Policies Act (PURPA)**

The Public Utility Regulatory Policies Act of 1978, incorporated in relevant part into the Federal Power Act.

**- Pumped-Storage Hydro Unit**

A hydroelectric dam with the capability to produce electricity and the ability to pump water between reservoirs at different elevations to store such water for the production of electricity.

**- Pumping Cost**

The hourly cost of pumping, expressed in $/hour, submitted by a Participating Load.

**- Pumping Level**

Level of MW that the Pumping Load resources would consume as submitted in their Bid.

**- Pumping Load**

A hydro pumping resource that is capable of responding to Dispatch Instructions by ceasing to pump.

**- Pump Ramping Conversion Factor**

A Master File entry submitted by Scheduling Coordinators that allows the Scheduling Coordinator to indicate the ratio of Energy expended to pump water into storage that can be used to produce Energy. A zero percent Pump Ramping Conversion Factor implies that no amount of Energy production capability is produced as a result of pumping water and the CAISO shall not use such unavailable Energy in its CAISO Markets optimization. A hundred percent Pump Ramping Conversion Factor indicates all the Energy expended to pump water is available for Generation and the CAISO shall use only the available portions in its CAISO Markets optimization. The Pump Ramping Conversion Factor submitted in the Master File need not be based on physical characteristics of the resource and is adjustable by the Scheduling Coordinator.

**- Pump Shut-Down Costs**

A Bid Component submitted by Scheduling Coordinators for resources that are registered as a Participating Load that indicates the $/shutdown that the Scheduling Coordinator is willing to be paid to not pump.

**- PURPA**

Public Utility Regulatory Policies Act

**- QF**

Qualifying Facility

**- Qualified Load Following Instruction**

The MSS Load following instruction that is limited by the qualified Load following up or down capacity. The qualified Load following up and down capacity is the Load following capacity that is qualified and limited by whether the resource is derated or is limited by the Regulation Limits if the resource is providing Regulation.

**- Qualified OBAALSE**

An OBAALSE which the CAISO has certified has met all the requirements for eligibility for CRR Allocation in accordance with Section 39.

**- Qualifying Capacity**

The maximum Resource Adequacy Capacity that a Resource Adequacy Resource may be eligible to provide. The criteria and methodology for calculating the Qualifying Capacity of resources may be established by the CPUC or other applicable Local Regulatory Authority and provided to the CAISO. A resource's eligibility to provide Resource Adequacy Capacity may be reduced below its Qualifying Capacity through the CAISO's assessment of Net Qualifying Capacity.

**- Qualifying Facility (QF)**

A qualifying cogeneration facility or qualifying small power production facility, as defined in the Code of Federal Regulations, Title 18, Part 292 (18 C.F.R. § 292).

**- Queue Cluster**

A set of Interconnection Requests processed collectively in an Interconnection Study Cycle other than pursuant to the Fast Track Process or the Independent Study Process.

**- Queue Position**

The order of a valid Interconnection Request, relative to all other pending valid Interconnection Requests, established pursuant to Section 6.1.3. of the RIS.

**- [Not Used]**

**- [Not Used]**

**- RA Reliability Margin**

The CAISO system forecast monthly peak Demand, plus a reserve margin of 15 percent of the forecast monthly peak Demand, based on the forecast prepared by the California Energy Commission.

**- RA Substitute Capacity**

Capacity that the CAISO permits under the CAISO Tariff to be substituted for a Resource Adequacy Resource that is on Outage.

**- RAAIM**

Resource Adequacy Availability Incentive Mechanism

**- RAC**

Regional Access Charge

**- Ramping**

Changing the loading level of a Generating Unit in a constant manner over a fixed time (e.g., Ramping up or Ramping down). Such changes may be directed by a computer or manual control.

**- Ramping Energy Deviation**

The portion of RTD Instructed Imbalance Energy produced or consumed due to deviation from the Standard Ramp because of ramp constraints, Start-Up, or Shut-Down. Ramping Energy Deviation may overlap with Standard Ramping Energy, and both Standard Ramping Energy and Ramping Energy Deviation may overlap with Day-Ahead Scheduled Energy, but not with any other Real-Time imbalance energy types. Ramping Energy Deviation may be composed of two parts: a) the part that overlaps with Standard Ramping Energy whenever the DOP crosses the Standard Ramping Energy region; and b) the part that does not overlap with Standard Ramping Energy. The latter part of Ramping Energy Deviation consists only of extra-marginal FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy contained within the hourly schedule change band and not attributed to Exceptional Dispatch or derates. Ramping Energy Deviation does not apply to Non-Dynamic System Resources (including Resource-Specific System Resources). Ramping Energy Deviation is settled as described in Section 11.5.1.

**- Ramp Rate**

The Bid component that indicates the Operational Ramp Rate, Regulation Ramp Rate, and Operating Reserve Ramp Rate for a Generating Unit, and the Load drop rate and Load pick-up rate for Participating

Loads, Reliability Demand Response Resources, and Proxy Demand Resources, for which the Scheduling Coordinator is submitting Energy Bids or Ancillary Services Bids.

**- RAS**

Remedial Action Schemes

**- Rated Governmental Agency**

A municipal utility or state or federal agency that holds an issuer, counterparty, or underlying credit rating by a Nationally Recognized Statistical Rating Organization.

**- Rated Public/Private Corporation**

An investor-owned or privately held entity that holds an issuer, counterparty, or underlying credit rating by a Nationally Recognized Statistical Rating Organization.

**- RC Customer**

An entity for which the CAISO acts as the Reliability Coordinator pursuant to Section 19.

**- RC Funding Requirement**

The revenue required to offset the costs that the CAISO will incur to provide RC Services.

**- RC Operating Procedures**

Operating Procedures adopted by the CAISO to facilitate compliance with NERC Reliability Standards applicable to the Reliability Coordinator function.

**- RC Services**

The Reliability Coordinator services provided by the CAISO for an RC Customer, pursuant to Section 19 and the Reliability Coordinator Services Agreement.

**- RC Services Date**

The date on which the CAISO assumes the role of Reliability Coordinator for an RC Customer, pursuant to Section 19.2.

**- RCD Availability Quantity**

A RCD Award (MW) excluding any RCD Capacity that is actually unavailable due to a unit derate or Outage.

**- RCU Availability Quantity**

A RCU Award (MW) excluding any RCU Capacity that is actually unavailable due to a unit derate or

Outage.

**- RCU Default Availability Bid**

The price to which an RUC Availability Bid for RCU is mitigated, as specified in Section 39.7.4.

**- RCU Negotiated Availability Bid**

A method of calculating an RCU Default Availability Bid based on a negotiation with the CAISO pursuant to Section 39.7.4.1.

**- RDRR**

Reliability Demand Response Resource

**- RDRR Availability Limit**

A limit applicable to a Reliability Demand Response Resource that is reached when the Reliability Demand Response Resource has been dispatched in Real-Time for at least a total of fifteen (15) Demand Response Events or a total of forty-eight (48) hours during a Reliability Demand Response Services Term.

**- Real-Time**

The period of time during the Operating Hour. Any time period during the twenty-four Operating Hours of any given day.

**- Real-Time Congestion Offset**

The amount calculated pursuant to Section 11.5.4.1.2 for purposes of determining the non-zero offset amount allocation.

**- Real-Time Contingency Dispatch (RTCD)**

The mode of the Real-Time Dispatch that will be invoked when a transmission or generation Contingency occurs and will include all Contingency Only Operating Reserves in the optimization.

**- Real-Time Dispatch**

The SCED and SCUC software used by the CAISO to determine which resources to Dispatch and to calculate LMPs.

**- Real-Time Disturbance Dispatch (RTDD)**

A mode of Real-Time Contingency Dispatch employed by the CAISO Operator pursuant to Section 34.3.2.2.

**- Real-Time Economic Dispatch (RTED)**

The mode of the Real-Time Dispatch that will optimally dispatch resources based on their Energy Bids, excluding Contingency Only Operating Reserves except when needed to avoid an imminent System Emergency.

**- Real-Time Imbalance Energy Offset**

The amount calculated pursuant to Section 11.5.4.1 for purposes of determining the non-zero offset amount allocation.

**- Real-Time Interchange Export Schedule**

A final agreed-upon schedule of Energy to be transferred from the CAISO Balancing Authority Area to another Balancing Authority Area based on agreed-upon size (megawatts), start and end time, beginning and ending ramp times and rate, and type required for delivery and receipt of power and Energy between the source and sink Balancing Authority Areas involved in the transaction.

**- Real-Time Interchange Import Schedule**

A final agreed-upon schedule of Energy to be transferred to the CAISO Balancing Authority Area from another Balancing Authority Area based on agreed-upon size (megawatts), start and end time, beginning and ending ramp times and rate, and type required for delivery and receipt of power and Energy between the source and sink Balancing Authority Areas involved in the transaction.

**- Real-Time Manual Dispatch (RTMD)**

The mode of the Real-Time Dispatch that will be invoked as a fall-back mechanism only when the RTED or RTCD fails to provide a feasible Dispatch.

**- Real-Time Marginal GHG Cost Offset**

The amount calculated pursuant to Section 11.5.4.1.4 for purposes of determining the non-zero offset amount allocation.

**- Real-Time Marginal Cost of Losses Offset**

A component of the neutrality adjustments as provided in Section 11.5.4.2 to account for the distribution of excess Real-Time Marginal Cost of Losses and the non-assessment of Marginal Cost of Losses charges to Measured Demand for TOR Self-Schedules eligible for the RTM Marginal Cost of Losses

Credit for Eligible TOR Self-Schedules as provided in Section 11.5.7.2.

**- Real-Time Market (RTM)**

The spot market conducted by the CAISO using SCUC and SCED in the Real-Time which includes the HASP, FMM, STUC and the RTD for the purpose of Unit Commitment, Ancillary Service procurement, Congestion Management and Energy procurement based on Supply Bids and CAISO Forecast of CAISO Demand.

**- Real-Time Market Pumping Bid Cost**

For the applicable Settlement Interval, the Pumping Cost submitted to the CAISO in the RTM divided by the number of Settlement Intervals in a Trading Hour, as further provided in Section 11.8.4.1.4.

**- Real-Time Performance Metric**

A factor calculated for the purposes of scaling a resource's Real-Time Bid Cost Recovery amounts calculated as the minimum of: (1) the number one (1); or (2) the absolute value of the ratio of the resource's (a) Metered Energy, less the Day-Ahead Scheduled Energy, and less the Regulation Energy, and (b) the total Expected Energy less the Day-Ahead Scheduled Energy. If the CAISO issues a Real-Time Dispatch to the resource that is incremental to its Day-Ahead Schedule and the resource deviates downward from its Day-Ahead Schedule, the Real-Time Performance Metric will be set to zero (0). If the CAISO issues a Real-Time Dispatch to the resource that is decremental to its Day-Ahead Schedule and the resource deviates to a level above its Day-Ahead Schedule, the Real-Time Performance Metric will be set to zero (0). If the resource's total Expected Energy is equal to the Day-Ahead Scheduled Energy and if the Metered Energy minus Regulation Energy is equal to the Day-Ahead Scheduled Energy, then the Real-Time Performance Metric is set to one (1). If the resource's total Expected Energy is equal to the Day-Ahead Scheduled Energy and if the Metered Energy minus the Regulation Energy is not equal to the Day-Ahead Scheduled Energy, then the Real-Time Performance Metric is set to zero (0). The Real-Time Performance Metric is applied as specified in the Section 11.8.4.4 and is not applied during any Settlement Interval when a resource is Starting Up, Shutting Down, in an MSG Transition Period, crossing over a Forbidden Operating Region, or a Dispatch Operating Point correction is performed due to a verbal Dispatch Instruction issued by the CAISO Operator, as long as the resource is in fact in the operational mode instructed by the CAISO.

**- Real-Time Unit Commitment (RTUC)**

An application of the RTM that runs every 15 minutes and commits Short Start Units using the SCUC to adjust from Day-Ahead Schedules, EIM Base Schedules, and HASP Advisory Schedules.

**- Reasonable Efforts**

With respect to an action required to be attempted or taken by a party under the GIDAP, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a party would use to protect its own interests.

**- Reasonableness Threshold**

The cost-based criteria the CAISO uses to evaluate Reference Level Change Requests through an automated process, which represents a reasonable cost-based Energy Bid, Start-Up Bid, and Minimum Load Bid, calibrated to a resource's costs as described in Section 30.11.

**- Recalculation Settlement Statement**

The recalculation of a Settlement Statement in accordance with the provisions of the CAISO Tariff, which includes the Recalculation Settlement Statement T+70B, Recalculation Settlement Statement T+11M, Recalculation Settlement Statement T+21M, Recalculation Settlement Statement T+24M, any Recalculation Settlement Statement issued pursuant to Section 11.29.7.4.1, or any other Recalculation Settlement Statement authorized by the CAISO Governing Board

**- Recalculation Settlement Statement T+12B**

The reissue of an Initial Settlement Statement T+3B by the CAISO on the twelfth (12th) Business Day from the relevant Trading Day.

**- Recalculation Settlement Statement T+55B**

The reissue of a Recalculation Settlement Statement T+12B by the CAISO on the fifty-fifth (55th) Business Day from the relevant Trading Day.

**- Recalculation Settlement Statement T+70B**

The reissue of an Initial Settlement Statement T+9B by the CAISO scheduled on the seventieth (70th) Business Day from the relevant Trading Day.

**- Recalculation Settlement Statement T+9M**

The reissue of a Recalculation Settlement Statement T+55B by the CAISO nine (9) calendar months after the Trading Day (T+9M) on the one hundred and ninety-fourth (194th) Business Day from the relevant Trading Day.

**- Recalculation Settlement Statement T+11M**

The reissue of Recalculation Settlement Statement T+70B by the CAISO approximately eleven (11) calendar months after the Trading Day (T+11M) scheduled on the two hundred thirty-fourth (234th) Business Day from the relevant Trading Day.

**- Recalculation Settlement Statement T+18M**

The reissue of a Recalculation Settlement Statement T+55B, a Recalculation Settlement Statement T+9M, or an Unscheduled Reissue Recalculation Settlement Statement by the CAISO eighteen (18) calendar months after the Trading Day (T+18M) on the three hundred and eighty third (383rd) Business Day from the relevant Trading Day (T+18M).

**- Recalculation Settlement Statement T+21M**

The reissue of Recalculation Settlement Statement T+70B, Recalculation Settlement Statement T+11M, or an Unscheduled Reissue Recalculation Settlement Statement by the CAISO approximately twenty-one (21) calendar months after the Trading Day (T+21M) scheduled on the four hundred forty-sixth (446th) Business Day from the relevant Trading Day.

**- Recalculation Settlement Statement T+24M**

The reissue of a Recalculation Settlement Statement T+70B, Recalculation Settlement Statement T+11M, or Recalculation Settlement Statement T+21M by the CAISO approximately twenty-four (24) calendar months after the Trading Day (T+24M) scheduled on the five hundred-twelfth (512th) Business Day from the relevant Trading Day (T+24M).

**- Recalculation Settlement Statement T+33M**

The reissue of a Recalculation Settlement Statement T+55B, a Recalculation Settlement Statement T+9M, a Recalculation Settlement Statement T+18M, or an Unscheduled Reissue Recalculation Settlement Statement by the CAISO thirty-three (33) calendar months after Trading Day (T+33M) on the six hundred and ninety-third (693) Business Day from the relevant Trading Day (T+33M).

**- Recalculation Settlement Statement T+35M**

The reissue of a Recalculation Settlement Statement T+55B, a Recalculation Settlement Statement T+9M, a Recalculation Settlement Statement T+18M, or an Unscheduled Reissue Recalculation Settlement Statement by the CAISO thirty-five (35) calendar months after Trading Day (T+35M) on the seven hundred and thirty seventh (737th) Business Day from the relevant Trading Day (T+35M).

**- Recalculation Settlement Statement T+36M**

The reissue of a Recalculation Settlement Statement T+55B, a Recalculation Settlement Statement T+9M, a Recalculation Settlement Statement T+18M or a Recalculation Settlement Statement T+35M by the CAISO thirty-six (36) calendar months after Trading Day (T+36M) on the seven hundred and fifty-ninth (759th) Business Day from the relevant Trading Day (T+36M).

**- Redispatch**

The readjustment of scheduled Generation or Demand side management measures, to relieve Congestion or manage Energy imbalances.

**- Reference Bus**

The Location(s) in the EDAM Area or the EIM Area relative to which mathematical quantities relating to a powerflow solution will be calculated.

**- Reference Levels**

A Default Start-Up Bid, Default Minimum Load Bid, and Default Energy Bid.

**- Reference Level Change Request**

A change requested by a Scheduling Coordinator to a resource's Reference Levels pursuant to Section 30.11.

**- Regional Access Charge (RAC)**

The Access Charge applicable under Section 26.1 to recover the Regional Transmission Revenue Requirements of each Participating TO.

**- Regional Entity**

An entity to whom NERC has delegated certain of its electric reliability organization functions for a particular geographic region. WECC is the applicable Regional Entity for the region encompassing the CAISO.

**- Regional Transmission Facility**

A transmission facility that is owned by a Participating TO or to which a Participating TO has an Entitlement that is represented by a Converted Right, that is under the CAISO Operational Control, and that is not (1) a Local Transmission Facility or a Location Constrained Resource Interconnection Facility, and supporting facilities, or (2) a Merchant Transmission Facility.

**- Regional Transmission Revenue Requirement (RTRR)**

The portion of a Participating TO's Transmission Revenue Requirement associated with and allocable to: 1) the Participating TO's Regional Transmission Facilities and Converted Rights associated with Regional Transmission Facilities, 2) the CAISO's assigned share of Interregional Transmission Project costs, and 3) Location Constrained Resource Interconnection Facilities that are under the CAISO Operational Control.

**- Regional Utility Specific Rate**

A Participating TO's Regional Transmission Revenue Requirement divided by such Participating TO's forecasted Gross Load.

**- Regional Wheeling Access Charge**

The Wheeling Access Charge associated with the recovery of a Participating TO's Regional Transmission Revenue Requirements in accordance with Section 26.1.

**- Registered Cost**

The cost basis of a generating resource for which the operating cost is determined from registered values pursuant to Section 30.4.7.

**- Registered Data**

Those items of technical data and operating characteristics relating to Generation, transmission or distribution facilities which are identified to the owners of such facilities as being information, supplied in accordance with the CAISO Tariff, to assist the CAISO to maintain reliability of the CAISO Controlled Grid and to carry out its functions.

**- Registered Entity**

An entity registered with NERC under the NERC Functional Model and the NERC Rules of Procedure as responsible for compliance with a designated set of requirements established by the NERC Reliability Standards.

**- Regulating Range**

The operating level range within which a resource may provide Regulation.

**- Regulation**

The service provided either by resources certified by the CAISO as equipped and capable of responding to the CAISO's direct digital control signals, or by System Resources that have been certified by the CAISO as capable of delivering such service to the CAISO Balancing Authority Area, in an upward and downward direction to match, on a Real-Time basis, Demand and resources, consistent with established NERC and WECC reliability standards and any requirements of the NRC. Regulation is used to control the operating level of a resource within a prescribed area in response to a change in system frequency, tie line loading, or the relation of these to each other so as to maintain the target system frequency and/or the established Interchange with other Balancing Authority Areas within the predetermined Regulation Limits. Regulation includes both an increase in Energy production by a resource or decrease in Energy consumption by a resource (Regulation Up) and a decrease in Energy production by a resource or increase in Energy consumption by a resource (Regulation Down). Regulation Up and Regulation Down are distinct capacity products, with separately stated requirements and ASMPs in each Settlement Period.

**- Regulation Down or Regulation Down Reserve**

Regulation reserve provided by a resource under CAISO EMS control that can decrease its Energy production or increase its Energy consumption in response to a direct electronic signal from the CAISO to maintain standard frequency in accordance with established Reliability Criteria.

**- Regulation Down Reserve Cost**

The revenues paid to the suppliers of the total awarded Regulation Down Reserve capacity in the Day-Ahead, HASP, and Real-Time Markets for the Settlement Period, minus the payments rescinded in the Settlement Period due to the unavailability of the Regulation Down under any of the provisions of Section 8.10.8.

**- Regulation Energy Management**

A market feature for resources located within the CAISO Balancing Authority Area that require Energy from the Real-Time Market to offer their full capacity as Regulation, as described in Section 8.4.1.2.

**- Regulation Limits**

The MW limits, up and down, set by a resource's operation under CAISO EMS control.

**- Regulation Ramp Rate**

A single number included in Ancillary Service Bids and Submissions to Self-Provide Ancillary Services for Regulation that represents the Ramp Rate of a resource used in the procurement of Regulation capacity.

**- Regulation Up or Regulation Up Reserve**

Regulation provided by a resource under CAISO EMS control that can increase its Energy production or decrease its Energy consumption in response to a direct electronic signal from the CAISO to maintain standard frequency in accordance with established Reliability Criteria.

**- Regulation Up Reserve Obligation**

The obligation of a Scheduling Coordinator for its share of costs incurred by the CAISO in procuring Regulation Up Reserves.

**- Regulatory Must-Run Generation**

Hydro Spill Generation and Generation which is required to run by applicable federal or California laws, regulations, or other governing jurisdictional authority. Such requirements include but are not limited to hydrological flow requirements, environmental requirements, such as minimum fish releases, fish pulse releases and water quality requirements, irrigation and water supply requirements, or the requirements of solid waste Generation, or other Generation contracts specified or designated by the jurisdictional regulatory authority as it existed on December 20, 1995, or as revised by federal or California law or Local Regulatory Authority.

**- Regulatory Must-Take Generation**

Generation from the following resources that the relevant Scheduling Coordinator schedules directly with the CAISO as Regulatory Must-Take Generation:

(1) Generation from Generating Units subject to

(a) an Existing QF Contract or an Amended QF Contract, or

(b) a QF power purchase agreement for a QF 20 MW or smaller pursuant to a mandatory purchase obligation as defined by federal law;

(2) Generation delivered from a CHP Resource needed to serve its host thermal

requirements up to RMTMax in any hour; and

(3) Generation from nuclear units.

**- Relevant Planning Regions**

Means, with respect to an Interregional Transmission Project, the Planning Regions that would directly interconnect electrically with such Interregional Transmission Project, unless and until such time as a Relevant Planning Region determines that such Interregional Transmission Project will not meet any of its regional transmission needs in accordance with Section 24.18.3.2, at which time it shall no longer be considered a Relevant Planning Region.

**- Reliability Capacity**

RCU and RCD

**- Reliability Capacity Down (RCD)**

Decremental capacity procured to meet any negative difference between Net Load Forecast and Non-VER Physical Supply with a market award.

**- Reliability Capacity Up (RCU)**

Incremental capacity procured to meet any positive difference between the Net Load Forecast and Non-VER Physical Supply with a market award.

**- Reliability Coordinator**

The entity designated by WECC as responsible for reliability coordination in Real-Time for the area defined by WECC.

**- Reliability Coordinator Services Agreement (RCSA)**

An agreement between an RC Customer and the CAISO, a pro forma version of which is set forth in Appendix B.

**- Reliability Coordinator Services Charge (RC Services Charge)**

The charges that the CAISO assesses to RC Customers for providing Reliability Coordinator Services pursuant to Sections 19.7 or 11.20.9, as calculated in accordance with Appendix F, Schedule 7.

**- Reliability Criteria**

Pre-established criteria that are to be followed in order to maintain desired performance of the CAISO Controlled Grid under Contingency or steady state conditions.

**- Reliability Demand Response Resource (RDRR)**

A Load or aggregation of Loads that has the characteristics of a Reliability Demand Response Resource set forth in Section 4.13.5, satisfies all other requirements applicable to a Reliability Demand Response Resource set forth in the CAISO Tariff, and is capable of measurably and verifiably providing Demand Response Services pursuant to the Demand Response Provider Agreement, including but not limited to Sections 4.1 and 4.3 of the Demand Response Provider Agreement and excluding Section 4.2 of the Demand Response Provider Agreement.

**- Reliability Demand Response Services Term**

A six (6) month time period during which or within which a Reliability Demand Response Resource is available to provide Demand Response Services as specified in the Business Practice Manual.

**- Reliability Must-Run Contract (RMR Contract)**

A Must-Run Service Agreement between the owner of a Reliability Must-Run Resource and the CAISO.

**- Reliability Must-Run Generation (RMR Generation)**

Generation that the CAISO determines is required to be on line to meet Applicable Reliability Criteria requirements. This includes i) Generation constrained on line to meet NERC and WECC reliability criteria for interconnected systems operation; ii) Generation needed to meet Load demand in constrained areas; and iii) Generation needed to be operated to provide voltage or security support of the CAISO or a local area.

**- Reliability Must-Run Resource (RMR Resource)**

A Generating Unit or other resource under an RMR Contract entered into after September 1, 2018.

**- Reliability Network Upgrade (RNU)**

The transmission facilities at or beyond the Point of Interconnection identified in the Interconnection Studies as necessary to interconnect one or more Generating Facility(ies) safely and reliably to the CAISO Controlled Grid, which would not have been necessary but for the interconnection of one or more Generating Facility(ies), including Network Upgrades necessary to remedy short circuit or stability problems, or thermal overloads. Reliability Network Upgrades shall only be deemed necessary for system operating limits, occurring under any system condition, which cannot be adequately mitigated through Congestion Management or Operating Procedures based on the characteristics of the

Generating Facilities included in the Interconnection Studies, limitations on market models, systems, or information, or other factors specifically identified in the Interconnection Studies. Reliability Network Upgrades also include, consistent with WECC practice, the facilities necessary to mitigate any adverse impact the Generating Facility's interconnection may have on a path's WECC rating. Reliability Network Upgrades include Interconnection Reliability Network Upgrades and General Reliability Network Upgrades.

**- Reliability Services Costs**

The costs associated with services provided by the CAISO: 1) that are deemed by the CAISO as necessary to maintain reliable electric service in the CAISO Balancing Authority Area; and 2) whose costs are billed by the CAISO to the Participating TO pursuant to the CAISO Tariff. Reliability Services Costs include costs charged by the CAISO to a Participating TO associated with service provided under a Reliability Must-Run Contract, or a Black Start Agreement, as well as Exceptional Dispatches and Minimum Load Costs associated with units committed for local reliability requirements.

**- Reliability Standard**

A requirement approved by FERC under Section 215 of the Federal Power Act to provide for reliable operation of the bulk power system. The term includes requirements for the operation of existing bulk power system facilities, including cyber security protection, and the design of planned additions or modifications to such facilities to the extent necessary for reliable operation of the bulk power system; but the term does not include any requirement to enlarge such facilities or to construct new transmission capacity or generation capacity.

**- Remaining Import Capability**

The quantity in MW of Total Import Capability assigned to a Load Serving Entity up to its Load Share Quantity after the assignment of Existing Contract Import Capability and Pre-RA Import Commitment. Capability.

**- Remedial Action Schemes (RAS)**

Reliability Network Upgrades consisting of protective systems that typically utilize a combination of conventional protective relays, computer-based processors, and telecommunications to accomplish rapid, automated response (including Outages) to unplanned power system events. Also, details of RAS logic

and any special requirements for arming of RAS schemes, or changes in RAS programming, that may be required. Remedial Action Schemes are also referred to as special protection systems.

**- Remote Self-Supply**

Positive Net Output from generating resources in the Station Power Portfolio that is deemed to have self-supplied Station Power Load of other Generating Units in the Station Power Portfolio during the Netting Period, where such self-supply requires use of the CAISO Controlled Grid.

**- Request Window**

The period of time as set forth in the Business Practice Manual during which transmission additions or upgrades, requests for Economic Planning Studies, and other transmission related information is submitted to the CAISO in accordance with Section 24.4.1.

**- Reserve Margin**

The percentage of a Load Serving Entity's peak Demand Forecast for which the Scheduling Coordinator for that Load Serving Entity must demonstrate procurement of Resource Adequacy Capacity, in addition to procurement of Resource Adequacy Capacity in the amount of that peak Demand Forecast.

**- Reserve Sharing LSE**

A Load Serving Entity whose Scheduling Coordinator has informed the CAISO in accordance with Section 40.1 of its election to be a Reserve Sharing LSE.

**- Residual Imbalance Energy**

Extra-marginal RTD Instructed Imbalance Energy produced or consumed at the start or end of a Trading Hour outside the hourly schedule-change band and not attributed to Exceptional Dispatch. Residual Imbalance Energy is due to a Dispatch Instruction in the previous Trading Hour or a Dispatch Instruction in the next Trading Hour. Residual Imbalance Energy may overlap only with Day-Ahead Scheduled Energy. Residual Imbalance Energy does not apply to Non-Dynamic System Resources (including Resource-Specific System Resources). Residual Imbalance Energy is settled as described in Section 11.5.5 and it is not included in BCR as described in Section 11.8.4.

**- Residual Unit Commitment (RUC)**

The process conducted by the CAISO in the Day-Ahead Market after the IFM has been executed to address mismatches between the CAISO Forecast of BAA Demand and the physical capacity committed

in the IFM.

**- Resource Adequacy Capacity or RA Capacity**

The supply capacity of a Resource Adequacy Resource listed on a Resource Adequacy Plan and a Supply Plan. Upon receiving a designation as CPM Capacity, that designated capacity becomes RA Capacity for the duration of its designation as CPM Capacity.

**- Resource Adequacy Compliance Year**

A calendar year from January 1 through December 31.

**- Resource Adequacy Plan**

A submission by a Scheduling Coordinator for a Load Serving Entity in the form required by the Business Practice Manual to satisfy the requirements of Section 40.

**- Resource Adequacy Resource**

A resource that is designated in a Supply Plan to provide Resource Adequacy Capacity. The criteria for determining the types of resources that are eligible to provide Qualifying Capacity may be established by the CPUC or other applicable Local Regulatory Authority and provided to the CAISO.

**- Resource Control Agreement**

An agreement that gives an entity bidding, scheduling, and/or operational control over a physical resource owned by or under contract to another entity, or otherwise directs the manner in which such a resource participates in the CAISO markets. A Resource Control Agreement includes but is not limited to any agreement under which an entity controls a resource that uses a Scheduling Coordinator ID Code assigned to a Scheduling Coordinator that is not an Affiliate of the controlling entity.

**- Resource Flexible RA Capacity Plan**

A submission by a Scheduling Coordinator for a resource in the form required by the Business Practice Manual to satisfy the requirements of Section 40.10.

**- Resource ID**

Identification characters assigned by the CAISO to Generating Units, Loads, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources, System Units, System Resources, and Physical Scheduling Plants.

**- Resource Interconnection Standards (RIS)**

Appendix KK to the CAISO Tariff.

**- Resource Location**

The Resource ID for a Generating Unit, Participating Load, Proxy Demand Resource, Reliability Demand Response Resource, or System Resource.

**- Resource-Specific ASMP**

The Ancillary Services Marginal Price as determined pursuant to Section 11.10.

**- Resource-Specific System Resource**

A Dynamic or Non-Dynamic Resource-Specific System Resource.

**- Resource-Specific Tier 1 UIE Settlement Interval Price**

The price used to settle Tier 1 UIE as calculated pursuant to Section 11.5.2.1.

**- Responsible Participating Transmission Owner**

The party providing transmission service under an Existing Contract listed in Appendix A of a Responsible Participating Transmission Owner Agreement and that is the Scheduling Coordinator for each Existing Right holder listed in Appendix A of that RPTOA, unless that Scheduling Coordinator responsibility is transferred pursuant to the provisions of the RPTOA.

**- Responsible Participating Transmission Owner Agreement**

An agreement between the CAISO and a Responsible Participating Transmission Owner, a pro forma version of which has been accepted by FERC as a CAISO rate schedule in 88 FERC ¶ 61,077.

**- Results Meeting**

The meeting among the CAISO, the applicable Participating TO(s), the Interconnection Customer, and, if applicable, other Affected System Operators to discuss the results of the Phase I Interconnection Study as set forth in GIP Section 6 set forth in Appendix Y.

**- Revenue Meter Data Acquisition and Processing System**

A collective name for the set of CAISO systems used to collect, validate, edit and report on Revenue Quality Meter Data.

**- Revenue Quality Meter Data**

Meter data meeting the standards and requirements established and maintained by the CAISO.

**- Revenue Requirement**

The revenue level required by a utility to cover expenses made on an investment, while earning a specified rate of return on the investment.

**- Revised Default Commitment Cost Bids**

Default Commitment Cost Bids produced as part of an accepted automated or manual Reference Level Change Request, which are calculated without including the Commitment Cost Multiplier.

**- Revised Default Energy Bid**

The Default Energy Bid produced as part of an accepted automated or manual Reference Level Change Request, which are calculated without including the Default Energy Bid Multiplier.

**- RMDAPS**

Revenue Meter Data Acquisition and Processing System

**- RMR**

Reliability Must-Run

**- RMR Capacity**

The PMax value reflected in Schedule A of an RMR Contract and maintained in the CAISO Master File.

**- RMR Contract**

Reliability Must-Run Contract

**- RMR Dispatch**

The quantity of Energy, Imbalance Reserves, Reliability Capacity, or Ancillary Services that is mandated by the CAISO to be delivered in a given market for a resource by a Legacy RMR Unit under a Legacy RMR Contract or by an RMR Resource under an RMR Contract.

**- RMR Dispatch Notice**

Dispatch of an RMR Resource or a Legacy RMR Unit under the applicable RMR Contract or Legacy RMR Contract.

**- RMR Generation**

Reliability Must-Run Generation

**- RMR Proxy Bid**

For Condition 1 Legacy RMR Units, for Energy, an amount calculated based on the hourly variable costs

as defined in Schedule C of the applicable Legacy RMR Contract in the form of a monotonically increasing function consistent with the bidding rules in Section 30. For Condition 2 Legacy RMR Units, for Energy, the Energy Bid defined in Schedule M of the Legacy RMR Contract. For Condition 1 and 2 Legacy RMR Units, for Start-Up costs, the amount set forth in Schedule D of the applicable Legacy RMR Contract; and for Minimum Load costs, an amount calculated based on unit specific performance parameters as set for the applicable RMR Contract and the gas price calculated in accordance with Schedule C of the applicable Legacy RMR Contract.

**- RMR Resource**

A Generating Unit or other resource under an RMR Contract entered into after September 1, 2018.

**- RMTMax**

For a Generating Unit that provides Regulatory Must-Take Generation from a CHP Resource, the minimum operating level at which the Generating Unit can safely and reliably meet host requirements as established under section 4.6.10, including the production of electricity from heat produced as a consequence of the industrial host's operations.

**- RNU**

Reliability Network Upgrades.

**- Roles and Responsibilities Agreement**

The Agreement for the Allocation of Responsibilities with Regard to Generator Interconnection Procedures and Interconnection Study Agreements, a pro forma version of which is attached to GIP Appendix Y and GIDAP Appendix DD.

**- RPTOA**

Responsible Participating Transmission Owner Agreement

**- RTCD**

Real-Time Contingency Dispatch

**- RTD**

Real-Time Dispatch

**- RTDD**

Real-Time Disturbance Dispatch

**- RTD Derate Energy**

Extra-marginal RTD IIE, exclusive of FMM IIE, Standard Ramping Energy, Ramping Energy Deviation, Residual Imbalance Energy, MSS Load Following Energy, and RTD Minimum Load Energy consumed due to PMax derates. RTD Derate Energy is consumed below the lower of the FMM Schedule or the Dispatch Operating Point and above the higher of the derated PMax or the Dispatch Operating Point. RTD Derate Energy does not overlap with FMM IIE, Standard Ramping Energy, Ramping Energy Deviation, Residual Imbalance Energy, RTD Minimum Load Energy, RTD Exceptional Dispatch Energy, or RTD Optimal Energy, but it may overlap with Day-Ahead Scheduled Energy and MSS Load Following Energy. RTD Derate Energy is settled as described in Section 11.5.1, and it is not included in BCR as described in Section 11.8.4. RTD Derate Energy also includes the Residual Imbalance Energy incurred due to the ramping up towards or ramping down from a Minimum Load rerated pursuant to Section 9.3.3 as specified in Section 11.5.5.

**- RTED**

Real-Time Economic Dispatch

**- RTD Exceptional Dispatch Energy**

Extra-marginal RTD IIE, exclusive of FMM IIE, Standard Ramping Energy, Ramping Energy Deviation, Residual Imbalance Energy, MSS Load Following Energy, RTD Minimum Load Energy, and RTD Derate Energy, produced or consumed due to RTD Exceptional Dispatch Instructions that are binding in the relevant Dispatch Interval. Without MSS Load following, RTD Exceptional Dispatch Energy is produced above the LMP index and below the lower of the Dispatch Operating Point or the RTD Exceptional Dispatch Instruction, or consumed below the LMP index and above the higher of the Dispatch Operating Point or the RTD Exceptional Dispatch Instruction. The LMP index is the capacity in the relevant Energy Bid that corresponds to a Bid price equal to the relevant LMP. RTD Exceptional Dispatch Energy does not overlap with FMM IIE, Standard Ramping Energy, Ramping Energy Deviation, Residual Imbalance Energy, RTD Minimum Load Energy, RTD Derate Energy, or RTD Optimal Energy, but it may overlap with Day-Ahead Scheduled Energy and MSS Load Following Energy. RTD Exceptional Dispatch Energy is settled as described in Section 11.5.6, and it is not included in BCR as described in Section 11.8.4.

**- RTD IIE Settlement Amount**

The payment due a Scheduling Coordinator for positive RTD Instructed Imbalance Energy or the charge assessed on a Scheduling Coordinator for negative RTD Instructed Imbalance Energy, as calculated pursuant to Section 11.5.1.2.

**- RTD Imbalance Energy**

The deviation of Supply or Demand from FMM Schedule, positive or negative, as measured by metered Generation, or Real-Time Interchange Schedules. RTD Imbalance Energy is composed of RTD Instructed Imbalance Energy and Uninstructed Imbalance Energy, or in the case of metered Load from the Day-Ahead Schedule, as applicable, as Uninstructed Imbalance Energy.

**- RTD Instructed Imbalance Energy or RTD IIE**

The portion of accounted for energy resulting from difference between Dispatch Instructions and the Day-Ahead Schedules and EIM Base Schedules that have not already been accounted for as FMM Instructed Imbalance Energy determined pursuant to Section 11.5.1.2.

**- RTD LAP Price**

The marginal price for a particular LAP calculated pursuant to Section 27.2.2.2.

**- RTD Minimum Load Energy**

RTD IIE, exclusive of Standard Ramping Energy, Ramping Energy Deviation, and Residual Imbalance Energy, produced due to the Minimum Load of a Generating Unit that is committed in the RUC or the RTM and does not have a Day-Ahead Schedule or a Constrained Output Generator (COG) that is committed in the IFM with a Day-Ahead Schedule below the Minimum Load, as defined in the Master File, or if applicable, as modified pursuant to Section 9.3.3. If the resource is committed in RTM for Load following by an MSS Operator, the RTD Minimum Load Energy is accounted as MSS Load Following Energy instead. RTD Minimum Load Energy is RTD IIE above the Day-Ahead Schedule (or zero if there is no Day-Ahead Schedule of Energy) and below the Minimum Load, as defined in the Master File, or if applicable, as modified pursuant to Section 9.3.3. RTD Minimum Load Energy does not overlap with any other Expected Energy type. RTD Minimum Load Energy is settled as described in Section 11.5.1, and it is included in BCR as described in Section 11.8.4.1.2. RTD IIE that is consumed when a resource that is scheduled in the DAM is shut down in the RTM is accounted as RTD Optimal Energy and not as RTD Minimum Load Energy.

**- RTD MSS Price**

1) The RTD LAP price for the MSS when the MSS internal metered Demand exceeds the MSS internal measured Generation; or 2) the weighted average of the RTD LMPs for all applicable PNodes within the relevant MSS when MSS internal measured Generation exceeds MSS internal Measured Demand where weighting factors for computing the weighted average are based on the measured Energy of all Generation at the corresponding PNodes.

**- RTD Non-Overlapping Optimal Energy**

The portions of RTD Optimal Energy that are not RTD Overlapping Optimal Energy, which are indexed against the relevant Energy Bid and sliced by Energy Bid price.

**- RTD Optimal Energy**

Any remaining RTD Instructed Imbalance Energy after accounting for all other RTD Instructed Imbalance Energy subtypes. RTD Optimal Energy does not overlap with FMM Optimal Energy Standard Ramping Energy, Ramping Energy Deviation, Residual Imbalance Energy, RTD Minimum Load Energy, RTD Derate Energy, and RTD Exceptional Dispatch Energy, but it may overlap with Day-Ahead Scheduled Energy, and MSS Load Following Energy. RTD Optimal Energy is indexed against the relevant Energy Bid and sliced by service type, depending on the AS capacity allocation on the Energy Bid. RTD Optimal Energy is also divided into RTD Overlapping Optimal Energy and RTD Non-Overlapping Optimal Energy. Any RTD Optimal Energy slice below or above the Energy Bid has no associated Energy Bid price, and it is not included in BCR as described in Section 11.5.1.1.

**- RTD Overlapping Optimal Energy**

The portion of RTD Optimal Energy that overlaps with MSS Load Following Energy.

**- RTD Pumping Energy**

RTD IIE from a Participating Load Pumped-Storage Hydro Unit or Pumping Load, exclusive of Standard Ramping Energy and Ramping Energy Deviation, consumed below the Day-Ahead Schedule when dispatched in pumping mode, or produced from pumping operation due to pumping level reduction in Real-Time Dispatch, including pump shut-down. RTD Pumping Energy does not overlap with any other RTD Expected Energy type. RTD Pumping Energy is settled as described in Section 11.5.1, and it is included in BCR as described in Section 11.8.4.1.4.

**- RTM**

Real-Time Market

**- RTM AS Bid Cost**

The Bid Cost for Ancillary Service capacity a Scheduling Coordinator may be eligible to recover pursuant to Section 11.8.4.1.6.

**- RTM Bid Cost**

The total of a resource's RTM Start–Up Cost, RTM Minimum Load Cost, RTM Pump Shut-Down Cost, RTM Transition Cost, RTM Pumping Cost, RTM Energy Bid Cost, and RTM AS Bid Cost.

**- RTM Bid Cost Shortfall**

For each Settlement Interval, for any BCR Eligible Resource, the negative amount resulting from the difference between its RTM Bid Cost and its RTM Market Revenue.

**- RTM Bid Cost Surplus**

For each Settlement Interval, for any BCR Eligible Resource, the positive amount, if any, resulting from the difference between its RTM Bid Cost and its RTM Market Revenue.

**- RTM Bid Cost Uplift**

The system-wide net of the RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses for a Settlement Interval of all BCR Eligible Resources with Unrecovered Bid Cost Uplift Payments. This amount will be netted according to Section 11.8.6.2 to calculate the Net RTM Bid Cost Uplift before allocation to Scheduling Coordinators.

**- RTM Commitment Period**

A Commitment Period determined by the RTM; provided that if the RTM changes the Commitment Status of units scheduled in the IFM or committed in the RUC, an RTM Commitment Period may or may not partially overlap with IFM Commitment Period and RUC Commitment Period.

**- RTM Congestion Credit**

A credit provided to Scheduling Coordinators to offset any RTM Congestion Charges that would otherwise be applied to the valid and balanced portions of any ETC or TOR Self-Schedules in the Real-Time Market as provided in Section 11.5.7.

**- RTM Energy Bid Cost**

The Energy Bid Costs a Scheduling Coordinator may be eligible to recover through the Bid Cost Recovery process, calculated pursuant to Section 11.8.4.1.5.

**- RTMD**

Real-Time Manual Dispatch

**- RTM Inter-SC Trade Period**

The period commencing at midnight (0000 hours) on the applicable Trading Day and ending at forty-five (45) minutes prior to the start of the applicable Operating Hour, during which time the CAISO will accept from Scheduling Coordinators Inter-SC Trades of Energy to the RTM, Inter-SC Trades of Ancillary Services, and Inter-SC Trades of IFM Load Uplift Obligations.

**- RTM MCL Credit for Eligible TOR Self-Schedules**

A credit provided to Scheduling Coordinators pursuant to Section 17.3.3 to offset any RTM Marginal Cost of Losses that would otherwise be applied to the valid and balanced portions of any TOR Self-Schedule in the IFM as provided in Section 11.5.7.2.

**- RTM Market Revenue**

The amount received by BCR Eligible Resource from Energy scheduled and Ancillary Services awarded in the RTM for the purposes of Bid Cost Recovery.

**- RTM Minimum Load Cost**

The Minimum Load Bid Costs a Scheduling Coordinator may be eligible to recover through the Bid Cost Recovery process, calculated pursuant to Section 11.8.4.1.2.

**- RTM Pumping Bid Cost**

Real-Time Market Pumping Bid Cost

**- RTM Pump Shut-Down Cost**

The Pump Shut-Down Cost a Scheduling Coordinator may be eligible to recover through the Bid Cost Recovery process, calculated pursuant to Section 11.8.4.1.3.

**- RTM Pumping Cost**

The Pumping Costs a Scheduling Coordinator may be eligible to recover through the Bid Cost Recovery process, calculated pursuant to Section 11.8.4.1.4.

**- RTM Self-Commitment Period**

A time period determined by the CAISO for the purposes of deriving any Bid Cost Recovery amounts, related to the RTM.

**- RTM Start-Up Cost**

The Start-Up Bid Costs a Scheduling Coordinator may be eligible to recover through the Bid Cost Recovery process, calculated pursuant to Section 11.8.4.1.1.

**- RTM Transition Cost**

The Transition Bid Costs a Scheduling Coordinator may be eligible to recover through the Bid Cost Recovery process, calculated pursuant to Section 11.8.4.1.7.

**- RTRR**

Regional Transmission Revenue Requirement

**- RUC**

Residual Unit Commitment

**- RUC Availability Bid**

The quantity (MW) and price ($/MW per hour) at or above which a Generating Unit, System Resource, System Unit, Participating Load, or Proxy Demand Resource has agreed to sell RUC Capacity for a specified interval of time to the CAISO to meet the Residual Unit Commitment requirement.

**- RUC Availability Bid Cost**

As provided in Section 11.8.3.1.3, the product of the RUC Award and the relevant RUC Availability Bid price, divided by the number of Settlement Intervals in a Trading Hour.

**- RUC Availability Payment**

The payment made for the RUC Availability Quantity as specified in Section 11.2.2.1.

**- RUC Availability Quantity**

A RUC Award (MW) excluding any RUC Capacity that is actually unavailable due to a unit derate or Outage.

**- RUC Award**

The quantity of RCU or RCD awarded to a resource by the RUC for a Settlement Period.

**- RUC Bid Cost**

The total Bid Costs associated with commitment by the CAISO through the RUC process used for determination of Unrecovered Bid Cost Uplift Payments and RUC Bid Cost Uplift allocation.

**- RUC Bid Cost Shortfall**

For each Settlement Interval, for any BCR Eligible Resource, the negative amount, if any, resulting from the difference between its RUC Bid Cost and its RUC Market Revenue.

**- RUC Bid Cost Surplus**

For each Settlement Interval, for any BCR Eligible Resource, the positive amount, if any, resulting from the difference between its RUC Bid Cost and its RUC Market Revenue.

**- RUC Bid Cost Uplift**

The system-wide net of the RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses for a Settlement Interval for all BCR Eligible Resources with Unrecovered Bid Cost Uplift Payments. This amount will be netted according to Section 11.8.6.2 to calculate the Net RUC Bid Cost Uplift before allocation to Scheduling Coordinators.

**- RUC Capacity**

RCU or RCD.

**- RUC Commitment Period**

A Commitment Period determined by the RUC; provided that because the RUC may not decommit units scheduled in the IFM, if the unit is scheduled by the IFM within that Time Period an IFM Commitment Period is always within a RUC Commitment Period; and a RUC Commitment Period may start earlier and/or may end later than an IFM Commitment Period if RUC issues an earlier Start-Up Instruction and/or later Shut-Down Instruction than the IFM, respectively.

**- RUC Compensation**

The payment to Scheduling Coordinators with RUC Awards, calculated as the sum of RUC Availability Payment and RUC Unrecovered Bid Costs.

**- RUC Compensation Cost**

As provided in Section 11.8.6.5, for each Trading Hour of the RUC, the sum of the RUC Availability Payment and the hourly Net RUC Bid Cost Uplift, which is allocated as provided in Section 11.8.6.5.3.

**- RUC Market Revenues**

The sum of a resource's RUC Availability Payment for a Trading Hour divided by the number of Settlement Intervals in a Trading Hour or the purposes of calculating Bid Cost Recovery for RUC.

**- RUC Minimum Load Cost**

The Minimum Load Bid Costs a Scheduling Coordinator may be eligible to recover through the Bid Cost Recovery process, calculated pursuant to Section 11.8.3.1.2.

**- RUC Price**

The Locational RCU Price or Locational RCD Price.

**- RUC Procurement Target**

The quantity of either RCU or RCD the CAISO procures of behalf of each EDAM Entity or the CAISO, as specified in Sections 31.5.3 and 31.5.4.

**- RUC Schedule**

The net of the Day-Ahead Schedule and the RUC Award in a given hour.

**- RUC Start-Up Cost**

The Start-Up Bid Costs a Scheduling Coordinator may be eligible to recover through the Bid Cost Recovery process, calculated pursuant to Section 11.8.3.1.1.

**- RUC Transition Cost**

The Transition Bid Costs a Scheduling Coordinator may be eligible to recover through the Bid Cost Recovery process, calculated pursuant to Section 11.8.3.1.4.

**- RUC Zone**

A forecast region representing a UDC or MSS Service Area, Local Capacity Area, or other collection of Nodes for which the CAISO has developed sufficient historical CAISO Demand and relevant weather data to perform a Demand Forecast for such area, for which as further provided in Section 31.5.3.2 the CAISO may adjust the CAISO Forecast of BAA Demand to ensure that the RUC process produces adequate local capacity procurement.

**- Rules of Conduct**

The rules set forth in Sections 37.2 through 37.7.

**- Run-of-River Resource**

A hydroelectric Generating Unit that has demonstrated to the CAISO's reasonable satisfaction that it has

no physical ability to control or store its fuel source for generation beyond whatever pondage is necessary to maintain sufficient head pressure to operate the Generating Unit consistent with Good Utility Practice.

**- Sanction**

A consequence specified in Section 37 for the violation of a Rule of Conduct, which may include a) a warning letter notifying the Market Participant of the violation and future consequences specified under Section 37 if the behavior is not corrected, or b) financial penalties. Neither referral to FERC nor rescission of payment for service not provided shall constitute a Sanction.

**- SC**

Scheduling Coordinator

**- SCA**

Scheduling Coordinator Agreement

**- SCADA**

Supervisory Control and Data Acquisition

**- Scarcity Reserve Demand Curve**

A demand curve used to clear the Ancillary Services markets when supply is insufficient in an Ancillary Service Region or Sub-Region to meet Ancillary Services minimum procurement requirements.

**- Scarcity Reserve Demand Curve Values**

Fixed percentages of the Soft Energy Bid Cap or Hard Energy Bid Cap reflected in the Scarcity Reserve Demand Curve that the CAISO uses to calculate Ancillary Service Shadow Prices for Regulation Up, Spinning Reserve, Non-Spinning Reserve and Regulation Down from which the CAISO determines Ancillary Service Marginal Prices when there is insufficient supply in an Ancillary Service Region or Sub-Region to meet an Ancillary Services minimum procurement requirement.

**- SCED**

Security Constrained Economic Dispatch

**- Schedule**

A Day-Ahead Schedule or a FMM Schedule.

**- Scheduled Demand**

The MW of Energy of Demand cleared through the IFM and set in the Day-Ahead Schedule for the next

Trading Day.

**- Scheduled Generation**

The MW of Energy of Generation cleared through the IFM and set in the Day-Ahead Schedule for the next Trading Day.

**- Scheduling Coordinator**

An entity certified by the CAISO for the purposes of undertaking the functions specified in Section 4.5.3, including any entity certified by the CAISO as an EDAM Entity Scheduling Coordinator, EDAM Resource Scheduling Coordinator, EDAM Load Serving Entity Scheduling Coordinator, or a Scheduling Coordinator for the purposes of undertaking the functions specified in Section 33, and including any entity certified by the CAISO as an EIM Entity Scheduling Coordinator or an EIM Participating Resource Scheduling Coordinator for the purposes of undertaking the functions specified in Section 29.

**- Scheduling Coordinator Agreement (SCA)**

An agreement between a Scheduling Coordinator and the CAISO whereby the Scheduling Coordinator agrees to comply with all CAISO rules, protocols and instructions, as those rules, protocols and instructions may be amended from time to time, a pro forma version of which is set forth in Appendix B.1.

**- Scheduling Coordinator Applicant**

An applicant for certification by the CAISO as a Scheduling Coordinator.

**- Scheduling Coordinator Application Form**

The form specified by the CAISO from time to time in which a Scheduling Coordinator Applicant must apply to the CAISO for certification as a Scheduling Coordinator.

**- Scheduling Coordinator Customer**

A customer of the Scheduling Coordinator Applicant or a Scheduling Coordinator for whom the Scheduling Coordinator provides services relevant to the CAISO Controlled Grid.

**- SC Estimated Settlement Quality Meter Data**

Settlement Quality Meter Data estimated and submitted by the Scheduling Coordinators on behalf of Scheduling Coordinator Metered Entities.

**- Scheduling Coordinator ID Charge**

The Grid Management Charge charge described in Section 11.22.8.

**- Scheduling Coordinator ID Code (SCID)**

The individual Identification Code provided by the CAISO to the Scheduling Coordinator.

**- Scheduling Coordinator Metered Entity**

Pursuant to Section 10.1, an eligible entity that has elected that its Scheduling Coordinator will process and submit its Settlement Quality Meter Data to the CAISO. Eligible entities include:

i. a Generator, including Participating Generators and QFs;

ii. a Utility Distribution Company or Small Utility Distribution Company;

iii. a Participating Intermittent Resource;

iv. an EDAM Entity, EDAM Resource, or EDAM Load Serving Entity;

v. an EIM Entity or EIM Participating Resource;

vi. a Proxy Demand Resource or Reliability Demand Response Resource;

vii. a Distributed Energy Resource;

viii. an End User; and

ix. Tie Point Meters with other Transmission Owners or Balancing Authority Areas.

**- Scheduling Point**

A Location in the Base Market Model at which Scheduling Coordinators may submit intertie Bids in the CAISO Markets.

**- SCID**

Scheduling Coordinator ID Code

**- Scoping Meeting**

The meeting among representatives of the Interconnection Customer, the applicable Participating TO, and the CAISO conducted for the purpose of discussing the proposed Interconnection Request and any alternative interconnection options, exchanging information including any transmission data and earlier study evaluations that would be reasonably expected to impact such interconnection options, refining information and models provided by Interconnection Customer(s), discussing the Cluster Study materials posted to OASIS pursuant to Section 3.5 of the GIDAP, and analyzing such information.

**- SCUC**

Security Constrained Unit Commitment

**- Seasonal Available CRR Capacity**

The upper limit of network capacity that will be used in the annual CRR Allocation and annual CRR Auction calculated by effectively reducing TTC for Transmission Ownership Rights as if all lines will be in service for the relevant year in accordance with Section 36.4.

**- Seasonal CRR**

A Congestion Revenue Right that is valid for one season and one time-of-use period in a given year.

**- Seasonal CRR Eligible Quantity**

The MW quantity of CRRs a CRR Holder or Candidate CRR Holder is eligible to nominate for a specific season and time of use period in the annual CRR Allocation.

**- Seasonal CRR Load Metric**

The MW level of Load that is exceeded only in 0.5 percent of the hours for each season and time of use period based on the LSE's historical Load.

**- Secondary Registration System**

The system and process through which CRR Holders and Candidate CRR Holders register any bilateral CRR transactions with the CAISO.

**- Security Constrained Economic Dispatch (SCED)**

An algorithm performed by a computer program that simultaneously clears Energy Supply Bids, including Self-Schedules, against Demand Forecast to determine Dispatch Instructions.

**- Security Constrained Unit Commitment (SCUC)**

An algorithm performed by a computer program over multiple hours that determines the Commitment Status and Day-Ahead Schedules, AS Awards, RUC Awards, Hourly Intertie Block Schedules, FMM Schedules and Dispatch Instructions for selected resources and minimizes production costs (Start-Up, Minimum Load and Energy Bid Costs in IFM, and RTM; Start-Up, Minimum Load and RUC Availability Bid Costs) while respecting the physical operating characteristics of selected resources and Transmission Constraints.

**- Security Monitoring**

The real-time assessment of the CAISO Controlled Grid that is conducted to ensure that the system is operating in a secure state, and in compliance with all Applicable Reliability Criteria.

**- Self-Commitment Period**

The portion of a Commitment Period of a unit with an Energy Self- Schedule or a Submission to Self-Provide an Ancillary Service, except for Non-Spinning Reserve self-provision. The Self-Commitment Period may include Time Periods without Energy Self-Schedules or AS self-provision if it is determined by inference that the unit must be on due to Minimum Run Time, Minimum Down Time, or Maximum Daily Start-Up constraints.

**- Self-Provided Ancillary Services**

A Submission to Self-Provide Ancillary Services in the Day-Ahead Market or Real-Time Market that has been accepted by the CAISO. Acceptance will occur prior to Ancillary Service Bid evaluation in the relevant market and indicates that the CAISO has determined the submission is feasible with regard to resource operating characteristics and regional constraints and is qualified to provide the Ancillary Service in the market for which it was submitted. Self-Provided Ancillary Services consist of self-provided Regulation Up reserves, self-provided Regulation Down reserves, self provided Spinning Reserves, and self-provided Non-Spinning Reserves.

**- Self-Provided Load**

The portion of Load that is served by a Net Scheduled Generating Unit listed in a Net Scheduled PGA, consistent with Section 218(b) of the California Public Utilities Code.

**- Self-Schedule**

The Bid component that indicates the quantities in MWhs with no specification of a price that the Scheduling Coordinator is submitting to the CAISO, which indicates that the Scheduling Coordinator is a Price Taker, Regulatory Must-Run Generation or Regulatory Must-Take Generation, which includes ETC and TOR Self-Schedules, Self-Schedules for Converted Rights, and Variable Energy Resource Self-Schedules.

**- Service Area**

An area in which an IOU or a Local Publicly Owned Electric Utility is obligated to provide electric service to End-Use Customers.

**- Set Point**

Scheduled operating level for each Generating Unit or other resource scheduled to run in the FMM

Schedule and FMM Award.

**- Settlement**

Process of financial settlement for products and services purchased and sold undertaken by the CAISO under Section 11 as supplemented by Section 29. Each Settlement will involve a price and a quantity.

**- Settlement Account**

An account held at a bank situated in California, designated by a Scheduling Coordinator, a CRR Holder or a Participating TO pursuant to the Scheduling Coordinator's Scheduling Coordinator Agreement, the CRR Holder's CRR Entity Agreement or in the case of a Participating TO, Section 2.2.1 of the Transmission Control Agreement, to which the CAISO shall pay amounts owing to the Scheduling Coordinator, the CRR Holder or the Participating TO under the CAISO Tariff.

**- Settlement Interval**

The five-minute time period over which the CAISO settles cost compensation amounts or deviations in Generation and Demand in the RTM.

**- Settlement Period**

For all CAISO transactions, the period beginning at the start of the hour and ending at the end of the hour. There are twenty-four Settlement Periods in each Trading Day, with the exception of a Trading Day in which there is a change to or from daylight savings time.

**- Settlement Quality Meter Data**

Meter Data gathered, edited, validated, and stored in a settlement-ready format, for Settlement and auditing purposes.

**- Settlement Quality Meter Data Systems (SQMDS)**

A collective name for the set of CAISO systems used to accept, analyze and report on Settlement Quality Meter Data.

**- Settlement Statement**

Any one of the following: Initial Settlement Statement T+3B, Initial Settlement Statement T+9B, Recalculation Settlement Statement T+12B, Recalculation Settlement Statement T+55B, Recalculation Settlement Statement T+70B, Recalculation Settlement Statement T+9M, Recalculation Settlement Statement T+11M, Recalculation Settlement Statement T+18M, Recalculation Settlement Statement

T+21M, Recalculation Settlement Statement T+24M, Recalculation Settlement Statement T+33M, Recalculation Settlement Statement T+36M, Unscheduled Reissue Recalculation Settlement Statement, or any other Recalculation Settlement Statement authorized by the CAISO Governing Board or FERC.

**- SFT**

Simultaneous Feasibility Test

**- Shadow Price**

The marginal value of relieving a particular constraint.

**- Short-Notice Opportunity RA Maintenance Outage**

A Forced Outage at a Resource Adequacy Resource accommodated by the CAISO on short notice without RA Substitute Capacity for the Resource Adequacy Capacity on Outage.

**- Short Start Unit**

A Generating Unit that has a cycle time less than or equal to 255 minutes (Start-Up Time plus Minimum Run Time is less than or equal to 255 minutes and can be fully optimized with respect to this cycle time.

**- Short-Term Unit Commitment (STUC)**

The Unit Commitment procedure run at approximately 52.5 minutes prior to the applicable Trading Hour to determine whether certain Short Start Units need to be started early to meet the Demand within the STUC forward-looking time period as described in Section 34.4 using the CAISO Forecast of CAISO Demand. The STUC produces a Unit Commitment solution for every 15-minute interval within the STUC forward-looking time periods and issues binding Start-Up Instructions only as necessary.

**- Shut-Down**

A Commitment Status transition from On to Off.

**- Shut-Down Cost**

The Bid Component submitted by the Scheduling Coordinator indicating a single price at which the resource is willing to Shut-Down.

**- Shut-Down Instruction**

An instruction issued by the CAISO to a resource to Shut-Down.

**- Shut-Down State Variable**

A state variable to keep track of positive Uninstructed Imbalance Energy once an advisory Shut-Down

Instruction is issued to a resource. The Shut-Down State Variable provides the MWh cumulative over the Real-Time Unit Commitment Intervals had the resource followed the Shut-Down Instruction. The Shut-Down State Variable begins to accumulate the positive Uninstructed Imbalance Energy MWh as soon as the advisory schedule includes a zero (0) MW Dispatch Operating Target within the Real-Time Market dispatch horizon and continues to accumulate the positive Uninstructed Imbalance Energy as long as (1) the unit is On, and (2) the Metered Energy less Regulation Energy less the Expected Energy is greater than the Performance Metric Tolerance Band. The Shut-Down State Variable will be reset to zero when the most recent Real-Time Unit Commitment run no longer has a zero (0) MW Dispatch Operating Target within the Real-Time Dispatch horizon or the resource is Off.

**- Simultaneous Feasibility Test (SFT)**

The process that the CAISO will conduct to ensure that allocated and auction CRRs do not exceed relevant Transmission Constraints as described in Section 36.4.2 and further described in the Business Practice Manuals.

**- Site Control**

The exclusive land right to develop, construct, operate, and maintain the Generating Facility over the term of expected operation of the Generating Facility. Site Control may be demonstrated by documentation establishing: (1) ownership of, a leasehold interest in, or a right to develop a site of sufficient size to construct and operate the Generating Facility; (2) an option to purchase or acquire a leasehold site of sufficient size to construct and operate the Generating Facility; or (3) any other documentation that clearly demonstrates the right of Interconnection Customer to exclusively occupy a site of sufficient size to construct and operate the Generating Facility. The CAISO will maintain acreage requirements for each Generating Facility type on its Website.

**- Site Exclusivity**

Documentation reasonably demonstrating:

(1) For private sites:

(a) Ownership of, a leasehold interest in, or a right to develop property upon which the Generating Facility will be located consisting of a minimum of 50% of the acreage reasonably necessary to accommodate the Generating Facility; or

(b) an option to purchase or acquire a leasehold interest in property upon which the Generating Facility will be located consisting of a minimum of 50% of the acreage reasonably necessary to accommodate the Generating Facility.

(2) For public sites, including that controlled or managed by any federal, state, or local agency, a permit, license, other right, or pending application prescribed by the relevant authority, to use the property for the purpose of generating electric power and in acreage reasonably necessary to accommodate the Generating Facility.

**- Site Exclusivity Deposit**

The cash deposit provided to the CAISO by Interconnection Customers under GIP and GIDAP Section 3.5.1 as an option in lieu of demonstrating Site Exclusivity for a valid Interconnection Request.

**- Small Generating Facility**

A Generating Facility that has a Generating Facility Capacity of no more than 20 MW.

**- Small Generator Interconnection Agreement**

The pro forma Interconnection Agreement applicable to an Interconnection Request for a Small Generating Facility.

**- Small Utility Distribution Company (SUDC)**

An entity that owns a Distribution System that is capable of transmitting or delivery of Energy to and/or from the CAISO Controlled Grid that provides retail electric service to End-Use Customers, and has the following characteristics:

Annual peak Demand is 25 MW or less;

The Distribution System is not in a local reliability area defined by the CAISO; and

Good Utility Practice was used in designing all substation facilities that are owned or operated by the entity and interconnected to the CAISO Controlled Grid, and none of those substations have transmission circuit breakers.

**- Small Utility Distribution Company Operating Agreement**

An agreement between the CAISO and an SUDC, a pro forma version of which is set forth in Appendix B.10.

**- SMEC**

System Marginal Energy Cost

**- Soft Energy Bid Cap**

The maximum Energy Bid price submitted by Scheduling Coordinators for resources the CAISO will use for purposes of clearing the CAISO Market Processes without cost verification pursuant to Section 30.11. The Soft Energy Bid Cap is $1,000 per MWh.

**- [Not Used]**

**- Spinning Reserve**

The portion of unloaded synchronized resource capacity that is immediately responsive to system frequency and that is capable of being loaded in ten (10) minutes, and that is capable of running for at least thirty (30) minutes from the time it reaches its award capacity.

**- Spinning Reserve Cost**

The revenues paid to the suppliers of the total awarded Spinning Reserve capacity in the Day-Ahead Market and Real-Time Market for the Settlement Period, minus the payments rescinded in the Settlement Period due to the unavailability of the Spinning Reserve under any of the provisions of Section 8.10.2.

**- Spinning Reserve Obligation**

The obligation of a Scheduling Coordinator for its share of costs incurred by the CAISO in procuring Spinning Reserve.

**- [Not Used]**

**- SQMD Plan**

A document submitted to the CAISO for Scheduling Coordinator Metered Entities that details how the Scheduling Coordinator will measure, collect, maintain, aggregate, process, and submit Settlement Quality Meter Data in accordance with applicable CAISO Tariff and, where applicable, Local Regulatory Authority metering and settlement standards.

**- SQMDS**

Settlement Quality Meter Data Systems

**- Stand Alone Network Upgrades**

Network Upgrades or tasks (e.g., telecommunications, environmental, or property work) that are not part of an Affected System and that an Interconnection Customer may construct without affecting day-to-day

operations of the CAISO Controlled Grid or Affected Systems during their construction. The Participating TO, the CAISO, and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to the Large Generator Interconnection Agreement. If the CAISO, Participating TO, and the Interconnection Customer disagree about whether a particular Network Upgrade is a Stand Alone Network Upgrade, the CAISO or Participating TO must provide the Interconnection Customer a written technical explanation outlining why it does not consider the Network Upgrade to be a Stand Alone Network Upgrade within 15 days of its determination.

**- Standard Large Generator Interconnection Agreement (LGIA)**

The form of interconnection agreement applicable to an Interconnection Request pertaining to a Large Generating Facility, a pro forma version of which is set forth in Appendix V.

**- Standard Large Generator Interconnection Procedures (LGIP)**

The interconnection procedures applicable to an Interconnection Request pertaining to a Large Generating Facility that is set forth in Appendix U.

**- Standard Ramp (-ing)**

A ramp calculated from two consecutive Day-Ahead Schedules that results in a straight trajectory between 10 minutes before the start of a Trading Hour to 10 minutes after the start of the Trading Hour.

**- Standard Ramping Energy**

RTD Instructed Imbalance Energy produced or consumed in the first two and the last two Dispatch Intervals due to hourly schedule changes. Standard Ramping Energy is a schedule deviation along a linear symmetric twenty (20)-minute ramp (Standard Ramp) across hourly boundaries. Standard Ramping Energy is always present when there is an hourly schedule change, including resource Start-Ups and Shut-Downs. Standard Ramping Energy does not apply to Non-Dynamic System Resources (including Resource-Specific System Resources) and is not subject to Settlement as described in Section 11.5.1.

**- Standby Rate**

A rate assessed a Standby Service Customer by the Participating TO that also provides retail electric service, as approved by the Local Regulatory Authority, or FERC, as applicable, for Standby Service which compensates the Participating TO, among other things, for costs of Regional Transmission

Facilities.

**- Standby Service**

Service provided by a Participating TO that also provides retail electric service, which allows a Standby Service Customer, among other things, access to Regional Transmission Facilities for the delivery of backup power on an instantaneous basis to ensure that Energy may be reliably delivered to the Standby Service Customer in the event of an Outage of a Generating Unit serving the customer's Load.

**- Standby Service Customer**

A retail End-Use Customer of a Participating TO that also provides retail electric service that receives Standby Service and pays a Standby Rate.

**- Standby Transmission Revenue**

The transmission revenues, with respect to cost of both Regional Transmission Facilities and Local Transmission Facilities, collected directly from Standby Service Customers through charges for Standby Service.

**- Start-Up**

A Commitment Status transition from Off to On.

**- Start-Up Bid**

The Bid component that indicates the Start-Up Time and Start-Up Cost curves for the Generating Unit, which applies for the entire Trading Day for which it is submitted. Start-Up Bids are subject to modification pursuant to the rules set forth in Sections 30.7.8 and 30.11.

**- Start-Up Bid Cost**

The Start-Up Costs submitted in a Start-Up Bid as modified pursuant to Sections 30.7.8 and 30.11, and used for purposes of the determination of Bid Cost Recovery.

**- Start-Up Cost**

The cost incurred by a particular Generating Unit during Start-Up from the time of first fire, the time of receipt of a CAISO Dispatch Instruction, or the time the unit was last synchronized to the grid, whichever is later, until the time the Generating Unit reaches its Minimum Load.

**- Start-Up Cost Curve**

The format of the Start-Up Bid or the Default Start-Up Bids that must be strictly monotonically increasing

non-negative staircase curves, of up to three (3) segments, which represent a function of Start-Up Cost versus down time.

**- Start-Up Instruction**

An instruction issued by the CAISO to a resource to Start-Up.

**- Start-Up Opportunity Costs**

An adder consisting of the estimated profits foregone by a Use-Limited Resource with a limitation on its number of starts that satisfies the definition of a Use-Limited Resource and applies for a time period that satisfies the requirements of Section 30.4.6.1, if the Use-Limited Resource had one less start in the time period.

**- Start-Up Time**

The time period required for a resource to go from Off to its Minimum Load.

**- State Commission**

The regulatory body of a state having jurisdiction to regulate rates and charges for the sale of electric energy to consumers within the state.

**- State Estimator**

A computer software program that provides the CAISO with a near Real-Time assessment of system conditions within the CAISO Balancing Authority Area, including portions of the CAISO Balancing Authority Area where Real-Time information is unavailable, and, for purposes of the Extended Day-Ahead Market, including the prospective EDAM Entity and EDAM Entity Balancing Authority Area(s), and, for purposes of the Energy Imbalance Market, including the prospective EIM Entity and EIM Entity Balancing Authority Area(s).

**- State of Charge**

The Energy available to CAISO Markets from a Non-Generator Resource or storage device.

**- Station Power**

Retail Energy, as defined by the Local Regulatory Authority, for operating electric equipment, for the sole purpose of participating in the CAISO Markets.

**- Station Power Portfolio**

One or more generating resources eligible to self-supply Station Power, including Generating Units in the

CAISO Balancing Authority Area, and generating facilities outside the CAISO Balancing Authority Area, all of which are owned by the same entity.

**- STUC**

Short-Term Unit Commitment

**- Study Plan**

The plan to be developed pursuant to Section 24.3.1, which sets forth the technical studies to be performed during the annual Transmission Planning Process.

**- Sub-LAP**

A CAISO defined subset of PNodes within a Default LAP.

**- Submission to Self-Provide an Ancillary Service**

A submission to the CAISO containing all of the bidding requirements for an Ancillary Service with the exception of price information.

**- Sub-Region**

A region identified by the CAISO for procurement of Ancillary Services within the System Region.

**- [Not Used]**

**- Subscriber**

An entity, or its designee, that has a Subscriber Encumbrance used to provide Subscriber Rights pursuant to a Subscription Agreement.

**- Subscriber Encumbrance**

A legal restriction or covenant binding on a Subscriber Participating TO that affects the operation of transmission assets or Entitlements of the Subscriber Participating TO used to provide Subscriber Rights and that the CAISO needs to take into account in exercising Operational Control over such transmission assets or Entitlements. Any reference to contracts granting Subscriber Rights shall be considered as a Subscription Agreement. Any reference in the CAISO Tariff to an Encumbrance shall be read as also a reference to a Subscriber Encumbrance.

**- Subscriber Participating TO**

A Participating TO whose transmission assets and Entitlements were constructed, and for which the associated transmission capacity is subject to long-term contractual obligations, to deliver energy,

capacity, and associated attributes to satisfy state, municipal, county, or federal policy requirements or directives. Any reference in the CAISO Tariff to a Participating TO shall be read as also a reference to a Subscriber Participating TO.

**- Subscriber Rights**

The transmission service rights and obligations of a Subscriber Participating TO to transmission customers with contracts entered into under the Subscriber Participating TO Tariff, as that tariff may change from time to time. Any reference in the CAISO Tariff to Existing Rights shall be read as also a reference to Subscriber Rights.

**- Subscription Agreement**

A contract or other legal arrangement between one or more Subscribers and a Subscriber Participating TO that includes the provision of a Subscriber Encumbrance to the Subscriber.

**- SUDC**

Small Utility Distribution Company

**- SUDC Operating Agreement**

Small Utility Distribution Company Operating Agreement

**- Supervisory Control and Data Acquisition (SCADA)**

A computer system that allows an electric system operator to remotely monitor and control elements of an electric system.

**- Supply**

The Energy delivered from a Generating Unit, System Unit, Physical Scheduling Plant, System Resource, the Curtailable Demand provided by a Participating Load, the Demand Response Services provided by a Proxy Demand Resource or a Reliability Demand Response Resource, or Non-Generator Resources.

**- Supply Plan**

A submission by a Scheduling Coordinator for a Resource Adequacy Resource in order to satisfy the requirements of Section 40.

**- Surplus Interconnection Service**

Any unneeded portion of Interconnection Service Capacity established in a Large Generator Interconnection Agreement, such that if Surplus Interconnection Service if utilized the total amount of

Interconnection Service Capacity at the Point of Interconnection would remain the same.

**- System Emergency**

Conditions beyond the normal control of the CAISO that affect the ability of the CAISO Balancing Authority Area to function normally, including any abnormal system condition which requires immediate manual or automatic action to prevent loss of Load, equipment damage, or tripping of system elements which might result in cascading Outages or to restore system operation to meet Applicable Reliability Criteria.

**- System Mileage Multiplier**

A quantity reflecting expected Mileage from 1 MW of Regulation Up and Regulation Down capacity in a given hour.

**- System Operations Balancing Authority Area Services Charge**

A component of the Grid Management Charge that represents the costs to support services within the CAISO Balancing Authority Area.

**- System Operations Charge**

The Grid Management Charge component described in Section 11.22.2.5.2.

**- System Operations Real-Time Dispatch Charge**

A component of the Grid Management Charge that represents the costs to support real-time dispatch services to the CAISO Balancing Authority Area customers, EIM, and EDAM.

**- System Planning Studies**

Reports summarizing studies performed to assess the adequacy of the CAISO Controlled Grid as regards conformance to Reliability Criteria.

**- System Region**

The CAISO Balancing Authority Area

**- System Reliability**

A measure of an electric system’s ability to deliver uninterrupted service at the proper voltage and frequency.

**- System Resource**

A group of resources, single resource, or a portion of a resource located outside of the Market Area, or an

allocated portion of a Balancing Authority Area's portfolio of generating resources that are either a static Interchange Schedule or directly responsive to that Balancing Authority Area's Automatic Generation Control (AGC) capable of providing Energy and/or Ancillary Services to the CAISO Balancing Authority Area or, for purposes of the Extended Day-Ahead Market only, to an EDAM Entity Balancing Authority Area(s), or, for purposes of scheduling and operating the Real-Time Market only, to an EIM Entity Balancing Authority Area, provided that if the System Resource is providing Regulation to the CAISO it is directly responsive to AGC.

**- System Unit**

One or more individual Generating Units and/or Loads within a Metered Subsystem controlled so as to simulate a single resource with specified performance characteristics, as mutually determined and agreed to by the MSS Operator and the CAISO. The Generating Units and/or Loads making up a System Unit must be in close physical proximity to each other such that the operation of the resources comprising the System Unit does not result in significant differences in flows on the CAISO Controlled Grid.

**- TAC**

Transmission Access Charge

**- TAC Area**

Transmission Access Charge Area

**- Take-Out Point**

The metering points at which a Scheduling Coordinator Metered Entity or CAISO Metered Entity takes delivery of Energy.

**- Tangible Net Worth**

For Rated or Unrated Public/Private Corporations, as defined in Step 4(a) of Section 12.1.1.1.2.

**- Tax Exempt Debt**

Municipal Tax Exempt Debt or Local Furnishing Bonds.

**- Tax Exempt Participating TO**

A Participating TO that is the beneficiary of outstanding Tax Exempt Debt issued to finance any electric facilities, or rights associated therewith, which are part of an integrated system including transmission facilities the Operational Control of which is transferred to the CAISO pursuant to the Transmission

Control Agreement.

**- TCA**

Transmission Control Agreement

**- TEA**

Transmission Exchange Agreement

**- Third Party Supply**

Energy that is deemed to have been purchased from third parties to supply Station Power Load during the Netting Period.

**- Tie Point Meter**

A revenue meter, which is capable of providing Settlement Quality Meter Data, at a Scheduling Point or at a boundary between Utility Distribution Companies within the CAISO Controlled Grid.

**- Tier LT**

The tier of the annual CRR Allocation process through which the CAISO allocates Long Term CRRs.

**- Time Period**

The period of time for Scheduling or Dispatch activities, which is a Trading Hour in the DAM and a Dispatch Interval in the RTM.

**- TO**

Transmission Owner

**- Tolerance Band**

The permitted area of variation for performance requirements of resources used for various purposes as further provided in the CAISO Tariff. The Tolerance Band is expressed in terms of Energy (MWh) for Generating Units, System Units and imports from Dynamic System Resources for each Settlement Interval and equals the greater of the absolute value of: (1) five (5) MW divided by the number of Settlement Intervals per Settlement Period or (2) three (3) percent of the relevant Generating Unit's, Dynamic System Resource's or System Unit's maximum output (PMax), as registered in the Master File, divided by the number of Settlement Intervals per Settlement Period. The maximum output (PMax) of a Dynamic System Resource will be established by agreement between the CAISO and the Scheduling

Coordinator representing the Dynamic System Resource on an individual case basis, taking into account the number and size of the generating resources, or allocated portions of generating resources, that comprise the Dynamic System Resource.

The Tolerance Band is expressed in terms of Energy (MWh) for Participating Loads for each Settlement Interval and equals the greater of the absolute value of: (1) five (5) MW divided by the number of Settlement Intervals per Settlement Period or (2) three (3) percent of the applicable Intertie Schedule or CAISO Dispatch amount divided by the number of Settlement Intervals per Settlement Period.

The Tolerance Band shall not be applied to Non-Dynamic System Resources.

**- TOR**

Transmission Ownership Right

**- TOR Charge**

The GMC component for TOR holders described in Section 11.22.4.

**- TOR Self-Schedule**

A Self-Schedule submitted by a Scheduling Coordinator pursuant to Transmission Ownership Rights as reflected in the TRTC Instructions.

**- Total CAISO Markets Uplift**

The sum of the Net IFM Bid Cost Uplift, the Net RUC Bid Cost Uplift, and the Net RTM Bid Cost Uplift, for all Settlement Intervals in the IFM, RUC and RTM.

**- Total Import Capability**

The aggregate Maximum Import Capability of all Interties into the CAISO Balancing Authority Area in MW deliverable to the CAISO Balancing Authority Area based on CAISO study criteria minus the aggregate sum in MW of all Existing Contracts and Transmission Ownership Rights held by load serving entities that do not serve Load within the CAISO Balancing Authority Area.

**- Total Positive CAISO Markets Uplift**

The sum of the positive IFM Bid Cost Uplift, positive RUC Bid Cost Uplift and positive RTM Bid Cost Uplift, for all Settlement Intervals in the IFM, RUC and RTM.

**- Total Transfer Capability (TTC)**

The amount of electric power that can be moved or transferred reliably from one area to another area of the interconnected transmission systems by way of all transmission lines or (paths) between those areas under specified system conditions.

**- TPD**

Transmission Plan Deliverability.

**- TP Deliverability (Transmission Plan Deliverability)**

The capability, measured in MW, of the CAISO Controlled Grid as modified by transmission upgrades and additions modeled or identified in the annual Transmission Plan to support the interconnection with Full Capacity Deliverability Status or Partial Capacity Deliverability Status of additional Generating Facilities in a specified geographic or electrical area of the CAISO Controlled Grid.

**- Trading Day**

The twenty-four hour period for which any given DAM or RTM is executed and settled, beginning at the start of the hour ending 0100 and ending at the end of the hour ending 2400 daily, except where there is a change to and from daylight savings time. For any given DAM, the Trading Day will be the next Operating Day following the Operating Day during which that DAM is executed. For any given RTM, the Trading Day will be the same Operating Day during which that RTM is executed.

**- Trading Hour**

Any hour during which trades are conducted in a CAISO Market.

**- Trading Hub**

An aggregation of network Pricing Nodes, such as Existing Zone Generation Trading Hubs, maintained and calculated by the CAISO for settlement and trading purposes posted by the CAISO on its CAISO Website.

**- Trading Interval**

A Settlement Period.

**- Trading Month**

The period beginning at the start of the hour ending 0100 and ending at the end of the hour ending 2400 for each calendar month, except where there is a change to and from daylight savings time on the first or last day of a month.

**- Transaction ID**

Identification characters generated by the CAISO when Bids are submitted by Scheduling Coordinators at Interties for resources whose characteristics are not registered in the Master File such as Non-Dynamic System Resources. The Transaction IDs remain associated with specific transactions represented in the Bid from Bid validation through Settlement of the Bid if cleared through the CAISO Markets. Transaction IDs are not assigned to Bids associated with resources whose characteristics are registered in the Master File such as Resource Adequacy Capacity, Transmission Ownership Rights, Existing Transmission Contracts, resources certified for Ancillary Services or other contractual agreements that the CAISO is required to honor.

**- Transfer Location**

A PNode at a boundary between Balancing Authority Areas in the Market Area where Market Transfers are defined.

**- Transfer System Resource (TSR)**

A System Resource used to model an Energy and/or capacity Market Transfer between two Balancing Authority Areas in the Market Area which is modeled by a pair of export and import Transfer System Resources, one for each Balancing Authority Area on either side of the Market Transfer, with equal Energy Schedules and/or capacity awards.

**- Transferred Frequency Response**

A frequency response performance adjustment under Applicable Reliability Criteria expressed in MW/0.1 Hz that a receiving Balancing Authority may acquire under an arrangement whereby another Balancing Authority adjusts its frequency response performance downward by the same amount it has provided to the receiving Balancing Authority.

Transferred Frequency Response is reported on applicable NERC/WECC forms, and applied consistently to each reported frequency disturbance event. On these forms, the delivering Balancing Authority decreases its performance and the receiving Balancing Authority increases its performance by the same amount.

Transferred Frequency Response may reflect an aggregate amount from multiple contracts. Any reported Transferred Frequency Response will not exceed the frequency response performance that the

delivering Balancing Authority has produced as reflected in its annual frequency response measure.

**- Transformer and Line Loss Correction Factor**

The transformer and line loss correction factor as set forth in the applicable Business Practice Manual or Technical Specifications to be applied to revenue quality meters of CAISO Metered Entities which are installed on the low voltage side of step-up transformers.

**- Transition Bid**

The Bid component that indicates the Transition Cost to transition a Multi-Stage Generating Resource from one MSG Configuration to another. Transition Bids are subject to modification pursuant to the rules specified in Section 30.7.11.

**- Transition Bid Cost**

The Transition Cost submitted in a Transition Bid as modified pursuant to Sections 30.7.8 and 30.11, and used for purposes of Bid Cost Recovery.

**- Transition Cost**

For a Multi-Stage Generating Resource, the dollar cost per feasible transition from a given MSG Configuration to a higher MSG Configuration when the resource is already On. Transition Cost must be non-negative.

**- Transition Instructions**

A binding instruction issued by the CAISO to Multi-Stage Generating Resources in the Real-Time that directs the Multi-Stage Generating Resource to move from between MSG Configurations and indicates: (1) “from” and “to” MSG Configurations; and (2) the start time and end time of the MSG Transition.

**- Transition Matrix**

A matrix that, for Multi-State Generating Resources defines the possible MSG Transitions between all online MSG Configurations including the Transition Times and Transition Costs.

**- Transition Opportunity Cost**

Costs derived from the number of Start-Ups required for the Multi-Stage Generating Resource to achieve a specific MSG Configuration.

**- Transition Time**

For a Multi-Stage Generating Resources, the time to complete a MSG Transition, as registered in the

Transition Matrix.

**- Transmission Access Charge (TAC)**

Access Charge

**- Transmission Access Charge Area (TAC Area)**

A portion of the CAISO Controlled Grid as identified in Section 3 of Schedule 3 of Appendix F.

**- Transmission Constraints**

Physical and operational limitations on the transfer of electric power through transmission facilities, which include Contingencies and Nomograms.

**- Transmission Constraints Enforcement Lists**

The post-Day-Ahead Market Transmission Constraints list and the pre-Day-Ahead Market Transmission Constraints list made available by the CAISO pursuant to Section 6.5.10. The post-Day-Ahead Market Transmission Constraints list consists of the Transmission Constraints enforced or not enforced in the Day-Ahead Market conducted on any given day. The pre-Day-Ahead Market Transmission Constraints list consists of the Transmission Constraints the CAISO plans to enforce or not enforce in the next day's Day-Ahead Market. These lists will identify and include definitions for all Transmission Constraints, including contingencies and nomograms. The definition of the Transmission Constraint includes the individual elements that constitute the Transmission Constraint. Both lists will each contain the same data elements and will provide: the flowgate constraints; transmission corridor constraints; the Nomogram constraints; and the list of Transmission Contingencies.

**- Transmission Control Agreement (TCA)**

The agreement between the CAISO and Participating TOs establishing the terms and conditions under which TOs will become Participating TOs and how the CAISO and each Participating TO will discharge their respective duties and responsibilities, as may be modified from time to time.

**- Transmission Exchange Agreement (TEA)**

The agreement among the CAISO, Western Area Power Administration and Pacific Gas and Electric Company establishing the terms and conditions of the treatment of Western Area Power Administration's interests in the Pacific AC Intertie, which agreement was originally accepted by FERC in Docket No. ER04-688.

**- Transmission Interface**

A CAISO-defined set of transmission facilities that comprise an important transmission corridor for Energy or capacity.

**- Transmission Losses**

Energy that is lost as a natural part of the process of transmitting Energy from Generation to a Point Of Delivery Or Withdrawal.

**- Transmission Losses Charge**

The charge for Transmission Losses based on the Marginal Cost of Losses at the Pricing Node.

**- Transmission Maintenance Coordination Committee**

The committee described in Section 7 of Appendix C to the Transmission Control Agreement.

**- Transmission Owner (TO)**

An entity owning transmission facilities or having firm contractual rights to use transmission facilities.

**- Transmission Ownership Right (TOR)**

The ownership or joint ownership right to transmission facilities within the CAISO Balancing Authority Area of a Non-Participating TO that has not executed the Transmission Control Agreement, which transmission facilities are not incorporated into the CAISO Controlled Grid.

**- Transmission Owner Tariff (TO Tariff)**

A tariff setting out a Participating TO's rates and charges for transmission access to the CAISO Controlled Grid and whose other terms and conditions are the same as those contained in the document referred to as the Transmission Owners Tariff approved by FERC as it may be amended from time to time.

**- Transmission Plan**

The report prepared by the CAISO on annual basis pursuant to Section 24, which documents the outcome of the Transmission Planning Process as defined in the Study Plan.

**- Transmission Planner**

A designation by NERC regarding responsibility to perform specified transmission planning functions in accordance with the NERC Reliability Standards.

**- Transmission Planning Process**

The process by which the CAISO assesses the CAISO Controlled Grid as set forth in Section 24.

**- Transmission Reliability Margin (TRM)**

A factor described in Appendix L-1.

**- Transmission Revenue Balancing Account (TRBA)**

A mechanism to be established by each Participating TO and Approved Project Sponsor that will ensure that all Transmission Revenue Credits and other credits specified in Sections 6, 8, and 13 of Appendix F, Schedule 3 and Section 11.4 of Appendix DD, flow through to transmission customers.

**- Transmission Revenue Credit**

The proceeds a Participating TO received from the CAISO for Wheeling service, plus (a) the revenues received from any LCRIG with respect to an LCRIF, unless FERC has approved an alternative mechanism to credit such revenues against the Participating TO's TRR, and (b) the shortfall or surplus resulting from any cost differences between Transmission Losses and Ancillary Service requirements associated with Existing Rights and the CAISO's rules and protocols, minus any Local Access Charge amounts paid for the use of the Local Transmission Facilities of a Non-Load-Serving Participating TO pursuant to Section 26.1 and Appendix F, Schedule 3, Section 13, and (c) EDAM recoverable revenue provided for in Section 26.2.

**- Transmission Revenue Requirement (TRR)**

The Transmission Revenue Requirement is the total annual authorized revenue requirements associated with (1) transmission facilities and Entitlements turned over to the Operational Control of the CAISO by a Participating TO or (2) transmission facilities that are not yet in operation, but have been approved under Section 24 and assigned to an Approved Project Sponsor. The costs of any transmission facility turned over to the Operational Control of the CAISO shall be fully included in the Participating TO's Transmission Revenue Requirement. The Transmission Revenue Requirement of a Participating TO includes the costs of transmission facilities and Entitlements and deducts Transmission Revenue Credits and credits for Standby Transmission Revenue and the transmission revenue expected to be actually received by the Participating TO for Existing Rights and Converted Rights.

**- Transmission Zone**

A study area determined in the Transmission Plan and used in the Transmission Planning Process and Interconnection Studies based on electrically proximate constraints, transmission, load, and supply

resources.

**- TRTC (Transmission Rights and Curtailment) Instructions**

Operational directives developed (i) between Existing Rights holders and holders of Converted Rights and the Participating TO, submitted to the CAISO by the Participating TO, unless otherwise agreed to by the Participating TO and the Existing Rights or Converted Rights holder, and (ii) by TOR holders, to facilitate the accommodation of Existing Rights, Converted Rights, and TORs in the CAISO Markets.

**- TRBA**

Transmission Revenue Balancing Account

**- Trial Operation**

The period during which Interconnection Customer is engaged in on-site test operations and commissioning of a Generating Unit prior to Commercial Operation.

**- TRM**

Transmission Reliability Margin

**- TRR**

Transmission Revenue Requirements

**- TRTC Instructions**

Transmission Rights and Curtailment Instructions

**- Trustee**

The trustee of the California Independent System Operator trust established by order of the California Public Utilities Commission on August 2, 1996 Decision No. 96-08-038 relating to the Ex Parte Interim Approval of a Loan Guarantee and Trust Mechanism to Fund the Development of an Independent System Operator (ISO) and a Power Exchange (PX) pursuant to Decision 95-12-063 as modified.

**- TTC**

Total Transfer Capability

**- UDC**

Utility Distribution Company

**- UDCOA**

Utility Distribution Company Operating Agreement

**- UDP**

Uninstructed Deviation Penalty

**- UPD Aggregation**

Two or more units scheduled by the same Scheduling Coordinator with the same Resource ID that are to be considered interchangeable for calculating the Uninstructed Deviation Penalty.

**- UFE**

Unaccounted for Energy

**- UIE**

Uninstructed Imbalance Energy

**- UIE Settlement Amount**

The payment due a Scheduling Coordinator for positive Uninstructed Imbalance Energy or the charge assessed on a Scheduling Coordinator for negative Uninstructed Imbalance Energy, calculated pursuant to Section 11.5.2.

**- Unaccounted For Energy (UFE)**

The difference in Energy, for each utility Service Area and Settlement Period, between the net Energy delivered into the utility Service Area, adjusted for utility Service Area Transmission Losses, and the total Measured Demand within the utility Service Area adjusted for distribution losses using Distribution System loss factors approved by the Local Regulatory Authority. This difference is attributable to meter measurement errors, power flow modeling errors, energy theft, statistical Load profile errors, and distribution loss deviations. For EIM Market Participants, the CAISO will calculate Unaccounted For Energy based on the EIM Entity Balancing Authority Area instead of the utility Service Area.

**- Unavailable Capacity**

Ancillary Services capacity that receives an AS Award and Self-Provided Ancillary Services capacity that was not dispatched by the CAISO but where all or a portion of the capacity was not available for Dispatch to provide Energy in Real-Time.

**- Uncertainty Award**

A resource's awards for meeting Uncertainty Requirements as described in Section 44.2.

**- Uncertainty Requirement**

Flexible ramping capability to meet the requirements as specified in Section 44.2.4.

**- Uncontrollable Force**

Any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm, flood, earthquake, explosion, any curtailment, order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities or any other cause beyond the reasonable control of the CAISO or Market Participant which could not be avoided through the exercise of Good Utility Practice.

**- Undeliverable Capacity**

Ancillary Services capacity that was dispatched by the CAISO to provide Energy but where a certain percentage or more of the Expected Energy was not provided in Real-Time, which percentage is determined as specified in the applicable Business Practice Manual.

**- Underfrequency Load Shedding (UFLS)**

Automatic Load Shedding, accomplished by the use of such devices as underfrequency relays, intended to arrest frequency decline and assure continued operation within anticipated islands.

**- Undispatchable Capacity**

Ancillary Services capacity that receives an AS Award and Self-Provided Ancillary Services capacity, or capacity committed in RUC, that is not available for use due to a derate or Outage of the resource. Undispatchable Capacity includes AS Awards for Spinning Reserve and Non-Spinning Reserve capacity that are not available for use due to Ramp Rate constraints (e.g., operational Ramping ability is lower than Operating Reserve Ramp Rate). For RUC Capacity, Undispatchable Capacity also includes RUC Capacity for which the resource does not have Bids to the Real-Time Market required of the RUC Award.

**- Under/Over Delivery Charge**

For a given Intertie transaction that has an Under/Over Delivery Quantity for a FMM interval, a charge equal to the product of the Under/Over Delivery Price and Under/Over Delivery Quantity.

**- Under/Over Delivery Price**

The price, as further specified in Section 11.31.2, a Scheduling Coordinator is charged for deviations between Energy awarded at an Intertie and Energy delivered at that Intertie.

**- Under/Over Delivery Quantity**

The quantity of Energy at an Intertie, as further specified in Section 11.31.1, the CAISO deems either under- or over-delivered relative to awarded Energy for purposes of charging a fee for such under- or over-deliveries.

**- Unified Planning Assumptions**

The assumptions to be developed pursuant to Section 24.3.1 and used, to the maximum extent possible, in performing technical studies identified in the Study Plan as part of the annual Transmission Planning Process.

**- Uninstructed Deviation**

A deviation from the resources' Dispatch Operating Point.

**- Uninstructed Deviation Penalty (UDP)**

The penalty as set forth in Section 11.23.

**- Uninstructed Imbalance Energy or UIE**

The portion of RTD Imbalance Energy that is not RTD Instructed Imbalance Energy.

**- Unit Commitment**

The process of determining which Generating Units will be committed (started) to meet Demand and provide Ancillary Services in the near future (e.g., the next Trading Day).

**- Unplanned Transmission Maintenance Outage**

A Maintenance Outage for transmission facilities that comprise the CAISO Controlled Grid that is requested by a Participating TO less than seven (7) days in advance of the start date for the Outage.

**- Unrated Governmental Entity**

A municipal utility or state or federal agency that does not hold an issuer, counterparty, or underlying credit rating by a Nationally Recognized Statistical Rating Organization.

**- Unrated Public/Private Corporation**

An investor-owned or privately held entity that does not hold an issuer, counterparty, or underlying credit rating by a Nationally Recognized Statistical Rating Organization.

**- Unrecovered Bid Cost Uplift Payment**

A payment made to Scheduling Coordinators for any Bid Costs in the IFM, RUC, and RTM not recovered

by IFM, RUC, or RTM Market Revenues as provided in Section 11.8.5.

**- Unsecured Credit Limit**

The level of credit established for a Market Participant that is not secured by any form of Financial Security, as provided for in Section 12.

**- Upgrade**

The required additions and modifications to the CAISO Controlled Grid and the Distribution System at or beyond the Point of Interconnection. Upgrades may be Network Upgrades or Distribution Upgrades. Upgrades do not include Interconnection Facilities.

**- Upper Economic Limit**

The highest operating level submitted in a resource's Energy Bid.

**- Upward Imbalance Reserves Requirement**

The extreme percentile of upward forecast error of the confidence interval described in Section 31.3.1.6.1.

**- Use-Limited Resource**

A resource demonstrated to be a Use-Limited Resource pursuant to Section 30.4.6.1.1.

**- Utility Distribution Company (UDC)**

An entity that owns a Distribution System for the delivery of Energy to and from the CAISO Controlled Grid, and that provides regulated retail electric service to Eligible Customers, as well as regulated procurement service to those End-Use Customers who are not yet eligible for direct access, or who choose not to arrange services through another retailer.

**- Utility Distribution Company Operating Agreement (UDCOA)**

An agreement between the CAISO and a Utility Distribution Company, a pro forma version of which is set forth in Appendix B.8.

**- Validation, Estimation and Editing**

The procedures set forth in Section 10 that the CAISO applies to Revenue Quality Meter Data in order to develop Settlement Quality Meter Data.

**- Variable Cost**

The cost associated with fuel cost and Variable Energy Operations and Maintenance Adders.

**- Variable Cost Option**

A method of calculation Default Energy Bids based on fuel costs and Variable Energy Operations and Maintenance Adders.

**- Variable Energy Operations and Maintenance Adder**

An adder to Minimum Load Costs and to Default Energy Bids calculated under the Variable Cost Option that is determined pursuant to Section 30.4.5.4.

**- Variable Energy Opportunity Costs**

An adder consisting of the estimated profits foregone by a Use-Limited Resource with a limitation on its Energy output that satisfies the definition of a Use-Limited Resource and applies for a time period that satisfies the requirements of Section 30.4.6.1, if the Use-Limited Resource had one less megawatt-hour of Energy output in the time period.

**- Variable Energy Resource**

A device for the production of electricity that is characterized by an Energy source that: (1) is renewable; (2) cannot be stored by the facility owner or operator; and (3) has variability that is beyond the control of the facility owner or operator.

**- Variable Minimum Load Operations and Maintenance Adder**

An adder to Minimum Load Costs that is determined pursuant to Section 30.4.5.4.

**- Variable Operations and Maintenance Adder**

A Variable Start-Up Operations and Maintenance Adder, Variable Minimum Load Operations and Maintenance Adder, or Variable Energy Operations and Maintenance Adder.

**- Variable Start-Up Operations and Maintenance Adder**

An adder to Start-Up costs that is determined pursuant to Section 30.4.5.4.

**- VEE**

Validation, Estimation and Editing

**- Verified CRR Source Quantity**

The MW amount corresponding to a verified CRR Source and the LSE or OBAALSE that submitted that verified CRR Source to the CAISO, as described in Section 36.8.3.4.

**- Virtual Award**

A Virtual Supply Award or a Virtual Demand Award.

**- Virtual Bid**

A Virtual Supply Bid or a Virtual Demand Bid.

**- Virtual Bid Curve**

The Virtual Bid component that indicates the prices and related quantities at which a Virtual Supply Bid or a Virtual Demand Bid is submitted. For a Virtual Supply Bid, the Virtual Bid Curve is a monotonically increasing staircase function, consisting of no more than ten (10) segments defined by eleven (11) pairs of MW operating points and $/MWh, which may be different for each Trading Hour of the applicable Virtual Bid time period. For a Virtual Demand Bid, the Virtual Bid Curve is a monotonically decreasing staircase function, consisting of no more than ten (10) segments defined by eleven (11) pairs of MW operating points and $/MWh, which may be different for each Trading Hour of the applicable Virtual Bid time period.

**- Virtual Bid Reference Price**

The price set forth in Section 12.8.2.

**- Virtual Bid Submission Charge**

A charge assessed to a Scheduling Coordinator for each submitted Virtual Bid segment that is passed to the IFM.

**- Virtual Demand Award**

The cleared Virtual Demand Bids in the IFM for a given hour.

**- Virtual Demand Bid**

A Bid submitted in the DAM that, if cleared in the IFM, represents a financial commitment for Energy at the LMP in the DAM and to receive credits as specified in Section 11.3.

**- Virtual Supply Award**

The cleared Virtual Supply Bids in the IFM for a given hour.

**- Virtual Supply Bid**

A Bid submitted in the DAM that, if cleared in the IFM, represents a commitment to receive revenues for Energy at the LMP in the DAM and to make payments as specified in Section 11.3.

**- Voltage Limits**

For all substation busses, the normal and post-Contingency Voltage Limits (kV). The bandwidth for normal Voltage Limits must fall within the bandwidth of the post-Contingency Voltage Limits. Special voltage limitations for abnormal operating conditions such as heavy or light Demand may be specified.

**- Voltage Support**

Services provided by Generating Units or other equipment such as shunt capacitors, static var compensators, or synchronous condensers that are required to maintain established grid voltage criteria. This service is required under normal or System Emergency conditions.

**- WAC**

Wheeling Access Charge

**- WECC**

Western Energy Coordinating Council

**- WEM Governing Body**

The body established under the CAISO bylaws, Article IV § 1, and the Charter for WEIM and EDAM Governance, with certain delegated responsibility to approve or recommend proposed amendments to this CAISO Tariff, among other things.

**- Weakly Peak Demand Forecast**

Demand Forecast of the highest Hourly Demand in a period beginning at the start of the hour ending 0100 on Sunday and ending at the end of the hour ending 2400 the following Saturday, in MW.

**- Western Electricity Coordinating Council (WECC)**

The Western Electricity Coordinating Council or its successor.

**- Western Interconnection**

The network of transmission lines embodied within the WECC region.

**- Western Path 15**

The Western Area Power Administration, Sierra Nevada Region (or its successor) with respect solely to its rights and interests in the Path 15 Upgrade.

**- Western Systems Coordinating Council (WSCC)**

The Western Systems Coordinating Council or its successor, the WECC.

**- Western Systems Power Pool**

An organization of participants in the electricity markets that have developed and maintain the Western Systems Power Pool Agreement.

**- Western Systems Power Pool Agreement**

A standardized power sales agreement developed and maintained as a FERC rate schedule by the Western Systems Power Pool.

**- Wheeling**

Wheeling Out or Wheeling Through.

**- Wheeling Access Charge (WAC)**

The charge assessed by the CAISO that is paid by a Scheduling Coordinator for Wheeling in accordance with Section 26.1. Wheeling Access Charges shall not apply for Wheeling under a bundled non-economy Energy coordination agreement of a Participating TO executed prior to July 9, 1996. The Wheeling Access Charge may consist of a Regional Wheeling Access Charge and a Local Wheeling Access Charge.

**- Wheeling Out**

Except for Existing Rights exercised under an Existing Contract in accordance with Section 16.1, the use of the CAISO Controlled Grid for the transmission of Energy from the CAISO Controlled Grid (which includes a Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area) for delivery to a point outside the transmission and Distribution System of a Participating TO.

**- Wheeling Through**

Except for Existing Rights exercised under an Existing Contract in accordance with Section 16.1, the use of the CAISO Controlled Grid for the transmission of Energy from outside the CAISO Controlled Grid for delivery to a point outside the transmission and Distribution System of a Participating TO.

**- Wheeling Through Priority**

A Wheeling Through Priority allows a Scheduling Coordinator to self-schedule Priority Wheeling Throughs during the term and hours of the priority up to the MW quantity of the priority and at the import and export Scheduling Points authorized under the priority.

**- Wheeling Through Priority Reseller**

An entity that resells, assigns, or otherwise transfers a monthly or long-term Wheeling Through Priority. A

Wheeling Through Priority Reseller can be the original priority rights holder or an assignee of a monthly Wheeling Through Priority.

**- Wholesale Customer**

A person wishing to purchase Energy, Imbalance Reserves, Reliability Capacity, and Ancillary Services at a Bulk Supply Point or a Scheduling Point for resale.

**- Wholesale Sales**

The sale of Energy, Imbalance Reserves, Reliability Capacity, and Ancillary Services at a Bulk Supply Point or a Scheduling Point for resale.

**- Withdrawal Penalty**

The penalty assessed by the CAISO to an Interconnection Customer that chooses to withdraw or is deemed withdrawn from the CAISO's interconnection queue or whose Generating Facility does not otherwise reach Commercial Operation. The calculation of the Withdrawal Penalty is set forth in Section 3.8.1 of the RIS.

**- WSCC**

Western Systems Coordinating Council

## Appendix B.1 Scheduling Coordinator Agreement

**THIS AGREEMENT** is made this ___ day of _____, _____ and is entered into, by and between:

(1) **[Full legal name]** having a registered or principal executive office at **[address]** (the "Scheduling Coordinator")

and

(2) **CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**, a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate (the "CAISO").

The Scheduling Coordinator and the CAISO are hereinafter referred to as the "Parties".

Whereas:

A. The Scheduling Coordinator has applied for certification by the CAISO under the certification procedure referred to in Section 4.5.1 of the CAISO Tariff.

B. The Scheduling Coordinator wishes to submit Bids for Energy and Ancillary Services on the CAISO Controlled Grid under the terms and conditions set forth in the CAISO Tariff.

**NOW IT IS HEREBY AGREED as follows:**

**1. Definitions and Interpretation.**

**1.1 Master Definitions Supplement.** Terms and expressions used in this Agreement shall have the same meanings as those contained in the Master Definitions Supplement to the CAISO Tariff.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) "includes" or "including" shall mean "including without limitation";

(e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a "person" includes any

individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) any reference to a day, week, month or year is to a calendar day, week, month or year; and

(k) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

**2. Covenant of the Scheduling Coordinator.**

**2.1 The Scheduling Coordinator agrees that:**

**2.1.1** The CAISO Tariff governs all aspects of bidding and scheduling of Energy and Ancillary Services on the CAISO Controlled Grid, including (without limitation), the financial and technical criteria for Scheduling Coordinators, bidding, Settlement, information reporting requirements and confidentiality restrictions;

**2.1.2** It will abide by, and will perform all of the obligations under the CAISO Tariff placed on Scheduling Coordinators in respect of all matters set forth therein including, without limitation, all matters relating to the bidding and scheduling of Energy and Ancillary Services on the CAISO Controlled Grid, obligations regarding Resource Adequacy Plans and other requirements of Section 40 of the CAISO Tariff applicable to Scheduling Coordinators for affected Load Serving Entities, ongoing obligations in respect of scheduling, Settlement, system security policy and procedures to be developed by the CAISO from time to time, billing and payments, confidentiality and dispute resolution;

**2.1.3** It shall ensure that each UDC, over whose Distribution System Energy or Ancillary Services are to be transmitted in accordance with Bids submitted to the CAISO by the Scheduling Coordinator, enters into a UDC Operating Agreement in accordance with Section 4.4 of the CAISO Tariff;

**2.1.4** It shall ensure that each Generator for which it submits Bids enters into a Participating Generator Agreement in accordance with Section 4.6 of the CAISO Tariff;

**2.1.5** It shall have the primary responsibility to the CAISO, as principal, for all Scheduling Coordinator payment obligations under the CAISO Tariff;

**2.1.6** Its status as a Scheduling Coordinator is at all times subject to the CAISO Tariff.

**3. Term and Termination.**

**3.1** This Agreement shall commence on the later of (a) _____ or (b) the date the Scheduling Coordinator is certified by the CAISO as a Scheduling Coordinator.

3.2 This Agreement may be terminated in accordance with the provisions of Section 4.5.4.4 and 4.5.4.5 of the CAISO Tariff; provided, however, that any outstanding financial right or obligation or any other right or obligation under the CAISO Tariff of the Scheduling Coordinator that may have arisen under this Agreement, and any provision of this Agreement necessary to give effect to such right or obligation, shall survive such termination until satisfied. The CAISO shall timely file any notice of termination with FERC, if this Agreement has been filed with FERC, or must

otherwise comply with the requirements of FERC rules regarding termination.

**4. Settlement Account.**

**4.1** The Scheduling Coordinator shall maintain at all times an account with a bank capable of Fedwire transfer and, at its option, may also maintain an account capable of ACH transfers, to which credits or debits shall be made in accordance with the billing and Settlement provisions of Section 11 of the CAISO Tariff. Such account shall be the account as notified by the Scheduling Coordinator to the CAISO from time to time by giving at least 20 days written notice before the new account becomes operational, together with all information necessary for the CAISO's processing of a change in that account.

**5. Agreement to be bound by CAISO Tariff.**

**5.1** The CAISO Tariff is incorporated herein and made a part hereof. In the event of a conflict between the terms and conditions of this Agreement and any other terms and conditions set forth in the CAISO Tariff, the terms and conditions of the CAISO Tariff shall prevail.

**6. Electronic Contracting.**

**6.1** All submitted applications, schedules, Bids, confirmations, changes to information on file with the CAISO and other communications conducted via electronic transfer (e.g. direct computer link, FTP file transfer, bulletin board, e-mail, facsimile or any other means established by the CAISO) shall have the same legal rights, responsibilities, obligations and other implications as set forth in the terms and conditions of the CAISO Tariff as if executed in written format.

**7. Penalties and Sanctions.**

**7.1** The Scheduling Coordinator shall be subject to all penalties made applicable to Scheduling Coordinators set forth in the CAISO Tariff.

**8. Costs.**

**8.1** The Scheduling Coordinator shall be responsible for all its costs incurred for the purpose of meeting its obligations under this Agreement.

**9. Dispute Resolution.**

**9.1** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement.

**10. Representation and Warranties.**

**10.1** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

**11. Liability.**

**11.1** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the Scheduling Coordinator and references to the CAISO Tariff

shall be read as references to this Agreement.

**12. Uncontrollable Forces.**

**12.1** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement.

**13. Miscellaneous.**

**13.1 Assignments**. Either Party may assign or transfer any or all of its rights and/or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest was an original Party to this Agreement.

**13.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 1. A Party must update the information in Schedule 1 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.

**13.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**13.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply, shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**13.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**13.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**13.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other

terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**13.8 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the Scheduling Coordinator shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**13.9 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF,** the Parties have caused this Agreement to be executed by their respective authorized officials.

**California Independent System Operator Corporation**

By: _____

Name: _____

Title: _____

Date: _____

**[Name of Scheduling Coordinator]**

By: _____

Name: _____

Title: _____

Date: _____

**SCHEDULE 1**

**NOTICES**

**[Section 7.1]**

**Scheduling Coordinator**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone: _____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**CAISO**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone: _____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

## Appendix B.2 Participating Generator Agreement

**THIS AGREEMENT** is dated this _____ day of _____, _____ and is entered into, by and between:

(1) **[Full Legal Name]** having its registered and principal place of business located at [Address] (the "Participating Generator");

and

(2) California Independent System Operator Corporation ("CAISO"), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The Participating Generator and the CAISO are hereinafter referred to as the "Parties".

Whereas:

**A.** The CAISO Tariff provides that the CAISO shall not accept Bids for Energy or Ancillary Services generated by any Generating Unit interconnected to the CAISO Controlled Grid, or to the Distribution System of a Participating TO or of a UDC otherwise than through a Scheduling Coordinator.

**B.** The CAISO Tariff further provides that the CAISO shall not be obliged to accept Bids relating to Generation from any Generating Unit interconnected to the CAISO Controlled Grid unless the relevant Generator undertakes in writing to the CAISO to comply with all applicable provisions of the CAISO Tariff.

**C.** The Participating Generator wishes to be able to submit Bids to the CAISO through a Scheduling Coordinator and, therefore, wishes to undertake to the CAISO that it will comply with the applicable provisions of the CAISO Tariff.

**D.** The Parties are entering into this Agreement in order to establish the terms and conditions on which the CAISO and the Participating Generator will discharge their respective duties and responsibilities under the CAISO Tariff.

**NOW THEREFORE,** in consideration of the mutual covenants set forth herein, **THE PARTIES AGREE** as follows:

### ARTICLE I

### DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** All terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement to the CAISO Tariff.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) “includes” or “including” shall mean “including without limitation”;

(e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a “person” includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) any reference to a day, week, month or year is to a calendar day, week, month or year; and

(k) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

## ARTICLE II

## ACKNOWLEDGEMENTS OF PARTICIPATING GENERATOR AND CAISO

**2.1 CAISO Responsibility.** The Parties acknowledge that the CAISO is responsible for the efficient use and reliable operation of the CAISO Controlled Grid consistent with achievement of planning and Operating Reserve criteria no less stringent than those established by the Western Electricity Coordinating Council and the North American Electric Reliability Corporation and further acknowledges that the CAISO may not be able to satisfy fully these responsibilities if the Participating Generator fails to fully comply with all of its obligations under this Agreement and the CAISO Tariff.

**2.2 Scope of Application to Parties.** The Participating Generator and CAISO acknowledge that all Generators, except those specified in Section 2.2.1 of this Agreement, wishing to submit Bids to the CAISO through a Scheduling Coordinator must sign this Agreement in accordance with Section 4.6 of the CAISO Tariff.

**2.2.1 Exemption for Certain Generators.** A Generator with an Existing QF Contract with a UDC is not required to sign a Participating Generator Agreement if: (a) the Generator sells all of its Energy (excluding any Energy consumed by auxiliary Load equipment electrically connected to that Generator’s Generating Unit at the same point) and Ancillary Services to the UDC; (b) the Generator sells any Energy through ”over the fence” arrangements as authorized under Section 218(b) of the California Public Utilities Code; or (c) the Generator employs landfill gas technology for the generation of electricity as authorized under 218(c) of the California Public Utilities Code.

## ARTICLE III

## TERM AND TERMINATION

**3.1 Effective Date**. This Agreement shall be effective as of the later of the date it is executed by the Parties or the date accepted for filing and made effective by FERC, if such FERC filing is required, and shall remain in full force and effect until terminated pursuant to Section 3.2 of this Agreement.

**3.2 Termination**

**3.2.1 Termination by CAISO.** Subject to Section 5.2, the CAISO may terminate this Agreement by giving written notice of termination in the event that the Participating Generator commits any material default under this Agreement and/or the CAISO Tariff which, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given, to the Participating Generator, written notice of the default, unless excused by reason of Uncontrollable Forces in accordance with Article X of this Agreement. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement was filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the filing of the notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within sixty (60) days after issuance of the notice of default; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if filed with FERC, or thirty (30) days after the date of the CAISO's notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**3.2.2 Termination by Participating Generator.** In the event that the Participating Generator no longer wishes to submit Bids and transmit Energy over the CAISO Controlled Grid, it may terminate this Agreement, on giving the CAISO not less than ninety (90) days written notice, provided, however, that in accordance with Section 4.1.3, the Participating Generator may modify Schedule 1 to eliminate Generating Units which it no longer owns or no longer has contractual entitlement to and such modification shall be effective upon receipt by the CAISO. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the request to file a notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within thirty (30) days of receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if such notice is required to be filed with FERC, or upon ninety (90) days after the CAISO's receipt of the Participating Generator's notice of termination, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

## ARTICLE IV

## GENERAL TERMS AND CONDITIONS

**4.1 Generating Units**

**4.1.1 Identification of Generating Units.** The Participating Generator has identified the Generating Units that it owns, operates or has a contractual entitlement to in Schedule 1, as required by Section 4.6.4 of the CAISO Tariff.

**4.1.2 Technical Characteristics.** The Participating Generator has provided to the CAISO in Schedule 1 the required information regarding the capacity and operating characteristics of each of the Generating Units listed in that schedule. Pursuant to Sections 8.9 and 8.10 of the CAISO Tariff, the CAISO may verify, inspect and test the capacity and operating characteristics provided in Schedule 1.

**4.1.3 Notification of Changes.** Sixty (60) days prior to changing any technical information in Schedule 1, the Participating Generator shall notify the CAISO of the proposed changes. Pursuant to Sections 8.9 and 8.10 of the CAISO Tariff, the CAISO may verify, inspect and test the capacity and operating characteristics provided in the revised Schedule 1. The CAISO shall post on the CAISO Website a schedule showing, for at least one year in advance: (i) the proposed dates on which the CAISO's Master File will be updated, which dates shall occur at least every three months; (ii) the dates on which the information contained in the revised Master File will become effective; and (iii) the deadlines by which changed technical information must be submitted to the CAISO in order to be tested and included in the next scheduled update of the CAISO's Master File. Unless the Participating Generator fails to test at the values in the proposed change(s), the change will become effective upon the effective date for the next scheduled update of the Master File, provided the Participating Generator submits the changed information by the applicable deadline and is tested by the deadline. Subject to such notification this Agreement shall not apply to any generating unit identified in Schedule 1 which the Participating Generator no longer owns or no longer has contractual entitlement to.

**4.2 Agreement Subject to CAISO Tariff.** The Parties will comply with all applicable provisions of the CAISO Tariff. This Agreement shall be subject to the CAISO Tariff which shall be deemed to be incorporated herein.

**4.3 Obligations Relating to Ancillary Services**

**4.3.1 Submission of Bids.** When the Scheduling Coordinator on behalf of the Participating Generator submits a Bid, the Participating Generator will, by the operation of this Section 4.3.1, warrant to the CAISO that it has the capability to provide that service in accordance with the CAISO Tariff and that it will comply with CAISO Dispatch Instructions for the provision of the service in accordance with the CAISO Tariff.

**4.3.2 Certification.** The Participating Generator shall not use a Scheduling Coordinator to submit a Bid for the provision of an Ancillary Service or submit a Submission to Self-Provide an Ancillary Service unless the Scheduling Coordinator serving that Participating Generator is in possession of a current certificate pursuant to Sections 8.3.4 and 8.4 of the CAISO Tariff.

**4.4 Obligations relating to Major Incidents**

**4.4.1 Major Incident Reports.** The Participating Generator shall promptly provide such information as the CAISO may reasonably request in relation to major incidents, in accordance with Section 4.6.7.3 of the CAISO Tariff.

## ARTICLE V

## PENALTIES AND SANCTIONS

**5.1 Penalties.** If the Participating Generator fails to comply with any provisions of this Agreement, the CAISO shall be entitled to impose penalties and sanctions on the Participating Generator. No penalties or sanctions may be imposed under this Agreement unless a Schedule or CAISO Tariff provision providing for such penalties or sanctions has first been filed with and made effective by FERC. Nothing in the Agreement, with the exception of the provisions relating to the CAISO ADR Procedures, shall be construed as waiving the rights of the Participating Generator to oppose or protest any penalty proposed by the CAISO to the FERC or the specific imposition by the CAISO

of any FERC-approved penalty on the Participating Generator.

**5.2 Corrective Measures.** If the Participating Generator fails to meet or maintain the requirements set forth in this Agreement and/or the CAISO Tariff, the CAISO shall be permitted to take any of the measures, contained or referenced in the CAISO Tariff, which the CAISO deems to be necessary to correct the situation.

## ARTICLE VI

## COSTS

**6.1 Operating and Maintenance Costs**. The Participating Generator shall be responsible for all its costs incurred in connection with operating and maintaining the Generating Units identified in Schedule 1 for the purpose of meeting its obligations under this Agreement.

## ARTICLE VII

## DISPUTE RESOLUTION

**7.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the Participating Generator and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VIII

## REPRESENTATIONS AND WARRANTIES

**8.1 Representation and Warranties.** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

**8.2 Necessary Approvals.** The Participating Generator represents that all necessary leases, approvals, permits, licenses, easements, rights of way or access to install, own and/or operate its Generating Units have been or will be obtained by the Participating Generator prior to the effective date of this Agreement.

## ARTICLE IX

## LIABILITY

**9.1 Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the Participating Generator and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE X

## UNCONTROLLABLE FORCES

**10.1 Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the Participating Generator and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE XI

## MISCELLANEOUS

**11.1 Assignments.** Either Party may assign or transfer any or all of its rights and/or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest was an original Party to this Agreement.

**11.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the Participating Generator and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 3. A Party must update the information in Schedule 3 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.

**11.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**11.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply, shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**11.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**11.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**11.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**11.8 [NOT USED]**

**11.9 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the Participating Generator shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**11.10 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF,** the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By:_____

Name:_____

Title:_____

Date:_____

**[NAME OF PARTICIPATING GENERATOR]**

By:_____

Name:_____

Title:_____

Date:_____

**[The following page is a placeholder for Schedule 1, Section 1.]**

**[The following page is a placeholder for Schedule 1, Section 2.]**

**SCHEDULE 2**

**CAISO IMPOSED PENALTIES AND SANCTIONS**

**Section 5.1**

**TO BE INSERTED UPON FERC APPROVAL**

**SCHEDULE 3**

**NOTICES**

**Section 11.2**

**Participating Generator**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**CAISO**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

## Appendix B.3 Net Scheduled Participating Generator Agreement

**THIS AGREEMENT** is dated this _____ day of _____, _____ and is entered into, by and between:

(1) **[Full Legal Name]**, having its registered and principal place of business located at **[Address]** (the "Participating Generator");

and

(2) **California Independent System Operator Corporation** ("CAISO"), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The Participating Generator and the CAISO are hereinafter referred to as the "Parties".

**Whereas:**

**A.** The CAISO Tariff provides that the CAISO shall not accept Bids for Energy or Ancillary Services generated by any Generating Unit interconnected to the CAISO Controlled Grid, or to the Distribution System of a Participating TO or of a UDC or MSS Operator otherwise than through a Scheduling Coordinator.

**B.** The CAISO Tariff further provides that the CAISO shall not be obliged to accept Bids relating to Generation from any Generating Unit interconnected to the CAISO Controlled Grid unless the relevant Generator undertakes in writing to the CAISO to comply with all applicable provisions of the CAISO Tariff.

**C.** The Participating Generator wishes to be able to submit Bids, from a Net Scheduled Generating Unit to the CAISO through a Scheduling Coordinator and, therefore, wishes to undertake to the CAISO that it will comply with the applicable provisions of the CAISO Tariff, except as otherwise specified in this Agreement.

**D.** It is the intent of the Parties that this Agreement will harmonize the special operational characteristics of the Participating Generator's Net Scheduled Generating Unit with the CAISO's grid operation function. Nothing in this Agreement is intended to limit or restrict the rights of the Participating Generator under Section 4.6.3.2 of the CAISO Tariff.

**E.** The Parties are entering into this Agreement in order to establish the terms and conditions on which the CAISO and the Participating Generator will discharge their respective duties and responsibilities under the CAISO Tariff.

**NOW THEREFORE,** in consideration of the mutual covenants set forth herein, **THE PARTIES AGREE** as follows:

### ARTICLE I

### DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** Unless defined in this Agreement, all capitalized terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement to the CAISO Tariff.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency, except as expressly provided otherwise in this Agreement;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) "includes" or "including" shall mean "including without limitation";

(e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) any reference to a day, week, month or year is to a calendar day, week, month or year; and

(k) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

## ARTICLE II

## ACKNOWLEDGEMENTS OF PARTICIPATING GENERATOR AND CAISO

**2.1 CAISO Responsibility.** The Parties acknowledge that the CAISO is responsible for the efficient use and reliable operation of the CAISO Controlled Grid consistent with achievement of planning and Operating Reserve criteria no less stringent than those established by the Western Electricity Coordinating Council and the North American Electric Reliability Corporation and further acknowledges that the CAISO may not be able to satisfy fully these responsibilities if the Participating Generator fails to fully comply with all of its obligations under this Agreement.

**2.2 Scope of Application to Parties.** The Participating Generator and CAISO acknowledge that all Qualifying Facility Generators (except those specified in Section 2.2.1 of this Agreement) and CHP Resources wishing to submit Bids to the CAISO through a Scheduling Coordinator shall first execute this Agreement or the standard Participating Generator Agreement applicable to any Generator. The Parties acknowledge that execution of this Agreement by the Participating Generator satisfies the requirement set forth in Section 4.6 of the CAISO Tariff.

**2.2.1 Exemption for Certain Generators.** A Generator with an Existing QF Contract with a UDC is not required to sign a Net Scheduled Participating Generator Agreement if: (a) the Generator sells all of its Energy (excluding any Energy consumed by auxiliary Load equipment electrically connected to the QF at the same point) and Ancillary Services to the UDC; (b) the Generator sells any Energy through "over the fence" arrangements as authorized under Section 218(b) of the California Public Utilities Code; or (c) the Generator employs landfill gas technology for the generation of electricity as authorized under 218(c) of the California Public Utilities Code.

## ARTICLE III

## TERM AND TERMINATION

**3.1 Effective Date.** This Agreement shall remain in full force and effect until terminated pursuant to Section 3.2 of this Agreement and shall be effective as of the later of: (1) the date the Agreement is executed by the Parties; or (2) where the Participating Generator is a party to an existing Participating Generator Agreement, the date upon which termination of the existing Participating Generator Agreement is accepted for filing and made effective by FERC, if such FERC filing is required; or (3) where the Participating Generator is a party to an existing Participating Generator Agreement and this Agreement is required to be filed with FERC for acceptance, the later of the date upon which termination of the existing Participating Generator Agreement is accepted for filing and made effective by FERC, or the date this Agreement is accepted for filing and made effective by FERC.

**3.2 Termination**

**3.2.1 Termination by CAISO.** Subject to Section 5.2, the CAISO may terminate this Agreement by giving written notice of termination in the event that the Participating Generator commits any material default under this Agreement and/or the CAISO Tariff which, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given, to the Participating Generator, written notice of the default, unless excused by reason of Uncontrollable Forces in accordance with Article X of this Agreement. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement was filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the filing of the notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within sixty (60) days after issuance of the notice of default; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if filed with FERC, or thirty (30) days after the date of the CAISO's notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**3.2.2 Termination by Participating Generator.** In the event that the Participating Generator no longer wishes to submit Bids and transmit Energy or provide Ancillary Services through a Scheduling Coordinator over the CAISO Controlled Grid, it may terminate this Agreement, on giving the CAISO not less than ninety (90) days written notice, provided, however, that in accordance with Section 4.1.3, the Participating Generator may modify Schedule 1 to eliminate generating resources which it no longer owns or no longer has contractual entitlement to and such modification shall be effective upon receipt by the CAISO. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the request to file a notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within thirty (30) days of receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This

Agreement shall terminate upon acceptance by FERC of such a notice of termination, if such notice is required to be filed with FERC, or upon ninety (90) days after the CAISO's receipt of the Participating Generator's notice of termination, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

## ARTICLE IV

## GENERAL TERMS AND CONDITIONS

### 4.1 Net Scheduled Generating Units

**4.1.1 Identification of Net Scheduled Generating Unit.** The Participating Generator has identified the Net Scheduled Generating Unit that it owns, operates or has a contractual entitlement to, in Schedule 1, as required by Section 4.6.4 of the CAISO Tariff.

**4.1.2 Technical Characteristics.** The Participating Generator shall provide to the CAISO the required information regarding operating contacts, rated capacity, and operating characteristics of the Net Scheduled Generating Unit. Pursuant to Sections 8.9 and 8.10 of the CAISO Tariff, and the Existing QF Contract or Amended QF Contract, if any, associated with that Net Scheduled Generating Unit, the CAISO may verify, inspect and test the capacity and operating characteristics of the Net Scheduled Generating Unit. The performance of such inspection or test shall be conducted at a time mutually agreed upon by the Parties, which agreement shall not unreasonably be withheld.

**4.1.3 Notification of Changes.** Sixty (60) days prior to changing any technical information in Schedule 1, the Participating Generator shall notify the CAISO of the proposed changes. Pursuant to Sections 8.9 and 8.10 of the CAISO Tariff, the CAISO may verify, inspect and test the capacity and operating characteristics; provided that the performance of such inspection or test is conducted at a time mutually agreed upon by the Parties, which agreement shall not unreasonably be withheld. The CAISO shall post on the CAISO Website a schedule showing, for at least one year in advance: (i) the proposed dates on which the CAISO's Master File will be updated, which dates shall occur at least every three months; (ii) the dates on which the information contained in the revised Master File will become effective; and (iii) the deadlines by which changed technical information must be submitted to the CAISO in order to be tested and included in the next scheduled update of the CAISO's Master File. Unless the Participating Generator fails to test at the values in the proposed change(s), the change will become effective upon the effective date for the next scheduled update of the Master File, provided the Participating Generator submits the changed information by the applicable deadline. Subject to such notification this Agreement shall not apply to any Net Scheduled Generating Unit identified in Schedule 1 which the Participating Generator no longer owns nor has contractual entitlement.

**4.2 Agreement Subject to CAISO Tariff.** The Parties will comply with all applicable provisions of the CAISO Tariff except as expressly provided in Sections 4.2.1 through 4.2.5 of this Agreement.

**4.2.1 Net Generation Metering.** Notwithstanding Section 10.1.3 of the CAISO Tariff, the Participating Generator may net the value for the Generation produced by each Net Scheduled Generating Unit listed in Schedule 1 and the value for the Demand of the Self-provided Load that is (i) served by the Net Scheduled Generating Unit and (ii) electrically located on the same side of the Point of Demarcation.

**4.2.2 Meter and Telemetry Location.** The Participating Generator may satisfy the provisions of the CAISO Tariff for the installation of meters and telemetry by installing at the Point of Demarcation meters and telemetry for the purpose of recording the net impact of the Net Scheduled Generating Unit upon the CAISO Controlled Grid; provided that the installed meters and telemetry satisfy the technical functional and performance requirements for meters and telemetry set forth in the CAISO Tariff.

**4.2.3 Scheduling, Billing and Settlement.** For scheduling, billing, and settlement purposes regarding Net Scheduled Generating Unit Self-provided Load, measurements shall be made at the Point of Demarcation.

**4.2.4 Operating Limitations.** Net Scheduled Generating Unit operating limitations shall be set forth in Schedule 1 of this Agreement, the resource data template used for transmittal of Participating Generator technical data to the CAISO pursuant to the CAISO Tariff, or as otherwise mutually agreed to by the Parties.

**4.2.5 Limitations on CAISO Dispatch Instructions and Operating Instructions.** The CAISO will not knowingly issue a Dispatch Instruction or Operating Instruction that: (1) requires the Participating Generator to reduce its Generation below the delineated minimum operating limit, other than in a System Emergency; (2) conflicts with operating limitations provided by the Participating Generator; or (3) results in damage to the Participating Generator's equipment, provided that any such equipment limitation has been provided to the CAISO and incorporated in the Participating Generator's operating limitations to the CAISO. If the Participating Generator: (1) receives a Schedule which requires operation below the minimum operating limit, and (2) deviates from that Schedule to continue to operate at the minimum operating limit, it will not be subject to any penalties or sanctions as a result of operating at the minimum operating limit. The Participating Generator's consequences for deviating from Schedules in Real-Time will be governed by the CAISO Tariff.

**4.3 Obligations Relating to Ancillary Services**

**4.3.1 Submission of Bids.** When the Scheduling Coordinator on behalf of the Participating Generator submits a Bid for Ancillary Services, the Participating Generator will, by the operation of this Section 4.3.1, warrant to the CAISO that it has the capability to provide that service in accordance with the CAISO Tariff and that it will comply with CAISO Dispatch Instructions for the provision of the service in accordance with the CAISO Tariff.

**4.3.2 Certification.** The Participating Generator shall not use a Scheduling Coordinator to submit a Bid for the provision of an Ancillary Service or submit a Submission to Self-Provide an Ancillary Service unless the Scheduling Coordinator serving that Participating Generator is in possession of a current certificate pursuant to Sections 8.3.4 and 8.4 of the CAISO Tariff.

**4.4 Obligations relating to Major Incidents**

**4.4.1 Major Incident Reports.** The Participating Generator shall promptly provide such information as the CAISO may reasonably request in relation to major incidents, in accordance with Section 4.6.7.3 of the CAISO Tariff.

**4.5 Dispatch and Curtailment.** The CAISO shall only dispatch or curtail a Net Scheduled Generating Unit of the Participating Generator: (a) to the extent the Participating Generator bids Energy or Ancillary Services from the Net Scheduled Generating Unit into the CAISO's markets or the Energy is otherwise available to the CAISO under Section 40 or 43A of the CAISO Tariff; or (b) if the CAISO must dispatch or curtail the Net Scheduled Generating Unit in order to respond to an existing or imminent System Emergency or condition that would compromise CAISO Balancing Authority Area integrity or reliability as provided in Sections 7 and 7.6.1 of the CAISO Tariff.

**4.6 Information to Be Provided by Participating Generator.** The Participating Generator shall provide to the CAISO (a) a copy of any existing power purchase agreement, if any, with a UDC or MSS for the Net Scheduled Generating Unit listed in Schedule 1, and (b) a copy or a summary of the primary terms of any agreement for standby service with a UDC or MSS Operator, a statement that the Net Scheduled Generating Unit is taking standby service pursuant to UDC

tariff, or a statement that the Self-provided Load shall be curtailed concurrently with any Outage of the Generation serving that Self-provided Load in an amount sufficient to cover that Outage. The Participating Generator shall notify the CAISO promptly of any change in the status of any of the foregoing.

## ARTICLE V

## PENALTIES AND SANCTIONS

**5.1 Penalties.** If the Participating Generator fails to comply with any provisions of this Agreement, the CAISO shall be entitled to impose penalties and sanctions on the Participating Generator. No penalties or sanctions may be imposed under this Agreement unless a Schedule or CAISO Tariff provision providing for such penalties or sanctions has first been filed with and made effective by FERC. Nothing in the Agreement, with the exception of the provisions relating to the CAISO ADR Procedures, shall be construed as waiving the rights of the Participating Generator to oppose or protest any penalty proposed by the CAISO to the FERC or the specific imposition by the CAISO of any FERC-approved penalty on the Participating Generator.

**5.2 Corrective Measures.** If the Participating Generator fails to meet or maintain the requirements set forth in this Agreement and/or in the CAISO Tariff as limited by the provisions of this Agreement, the CAISO shall be permitted to take any of the measures, contained or referenced in the CAISO Tariff, which the CAISO deems to be necessary to correct the situation.

## ARTICLE VI

## COSTS

**6.1 Operating and Maintenance Costs.** The Participating Generator shall be responsible for all its costs incurred in connection with operating and maintaining the Net Scheduled Generating Unit identified in Schedule 1 for the purpose of meeting its obligations under this Agreement.

## ARTICLE VII

## DISPUTE RESOLUTION

**7.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the Participating Generator and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VIII

## REPRESENTATIONS AND WARRANTIES

**8.1 Representation and Warranties.** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

**8.2 Necessary Approvals.** The Participating Generator represents that all necessary leases, approvals, permits, licenses, easements, rights of way or access to install, own and/or operate its Net Scheduled Generating Unit have been or will be obtained by the Participating Generator prior to the effective date of this Agreement.

**8.3 Specific Warranty.** The Participating Generator represents and warrants that: (1) the Net Scheduled Generating Unit listed in Schedule 1 is (a) a Qualifying Facility or is operated as an integral part of a Qualifying Facility, or (b) is a CHP Resource, and (2) (a) the Self-provided Load of the Participating Generator that is served by the Net Scheduled Generating Unit either has, and continues to have through the term of this Agreement, standby service from a UDC or MSS Operator under terms approved by the Local Regulatory Authority or the Federal Energy Regulatory Commission, as applicable, or (b) the Self-provided Load shall be curtailed concurrently with any Outage of the Generation serving that Self-provided Load in an amount sufficient to cover that Outage.

## ARTICLE IX

## LIABILITY

**9.1 Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the Participating Generator and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE X

## UNCONTROLLABLE FORCES

**10.1 Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the Participating Generator and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE XI

## MISCELLANEOUS

**11.1 Assignments.** Either Party may assign or transfer any or all of its rights and/or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest was an original Party to this Agreement.

**11.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the Participating Generator and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 3. A Party must update the information in Schedule 3 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.

**11.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**11.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply, shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**11.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**11.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**11.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**11.8 [NOT USED]**

**11.9 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. If the amendment does not require FERC approval, the amendment will be filed with FERC for information. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the Participating Generator shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**11.10 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**11.11 Rights Reserved.** Execution of this Agreement does not deprive the Participating Generator of any unexpressed legal right, either under law or under an existing power purchase agreement.

**IN WITNESS WHEREOF,** the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By:_____

Name:_____

Title:_____

Date:_____

**[NAME OF PARTICIPATING GENERATOR]**

By:_____

Name:_____

Title:_____

Date:_____

**[The following page is a placeholder for Schedule 1, Section 1.]**

**SCHEDULE 2**

**CAISO IMPOSED PENALTIES AND SANCTIONS**

**[Section 5.1]**

**TO BE INSERTED UPON FERC APPROVAL**

**SCHEDULE 3**

**NOTICES**

**(Section 11.2)**

**Participating Generator**

Name of Primary

Representative:_____

Title:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**CAISO**

Name of Primary

Representative:_____

Title:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

## Appendix B.4 Participating Load Agreement

**THIS AGREEMENT** is dated this _____ day of _____, _____ and is entered into, by and between:

(1) [Full legal name], having its registered and principal place of business located at **[legal address]** (the "Participating Load");

and

(2) **California Independent System Operator Corporation** ("CAISO"), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The Participating Load and the CAISO are hereinafter referred to as the "Parties".

**Whereas:**

A. The CAISO Tariff provides that the CAISO shall not accept Bids for Ancillary Services from a Load interconnected to the CAISO Controlled Grid, or to the Distribution System of a Participating TO or of a UDC otherwise than through a Scheduling Coordinator.

B. The CAISO Tariff further provides that Curtailable Demand services shall be provided by Participating Loads.

C. The Participating Load desires to provide Curtailable Demand services, intends to submit Bids to the CAISO through a Scheduling Coordinator and, therefore, represents to the CAISO that it will comply with the applicable provisions of the CAISO Tariff.

D. The Parties are entering into this Agreement in order to establish the terms and conditions on which the CAISO and the Participating Load will discharge their respective duties and responsibilities under the CAISO Tariff.

NOW THEREFORE, in consideration of the mutual covenants set forth herein, THE PARTIES AGREE as follows:

### ARTICLE I

### DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** All terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement to the CAISO Tariff.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) "includes" or "including" shall mean "including without limitation";

(e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) any reference to a day, week, month or year is to a calendar day, week, month or year; and

(k) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

## ARTICLE II

## ACKNOWLEDGEMENTS OF PARTICIPATING LOAD AND CAISO

**2.1 CAISO Responsibility.** The Parties acknowledge that the CAISO is responsible for the efficient use and reliable operation of the CAISO Controlled Grid consistent with achievement of planning and Operating Reserve criteria no less stringent than those established by the Western Electricity Coordinating Council and the North American Electric Reliability Corporation and further acknowledge that the CAISO may not be able to satisfy fully these responsibilities if the Participating Load fails to fully comply with all of its obligations under this Agreement and the CAISO Tariff.

**2.2 Scope of Application to Parties.** The Participating Load and CAISO acknowledge that all Loads which desire to submit Bids to the CAISO through a Scheduling Coordinator must be included in Schedule 1 to this Agreement. The Participating Load warrants that it owns, operates, or has sufficient contractual entitlement to provide Curtailable Demand services from such Loads in accordance with the CAISO Tariff.

## ARTICLE III

## TERM AND TERMINATION

**3.1 Effective Date.** This Agreement shall be effective as of the later of the date it is executed by the Parties or the date accepted for filing and made effective by FERC, if such FERC filing is required, and shall remain in full force and effect until terminated pursuant to Section 3.2 of this Agreement.

**3.2 Termination**

**3.2.1 Termination by CAISO.** Subject to Section 5.2, the CAISO may terminate this Agreement by giving written notice of termination in the event that the Participating Load commits any material default under this Agreement and/or the CAISO Tariff which, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given, to the Participating Load, written notice of the default, unless excused by reason of Uncontrollable Forces in accordance with Article X of this Agreement. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement was filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the filing of the notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within sixty (60) days after issuance of the notice of default; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if filed with FERC, or thirty (30) days after the date of the CAISO's notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**3.2.2 Termination by Participating Load.** In the event that the Participating Load no longer wishes to submit Bids or transmit Energy over the CAISO Controlled Grid, it may terminate this Agreement, on giving the CAISO not less than ninety (90) days written notice, provided, however, that in accordance with Section 4.4, the Participating Load may modify Schedule 1 to eliminate Load which it no longer provides for and such modification shall be effective upon receipt by the CAISO. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the request to file a notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within thirty (30) days of receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if such notice is required to be filed with FERC, or upon ninety (90) days after the CAISO's receipt of the Participating Load's notice of termination, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

## ARTICLE IV

## GENERAL TERMS AND CONDITIONS

### 4.1 Technical Characteristics.

**4.1.1 Curtailable Demand.** As required by Sections 8.3.4 and 8.4 of the CAISO Tariff, the Participating Load shall provide the CAISO with all technical and operational information requested in Schedule 1 for each Curtailable Demand that it owns, operates, or has a contractual entitlement to. For those Loads designated by the Participating Load as providing Curtailable Demand, Schedule 1 requires the Participating Load to indicate in Schedule 1 whether the Load can be scheduled or bid as Non-Spinning Reserve. Pursuant to Sections 8.9 and 8.10 of the CAISO Tariff, the CAISO may verify, inspect and test the capacity and operating characteristics provided in Schedule 1 for Curtailable Demands.

### 4.2 Metering and Communication.

**4.2.1 Curtailable Demand.** Pursuant to Sections 8.4.5 and 8.4.6 of the CAISO Tariff, Curtailable Demand that is scheduled or bid as Non-Spinning Reserve is required to comply with the CAISO's communication and metering requirements.

**4.3 UDC Interruptible Load Programs.** Due to the CAISO's reliance on interruptible Loads to relieve System Emergencies and its contractual relationship with each UDC, the CAISO will not accept, and the Participating Load shall not submit Bids from interruptible Loads which are subject to curtailment criteria established under existing retail tariffs, except under such conditions as may be specified in the CAISO Tariff.

**4.4 Notification of Changes.** Sixty (60) days prior to changing any technical information in Schedule 1, the Participating Load shall notify the CAISO of the proposed change(s). Pursuant to Sections 8.9 and 8.10 of the CAISO Tariff, the CAISO may verify, inspect and test the capacity and operating characteristics provided in the revised Schedule 1. The CAISO shall post on the CAISO Website a schedule showing, for at least one year in advance: (i) the proposed dates on which the CAISO's Master File will be updated; (ii) the dates on which the information contained in the revised Master File will become effective; and (iii) the deadlines by which changed technical information must be submitted to the CAISO in order to be tested and included in the next scheduled update of the CAISO's Master File. Unless the Load fails to test at the values in the proposed change(s), the Participating Load's proposed change(s) will become effective upon the effective date for the next scheduled update of the Master File, provided that the Participating Load submits the changed information by the applicable deadline and is tested by the deadline. Subject to such notification this Agreement shall not apply to any Loads identified in Schedule 1 which the Participating Load no longer owns or no longer has a contractual entitlement to.

**4.5 Agreement Subject to CAISO Tariff.** The Parties will comply with all applicable provisions of the CAISO Tariff. This Agreement shall be subject to the CAISO Tariff, which shall be deemed to be incorporated herein.

**4.6 Obligations Relating to Ancillary Services**

**4.6.1 Submission of Bids and Self-provided Schedules.** When the Scheduling Coordinator on behalf of the Participating Load submits a Bid, the Participating Load will, by the operation of this Section 4.6.1, warrant to the CAISO that it has the capability to provide that service in accordance with the CAISO Tariff and that it will comply with CAISO Dispatch Instructions for the provision of the service in accordance with the CAISO Tariff.

**4.6.2 Certification.** The Participating Load shall not use a Scheduling Coordinator to submit a Bid, for the provision of an Ancillary Service or submit a Submission to Self-Provide an Ancillary Service unless the Scheduling Coordinator serving that Participating Load is in possession of a current Ancillary Service certificate pursuant to Sections 8.3.4 and 8.4 of the CAISO Tariff.

**4.7 Obligations relating to Major Incidents.** The Participating Load shall promptly provide such information as the CAISO may reasonably require in relation to the CAISO's investigations of operating situations or events, or for the CAISO's reporting to the authorities such as the FERC, California Public Utilities Commission, Western Electricity Coordinating Council, or North American Electric Reliability Corporation.

## ARTICLE V

## PENALTIES AND SANCTIONS

**5.1 Penalties.** If the Participating Load fails to comply with any provisions of this Agreement, the CAISO shall be entitled to impose penalties and sanctions on the Participating Load, including the penalties set forth in Sections 8.9.7 and 8.10.7 of the CAISO Tariff. No penalties or sanctions may be imposed under this Agreement unless a Schedule or CAISO Tariff provision providing for such penalties or sanctions has first been filed with and made effective by FERC. Nothing in this Agreement, with the exception of the provisions relating to the CAISO ADR Procedures, shall be construed as waiving the rights of the Participating Load to oppose or protest any penalty proposed by the CAISO to the FERC or the specific imposition by the CAISO of any FERC-

approved penalty on the Participating Load.

**5.2 Corrective Measures.** If the Participating Load fails to meet or maintain the requirements set forth in this Agreement and/or the CAISO Tariff, the CAISO shall be permitted to take any of the measures, contained or referenced in the CAISO Tariff, which the CAISO deems to be necessary to correct the situation.

## ARTICLE VI

## COSTS

**6.1 Operating and Maintenance Costs.** The Participating Load shall be responsible for all its costs incurred in meeting its obligations under this Agreement for the Load identified in Schedule 1.

## ARTICLE VII

## DISPUTE RESOLUTION

**7.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the Participating Load and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VIII

## REPRESENTATIONS AND WARRANTIES

**8.1 Representation and Warranties.** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

**8.2 Necessary Approvals.** The Participating Load represents that all necessary leases, approvals, permits, licenses, easements, rights of way or access to install, own and/or operate its Load have been or will be obtained by the Participating Load prior to the effective date of this Agreement.

## ARTICLE IX

## LIABILITY

**9.1 Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the Participating Load and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE X

## UNCONTROLLABLE FORCES

**10.1 Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the Participating Load and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE XI

## MISCELLANEOUS

**11.1 Assignments.** Either Party may assign or transfer any or all of its rights and/or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest was an original Party to this Agreement.

**11.2 Notices.** Any notice, demand, or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the Participating Load and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 3. A Party must update the information in Schedule 3 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.

**11.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**11.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply, shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**11.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**11.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**11.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**11.8 [NOT USED]**

**11.9 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to the Federal Energy Regulatory Commission for a change in the rates, terms and conditions under section 205 of the Federal Power Act and pursuant to the Commission's Rules and Regulations promulgated thereunder, and the Participating Load shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**11.10 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF,** the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By:_____

Name:_____

Title:_____

Date:_____

**Participating Load**

By:_____

Name:_____

Title:_____

Date:_____

**SCHEDULE 1**

Technical Characteristics of Individual or Aggregated Loads Participating under Participating Load Agreement

| Name of ALMDS Facility or Individual Load | CAISO Resource ID | Present Scheduling Point (i.e. PNode, LAP, or Custom LAP) | Capacity Available [1] (MW) | Minimum Operating Level[1] (MW) | Maximum Operating Level[1,2] (MW) | Decremental Ramp Rate[1,2] (MW/min) | Ancillary Service Provider (Yes or No) | Participant in UDC Interruptible Program (Yes or No) | Limitations[3] (Yes or No) |
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[Footnote 1: Current effective values for purposes of bidding to provide Energy and/or Ancillary Services in CAISO markets may differ from those set forth in this Schedule 1, depending on the results of CAISO performance testing pursuant to Sections 8.9 and 8.10 of the CAISO Tariff.]
[Footnote 2: These values are subject to certification by the CAISO in accordance with Section 4.6.2 of the Participating Load Agreement.]
[Footnote 3: If "Yes," limitations should be specified in the Participating Load's implementation plan.]

**SCHEDULE 2**

**CAISO IMPOSED PENALTIES AND SANCTIONS**

**[Section 5.1]**

**TO BE INSERTED UPON FERC APPROVAL**

**SCHEDULE 3**

**NOTICES**

**(Section 11.2)**

**Participating Load**

Name of Primary

Representative:_____

Title:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**CAISO**

Name of Primary

Representative:_____

Title:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

## Appendix B.5 Dynamic Scheduling Agreement for Scheduling Coordinators

**THIS AGREEMENT** is dated this _____ day of _____, _____ and is entered into, by and between:

(1) **[Full Legal Name]** having its registered and principal place of business located at **[Address]** (the "Scheduling Coordinator");

and

(2) **California Independent System Operator Corporation** ("CAISO"), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The Scheduling Coordinator and the CAISO are hereinafter referred to as the "Parties."

**Whereas:**

A. The CAISO Tariff provides that a Scheduling Coordinator may submit Dynamic Schedules to the CAISO from System Resources.

B. The Scheduling Coordinator is currently Scheduling Coordinator for a System Resource associated with a power plant(s) interconnected in a Balancing Authority Area other than the CAISO Balancing Authority Area (the "Host Balancing Authority Area").

C. The Scheduling Coordinator wishes to implement and operate a dynamic functionality that allows bidding dynamically from a System Resource into the CAISO Balancing Authority Area from the Host Balancing Authority Area and, therefore, wishes to undertake to the CAISO that it will comply with the applicable provisions of the CAISO Tariff.

D. The Parties are entering into this Agreement in order to establish the terms and conditions on which the CAISO and the Scheduling Coordinator will discharge their respective duties and responsibilities under the CAISO Tariff.

NOW THEREFORE, in consideration of the mutual covenants set forth herein, THE PARTIES AGREE as follows:

## ARTICLE I

## DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** All terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement to the CAISO Tariff.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) "includes" or "including" shall mean "including without limitation";

(e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) any reference to a day, week, month or year is to a calendar day, week, month or year; and

(k) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

## ARTICLE II

## ACKNOWLEDGEMENTS OF Scheduling Coordinator AND CAISO

**2.1 CAISO Responsibility.** The Parties acknowledge that the CAISO is responsible for the efficient use and reliable operation of the CAISO Controlled Grid consistent with achievement of planning and Operating Reserve criteria no less stringent than those established by the Western Electricity Coordinating Council and the North American Electric Reliability Corporation and further acknowledges that the CAISO may not be able to satisfy fully these responsibilities if the Scheduling Coordinator fails to fully comply with all of its obligations under this Agreement and the CAISO Tariff.

## ARTICLE III

## TERM AND TERMINATION

**3.1 Effective Date.** This Agreement shall be effective as of the date set forth above, unless accepted for filing and made effective by FERC on some other date, if FERC filing is required, and shall remain in full force and effect until terminated pursuant to Section 3.2 of this Agreement.

**3.2 Termination**

**3.2.1 Termination by CAISO.** Subject to Section 3.2.2, the CAISO may terminate this Agreement by giving written notice of termination in the event that the CAISO's agreement with the Host Balancing Authority has terminated or the Scheduling Coordinator commits any material default under this Agreement and/or the CAISO Tariff which, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given, to the Scheduling Coordinator, written notice of the default, unless excused by reason of Uncontrollable Forces in accordance with Article X of this Agreement. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the filing of the notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within sixty (60) days after issuance of the notice of default; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if filed with FERC, or thirty (30) days after the date of the CAISO's notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**3.2.2 Limitation on CAISO Termination.** Notwithstanding the provisions of Section 3.2.1, in the event of noncompliance with the provisions of the CAISO Dynamic Scheduling Protocol, set forth in Appendix M of the CAISO Tariff, the CAISO shall have the right to suspend or terminate this Agreement after three (3) instances of noncompliance. In the event that the CAISO determines that the Scheduling Coordinator has failed to comply with the CAISO Dynamic Scheduling Protocol, the CAISO will provide written notice to that effect to the Scheduling Coordinator, and the Scheduling Coordinator shall have seven (7) days to correct the non-compliant condition(s). If the CAISO determines that Scheduling Coordinator has not corrected the non-compliant condition(s) within seven (7) days after the third notice of noncompliance, the CAISO may, by further written notice to the Scheduling Coordinator, suspend or terminate this Agreement and the existing functionality and arrangements described herein pursuant to Section 3.2.1, but without providing for the additional thirty (30)-day cure period otherwise provided in Section 3.2.1.

**3.2.3 Termination by Scheduling Coordinator.** In the event that the Scheduling Coordinator no longer wishes to submit dynamic Bids to the CAISO, it may terminate this Agreement, on giving the CAISO not less than ninety (90) days written notice. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the request to file a notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within thirty (30) days of receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if such notice is required to be filed with FERC, or upon ninety (90) days after the CAISO's receipt of the Scheduling Coordinator's notice of termination, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

## ARTICLE IV

## GENERAL TERMS AND CONDITIONS

### 4.1 Dynamic Scheduling Requirements and Obligations

**4.1.1** The dynamic functionality established under this Agreement shall be implemented and operated in accordance with CAISO Tariff Section 4.5.4.3, other applicable provisions of the CAISO Tariff, all applicable NERC and WECC policies, requirements, and provisions, and the CAISO Dynamic Scheduling Protocol.

**4.1.2** The maximum allowable dynamic power transfer (in MW) from the Scheduling Coordinator's System Resource(s) and from the generating resources from which it intends to dynamically schedule exports shall be as set forth in Schedule 1 and will be referred to as "PMax" in all CAISO scheduling and control systems.

**4.1.3** The Scheduling Coordinator warrants that the power plant(s) listed in Schedule 1 is interconnected within the Host Balancing Authority Area specified in Schedule 1, placing both the plant(s) as well as the associated System Resource under the operational jurisdiction of the Host Balancing Authority.

**4.1.4** The CAISO Interties associated with the System Resource(s) and the generating resources from which it intends to dynamically schedule exports are set forth in Schedule 1. The Scheduling Coordinator may request, and the CAISO may agree, at its sole discretion, to change the foregoing CAISO Intertie association, subject to any limitations set forth in the CAISO Dynamic Scheduling Protocol.

**4.1.5** Dynamic functionalities implemented between the CAISO and the Scheduling Coordinator may provide for imports from the System Resource(s) listed in Schedule 1 to the CAISO Balancing Authority Area or for exports from generating resources listed in Schedule 1 from the CAISO Balancing Authority Area.

**4.1.6 Identification of System Resources.** The Scheduling Coordinator has identified the System Resources and the generating resources from which it intends to dynamically schedule exports that it represents in Schedule 1.

**4.1.7 Notification of Changes.** Sixty (60) days prior to changing any technical information in Schedule 1, the Scheduling Coordinator shall notify the CAISO of the proposed changes. Pursuant to Sections 8.9 and 8.10 of the CAISO Tariff, the CAISO may verify, inspect and test the capacity and operating characteristics provided in the revised Schedule 1. Unless the Scheduling Coordinator fails to test at the values in the proposed change(s), the change will become effective upon the effective date for the next scheduled update of the CAISO's Master File, provided the Scheduling Coordinator submits the changed information by the applicable deadline and is tested by the deadline.

**4.2 Agreement Subject to CAISO Tariff.** The Parties will comply with all applicable provisions of the CAISO Tariff, including Sections 4.5.4.3 and 8.4.5 and the Dynamic Scheduling Protocol in Appendix M. This Agreement shall be subject to the CAISO Tariff, which shall be deemed to be incorporated herein.

### 4.3 Obligations Relating to Ancillary Services

**4.3.1 Submission of Bids.** When the Scheduling Coordinator submits a Bid for Ancillary Services, the Scheduling Coordinator will, by the operation of this Section 4.3.1, warrant to the CAISO that it has the capability to provide that service in accordance with the CAISO Tariff and that it will

comply with CAISO Dispatch Instructions for the provision of the service in accordance with the CAISO Tariff.

## ARTICLE V

## PENALTIES AND SANCTIONS

**5.1 Uninstructed Deviations.** Deviations from Dynamic Schedules of Energy will be subject to Uninstructed Deviation Penalties pursuant to Section 11.23 and related provisions of the CAISO Tariff.

**5.2 General.** The Scheduling Coordinator shall be subject to all penalties made applicable to dynamic imports from System Resources set forth in the CAISO Tariff.

## ARTICLE VI

## COSTS

**6.1 Operating and Maintenance Costs.** The Scheduling Coordinator shall be responsible for all its costs incurred in connection with dynamic scheduling and compliance by the System Resources and the generating resources from which it intends to dynamically schedule exports identified in Schedule 1 for the purpose of meeting its obligations under this Agreement.

## ARTICLE VII

## DISPUTE RESOLUTION

**7.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VIII

## REPRESENTATIONS AND WARRANTIES

**8.1 Representation and Warranties.** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

## ARTICLE IX

## LIABILITY

**9.1 Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE X

## UNCONTROLLABLE FORCES

**10.1 Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE XI

## MISCELLANEOUS

**11.1 Assignments.** Either Party may assign or transfer any or all of its rights and/or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest was an original Party to this Agreement.

**11.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 2. A Party must update the information in Schedule 2 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.

**11.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**11.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply, shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**11.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**11.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**11.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public

interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**11.8 [NOT USED]**

**11.9 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the Scheduling Coordinator shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**11.10 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF,** the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By:_____

Name:_____

Title:_____

Date:_____

**NAME OF SCHEDULING COORDINATOR**

By:_____

Name:_____

Title:_____

Date:_____

**SCHEDULE 1**

**SYSTEM RESOURCES AND BALANCING AUTHORITY AREA INFORMATION**

**[Sections 4.1.2, 4.1.3, 4.1.4, 4.1.5, 4.1.7]**

**Description of System Resource(s), including Associated Power Plants and PMax Values, for Dynamic Imports to the CAISO Balancing Authority Area:**

**CAISO Intertie:**

**Host Balancing Authority Area:**

**Intermediary Balancing Authority Areas:**

**Description of Generating Resource(s), including Associated Power Plants and PMax Values, for Dynamic Exports from the CAISO Balancing Authority Area:**

**CAISO Intertie:**

**Receiving Balancing Authority Area:**

**Intermediary Balancing Authority Areas:**

**SCHEDULE 2**

**NOTICES**

**[Section 11.2]**

**Scheduling Coordinator**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**CAISO**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

## Appendix B.6 MSA for Metered Entities (MSA CAISOME)

**THIS AGREEMENT** is dated this ___ day of _____, ____ and is entered into, by and between:

(1) **[Full legal name]** having its registered and principal place of business located at **[Address]** (the "CAISO Metered Entity");

and

(2) **California Independent System Operator Corporation** ("CAISO"), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The CAISO Metered Entity and the CAISO are hereinafter referred to as the "Parties".

**Whereas:**

A. Section 10 of the CAISO Tariff requires the CAISO to establish meter service agreements with CAISO Metered Entities for the collection and transfer of Meter Data.

B. Section 10 of the CAISO Tariff further provides that a CAISO Metered Entity shall certify its revenue quality meters and Section 10 provides that CAISO Metered Entities shall make Meter Data available to RMDAPS.

C. The Parties are entering into this Agreement in order to establish the terms and conditions upon which the CAISO and the CAISO Metered Entity shall discharge their respective duties and responsibilities pursuant to this Agreement, and the CAISO Tariff.

D. All obligations and responsibilities included in this Agreement may be set forth in further detail in the CAISO Tariff.

**NOW THEREFORE,** in consideration of the mutual covenants set forth herein, **THE PARTIES AGREE** as follows:

### ARTICLE I

### DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** Unless defined in Section 1.2 of this Agreement, all terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement to the CAISO Tariff.

**1.2 Special Definitions for this Agreement.** In this Agreement, the following words and expressions shall have the meanings set forth below:

**1.2.1 "Authorized Users"** means users authorized by the CAISO Metered Entity to access the Meter Data of that CAISO Metered Entity held by the CAISO.

**1.3 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) "includes" or "including" shall mean "including without limitation";

(e) references to a section, article or schedule shall mean a section, article or a schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) any reference to a day, week, month or year is to a calendar day, week, month or year;

(k) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement; and

(l) references to the CAISO Tariff and other CAISO Documents shall be interpreted in accordance with any exceptions or exemptions to such as may have been granted by the CAISO.

## ARTICLE II

## TERM AND TERMINATION

**2.1 Effective Date.** This Agreement shall be effective as of the later of the date of execution of this Agreement, or the date it is accepted and made effective by FERC, if such FERC filing is required, and shall remain in full force and effect until terminated by operation of law or pursuant to Section 2.2 of this Agreement.

**2.2 Termination**

**2.2.1 Termination by CAISO.** Subject to Section 4.2, the CAISO may terminate this Agreement by giving written notice of termination in the event that the CAISO Metered Entity commits any default under this Agreement and/or the CAISO Tariff which, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given it written notice of the default, unless excused by reason of Uncontrollable Force in accordance with Section 14.1 of the CAISO Tariff. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement was filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the filing of the notice of termination is made after the preconditions for termination have been met, and the

CAISO files the notice of termination within sixty (60) days after issuance of the notice of default; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such notice of termination, if filed with FERC, or thirty (30) days after the date of the CAISO's notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**2.2.2 Termination by CAISO Metered Entity.** In the event that the CAISO Metered Entity wishes to terminate this Agreement, the CAISO Metered Entity shall give the CAISO not less than ninety (90) days written notice. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the request to file a notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within thirty(30) days of receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such notice of termination, if such notice is required to be filed with FERC, or upon ninety (90) days after the CAISO's receipt of the CAISO Metered Entity's notice of termination, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

## ARTICLE III

## GENERAL TERMS AND CONDITIONS

**3.1 Agreement Subject to CAISO Tariff.** This Agreement shall be subject to the provisions of the CAISO Tariff which shall be deemed to be incorporated herein, as the same may be changed or superseded from time to time. The Parties agree that they will comply with the provisions of Section 10 and all other applicable provisions of the CAISO Tariff and the applicable Business Practice Manual implementing Section 10 of the CAISO Tariff.

**3.2 Obligations and Rights of the CAISO Metered Entity.**

**3.2.1 Submission of Meter Data through SQMDS and RMDAPS.** The CAISO Metered Entity agrees to make available to the CAISO through SQMDS and RMDAPS its Meter Data in accordance with the CAISO Tariff. The CAISO's requirements regarding the frequency with which it requires Meter Data to be made available to it through SQMDS and RMDAPS by the CAISO Metered Entity are referred to in the CAISO Tariff.

**3.2.2 Meter Information.** The CAISO Metered Entity shall provide in the format prescribed by Schedule 1 to this Agreement the required information with respect to all of its meters used to provide Meter Data to the CAISO. The CAISO Metered Entity must immediately notify the CAISO of any changes to the information provided to the CAISO in accordance with this Section 3.2.2 and provide the CAISO with any information in relation to such change as reasonably requested by the CAISO. The CAISO Metered Entity shall have the right to modify Schedule 1, which modification shall not constitute an amendment to this Agreement. Such modification shall be effective upon receipt of notice by the CAISO.

**3.2.3 Transformer and Line Loss Correction Factors.** If the CAISO Metered Entity uses low voltage side metering or metering connected to the Distribution System, it shall use the CAISO approved Transformer and Line Loss Correction Factor referred to in the CAISO Tariff and in the applicable Business Practice Manual.

**3.2.4 Rights to Access Metering Facilities.** The CAISO Metered Entity shall use its best efforts to procure any rights necessary for the CAISO to access all Metering Facilities of the CAISO Metered Entity to fulfill its obligations under the CAISO Tariff and its obligations under this Agreement. If, after using its best efforts, the CAISO Metered Entity is unable to provide the CAISO with such access rights, the CAISO Metered Entity shall ensure that one of its employees is a CAISO Authorized Inspector and such employee undertakes, at the CAISO's request, the certification, testing, inspection and/or auditing of those Metering Facilities in accordance with the procedures established pursuant to the CAISO Tariff, including the requirement to complete and provide to the CAISO all necessary documentation. The CAISO acknowledges that it will not be prevented from fulfilling its obligations under the CAISO Tariff or this Agreement by reason of the fact that it is provided with escorted access to the Metering Facilities of the CAISO Metered Entity.

**3.2.5 Security and Validation Procedures.** The security measures and the validation, editing and estimation procedures that the CAISO will apply to Meter Data made available to the CAISO by the CAISO Metered Entity shall be as referred to in the CAISO Tariff.

**3.3 Obligations and Rights of the CAISO.**

**3.3.1 Direct Polling of Revenue Quality Meter Data.** The CAISO shall allow the Scheduling Coordinator representing the CAISO Metered Entity and all Authorized Users to directly poll CAISO certified meters for the Meter Data relating to the CAISO Metered Entity in accordance with the procedures referred to in the CAISO Tariff and the applicable Business Practice Manual.

**3.3.2 CAISO as Third-Party Beneficiary.** The CAISO shall be a third-party beneficiary to any future agreement between the CAISO Metered Entity and any other party relating to the Metering Facilities of the CAISO Metered Entity for the purpose of granting the CAISO access to any relevant information, records and facilities as needed by the CAISO to fulfill its obligations under the CAISO Tariff and its obligations under this Agreement.

**3.3.3 Remote and Local Access to Metering Data.** The CAISO shall provide the CAISO Metered Entity any password or other requirements necessary for the CAISO Metered Entity to access its Meter Data remotely or locally at the meter.

**3.4 Exemptions Granted by the CAISO.** Any exemptions provided for under the CAISO Tariff that are granted by the CAISO shall be set forth in Schedule 2 of this Agreement. Any amendment or addition to Schedule 2 shall not constitute an amendment to this Agreement.

## ARTICLE IV

## PENALTIES AND SANCTIONS

**4.1 Penalties.** If a CAISO Metered Entity provides inaccurate or incorrect Meter Data or fraudulent Meter Data to the CAISO, the CAISO shall be entitled to impose penalties and sanctions, including but not limited to suspension of trading rights following 14 days written notice to the CAISO Metered Entity. Fraudulent Meter Data means any Meter Data provided to the CAISO by the CAISO Metered Entity that it knows to be false, incorrect or incomplete at the time it provided that Meter Data to the CAISO. All penalties and sanctions shall be set forth in Schedule 4 Part A to this Agreement or in the CAISO Tariff. No penalties or sanctions, including suspension of trading rights, may be imposed under this Agreement unless a Schedule or CAISO Tariff provision providing for such penalties or sanctions has first been filed with and made effective by FERC. Nothing in the Agreement, with the exception of the provisions relating to the CAISO ADR Procedures, shall be construed as waiving the rights of the CAISO Metered Entity to oppose or protest any penalty proposed by the CAISO to the FERC or the specific imposition by the CAISO of any FERC-approved penalty on the CAISO Metered Entity.

**4.2 Corrective Measures.** If the CAISO Metered Entity fails to meet or maintain the standards for Metering Facilities or comply with the audit or test procedures as referred to in the CAISO Tariff, the CAISO shall be permitted to take corrective measures. The corrective measures and rights the CAISO may exercise upon any failure by any entity to meet those standards for Metering Facilities or to comply with the audit or test procedures shall be set forth in Schedule 4 Part B or in the CAISO Tariff.

## ARTICLE V

## ACCESS TO METERING DATA

**5.1 Authorized Users.** In addition to the persons referred to in the CAISO Tariff, including the CAISO Metered Entity and the relevant Scheduling Coordinator, as being entitled to access Meter Data on SQMDS, the CAISO Metered Entity may set forth in Schedule 3 of this Agreement any additional Authorized Users that shall be entitled to access the CAISO Metered Entity's Settlement Quality Meter Data held by the CAISO. The CAISO Metered Entity shall include in Schedule 3 as Authorized Users the relevant UDCs and TOs. The CAISO shall provide the Authorized Users with any password or other information necessary to access the CAISO Metered Entity's Settlement Quality Metered Data held by the CAISO on SQMDS. Any amendment or addition to Schedule 3 shall not constitute an amendment to this Agreement.

## ARTICLE VI

## COSTS

**6.1 Certification, Inspection and Auditing of Meters.** The CAISO Metered Entity shall be responsible for all reasonable costs incurred by the CAISO or a CAISO Authorized Inspector in connection with them carrying out the certification, inspection, testing or auditing of the meters identified in Schedule 1 from which the CAISO Metered Entity provides Meter Data to the CAISO. The CAISO or CAISO Authorized Inspector will furnish the CAISO Metered Entity, upon request, an itemized bill for such costs.

## ARTICLE VII

## DISPUTE RESOLUTION

**7.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that all reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the CAISO Metered Entities and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VIII

## REPRESENTATIONS AND WARRANTIES

**8.1 Representations and Warranties.** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

**8.2 Necessary Approvals.** The CAISO Metered Entity represents that all necessary approvals, permits, licenses, easements, right of way or access to install, own and operate its meters have been or will be obtained by the CAISO Metered Entity prior to the effective date of this Agreement.

## ARTICLE IX

## LIABILITY AND INDEMNIFICATION

**9.1 Liability and Indemnification.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the CAISO Metered Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE X

## UNCONTROLLABLE FORCES

**10.1 Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as references to the CAISO Metered Entity and all references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE XI

## MISCELLANEOUS

**11.1 Assignments.** Either Party may assign or transfer any or all of its rights and/or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest was an original Party to this Agreement.

**11.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the CAISO Metered Entity and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 5. A Party must update the information in Schedule 5 as information changes. Such changes shall not constitute an amendment to this Agreement.

**11.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**11.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under and for all purposes shall be governed by and construed in accordance with the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**11.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**11.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**11.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**11.8 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that are subject to FERC approval shall not take effect until FERC has accepted such amendments for filing and has made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the CAISO Metered Entity shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**11.9 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF,** the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By:_____

Name:_____

Title:_____

Date:_____

**Full legal name of CAISO Metered Entity**

By:_____

Name:_____

Title:_____

Date:_____

**SCHEDULE 1**

**METER INFORMATION**

**[Section 3.2.2]**

Resource ID/Meter Number:_____

Name of the Facility:_____

Location (address if applicable):_____

Point of Delivery to the CAISO:_____

Controlled Grid for Meter Compensation:_____

**SCHEDULE 2**

**EXEMPTIONS FROM METERING STANDARDS AND OTHER REQUIREMENTS**

**[Section 3.4]**

**SCHEDULE 3**

**ACCESS TO METER DATA**

**AND**

**AUTHORIZED USERS**

**[Section 5.1]**

List authorized users and any restrictions or limitations placed on them.

**SCHEDULE 4**

**PART A**

**CAISO IMPOSED PENALTIES AND SANCTIONS**

**[Section 4.1]**

**TO BE INSERTED UPON FERC APPROVAL**

**PART B**

**CORRECTIVE MEASURES**

**[Section 4.2]**

**TO BE DEVELOPED**

**SCHEDULE 5**

**NOTICE**

**[Section 11.2]**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**CAISO**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

## Appendix B.7 Meter Service Agreement for SCs (MSA SC)

**THIS AGREEMENT** is dated this ___ day of _____, ____ and is entered into, by and between:

(1) **[Full legal name]** having its registered and principal place of business located at **[Address]** (the "SC");

and

(2) **California Independent System Operator Corporation** ("CAISO"), a California non-profit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The Scheduling Coordinator and the CAISO are hereinafter referred to as the "Parties".

**Whereas:**

A. Section 10 of the CAISO Tariff requires the CAISO to enter into a meter service agreement with each Scheduling Coordinator responsible for providing Settlement Quality Meter Data for Scheduling Coordinator Metered Entities that it represents.

B. Section 10 of the CAISO Tariff requires Scheduling Coordinators to ensure that the Scheduling Coordinator Metered Entities that they represent adhere to the requirements and standards for Metering Facilities set forth in Section 10.3.

C. The Parties are entering into this Agreement in order to establish the terms and conditions upon which the CAISO and the Scheduling Coordinator shall discharge their respective duties and responsibilities pursuant to this Agreement and the CAISO Tariff.

D. All obligations and responsibilities included in this Agreement may be set forth in further detail in the CAISO Tariff.

**NOW THEREFORE,** in consideration of the mutual covenants set forth herein, **THE PARTIES AGREE** as follows:

## ARTICLE I

## DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** All terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement to the CAISO Tariff.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) "includes" or "including" shall mean "including without limitation";

(e) references to a section, article or schedule shall mean a section, article or a schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) any reference to a day, week, month or year is to a calendar day, week, month or year;

(k) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement; and

(l) references to the CAISO Tariff and other CAISO Documents shall be interpreted in accordance with any exceptions or exemptions to such as may have been granted by the CAISO.

## ARTICLE II

## TERM AND TERMINATION

**2.1 Effective Date.** This Agreement shall be effective as of the later of the date of execution of this Agreement, or the date it is accepted and made effective by FERC, if such FERC filing is required, and shall remain in full force and effect until terminated by operation of law or pursuant to Section 2.2 of this Agreement.

**2.2 Termination**

**2.2.1 Termination by CAISO.** Subject to Section 4.2 the CAISO may terminate this Agreement by giving written notice of termination in the event that the Scheduling Coordinator commits any default under this Agreement and/or the CAISO Tariff which, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given it written notice of the default, unless excused by reason of Uncontrollable Force in accordance with Section 14.1 of the CAISO Tariff. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement was filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the filing of the notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within sixty (60) days after issuance of the notice of default; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such notice of termination, if filed with FERC, or thirty (30) days after the date of the CAISO's notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**2.2.2 Termination by SC.** In the event that the Scheduling Coordinator wishes to terminate this Agreement, the Scheduling Coordinator shall give the CAISO not less than ninety (90) days written notice. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the request to file a notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within thirty (30) days of receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if such notice is required to be filed with FERC, or upon ninety (90) days after the CAISO's receipt of the Scheduling Coordinator's notice of termination, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

## ARTICLE III

## GENERAL TERMS AND CONDITIONS

**3.1 Agreement Subject to CAISO Tariff.** This Agreement shall be subject to the provisions of the CAISO Tariff which shall be deemed to be incorporated herein, as the same may be changed or superseded from time to time. The Parties agree that they will comply with the provisions of Section 10 and all other applicable provisions of the CAISO Tariff.

**3.2 Requirements and Standards for Metering Facilities.** The Scheduling Coordinator shall ensure that the Scheduling Coordinator Metered Entities it represents shall adhere to the requirements and standards for Metering Facilities of its Local Regulatory Authority. If that Scheduling Coordinator Metered Entity's Local Regulatory Authority has not set any requirements or standards in relation to any of its Metering Facilities, the Scheduling Coordinator representing that Scheduling Coordinator Metered Entity must comply with the requirements and standards for those Metering Facilities as set forth in this Agreement and the CAISO Tariff.

**3.3 Obligations and Rights of the Scheduling Coordinator.**

**3.3.1 Meter Information.** If the CAISO so requests, the Scheduling Coordinator shall provide in the format prescribed by Schedule 1 to this Agreement the required information with respect to the meters for all Scheduling Coordinator Metered Entities it represents including the reference to

specific distribution loss factors or methodology it proposes to use as determined by the relevant UDC and approved by the relevant Local Regulatory Authority. The Scheduling Coordinator must immediately notify the CAISO of any changes to the information provided to the CAISO in accordance with this Section 3.3.1 and provide the CAISO with any information in relation to such change as reasonably requested by the CAISO. Any amendments or additions to Schedule 1 shall not constitute an amendment to this Agreement.

**3.3.2 Assistance and Cooperation of Scheduling Coordinator.** The Scheduling Coordinator shall ensure that the CAISO shall, upon reasonable notice, have access to the entire Metering Facilities of the Scheduling Coordinator Metered Entities that it represents from the meter data server to the Metering Facilities in order to inspect, test or otherwise audit those Metering Facilities.

**3.3.3 Profiled and Cumulative Meter Data.** The Scheduling Coordinator shall provide the CAISO with any applicable Approved Load Profile for each Scheduling Coordinator Metered Entity that it represents that is load profiled in accordance with the CAISO Tariff. The Scheduling Coordinator shall provide a copy of the Approved Load Profile applicable to each Scheduling Coordinator Metered Entity (if any) that it represents, which shall be set forth in Schedule 2 to this Agreement. The Scheduling Coordinator must immediately notify the CAISO of any changes to the Approved Load Profiles referred to in Schedule 2 to this Agreement and provide the CAISO with a copy of the new or amended Approved Load Profile. Such change to Schedule 2 shall not constitute an amendment to this Agreement.

**3.3.4 Security and Validation Procedures.** The Scheduling Coordinator shall apply to the Meter Data of the Scheduling Coordinator Metered Entities that it represents the security and validation procedures prescribed by the relevant Local Regulatory Authority. If the relevant Local Regulatory Authority has not prescribed any such procedures, the Scheduling Coordinator shall apply the procedures set forth in the CAISO Tariff. Meter Data submitted by a Scheduling Coordinator for Scheduling Coordinator Metered Entities shall conform to these standards unless the CAISO has, at its discretion, exempted the Scheduling Coordinator from these standards.

**3.4 Obligations and Rights of the CAISO.**

**3.4.1 Exemptions Granted by CAISO.** Any exemptions provided for under the CAISO Tariff that are granted by the CAISO shall be set forth in Schedule 3 to this Agreement. Any amendment or addition to Schedule 3 shall not constitute an amendment to this Agreement.

**3.4.2 CAISO as Third-Party Beneficiary.** The CAISO shall be a third-party beneficiary to the agreements between the Scheduling Coordinator and Scheduling Coordinator Metered Entities that the Scheduling Coordinator represents. Such agreements shall grant the CAISO access to any relevant information, records and facilities of the Scheduling Coordinator Metered Entity as needed for the CAISO to fulfill its obligations under this Agreement and the CAISO Tariff.

## ARTICLE IV

## PENALTIES & SANCTIONS

**4.1 Penalties.** If the Scheduling Coordinator provides inaccurate or incorrect Settlement Quality Meter Data or fraudulent Meter Data to the CAISO, the CAISO shall be entitled to impose penalties and sanctions, including but not limited to suspension of trading rights following 14 days written notice to the Scheduling Coordinator. Fraudulent Meter Data means any data provided to the CAISO by the Scheduling Coordinator that the Scheduling Coordinator knows to be false, incorrect or incomplete at the time it provided it to the CAISO. All penalties and sanctions shall be set forth in Schedule 4 Part A or in the CAISO Tariff. No penalties or sanctions, including the suspension of trading rights, may be imposed under this Agreement unless a Schedule or CAISO Tariff provision providing for such penalties or sanctions has first been filed with and made effective by FERC. Nothing in the Agreement, with the exception of the provisions relating to the CAISO ADR Procedures, shall be construed as waiving the rights of the Scheduling Coordinator to oppose or protest any penalty proposed by the CAISO to the FERC or the specific imposition by the CAISO of any FERC-approved penalty on the Scheduling Coordinator. The CAISO will provide notice to all Scheduling Coordinators of any filing of proposed penalties or sanctions with the FERC. The CAISO shall notify the Scheduling Coordinator of those approved penalties within 14 days of their approval by the FERC.

**4.2 Corrective Measures.** If the Scheduling Coordinator or any Scheduling Coordinator Metered Entity that it represents fails to meet or maintain the standards for Metering Facilities or comply with the audit or test procedures as set forth in the CAISO Tariff, the CAISO shall be permitted to take corrective measures. Details of the corrective measures and rights the CAISO may exercise upon any failure by any entity to meet those standards for Metering Facilities or to comply with the audit or test procedures shall be set forth in Schedule 4 Part B or in the CAISO Tariff.

## ARTICLE V

## ACCESS TO METER DATA

**5.1 Third Parties.** Third parties that are authorized by the Scheduling Coordinator to access the Meter Data of a Scheduling Coordinator Metered Entity held by the CAISO and that are entitled to such Meter Data shall be identified in Schedule 5 to this Agreement. The Scheduling Coordinator shall not provide a third party access to Meter Data of a Scheduling Coordinator Metered Entity unless the Scheduling Coordinator has permission from that Scheduling Coordinator Metered Entity to provide that access. The relevant UDCs and TOs shall be included in Schedule 5 provided that the Scheduling Coordinator Metered Entity has granted those UDCs and TOs access to its Meter Data. Any amendment or addition to Schedule 5 shall not constitute an amendment to this Agreement. The Scheduling Coordinator shall, on request by the Scheduling Coordinator Metered Entity, access the Meter Data held by the CAISO relating to that Scheduling Coordinator Metered Entity and provide that Meter Data to the Scheduling Coordinator Metered Entity in a timely manner.

## ARTICLE VI

## COSTS

**6.1 Certification, Inspection and Auditing of Meters.** The Scheduling Coordinator shall be responsible for all reasonable costs incurred by the CAISO or a CAISO Authorized Inspector in connection with them carrying out the certification, inspection, testing or auditing of the meters identified in Schedule 1 from which the Scheduling Coordinator provides Meter Data to the CAISO. The CAISO or CAISO Authorized Inspector will furnish the Scheduling Coordinator, upon request, an itemized bill for such costs.

## ARTICLE VII

## DISPUTE RESOLUTION

**7.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that all reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the Scheduling Coordinator Metered Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VIII

## REPRESENTATIONS AND WARRANTIES

**8.1 Representations and Warranties.** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

**8.2 Necessary Authority.** The Scheduling Coordinator represents and warrants that all of the entities which it identifies on Schedule 1 as Scheduling Coordinator Metered Entities that it represents have granted it all necessary authority to enable it to carry out its obligations under this Agreement and the CAISO Tariff, and, subject to the execution and delivery by the CAISO, this Agreement will be enforceable against the Scheduling Coordinator in accordance with its terms.

**8.3 Meter Data Access.** The Scheduling Coordinator represents and warrants that all third parties referred to in Schedule 5 to this Agreement have been authorized by the relevant Scheduling Coordinator Metered Entity as having access to its Settlement Quality Meter Data.

## ARTICLE IX

## LIABILITY AND INDEMNIFICATION

**9.1 Liability and Indemnification.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the Scheduling Coordinator and references in the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE X

## UNCONTROLLABLE FORCES

**10.1 Uncontrollable Forces.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as references to the Scheduling Coordinator and all references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE XI

## MISCELLANEOUS

**11.1 Assignments.** Either Party may assign or transfer any or all of its rights and/or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest was an original Party to this Agreement.

**11.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with the Scheduling Coordinator's Scheduling Coordinator Agreement and in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 6. A Party must update the information in Schedule 6 as information changes. Such changes shall not constitute an amendment to this Agreement.

**11.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay short of the statutory period of limitations in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**11.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under and for all purposes shall be governed by and construed in accordance with the laws of the State of California, except its conflict of law provisions. The Scheduling Coordinator irrevocably consents that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**11.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**11.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**11.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**11.8 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that are subject to FERC approval shall not take effect until FERC has accepted such amendments for filing and has made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the Scheduling Coordinator shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**11.9 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF,** the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By:_____

Name:_____

Title:_____

Date:_____

**Full legal name of SC**

By:_____

Name:_____

Title:_____

Date:_____

**SCHEDULE 1**

**METER INFORMATION**

**[Section 3.3.1]**

Meter Number

Name of the Facility

Contact details for Scheduling Coordinator Metered Entity Representative

**SCHEDULE 2**

**APPROVED LOAD PROFILE**

**[Section 3.3.3]**

Attach details of each Approved Load Profile used by the Scheduling Coordinator Metered Entities represented by the Scheduling Coordinator, the names of the Scheduling Coordinator Metered Entities that use each of those Approved Load Profiles and the name of the Local Regulatory Authority that approved each of those Approved Load Profiles.

**SCHEDULE 3**

**EXEMPTIONS FROM METERING STANDARDS AND OTHER REQUIREMENTS**

**[Section 3.4.1]**

Exemption

Attach variation with an explanation.

Name of the relevant Local Regulatory Authority which sets security and validation standards for the Scheduling Coordinator Metered Entity.

Other Exemptions

**SCHEDULE 4**

**PART A**

**CAISO IMPOSED PENALTIES AND SANCTIONS**

**[Section 4.1]**

**TO BE INSERTED UPON FERC APPROVAL**

**PART B**

**CORRECTIVE MEASURES**

**[Section 4.2]**

**TO BE DEVELOPED**

**SCHEDULE 5**

**ACCESS TO METER DATA**

**[Section 5.1]**

List the third parties authorized by each Scheduling Coordinator Metered Entity represented by the Scheduling Coordinator to access that Scheduling Coordinator Metered Entity's Settlement Quality Meter Data.

**SCHEDULE 6**

**NOTICE**

**[Section 11.2]** Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**CAISO**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

## Appendix B.8 Utility Distribution Company Operating Agreement (UDCOA)

**THIS OPERATING AGREEMENT** is dated this ___ day of _____, ____ and is entered into, by and between:

(1) **[Full legal name of UDC]** having its registered and principal place of business located at **[Address]** (the "UDC");

and

(2) **California Independent System Operator Corporation** ("CAISO"), a California non-profit public benefit corporation having its principal place of business located in such place in the State of California as the CAISO Governing Board may from time to time designate.

The UDC and the CAISO are hereinafter referred to as the "Parties".

**Whereas:**

A. The purpose of this Operating Agreement is to establish the rights and obligations of the UDC and the CAISO with respect to the UDC's Interconnection with the CAISO Controlled Grid and the UDC's cooperation and coordination with the CAISO to aid the reliability and the Operational Control of the CAISO Controlled Grid and the UDC's Distribution System.

B. The UDC owns and operates a Distribution System within the CAISO Balancing Authority Area subject to the authority of a Local Regulatory Authority.

C. The UDC wishes to transmit Energy and/or supply Ancillary Services to or from the CAISO Controlled Grid under the terms and conditions set forth in the CAISO Tariff. The UDC also wishes to support and be part of the coordinated response to System Emergencies and to System Reliability concerns relating to the CAISO Controlled Grid.

D. The CAISO has certain statutory obligations under California law to maintain the reliability of the CAISO Controlled Grid.

E. This Operating Agreement obligates the UDC and the CAISO to comply with the relevant sections of the CAISO Tariff, the CAISO Operating Procedures and the CAISO Specifications.

F. The UDC and the Participating TO with which it is interconnected intend to coordinate the planning and implementation of any expansions or modifications of the UDC's or Participating TO's systems that will affect their transmission interconnection, the CAISO Controlled Grid or the transmission services to be required by the UDC.

**NOW THEREFORE,** in consideration of the mutual covenants set forth herein, THE PARTIES AGREE as follows:

## ARTICLE I

## DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** Unless defined in Section 1.2 of this Operating Agreement, all terms and expressions used in this Operating Agreement shall have the same meaning as those contained in the Master Definitions Supplement to the CAISO Tariff.

**1.2 Special Definitions for this Operating Agreement.** In this Operating Agreement, the following words and expressions shall have the meanings set opposite them:

**"CAISO Specifications"** means those standards pertaining to the areas of operation listed in Article IV of this Operating Agreement, approved by the CAISO to establish detailed technical performance and reliability parameters at the CAISO Controlled Grid and UDC Interconnection, associated with the CAISO Tariff, as those standards may be amended from time to time.

**"CAISO Operating Procedures"** means those procedures pertaining to the areas of operation listed in Article IV of this Operating Agreement, created by the CAISO to establish detailed operating practices at the CAISO Controlled Grid and UDC Interconnection, associated with general provisions required in the CAISO Tariff, as those standards may be amended from time to time.

**1.3 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Operating Agreement:

(a) if there is any inconsistency between this Operating Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) "includes" or "including" shall mean "including without limitation";

(e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Operating Agreement, as the case may be, unless the context otherwise requires;

(f) a reference in this Operating Agreement to a given agreement, instrument or the CAISO Tariff shall be a reference to that agreement, instrument or the CAISO Tariff as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) any reference to a day, week, month or year is to a calendar day, week, month or year; and

(k) the captions and headings in this Operating Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Operating Agreement.

## ARTICLE II

## TERM AND TERMINATION

**2.1 Effective Date.** This Operating Agreement shall be effective as of the later of the date it is executed by the Parties or the date accepted for filing and made effective by the FERC, if such FERC filing is required, and shall remain in full force and effect until the earlier of the termination date, the termination of the TCA or such other date as the Parties shall mutually agree. With respect to any such termination, the CAISO must file a timely notice of termination with FERC, if such FERC filing is required, and this Operating Agreement shall terminate upon acceptance by FERC of such a notice of termination, if such FERC filing is required.

**2.2 Termination Date.** Either Party (the terminating Party) may terminate this Operating Agreement by giving written notice in the event that the other Party (the defaulting Party) commits any default under this Operating Agreement and/or the CAISO Tariff which, if capable of being remedied, is not remedied within 30 days after the terminating Party has given the defaulting Party written notice of the default, unless excused by reason of Uncontrollable Forces under Article X of this Operating Agreement. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Operating Agreement was filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the filing of the notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within sixty (60) days after issuance of the notice of default; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Operating Agreement shall terminate upon acceptance by FERC of such a notice of termination, if filed with FERC, or thirty (30) days after the date of the notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**2.3 Termination Pursuant to the TCA.** If the UDC is a party to the Transmission Control Agreement ("TCA"), this Operating Agreement shall terminate upon the effective date of the UDC's withdrawal from the TCA in accordance with Section 3.3 of the TCA, provided, however, that first the CAISO shall have filed a timely notice of termination with FERC, if such FERC filing is required, and FERC shall have accepted such notice of termination, if such FERC filing is required, or the CAISO must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the request to file a notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within sixty (60) days of receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001.

## ARTICLE III

## GENERAL TERMS AND CONDITIONS

**3.1.1 Facilities Under CAISO Operational Control.** Parties shall identify on Schedule 1 those facilities of the UDC that the Parties mutually agree will be placed under the CAISO's Operational Control pursuant to the CAISO Tariff. In the event that a Party invokes the dispute resolution provision identified in Section 7.1 of this Operating Agreement, such dispute shall be resolved based upon whether the CAISO's control over such disputed facilities is essential to meeting the Applicable Reliability Criteria, as defined in the CAISO Tariff. With respect to each facility identified in Schedule 1, the Parties shall negotiate the extent of the CAISO's Operational Control

in order to meet said standard.

**3.1.2 Facilities Financed by Local Furnishing Bonds or Other Tax-Exempt Bonds.** This Section 3.1.2 applies only to facilities which are under the Operational Control of the CAISO and are owned by a UDC with Local Furnishing Bonds or other tax-exempt bonds. Nothing in this Operating Agreement shall compel (and the CAISO is not authorized to request) any UDC with Local Furnishing Bonds, or other tax-exempt bonds, to violate restrictions applicable to facilities which are part of a system that was financed in whole or part with Local Furnishing Bonds or other tax-exempt bonds. The UDC shall cooperate with and provide all necessary assistance to the CAISO in developing specific schedules to be included in executed Operating Agreements with such UDC to meet the intent of Section 3.1.1 of this Operating Agreement.

**3.2 Agreement Subject to CAISO Tariff.** This Operating Agreement shall be subject to the provisions of the CAISO Tariff which shall be deemed to be incorporated by reference herein, as the same may be changed or superseded from time to time pursuant to Section 15 of the CAISO Tariff. The Parties agree that they will comply with Section 4.4, and any other applicable provisions, of the CAISO Tariff.

**3.3 Operation of CAISO Controlled Grid.** The CAISO shall operate the CAISO Controlled Grid in accordance with the CAISO Tariff and the Transmission Control Agreement to which it is a party.

**3.4.1 Compliance with CAISO Specifications and CAISO Operating Procedures.** The UDC will abide by and will perform all of the obligations under the CAISO Specifications and the CAISO Operating Procedures placed on UDCs in respect of all matters set forth therein as the same may be changed or superseded from time to time pursuant to the procedures set forth in Sections 22.11 and 22.4.3 of the CAISO Tariff. In the event of any conflict or dispute over interpretation, the CAISO Tariff shall, at all times, take precedence over the CAISO Specifications and CAISO Operating Procedures. The CAISO shall not implement any reliability requirements, operating requirements or performance standards that would impose increased costs on the UDC without giving due consideration to whether the benefits of such requirements or standards are sufficient to justify such increased costs. In any proceeding concerning the cost recovery by the UDC of capital and operation and maintenance costs incurred to comply with CAISO Specifications and Operating Procedures, the CAISO shall, at the request of the UDC, provide specific information regarding the nature of, and need for, the CAISO-imposed requirements or standards to enable the UDC to use this information in support of cost recovery through rates and tariffs.

**3.4.2 Review of Specifications and Operating Procedures.** The CAISO shall periodically review with the UDC the CAISO Specifications and Operating Procedures and, through the process specified in the CAISO Tariff, shall modify the specifications and/or Operating Procedures as necessary.

**3.4.3 Periods When Compliance is Required.** While awaiting dispute resolution or regulatory review, the UDC shall not be required to comply with changes to the CAISO Specifications and/or Operating Procedures, except where compliance is necessary in order to prevent or remedy an imminent System Emergency.

**3.5 Scheduling Coordinator Certification.** The UDC shall ensure that any Scheduling Coordinator through which it submits Bids for Energy and Ancillary Services to or from the CAISO Controlled Grid is appropriately certified in accordance with Section 4.5.1 of the CAISO Tariff in accordance with the list of Scheduling Coordinators established by the CAISO on the CAISO Website.

**3.6 Single Point of Contact.** The CAISO and the UDC shall each provide a single point of contact on a 24-hour, 7-day basis for the exchange of operational procedures and information. The Parties agree to exchange operational contact information in a format to be provided by the CAISO and completed as of the effective date of this Operating Agreement. Each Party shall provide the other Party ten (10) calendar days advance notice of updates to its operational

contact information as that information is expected to change. In the case of a UDC that is also a Participating TO, there may be only one single point of contact required and, in the reasonable discretion of the CAISO, duplicative reporting requirements and functions may be waived.

**3.7 Delegated Operational Responsibilities.** The UDC undertakes to perform all operational responsibilities delegated to the UDC by the CAISO in accordance with Section 4.4.1.2 of the CAISO Tariff and described in Schedule 3.

## ARTICLE IV

## OPERATIONAL COORDINATION

The Parties will perform the operational coordination obligations and responsibilities assigned to them under the CAISO Tariff, the CAISO Operating Procedures, and the CAISO Specifications. The obligations and responsibilities include:

### 4.1 Maintenance Coordination

**4.1.1 Maintenance Coordination for Facilities under CAISO Control.** The UDC shall schedule with the CAISO on an annual basis any maintenance Outages of the equipment included in Schedule 1 pursuant to Schedule 4 in compliance with the CAISO Tariff and shall coordinate its Outage requirements with the Participating TO with which it is interconnected.

**4.1.2 Maintenance Coordination for Other Facilities.** With respect to other facilities which may affect the reliability of the UDC Interconnection, the UDC shall coordinate its Outage requirements with the Participating TO with which it is interconnected.

**4.2 System Emergencies.** The responsibilities of the Parties in relation to System Emergencies are stated in the CAISO Tariff and in Schedule 5. The CAISO shall adopt fair and non-discriminatory procedures among the UDCs to ensure that no UDC bears a disproportionate share of the CAISO's Load Shedding program.

**4.2.1 Underfrequency Load Shedding (UFLS).** The responsibilities of the Parties in relation to UFLS are stated in Section 7.7.8 of the CAISO Tariff, the CAISO Operating Procedures, the CAISO Specifications and in Schedule 6.

**4.2.2 Other Automatic Load Shedding.** The responsibilities of the Parties in relation to automatic Load Shedding as a function of voltage and other parameters are stated in the CAISO Operating Procedures, the CAISO Specifications and in Schedule 7.

**4.2.3 Manual Load Shedding.** The responsibilities of the Parties to direct and to accept direction for manual disconnection of Load, under EEP, Load curtailment programs or other emergency plans, are stated in Section 7, including Section 7.7.11.3, of the CAISO Tariff, the CAISO Operating Procedures, the CAISO Specifications and in Schedule 8.

**4.3 Electrical Emergency Plan (EEP).** The responsibilities of the Parties in relation to the EEP are stated in Section 7.7.5.1 of the CAISO Tariff, the CAISO Operating Procedures, the CAISO Specifications and in Schedule 9.

**4.4 Load Restoration.** The responsibilities of the Parties for restoring Load following a system disturbance are stated in Section 7.7.11.3 of the CAISO Tariff, the CAISO Operating Procedures, the CAISO Specifications and in Schedule 10.

**4.5 Records, Information and Reports.** The Parties are required to maintain such records, to share information, and to make such reports as are stated in Section 4.4.1, 4.4.3, and 4.4.5 of the CAISO Tariff, the CAISO Operating Procedures, the CAISO Specifications, and in Schedule 11. Additionally, the Parties shall jointly perform a review following a major Outage as provided in Section 7.7.13.1 of the CAISO Tariff.

**4.6 Interconnection Operation Standards.** The CAISO and UDC shall maintain stable established operating parameters and control power and reactive flow within standards stated in the CAISO Specifications and in Schedule 12.

**4.7 Critical Protective Systems.** The UDC shall (in accordance with Section 11.2 of this Operating Agreement) notify the CAISO as soon as is reasonably practicable of any condition that it becomes aware of that may compromise the CAISO Controlled Grid Critical Protective Systems in accordance with Section 4.4.2 of the CAISO Tariff and Schedule 13.

**4.8 UDC Distribution Systems.** The CAISO shall (in accordance with Section 11.2 of this Operating Agreement) notify the UDC as soon as is reasonably practicable of any condition which the CAISO becomes aware that may compromise the operation and reliability of the UDC Distribution System.

## ARTICLE V

## ACCESS TO FACILITIES

**5.1 Access Rights.** Pursuant to Section 4.4.6 of the CAISO Tariff and Schedule 14 of this Operating Agreement, the CAISO and the UDC shall each have the right to install or to have installed equipment or other facilities, including metering equipment, on the electric utility property of the other necessary for the implementation of this Operating Agreement. The CAISO's installation of equipment on the property of the UDC shall comply with Local Regulatory Authority regulations, except where compliance with Local Regulatory Authority regulations would cause the CAISO to violate the CAISO Tariff, and with all relevant safety standards. In such case, the UDC and CAISO will work together to resolve the conflict between the Local Regulatory Authority regulations and the CAISO Tariff.

**5.2 Meter Testing.** The UDC shall, at the request of the CAISO and upon reasonable notice, provide access to its facilities necessary to permit the CAISO or a CAISO-approved meter inspector to perform such testing as necessary in accordance with Section 4.4.6 of the CAISO Tariff and the procedures set forth in Schedule 14.

**5.3 Emergency Access Rights.** Section 4.4.6.3 of the CAISO Tariff shall govern the CAISO's right to access the UDC's equipment or other facilities during a System Emergency or where access is needed in connection with an audit function. In a System Emergency, the UDC shall have a right of access to CAISO equipment on UDC property and UDC equipment on CAISO property without notice.

## ARTICLE VI

## COSTS

**6.1 UDC Operating and Maintenance Costs.** The UDC shall be responsible for all costs incurred in connection with procuring, installing, operating and maintaining its facilities identified in Schedule 1 for the purpose of meeting its obligations under this Operating Agreement.

**6.2 CAISO Operating and Maintenance Costs.** The CAISO shall be responsible for the procurement, installation, operation and maintenance costs of CAISO equipment set out in Article V of this Operating Agreement installed on UDC property.

## ARTICLE VII

## DISPUTE RESOLUTION

**7.1 Alternative Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Operating Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that all reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the UDC and references to the CAISO Tariff shall be read as references to this Operating Agreement.

## ARTICLE VIII

## REPRESENTATIONS AND WARRANTIES

**8.1 Representations and Warranties.** Each Party represents and warrants that its execution, delivery and performance of this Operating Agreement has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

**8.2 Necessary Approvals.** Each Party represents that all necessary approvals, permits, licenses, easements, right of way or access to install, own and operate its facilities subject to this Operating Agreement have been obtained prior to the effective date of this Operating Agreement.

## ARTICLE IX

## LIABILITY

**9.1 Extent of Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Operating Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the UDC and references to the CAISO Tariff shall be read as references to this Operating Agreement.

## ARTICLE X

## UNCONTROLLABLE FORCES

**10.1 Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Operating Agreement, except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the UDC and references to the CAISO Tariff shall be read as references to this Operating Agreement.

## ARTICLE XI

## MISCELLANEOUS

**11.1 Assignments.** Either Party may assign its obligations under this Operating Agreement, with the other Party's prior written consent, in accordance with Section 22.2 of the CAISO Tariff, which is incorporated by reference into this Operating Agreement. Such consent shall not be unreasonably withheld.

**11.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Operating Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, which is incorporated by reference, except that all reference in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the UDC and references to the CAISO Tariff shall be read as references to this Operating Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 2.

A Party must update the information relating to its address as that information changes in accordance with Section 22.4 of the CAISO Tariff. Such changes will not constitute an amendment to this Operating Agreement.

**11.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Operating Agreement, or with respect to any other matter arising in connection with this Operating Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or matter arising in connection with this Operating Agreement. Any delay short of the statutory period of limitations, in asserting or enforcing any right under this Operating Agreement, shall not constitute or be deemed a waiver of such right.

**11.4 Governing Law and Forum.** This Operating Agreement shall be deemed to be a contract made under and for all purposes shall be governed by and construed in accordance with the laws of the State of California except in its conflict of laws provisions. The Parties irrevocably consent that any legal action or proceeding arising under or in relation to this Operating Agreement to which the CAISO ADR Procedures do not apply, shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**11.5 Consistency with Federal Laws and Regulations.**

(a) Nothing in this Operating Agreement shall compel any person or federal entity to: (1) violate federal statutes or regulations; or (2) in the case of a federal agency, to exceed its statutory authority, as defined by any applicable federal statutes, regulations, or orders lawfully promulgated thereunder. If any provision of this Operating Agreement is inconsistent with any obligation imposed on any person or federal entity by federal law or regulation to that extent, it shall be inapplicable to that person or federal entity. No person or federal entity shall incur any liability by failing to comply with this Operating Agreement that is inapplicable to it by reason of being inconsistent with any federal statutes, regulations, or orders lawfully promulgated thereunder; provided, however, that such person or federal entity shall use its best efforts to comply with the CAISO Tariff to the extent that applicable federal laws, regulations, and orders lawfully promulgated thereunder permit it to do so.

(b) If any provision of this Operating Agreement requiring any person or federal entity to give an indemnity or impose a sanction on any person is unenforceable against a federal entity, the CAISO shall submit to the Secretary of Energy or other appropriate Departmental Secretary a report of any circumstances that would, but for this provision, have rendered a federal entity liable to indemnify any person or incur a sanction and may request the Secretary of Energy or other appropriate Departmental Secretary to take such steps as are necessary to give effect to any provisions of this Operating Agreement that are not enforceable against the federal entity.

**11.6 Integration.** This Operating Agreement constitutes the full agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**11.7 Severability.** If any term, covenant, or condition of this Operating Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Operating Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other

determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Operating Agreement.

**11.8 Penalties.** Any penalties to be levied under this Operating Agreement shall be established in accordance with the CAISO Tariff after consultation between the UDC and the CAISO, and approval by the FERC, and shall be set out in Schedule 15 or a provision of the CAISO Tariff. No penalties or sanctions may be imposed under this Operating Agreement unless a Schedule or CAISO Tariff provision providing for such penalties or sanctions has first been filed with and made effective by FERC. Nothing in this Operating Agreement, with the exception of the provisions relating to the CAISO ADR Procedures, shall be construed as waiving the rights of the UDC to oppose or protest any penalty proposed by the CAISO to the FERC or the specific imposition by the CAISO of any FERC-approved penalty on the UDC.

**11.9 [NOT USED]**

**11.10 Amendments.** This Operating Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Operating Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the UDC shall have the right to make a unilateral filing with FERC to modify this Operating Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Operating Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**11.11 Counterparts.** This Operating Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Operating Agreement.

**IN WITNESS WHEREOF,** the Parties hereto have caused this Operating Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By:_____

Name:_____

Title:_____

Date:_____

**Full Name of UDC**

By:_____

Name:_____

Title:_____

Date:_____

## SCHEDULE 1

## FACILITIES UNDER CAISO CONTROL

The UDC will supply a list of UDC facilities that are placed under the Operational Control of the CAISO in Schedule 1.

There are no UDC facilities to be listed here at present.

**SCHEDULE 2**

**CONTACTS FOR NOTICES**

**UDC**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**CAISO**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

## SCHEDULE 3

## DELEGATED OPERATIONAL RESPONSIBILITIES

Currently the CAISO has not delegated any operational responsibilities to the UDC in accordance with Section 4.4.1 of the CAISO Tariff. If such a delegation occurs, they will be identified in this Schedule 3.

## SCHEDULE 4

## MAINTENANCE COORDINATION

By October 1st of each year, the UDC will exchange with the CAISO a provisional planned Outage program for all lines and equipment in Schedule 1. That document will be updated quarterly or as changes occur to the proposed schedule.

The CAISO will approve all Outages on equipment and lines transferred to CAISO Operational Control.

Applications for scheduled work will be submitted to the CAISO by _____'s Grid Operations group via means to be agreed to by both Parties. The UDC documents will record the details for all work and become the data base for reporting and recording Outage information.

## SCHEDULE 5

## SYSTEM EMERGENCIES

The CAISO will notify the UDC's operational contact (Operations Shift Supervisor - Grid Control) of the emergency, including information regarding the cause, nature, extent, and potential duration of the emergency. The Operations Shift Supervisor will add any relevant data and will notify Distribution Operations. Distribution Operations will make the appropriate notifications within the UDC organization. The Operations Shift Supervisor and Distribution Control Shift Supervisor will then take such actions as are appropriate for the emergency.

The UDC will make requests for information from the CAISO regarding emergencies through the Operations Shift Supervisor, or the UDC Communication Coordinator may coordinate public information with the CAISO Communication Coordinator.

The UDC is required to estimate service restoration by geographic areas, and will use its call center and the media to communicate with customers during service interruptions. The UDC is also required to communicate the same information to appropriate state and local governmental entities. For transmission system caused outages the Operations Shift Supervisor will notify Distribution Operations Control Center of any information related to the outage such as cause, nature, extent, potential duration and customers affected.

Distribution Control and Grid Control Center logs, Electric Switching Orders and Energy Management System temporal data base will be used in preparation of outage reviews. These documents are defined as the chronological record of the operation of the activities which occur with the portion of the electrical system assigned to that control center. The log shall contain all pertinent information, including orders received and transmitted, relay operations, messages, clearances, accidents, trouble reports, daily switching program, etc.

The UDC will retain records in accordance with its record retention policy or practice, provided the records associated with this Operating Agreement are retained for a minimum of six years.

## SCHEDULE 6

## UNDERFREQUENCY LOAD SHEDDING

The objective of the Underfrequency Load Shedding (UFLS) program is to provide security and protection to the interconnected bulk power network by arresting frequency decay during periods of insufficient resources.

This plan establishes Underfrequency Load Shedding objectives consistent with the Load Shedding policies of the Western Electricity Coordinating Council, the North American Electric Reliability Corporation and the UDC. The UDC's Load Shedding program will be in accordance with the WECC Off-nominal Frequency Report requirements.

## SCHEDULE 7

## OTHER AUTOMATIC LOAD SHEDDING

In addition to underfrequency relay load reduction, any undervoltage relay protection that is utilized in the UDC will be identified in the Attachment to this Schedule 7.

## SCHEDULE 8

## MANUAL LOAD SHEDDING

[Note: Schedule 8 will detail the criteria governing the implementation of manual Load Shedding and/or interruptible Loads, and will describe the UDC's means of effecting Load Shedding and the estimated associated MW values of various UDC Loads to be shed. For Load curtailment programs Schedule 8 will also contain the UDC's capabilities until October 1 and thereafter annually.]

## SCHEDULE 8A

## ROTATING LOAD CURTAILMENT PROCEDURES

## SCHEDULE 8B

## INTERRUPTIBLE LOAD

## SCHEDULE 9

## ELECTRICAL EMERGENCY PLAN

The CAISO Specifications will outline the basic criteria for the development, coordination, and implementation of the UDC EEP and the requirements for coordination with the CAISO EEP. Schedule 9 will include the UDC EEP as coordinated with the CAISO EEP.

## SCHEDULE 10

## LOAD RESTORATION

The UDC will follow the procedures set forth below in this Schedule 10 in promoting orderly, coordinated restoration of electric systems after a major system disturbance has occurred which resulted in Load Shedding by frequency relays in California.

1. Immediately after Load Shedding by frequency relay has occurred in the UDC, the UDC will remain in contact with its respective Participating Transmission Owner (PTO) Area Control Center (ACC) until normal frequency has been restored throughout the CAISO Balancing Authority Area or the CAISO Shift Supervisor has concluded that such full-time communications can be terminated. Emergency communications over the California ACC Hot-line will be under the direction of the CAISO Shift Supervisor and the senior dispatcher present at the affected PTO ACC(s).

2. Load restoration will not normally be initiated until the California ACC Hot Line is attended. No Load is to be manually restored unless directed by the CAISO after the frequency has recovered and there is indication that the frequency can be maintained. The UDC will await direction from its respective PTO ACC who will be in contact with the CAISO Shift Supervisor. The CAISO Shift Supervisor will determine whether adequate generation resources are available on line to support the Load to be restored.

3. Any UDC automatic Load restoration will be consistent with the WECC Coordinated Off-Nominal Frequency Load Shedding and Restoration Plan.

4. If the CAISO cannot meet the WECC and NERC Balancing Authority Area Disturbance Control Standard or the Control Performance Standard post disturbance, no manual Load restoration will be permitted. If the frequency is such that automatic Load restoration occurs under these conditions, the UDC(s) which has restored Load automatically will manually shed an equivalent amount of Load to offset the Load which was automatically restored.

5. Restoration of ties and off-site power supply to nuclear generating facilities should be given top priority. Manual Load restoration will be deferred during periods of tie restoration. The UDC should be equipped and prepared to drop Load manually when necessary to allow frequency recovery sufficient to re-establish CAISO intra-area ties and Interties between the CAISO Balancing Authority Area and outside systems. Where manual Load Shedding is required, the CAISO shall make reasonable efforts to allocate the Load Shedding requirement equitably among the UDCs where Load Shedding will be beneficial.

6. The UDC will use its existing plans and priorities to restore Load within the parameters given by the CAISO, giving the appropriate priority to essential services such as military, public safety agencies, water treatment plants, sewage treatment plants, etc.

## SCHEDULE 11

## RECORDS, INFORMATION, REPORTS

The CAISO and UDC will jointly develop any necessary forms and procedures for collection, study and transmittal of system data, information, reports, and forecasts.

## SCHEDULE 12

## INTERCONNECTION OPERATION STANDARDS

The CAISO and UDC shall jointly maintain stable operating parameters and control power and reactive flow in accordance with the CAISO Tariff and the following Interconnection Operation Standards.

### UDC Responsibilities

**1.0** The UDC shall operate its facilities at each point of interconnection with the CAISO Controlled Grid in such manner as to avoid any material or adverse impact on the CAISO Controlled Grid. In accordance with this performance goal, the UDC shall:

**1.1** Operate its facilities at each point of interconnection with the CAISO Controlled Grid within established operating parameters including normal ratings, emergency ratings, voltage limits, and balance of load between electrical phases.

**1.2** Maintain primary and backup protective systems such that faults on UDC facilities will be cleared with minimal impact on the CAISO Controlled Grid.

**1.3** Maintain Load power factor at each point of interconnection with the CAISO Controlled Grid as close as possible to unity power factor and pursuant to Section 8.2.3.3 of the CAISO Tariff.

### CAISO Responsibilities

**2.0** The CAISO shall operate the CAISO Controlled Grid at each point of interconnection with the UDC in such manner as to avoid any material or adverse impact on the UDC facilities. In accordance with this performance goal, the CAISO shall:

**2.1** Participate with the UDC and TO in the development of joint power quality performance standards and jointly maintain compliance with such standards.

**2.2** Observe UDC grid voltage limits specified in Attachment 1 including requirements for reduced voltage on CAISO Controlled Grid facilities which apply during heavy fog (or other unusual operating conditions) as needed to minimize the risk of insulator flashover.

**2.3** Approve transmission owner maintenance requests in a timely manner, and shall not unreasonably withhold approval of TO requests for authorization to perform energized insulator washing work or to take planned Outages needed to replace or insul-grease insulators.

**2.4** Support UDC investigation of power quality incidents, and provide related data to the UDC in a timely manner.

**2.5** Support installation of apparatus on the CAISO Controlled Grid to improve power quality, and take all reasonable measures to investigate and mitigate power quality concerns caused by actions or events in neighboring systems or Balancing Authority Areas.

**2.6** Maintain Load power factor at each UDC Interconnection as close as possible to unity power factor and pursuant to Section 8.2.3.3 of the CAISO Tariff.

## SCHEDULE 13

## CRITICAL PROTECTION SYSTEMS

Distribution protective relay schemes affecting the CAISO Controlled Grid are those associated with transformers that would trip transmission breakers and/or busses at UDC Interconnection point when activated. These would include any of the following:

1. Side Overcurrent Relays
2. Differential Overcurrent Relays
3. Sudden Pressure Relays
4. Low Oil Relays
5. Neutral Ground Overcurrent Relays
6. On fuse protected transformers, it would be the high-side fuses.

## SCHEDULE 14

## RIGHTS OF ACCESS TO FACILITIES

**14.1 Equipment Installation.** In order to give effect to this Operating Agreement, a Party that requires to use particular equipment (the equipment owner) may require installation of such equipment on property owned by the other Party (the property owner), provided that the equipment is necessary to meet the equipment owner's service obligations and that the equipment shall not have a negative impact on the reliability of the service provided, nor prevent the property owner from performing its own obligations or exercising its rights under this Operating Agreement.

**14.1.1 Free Access.** The property owner shall grant to the equipment owner free of charge reasonable installation rights and rights of access to accommodate equipment inspection, maintenance, repair, upgrading, or removal for the purposes of this Operating Agreement, subject to the property owner's reasonable safety, operational, and future expansion needs.

**14.1.2 Notice.** The equipment owner shall provide reasonable notice to the property owner when requesting access for site assessment, equipment installation, or other relevant purposes. Such access shall not be provided unless the parties mutually agree to the date, time, and purpose of each access. Agreement on the terms of the access shall not be unreasonably withheld or delayed.

**14.1.3 Removal of Installed Equipment.** Following reasonable notice, the equipment owner shall be required, at its own expense, to remove or relocate equipment, at the request of the property owner, provided that the equipment owner shall not be required to do so if it would have a negative impact on the reliability of the service provided, or be prevented from performing its own obligations or exercising its rights under this Operating Agreement.

**14.1.4 Costs.** The equipment owner shall repair at its own expense any property damage it causes in exercising its rights and shall reimburse the property owner for any other reasonable costs that it may be required to incur to accommodate the equipment owner's exercise of its rights under this Section 14.1.

**14.2 Rights to Assets.** The Parties shall not interfere with each other's assets, without prior written agreement.

**14.3 Inspection of Facilities.** In order to meet their respective obligations under this Operating Agreement, each Party may view or inspect facilities owned by the other Party. Provided that reasonable notice is given, a Party shall not unreasonably deny access to relevant facilities for viewing or inspection by the requesting Party.

**14.4 Access During Emergencies.** Either Party shall have rights of access, without prior notice, to the other Party's equipment as necessary during times of a System Emergency.

## SCHEDULE 15

## PENALTIES AND SANCTIONS

Intentionally left blank, initially, in accordance with Section 11.8

**Appendix B.9 Dynamic Scheduling Host Balancing Authority Operating Agreement (DSHBAOA)**

**THIS DYNAMIC SCHEDULING HOST BALANCING AUTHORITY OPERATING AGREEMENT**

**("AGREEMENT")** is established this ____ day of _____, ____ and is accepted by and between:

**[Full legal name]** ("Host Balancing Authority"), having its registered and principal executive office at [address],

and

**California Independent System Operator Corporation** ("CAISO"), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The Host Balancing Authority and the CAISO are hereinafter referred to as the "Parties."

**Whereas:**

**A.** The Parties named above operate Balancing Authority Areas.

**B.** The Parties wish to coordinate operation of dynamic scheduling functionality to satisfy North American Electric Reliability Corporation ("NERC") and Western Electricity Coordinating Council ("WECC") standards and criteria and Good Utility Practice.

**C.** The Host Balancing Authority desires to implement an agreement to facilitate dynamic scheduling from System Resources in its Balancing Authority Area to the CAISO Balancing Authority Area.

**D.** The Parties wish to enter into this Agreement to establish the terms and conditions for the operation of the dynamic scheduling functionality from Host Balancing Authority's Balancing Authority Area to the CAISO Balancing Authority Area.

**E.** The CAISO has certain statutory obligations under California law to maintain power system reliability.

**NOW THEREFORE,** in consideration of the mutual covenants set forth herein, **THE PARTIES AGREE** as follows:

## 1. Term and Termination

### 1.1 Effective Date

This Agreement shall be effective as of the date set forth above, unless this Agreement is accepted for filing and made effective by the Federal Energy Regulatory Commission ("FERC") on some other date, if FERC filing is required, and shall continue in effect until terminated.

### 1.2 Termination

This Agreement may be terminated by either Party upon thirty (30) days written notice to the other Party or upon mutual consent of both Parties. For entities subject to FERC jurisdiction, termination will be effective upon acceptance by FERC of notice of termination, if this Agreement has been filed with FERC, or thirty (30) days after the date of the notice of termination by a Party,

if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders. The CAISO shall timely file any required notice of termination with FERC. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the filing of the notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination with FERC within sixty (60) days after issuance of the notice of termination by a Party; or (2) the CAISO files the notice of termination with FERC in accordance with the requirements of FERC Order No. 2001.

## 2. Definitions

### 2.1 WECC Definitions

Except as defined below, terms and expressions used in this Agreement shall have the same meanings as those contained in the WECC Glossary of WECC Terms and Acronyms.

### 2.2 Specific Definitions

**2.2.1 CAISO Dynamic Scheduling Protocol:** The CAISO's Dynamic Scheduling Protocol, which is set forth in Appendix M of the CAISO Tariff.

**2.2.2 CAISO Tariff:** CAISO Operating Agreement, Protocols, and Tariff as amended from time to time, together with any appendices or attachments thereto.

**2.2.3 Good Utility Practice:** Any of the practices, methods, and acts engaged in or approved by a significant portion of the electric utility industry in the WECC region during the relevant time period, or any of the practices, methods, and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety, and expedition. Good Utility Practice is not intended to be any one of a number of the optimum practices, methods, or acts to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

**2.2.4 Point of Contact:** A person or entity having the authority to receive and act upon scheduling or dispatch communications from the other Balancing Authority and available through a communications device mutually agreed upon on a 24-hour, 7-day basis.

**2.2.5 Scheduling Coordinator:** An entity certified by the CAISO for the purposes of undertaking the functions of: submitting bids or schedules for energy, generation, transmission losses, and ancillary services; coordinating generation; tracking, billing, and settling trades with other Scheduling Coordinators; submitting forecast information; paying the CAISO’s charges; and ensuring compliance with CAISO protocols.

**2.2.6 System Resource:** “System Resource” is defined in the CAISO Tariff and, in the context of this Agreement, may include combinations of resources as described in the CAISO Dynamic Scheduling Protocol.

## 3 General

### 3.1 Purpose

This Agreement sets forth the requirements that must be satisfied by the Host Balancing Authority should it elect to support Scheduling Coordinators' requests for implementation of a dynamic scheduling functionality and delivery of energy and energy associated with ancillary services (except regulation service) into the CAISO Balancing Authority Area. The requirements encompass technical (energy management system (“EMS”), automatic generation control

("AGC"), and communications), interchange scheduling, telemetry, and aspects of Balancing Authority Area operations.

### 3.2 NERC/WECC Operating Standards Observed

Nothing in this Agreement is intended to change, supersede, or alter either Party's obligations to abide by NERC and WECC reliability standards and policies and WECC criteria.

### 3.3 Applicable Standards

This Agreement incorporates, by reference, the CAISO Dynamic Scheduling Protocol.

### 3.4 Communication

The CAISO and the Host Balancing Authority shall each operate and maintain a 24-hour, 7-day control center with real-time scheduling and control functions. Appropriate control center staff will be provided by each Party who shall be responsible for operational communications and who shall have sufficient authority to commit and bind that Party. The CAISO and the Host Balancing Authority shall jointly develop communication procedures necessary to support scheduling and dispatch functions. The Parties agree to exchange operational contact information in a format to be provided by the CAISO and completed as of the effective date of this Agreement. Each Party shall provide the other Party ten (10) calendar days advance notice of updates to its operational contact information is expected to change.

## 4. Telecommunications Requirements

The CAISO and Host Balancing Authority shall establish and maintain real-time, redundant, diversely routed, communications links between the CAISO EMS and the Host Balancing Authority EMS, with the primary link utilizing the standard inter-control center communications protocol ("ICCP") in accordance with the CAISO Dynamic Scheduling Protocol for the dynamically scheduled System Resources listed in Schedule 2.

## 5. Telemetry

For each operating hour for which a System Resource is scheduled to deliver energy, and/or energy associated with any of the non-regulating ancillary services to the CAISO Balancing Authority Area, the Host Balancing Authority shall provide, via the ICCP communication links to the CAISO EMS, the data for each System Resource, as set forth in the CAISO Dynamic Scheduling Protocol.

## 6. Interchange Scheduling Requirements

### 6.1 Dynamic Scheduling

The Host Balancing Authority shall support Scheduling Coordinators' requests to arrange dynamic interchange schedules for the delivery of energy to the CAISO Balancing Authority Area, reflecting the System Resource's instantaneous energy production or allocation level and taking into account available transmission capacity.

### 6.2 Treatment of Area Control Error ("ACE")

The Host Balancing Authority shall instantaneously compensate its AGC for the System Resource's energy output that is generated or allocated for establishing the dynamic schedule to the CAISO such that the System Resource energy production or allocation changes have an equal in magnitude and opposite in sign effect on the Host Balancing Authority's ACE.

### 6.3 Integration of Dynamic Scheduling

For each operating hour during which energy was dynamically scheduled for delivery to the CAISO Balancing Authority Area, the Host Balancing Authority shall compute an integrated amount of interchange based on the System Resource's integrated energy production, by integrating the instantaneous System Resource production levels. Such integrated MWH value shall be agreed to hourly by the real-time schedulers.

### 6.4 Delivery of Megawatts ("MW")

The CAISO and the Host Balancing Authority will share in the real time deviations from the dynamic, non-regulation ancillary services and energy from the dynamic System Resource, for which the CAISO's maximum responsibility will be on a pro rata basis. The Host Balancing Authority will remain responsible for regulation obligation for the portion of the System Resource's output not dynamically scheduled into the CAISO Balancing Authority Area in accordance with WECC and NERC reliability standards.

### 6.5 Access to Information

The Parties agree to exchange information related to telemetry sent and received with respect to the delivery of energy (i) at the request of the other Party for purposes of after-the-fact interchange accounting or (ii) on demand for any other purpose.

## 7 Other Host Balancing Authority Responsibilities

### 7.1 Operational Jurisdiction

The Host Balancing Authority will have, at a minimum, the level of operational jurisdiction over the System Resource and the associated dynamic schedule that NERC and WECC vest in Host Balancing Authorities.

### 7.2 E-Tagging

The Host Balancing Authority must support associated E-Tagging as described in the CAISO Dynamic Scheduling Protocol and deemed to be consistent with NERC and/or WECC requirements.

### 7.3 Real-Time Adjustments

The Host Balancing Authority must have a means to manually override and/or otherwise adjust the dynamic signal in real-time, if needed.

### 7.4 Coordination with Other Balancing Authorities

The Host Balancing Authority must provide in real-time the instantaneous value of each dynamic schedule to every intermediary Balancing Authority Area through whose systems such dynamic schedule may be implemented to the CAISO.

## 8. Other

### 8.1 Losses

The CAISO shall not be responsible for transmission losses caused by transmitting energy dynamically within or across the Host Balancing Authority's Balancing Authority Area for delivery to the CAISO.

**8.2 Certification**

Only CAISO-certified System Resource/Host Balancing Authority arrangements will be allowed to bid or self provide ancillary services in the CAISO's ancillary services market through a CAISO-certified Scheduling Coordinator.

**8.3 No Guarantee of Award**

Certification of a System Resource/Host Balancing Authority arrangement allows for bidding of energy and/or certain ancillary services into the CAISO market; it does not, however, guarantee selection of such bid.

**8.4 Performance Assessment**

The CAISO will monitor and measure dynamically imported ancillary services, whether bid or self-provided, against the performance benchmarks described in the CAISO Dynamic Scheduling Protocol.

**8.5 Description of System Resources**

Each dynamically scheduled System Resource permitted pursuant to this Agreement is described in Schedule 2.

**9 Notifications**

The CAISO and the Host Balancing Authority shall jointly develop methods for coordinating the notification of all affected scheduling entities within their respective Balancing Authority Areas regarding schedule changes in emergency or curtailment conditions.

**10 Liability**

**10.1 Uncontrollable Forces**

An Uncontrollable Force means any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm, flood, earthquake, explosion, any curtailment, order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond the reasonable control of a Balancing Authority which could not be avoided through the exercise of Good Utility Practice.

Neither the CAISO nor the Host Balancing Authority will be considered in default of any obligation under this Agreement or liable to the other for direct, indirect, and consequential damages if prevented from fulfilling that obligation due to the occurrence of an Uncontrollable Force. Neither the CAISO nor the Host Balancing Authority will be considered in default of any obligation under this Agreement to the extent caused by any act, or failure to act, of any intermediary Balancing Authority.

In the event of the occurrence of an Uncontrollable Force, which prevents either the CAISO or the Host Balancing Authority from performing any obligations under this Agreement, the affected entity shall not be entitled to suspend performance of its obligations in any greater scope or for any longer duration than is required by the Uncontrollable Force. The CAISO and the Host Balancing Authority shall each use its best efforts to mitigate the effects of such Uncontrollable Force, remedy its inability to perform, and resume full performance of its obligations hereunder.

**10.2 Liability To Third Parties**

Except as otherwise expressly provided herein, nothing in this Agreement shall be construed or deemed to confer any right or benefit on, or to create any duty to, or standard of care with reference to any third party, or any liability or obligation, contractual or otherwise, on the part of CAISO or the Host Balancing Authority.

### 10.3 Liability Between the Parties

The Parties' duties and standard of care with respect to each other, and the benefits and rights conferred on each other, shall be no greater than as explicitly stated herein. Neither Party, its directors, officers, employees, or agents, shall be liable to the other Party for any loss, damage, claim, cost, charge, or expense, whether direct, indirect, or consequential, arising from the Party's performance or nonperformance under this Agreement, except for a Party's gross negligence, or willful misconduct.

## 11 Miscellaneous

### 11.1 Assignments

Either Party to this Agreement may assign its obligations under this Agreement, with the other Party's prior written consent. Such consent shall not be unreasonably withheld.

Obligations and liabilities under this Agreement shall be binding on the successors and assigns of the Parties. No assignment of this Agreement shall relieve the assigning Party from any obligation or liability under this Agreement arising or accruing prior to the date of assignment.

### 11.2 Notices

Any notice, demand, or request which may be given to or made upon either Party regarding this Agreement shall be made in writing and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 3 and shall be deemed properly served, given, or made: (a) upon delivery if delivered in person, (b) five (5) days after deposit in the mail if sent by first class United States mail, postage prepaid, (c) upon receipt of confirmation by return facsimile if sent by facsimile, or (d) upon delivery if delivered by prepaid commercial courier service. A Party must update the information in Schedule 3 relating to its address as that information changes. Such changes shall not constitute an amendment to this Agreement.

### 11.3 Waivers

Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or matter arising in connection with this Agreement. Any delay short of the statutory period of limitations, in asserting or enforcing any right under this Agreement, shall not constitute or be deemed a waiver of such right.

### 11.4 Governing Law and Forum

Subject to Section 11.5, this Agreement shall be deemed to be a contract made under and for all purposes shall be governed by and construed in accordance with the laws of the State of California. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement shall be brought in any of the following forums, as appropriate: a court of the State of California or any federal court of the United States of America located in the State of California or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission. No provision of this Agreement shall be deemed to waive the right of any Party to protest, or challenge in any manner, whether this Agreement, or any action or proceeding arising

under or relating to this Agreement, is subject to the jurisdiction of the Federal Energy Regulatory Commission.

### 11.5 Consistency with Federal Laws and Regulations

(a) Nothing in this Agreement shall compel any person or federal entity to: (1) violate federal statutes or regulations; or (2) in the case of a federal agency, to exceed its statutory authority, as defined by any applicable federal statutes, regulations, or orders lawfully promulgated thereunder. If any provision of this Agreement is inconsistent with any obligation imposed on any person or federal entity by federal law or regulation to that extent, it shall be inapplicable to that person or federal entity. No person or federal entity shall incur any liability by failing to comply with any provision of this Agreement that is inapplicable to it by reason of being inconsistent with any federal statutes, regulations, or orders lawfully promulgated thereunder; provided, however, that such person or federal entity shall use its best efforts to comply with the CAISO Tariff to the extent that applicable federal laws, regulations, and orders lawfully promulgated thereunder permit it to do so.

(b) If any provision of this Agreement requiring any person or federal entity to give an indemnity or impose a sanction on any person is unenforceable against a federal entity, the CAISO shall submit to the Secretary of Energy or other appropriate Departmental Secretary a report of any circumstances that would, but for this provision, have rendered a federal entity liable to indemnify any person or incur a sanction and may request the Secretary of Energy or other appropriate Departmental Secretary to take such steps as are necessary to give effect to any provisions of this Agreement that are not enforceable against the federal entity.

### 11.6 Severability

If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

### 11.7 Section Headings

Section headings provided in this Agreement are for ease of reading and are not meant to interpret the text in each Section.

### 11.8 Amendments

This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that are subject to FERC approval shall not take effect until FERC has accepted such amendments for filing and has made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO or the Host Balancing Authority to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before

FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**11.9 Counterparts**

This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF,** the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date first written above.

**California Independent System Operator Corporation**

By:_____

Name:_____

Title:_____

Date:_____

**[Full legal name of Host Balancing Authority]**

By:_____

Name:_____

Title:_____

Date:_____

**SCHEDULE 1**

**[NOT USED]**

**SCHEDULE 2**

**DESCRIPTION OF DYNAMICALLY SCHEDULED SYSTEM RESOURCES**

**[Section 4]**

**SCHEDULE 3**

**NOTICES**

**[Section 11.2]**

**Host Balancing Authority**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**CAISO**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**Appendix B.10 Small Utility Distribution Company Operating Agreement (SUDCOA)**

**THIS OPERATING AGREEMENT** is dated this ___ day of _____, ____ and is entered into, by and between:

(1) **[Full legal name of SUDC],** having its registered and principal place of business located at **[Address]** (the "SUDC");

and

(2) **California Independent System Operator Corporation** ("CAISO"), a California non-profit public benefit corporation having its principal place of business located in such place in the State of California as the CAISO Governing Board may from time to time designate.

The SUDC and the CAISO are hereinafter referred to individually as "Party" and collectively as "Parties".

**Whereas:**

A. The purpose of this Operating Agreement is to establish the rights and obligations of the SUDC and the CAISO with respect to the SUDC's Facilities interconnected with the CAISO Controlled Grid and the SUDC's cooperation and coordination with the CAISO regarding reliability and the operational control of the CAISO Controlled Grid and the SUDC's Distribution System.

B. The SUDC owns and operates a small Distribution System within the CAISO Balancing Authority Area subject to the authority of a Local Regulatory Authority.

C. The SUDC wishes to receive and transmit Energy and/or Ancillary Services to and/or from the CAISO Controlled Grid under the terms and conditions set forth in the CAISO Tariff.

D. The CAISO has certain statutory obligations under California law to maintain the reliability of the CAISO Controlled Grid.

E. The Parties recognize that while a single SUDC has little or no ability to materially, adversely affect reliability of the CAISO Controlled Grid or the CAISO Balancing Authority Area, the SUDC agrees to support and be part of the coordinated response to System Emergencies and to reliability concerns relating to the CAISO Balancing Authority Area as set forth in this Operating Agreement.

F. This Operating Agreement obligates the SUDC to comply with the sections of the CAISO Tariff, the CAISO Operating Procedures and the CAISO Specifications specified in this Operating Agreement.

**NOW THEREFORE,** in consideration of the mutual covenants set forth herein, **THE PARTIES AGREE** as follows:

## ARTICLE I

## DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** Unless defined in Section 1.2 of this Operating Agreement, all defined terms and expressions used in this Operating Agreement shall have the same meaning as those contained in the Master Definitions Supplement to the CAISO Tariff.

**1.2 Special Definitions for this Operating Agreement.** In this Operating Agreement, the following words and expressions shall have the meanings set opposite them:

**"CAISO Specifications"** means those standards pertaining to the areas of operation listed in Article IV of this Operating Agreement and listed in Schedule 6, approved by the CAISO to establish detailed technical performance and reliability parameters at the CAISO Controlled Grid and SUDC Interconnection, associated with the CAISO Tariff, as those standards may be amended from time to time.

**"CAISO Operating Procedures"** means those procedures pertaining to the areas of operation listed in Article IV of this Operating Agreement and listed in Schedule 9, created by the CAISO to establish detailed operating procedures at the CAISO Controlled Grid and SUDC Interconnection, associated with general provisions required in the CAISO Tariff, as those standards may be amended from time to time.

**"SUDC Facilities"** shall have the meaning accorded to such term as provided in Section 3.2 of this Operating Agreement.

**1.3 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Operating Agreement:

(a) if there is any inconsistency between this Operating Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) "includes" or "including" shall mean "including without limitation";

(e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Operating Agreement, as the case may be, unless the context otherwise requires;

(f) a reference in this Operating Agreement to a given agreement, instrument or the CAISO Tariff shall be a reference to that agreement, instrument or the CAISO Tariff as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) any reference to a day, week, month or year is to a calendar day, week, month or year; and

(k) the captions and headings in this Operating Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Operating Agreement.

## ARTICLE II

## TERM AND TERMINATION

**2.1 Effective Date.** This Operating Agreement shall be effective as of the date it is accepted for filing and made effective by the FERC, if such FERC filing is required, and shall remain in full force and effect until the earlier of the termination date, the termination of the Transmission Control Agreement or such other date as the Parties shall mutually agree. With respect to any such termination, the CAISO must file a timely notice of termination with FERC, if such FERC filing is required, and this Operating Agreement shall terminate on the date FERC permits such a notice of termination to be effective, if such FERC filing is required.

**2.2 Termination Date.**

**2.2.1 Termination by Default.** Either Party (the terminating Party) may terminate this Operating Agreement by giving written notice in the event that the other Party (the defaulting Party) commits any default under this Operating Agreement and/or the CAISO Tariff which, if capable of being remedied, is not remedied within 30 days after the terminating Party has given the defaulting Party written notice of the default, unless excused by reason of Uncontrollable Forces under Article X of this Operating Agreement.

**2.2.2 Failure To Meet SUDC Definition.** Failure of a SUDC to satisfy the CAISO Tariff definition of a SUDC shall be grounds for the CAISO to terminate this Operating Agreement. In the event the CAISO believes the SUDC no longer satisfies the CAISO Tariff definition of a SUDC, the CAISO shall provide written notification of the same to the SUDC and the SUDC shall have 60 days to respond. Following the 60-day response period and regardless of the position of the SUDC, if the CAISO believes the SUDC no longer satisfies the CAISO Tariff definition of a SUDC regardless of the response, the CAISO may file a notice of termination with FERC in accordance with Section 2.2.3.

**2.2.3 Filing.** With respect to any notice of termination given pursuant to this Section 2.2, the CAISO must file a timely notice of termination with FERC, if this Operating Agreement was filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the request by either Party to file a notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within 30 days of receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Operating Agreement shall terminate on the date FERC permits such a notice of termination to be effective, if filed with FERC, or thirty (30) days after the date of the notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

## ARTICLE III

## GENERAL TERMS AND CONDITIONS

**3.1 SUDC Responsibilities.** The SUDC will be responsible to operate and maintain its SUDC Facilities in accordance with applicable reliability standards, statutes, and regulations and Good Utility Practice so as to avoid any material adverse impact on the reliability of the CAISO Balancing Authority Area and the CAISO Controlled Grid.

**3.2 Interconnection and SUDC Facilities.** Schedule 1 sets forth the SUDC's Generating Units, if any, and those facilities that comprise the interconnection of the SUDC Distribution System and the CAISO Controlled Grid. These facilities will be considered the "SUDC Facilities" and, except as otherwise expressly provided, the provisions of this Operating Agreement shall apply only to such SUDC Facilities.

**3.3 Non-SUDC Facilities.** To assist the CAISO in cataloging non-SUDC facilities located in the CAISO Balancing Authority Area and for information purposes only, Schedule 2 sets forth any non-SUDC Generating Units or other facilities that are interconnected to the SUDC Distribution System. Such non-SUDC facilities are not owned or operated by the SUDC.

**3.4 Agreement Subject to CAISO Tariff.** Notwithstanding anything to the contrary herein, the Parties agree that they will comply with Section 4.11 of the CAISO Tariff, and any other applicable provisions of the CAISO Tariff specifically referenced in this Operating Agreement. This Operating Agreement shall be subject to such provisions of the CAISO Tariff, which shall be deemed to be incorporated to the extent referenced herein, as the same may be changed or superseded from time to time pursuant to Section 15 of the CAISO Tariff. Nothing in this Operating Agreement shall affect in any way the authority of the CAISO to unilaterally make application to FERC for a change in the CAISO Tariff under Section 205 of the Federal Power Act, nor shall anything in this Operating Agreement affect the right of either Party to file a complaint under Section 206 of the Federal Power Act regarding the CAISO Tariff.

**3.5 Operation of CAISO Controlled Grid.** The CAISO shall operate the CAISO Balancing Authority Area and the CAISO Controlled Grid in accordance with the CAISO Tariff and the Transmission Control Agreement to which it is a party.

**3.6 CAISO Specifications and CAISO Operating Procedures.**

**3.6.1 Compliance with CAISO Specifications and CAISO Operating Procedures.** The SUDC will abide by and will perform all of the obligations under the CAISO Specifications identified in Schedule 6 and CAISO Operating Procedures identified in Schedule 9 in respect of all matters set forth therein as the same may be changed or superseded from time to time pursuant to the procedures set forth in Sections 22.11 and 22.4.3 of the CAISO Tariff. In the event of any conflict or dispute over interpretation, those sections of the CAISO Tariff identified herein shall, at all times, take precedence over such CAISO Specifications and CAISO Operating Procedures. The CAISO shall not implement any reliability requirements, operating requirements or performance standards that would impose increased costs on the SUDC without giving due consideration to whether the benefits of such requirements or standards are sufficient to justify such increased costs. In any proceeding concerning the cost recovery by the SUDC of capital and operation and maintenance costs incurred to comply with CAISO Specifications and CAISO Operating Procedures, the CAISO shall to the extent practicable, at the request of the SUDC, provide specific information in a form that may be readily understood by the general public regarding the nature of, and need for, the CAISO-imposed requirements or standards to enable the SUDC to use this information in public hearings in support of cost recovery through rates and tariffs.

**3.6.2 Review of CAISO Specifications and CAISO Operating Procedures.** The CAISO shall periodically review with the SUDC the CAISO Specifications identified in Schedule 6 and CAISO Operating Procedures identified in Schedule 9 and shall modify such CAISO Specifications and/or CAISO Operating Procedures as provided in Section 3.6.1. If a new CAISO Specification or CAISO Operating Procedure applicable to the SUDC is adopted pursuant to Section 3.6.1, the CAISO shall provide a revised version of Schedule 6 or Schedule 9 to the SUDC. Any changes to Schedule 6 or Schedule 9 will not constitute an amendment to this Operating Agreement.

**3.6.3 Periods When Compliance is Required.** While awaiting dispute resolution or regulatory review, the SUDC shall not be required to comply with changes to the CAISO Specifications and CAISO Operating Procedures, except where compliance is necessary in order to prevent or remedy an imminent System Emergency.

**3.7 Utilization of Certified Scheduling Coordinator.** The SUDC shall utilize a CAISO-certified Scheduling Coordinator to submit Bids for Energy and Ancillary Services to or from the CAISO Controlled Grid. At the time when the SUDC retains such Scheduling Coordinator, the SUDC shall confirm that the Scheduling Coordinator has entered into a Scheduling Coordinator Agreement with the CAISO that is currently in effect.

**3.8 Single Point of Contact.** The CAISO and the SUDC shall each provide a single point of contact for the exchange of operational procedures and information. The Parties agree to exchange operational contact information in a format to be provided by the CAISO and completed as of the effective date of this Operating Agreement. Each Party shall provide the other Party ten (10) calendar days advance notice of updates to its operational contact information as that information is expected to change.

**3.9 SUDC Compliance.** In the event the CAISO believes that the SUDC has failed to comply with any provision of the CAISO Tariff created after the effective date applicable to the SUDC in accordance with this Operating Agreement, the CAISO shall notify the SUDC of such alleged failure and, if requested, shall meet with the SUDC regarding such alleged failure to comply. If the Parties cannot reach agreement on the alleged failure to comply, then the CAISO may, if applicable, invoke Section 2.2.1 of this Operating Agreement.

## ARTICLE IV

## OPERATIONAL COORDINATION

**4.1 Maintenance Coordination.** The SUDC shall coordinate its SUDC Facilities Outage requirements with the Participating TO with which it is interconnected. The SUDC will provide the CAISO with copy of any written information regarding Outages of the SUDC Facilities that could cause a material adverse impact on the reliability of the CAISO Controlled Grid. To the extent the SUDC schedules maintenance of SUDC Facilities that has a reasonable potential to cause a material adverse impact to reliability of the CAISO Controlled Grid, the SUDC shall notify the CAISO of such maintenance when it becomes known, and that information will be updated quarterly or as changes occur to the proposed schedule. Consistent with the SUDC's normal record generation and retention practices, the SUDC will record the details for all such work and shall provide available records when it is known, quarterly, or upon written request by the CAISO.

**4.2 System Emergencies.** The responsibilities of the Parties in relation to System Emergencies are stated in Sections 4.11.4, 4.11.5, as well as Section 34 and Section 7 of the CAISO Tariff, the CAISO Operating Procedures identified in Schedule 9, and in Schedule 4.

**4.3 System Emergency Response.** The SUDC will participate in Load Shedding by reducing Load on a voluntary basis when the CAISO declares an emergency alert pursuant to its System Emergency Operating procedure that requests Load curtailment. The SUDC will use any available local communication infrastructure to request that its customers curtail their electricity

usage. The SUDC will not be called separately to manually shed Load. Load restoration of any voluntary Load reduction may not commence until such time as the CAISO declares that a System Emergency no longer exists. The responsibilities of the Parties to direct and to accept direction for Load reduction or other emergency plans are stated in Sections 4.11.4 and 4.11.5 of the CAISO Tariff, and the CAISO Operating Procedures identified in Schedule 9 and CAISO Specifications identified in Schedule 6.

**4.4 System Disturbance Load Restoration.** The responsibilities of the Parties for restoring Load following a system disturbance are stated in Section 4.11.5.2 of the CAISO Tariff, the CAISO Operating Procedures identified in Schedule 9 and CAISO Specifications identified in Schedule 6, and in Schedule 5.

**4.5 Interconnection Operation Standards.** The CAISO and SUDC shall maintain stable established operating parameters and control power and reactive flow within standards stated in Schedule 6.

**4.6 Records, Information and Reports.** The Parties are required to maintain such records, to share information, and to make such reports as are stated in Sections 4.11.1.2, 4.11.6 and 4.11.8 of the CAISO Tariff, and the CAISO Operating Procedures identified in Schedule 9 and the CAISO Specifications identified in Schedule 6. In accordance with Schedule 7, the SUDC will cooperate with the CAISO regarding its collection, study and transmittal of system data, information, reports, and forecasts, provided that the SUDC need only provide available information to the CAISO. Upon the request of the CAISO, the SUDC will cooperate with the CAISO regarding any CAISO review following a major Outage and provide any requested information that is available.

**4.7 Critical Protective Systems.** The SUDC shall (in accordance with Section 11.2 of this Operating Agreement) notify the CAISO as soon as it is reasonably practicable of any condition that it becomes aware of that may compromise the CAISO Controlled Grid Critical Protective Systems.

**4.8 SUDC Distribution System.** The CAISO shall (in accordance with Section 11.2 of this Operating Agreement) notify the SUDC as soon as is reasonably practicable of any condition which the CAISO becomes aware that may compromise the operation and reliability of the SUDC Distribution System.

## ARTICLE V

## ACCESS TO FACILITIES

**5.1 Access Rights.** Pursuant to Section 4.11.9.1 of the CAISO Tariff and Schedule 8 of this Operating Agreement, the CAISO and the SUDC shall each have the right to install or to have installed equipment or other facilities, including metering equipment, on the electric utility property of the other necessary for the implementation of this Operating Agreement. The CAISO's installation of equipment on the property of the SUDC shall comply with Local Regulatory Authority regulations, except where compliance with Local Regulatory Authority regulations would cause the CAISO to violate the CAISO Tariff, and with all relevant safety standards. In such case, the SUDC and CAISO will work together to resolve the conflict between the Local Regulatory Authority regulations and the CAISO Tariff.

**5.2 Meter Testing.** The SUDC shall, at the request of the CAISO and upon reasonable notice, provide access to its facilities necessary to permit the CAISO or a CAISO-approved meter inspector to perform such testing as necessary in accordance with Section 4.11.9.2 or 4.11.9.4 of the CAISO Tariff and the procedures set forth in Schedule 8. For meters that are not owned by the SUDC, the CAISO will obtain approval from the meter owner in advance of accessing SUDC's Facilities. Such approval shall be provided to the SUDC upon request.

**5.3 Emergency Access Rights.** The CAISO shall have a right to access the SUDC's equipment or other facilities during a System Emergency in accordance with Section 4.11.9.3 of the CAISO Tariff. In a System Emergency, the SUDC shall have a right of access to CAISO equipment on SUDC property and SUDC equipment on CAISO property without notice.

## ARTICLE VI

## COSTS

**6.1 SUDC Operating and Maintenance Costs.** The SUDC shall be responsible for all costs incurred in connection with procuring, installing, operating and maintaining its facilities identified in Schedule 1 for the purpose of meeting its obligations under this Operating Agreement.

**6.2 CAISO Operating and Maintenance Costs.** The CAISO shall be responsible for the procurement, installation, operation and maintenance costs of CAISO equipment set out in Article V of this Operating Agreement installed on SUDC property.

## ARTICLE VII

## DISPUTE RESOLUTION

**7.1 Alternative Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Operating Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that all reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the SUDC and references to the CAISO Tariff shall be read as references to this Operating Agreement.

## ARTICLE VIII

## REPRESENTATIONS AND WARRANTIES

**8.1 Representations and Warranties.** Each Party represents and warrants that its execution, delivery and performance of this Operating Agreement has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

**8.2 Necessary Approvals.** Each Party represents that all necessary approvals, permits, licenses, easements, right of way or access to install, own and operate its facilities subject to this Operating Agreement have been obtained prior to the effective date of this Operating Agreement.

## ARTICLE IX

## LIABILITY

**9.1 Extent of Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Operating Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the SUDC and references to the CAISO Tariff shall be read as references to this Operating Agreement.

## ARTICLE X

## UNCONTROLLABLE FORCES

**10.1 Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be

incorporated by reference into this Operating Agreement, except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the SUDC and references to the CAISO Tariff shall be read as references to this Operating Agreement.

## ARTICLE XI

## MISCELLANEOUS

**11.1 Assignments.** Either Party may assign its obligations under this Operating Agreement, with the other Party's prior written consent, in accordance with Section 22.2 of the CAISO Tariff, which is incorporated by reference into this Operating Agreement. Such consent shall not be unreasonably withheld.

**11.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Operating Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, which is incorporated by reference, except that all reference in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the SUDC and references to the CAISO Tariff shall be read as references to this Operating Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 3. A Party must update the information in Schedule 3 of this Operating Agreement as that information changes in accordance with Section 22.4 of the CAISO Tariff. Such changes will not constitute an amendment to this Operating Agreement.

**11.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Operating Agreement, or with respect to any other matter arising in connection with this Operating Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or matter arising in connection with this Operating Agreement. Any delay short of the statutory period of limitations, in asserting or enforcing any right under this Operating Agreement, shall not constitute or be deemed a waiver of such right.

**11.4 Governing Law and Forum.** This Operating Agreement shall be deemed to be a contract made under and for all purposes shall be governed by and construed in accordance with the laws of the State of California except in its conflict of laws provisions. The Parties irrevocably consent that any legal action or proceeding arising under or in relation to this Operating Agreement to which the CAISO ADR Procedures do not apply, shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**11.5 Consistency with Federal Laws and Regulations.**

(a) Nothing in this Operating Agreement shall compel any person or federal entity to: (1) violate federal statutes or regulations; or (2) in the case of a federal agency, to exceed its statutory authority, as defined by any applicable federal statutes, regulations, or orders lawfully promulgated thereunder. If any provision of this Operating Agreement is inconsistent with any obligation imposed on any person or federal entity by federal law or regulation to that extent, it shall be inapplicable to that person or federal entity. No person or federal entity shall incur any liability by failing to comply with this Operating Agreement that is inapplicable to it by reason of being inconsistent with any federal statutes, regulations, or orders lawfully promulgated thereunder; provided, however, that such person or federal entity shall use its best efforts to comply with the CAISO Tariff to the extent that applicable federal laws, regulations, and orders lawfully promulgated thereunder permit it to do so.

(b) If any provision of this Operating Agreement requiring any person or federal entity to give an indemnity or impose a sanction on any person is unenforceable against a federal

entity, the CAISO shall submit to the Secretary of Energy or other appropriate Departmental Secretary a report of any circumstances that would, but for this provision, have rendered a federal entity liable to indemnify any person or incur a sanction and may request the Secretary of Energy or other appropriate Departmental Secretary to take such steps as are necessary to give effect to any provisions of this Operating Agreement that are not enforceable against the federal entity.

**11.6 Integration.** This Operating Agreement constitutes the full agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**11.7 Severability.** If any term, covenant, or condition of this Operating Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Operating Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Operating Agreement.

**11.8 Penalties.** Any penalties to be levied under this Operating Agreement shall be established in accordance with the CAISO Tariff and approved by the FERC. Nothing in this Operating Agreement, with the exception of the provisions relating to the CAISO ADR Procedures, shall be construed as waiving the rights of the SUDC to oppose or protest any penalty proposed by the CAISO to the FERC or the specific imposition by the CAISO of any FERC-approved penalty on the SUDC.

**11.9 [NOT USED]**

**11.10 Amendments.** This Operating Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Operating Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the SUDC shall have the right to make a unilateral filing with FERC to modify this Operating Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Operating Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**11.11 Counterparts.** This Operating Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Operating Agreement.

**IN WITNESS WHEREOF,** the Parties hereto have caused this Operating Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By:_____

Name:_____

Title:_____

Date:_____

**[Full name of SUDC]**

By:_____

Name:_____

Title:_____

Date:_____

**SCHEDULE 1**

**SYSTEM INTERCONNECTION FACILITIES**

[List to be provided in accordance with the SUDC Operating Agreement.]

**SCHEDULE 2**

**Non-SUDC FACILITIES**

[List to be provided in accordance with the SUDC Operating Agreement.]

**SCHEDULE 3**

**CONTACTS FOR NOTICES**

**SUDC**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**CAISO**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

## SCHEDULE 4

## SYSTEM EMERGENCIES

The CAISO will notify the SUDC's operational contact, as identified in Schedule 2, of the emergency, including information regarding the cause, nature, extent, and potential duration of the emergency. The SUDC contact will then take such actions as are appropriate for the emergency.

The SUDC will make requests for information from the CAISO regarding emergencies through the CAISO Operations Shift Supervisor, by the SUDC's operational contact, or the SUDC may coordinate public information with the CAISO Communication Coordinator.

For transmission system caused outages the CAISO Operations Shift Supervisor will notify the SUDC contact of any information related to the outage such as cause, nature, extent, potential duration and customers affected.

Available SUDC information and CAISO Grid Control Center logs, CAISO Electric Switching Orders and CAISO Energy Management System temporal database will be used in the CAISO's preparation of outage reviews. These documents are defined as the chronological record of the operation of the activities which occur with the portion of the electrical system assigned to that control center. The log shall contain all pertinent information, including orders received and transmitted, relay operations, messages, clearances, accidents, trouble reports, daily switching program, etc.

The SUDC will retain records in accordance with its record retention policy or practice, provided the record associated with this Operating Agreement are retained for a minimum of six years.

## SCHEDULE 5

## SYSTEM DISTURBANCE LOAD RESTORATION

If the SUDC is required to shed load, the SUDC will follow the procedures set forth below in this Schedule 5 in promoting orderly, coordinated restoration of electric systems after a major system disturbance has occurred which resulted in Load Shedding by frequency relays in California.

1. Immediately after Load Shedding has occurred in the SUDC, the SUDC will remain in contact with its respective Participating Transmission Owner (PTO) Area Control Center (ACC) until normal frequency has been restored throughout the CAISO Balancing Authority Area or the CAISO Shift Supervisor has concluded that such full-time communications can be terminated. Emergency communications over the California ACC Hot-line will be under the direction of the CAISO Shift Supervisor and the senior dispatcher present at the affected PTO ACC(s).

2. Manual Load restoration will not normally be initiated until the California ACC Hot Line is attended. No Load is to be manually restored unless directed by the CAISO, either directly or through its assignee, provided that the procedure for the CAISO's designation of any assignee is agreed to by the SUDC, after the frequency has recovered and there is indication that the frequency can be maintained. The SUDC will await direction from the CAISO or its assignee, who will be in contact with the CAISO Shift Supervisor. The CAISO Shift Supervisor will determine whether adequate generation resources are available on line to support the Load to be restored.

3. If the CAISO cannot meet the WECC and NERC Balancing Authority Area Disturbance Control Standard or the Control Performance Standard post disturbance, no manual Load restoration will be permitted. If the frequency is such that automatic Load restoration occurs under these conditions, if the SUDC has restored Load automatically, it will manually shed an equivalent amount of Load to offset the Load which was automatically restored.

## SCHEDULE 6

## INTERCONNECTION OPERATION STANDARDS

The CAISO and SUDC shall jointly maintain stable operating parameters and control power and reactive flow in accordance with the capabilities of the SUDC, the CAISO Tariff and the following interconnection operation standards.

**SUDC Responsibilities**

1. The SUDC shall operate its SUDC Facilities at each point of interconnection with the CAISO Controlled Grid in such manner as to avoid any material adverse impact on the reliability of the CAISO Controlled Grid. In accordance with this performance goal, the SUDC shall: i) operate its SUDC Facilities at each point of interconnection with the CAISO Controlled Grid in accordance with Good Utility Practice with respect to normal ratings, emergency ratings, voltage limits, and balance of load between electrical phases; and ii) maintain Load power factor at each point of interconnection with the CAISO Controlled Grid as close as reasonably possible to unity power factor and consistent with Good Utility Practice.

**CAISO Responsibilities**

1. The CAISO shall operate the CAISO Controlled Grid at each point of interconnection with the SUDC in accordance with the CAISO Tariff and in such manner as to avoid any material adverse impact on the SUDC Facilities. In accordance with this performance goal, the CAISO shall:

2. At the request of the SUDC, participate with the SUDC and Participating TO in the development of joint power quality performance standards and jointly maintain compliance with such standards.

3. Observe SUDC grid voltage limits specified in Attachment 1 including requirements for reduced voltage on CAISO Controlled Grid facilities which apply during heavy fog (or other unusual operating conditions) as needed to minimize the risk of insulator flashover.

4. At the request of the SUDC, support SUDC investigation of power quality incidents, and provide related data to the SUDC in a timely manner.

5. Support installation of apparatus on the CAISO Controlled Grid to improve power quality, and take all reasonable measures to investigate and mitigate power quality concerns caused by actions or events in neighboring systems or Balancing Authority Areas.

6. Maintain, or cause to be maintained, Load power factor at each SUDC Interconnection as close as reasonably possible to unity power factor and consistent with Good Utility Practice, pursuant to Section 8.2.3.3 of the CAISO Tariff.

The Parties may adopt additional operations standards for the interconnection provided such standards are in writing and are mutually agreed to.

## SCHEDULE 6

## ATTACHMENT 1

## SUDC GRID VOLTAGE LIMITS

[To be determined]

## SCHEDULE 7

## RECORDS, INFORMATION, REPORTS

The SUDC shall provide available information to the CAISO relating to SUDC system operations reasonably related to system reliability of the CAISO Controlled Grid. The Parties shall jointly develop any necessary forms and procedures for collection, study and transmittal of system data, information, reports and forecasts.

## SCHEDULE 8

## RIGHTS OF ACCESS TO FACILITIES

**1.** **Equipment Installation**. In order to give effect to this Operating Agreement, a Party that requires the use of particular equipment (the equipment owner) may require installation of such equipment on property owned by the other Party (the property owner), provided that the equipment is necessary to meet the equipment owner's service obligations and that the equipment shall not have a negative impact on the reliability of the service provided, nor prevent the property owner from performing its own obligations or exercising its rights under this Operating Agreement.

**2.** **Free Access.** The property owner shall grant to the equipment owner free of charge reasonable installation rights and rights of access to accommodate equipment inspection, maintenance, repair, upgrading, or removal for the purposes of this Operating Agreement, subject to the property owner's reasonable safety, operational, and future expansion needs.

**3.** **Notice.** The equipment owner shall provide reasonable notice to the property owner when requesting access for site assessment, equipment installation, or other relevant purposes. Such access shall not be provided unless the parties mutually agree to the date, time, and purpose of each access. Agreement on the terms of the access shall not be unreasonably withheld or delayed.

**4.** **Removal of Installed Equipment.** Following reasonable notice, the equipment owner shall be required, at its own expense, to remove or relocate equipment, at the request of the property owner, provided that the equipment owner shall not be required to do so if it would have a negative impact on the reliability of the service provided, or be prevented from performing its own obligations or exercising its rights under this Operating Agreement.

**5.** **Costs.** The equipment owner shall repair at its own expense any property damage it causes in exercising its rights and shall reimburse the property owner for any other reasonable costs that it may be required to incur to accommodate the equipment owner's exercise of its rights under Section 1 or Section 4.

**6.** **Rights to Assets.** The Parties shall not interfere with each other's assets, without prior written agreement.

**7.** **Inspection of Facilities.** In order to meet their respective obligations under this Operating Agreement, the CAISO may view or inspect SUDC Facilities and the SUDC may view or inspect CAISO Controlled Grid facilities. Provided that reasonable notice is given, a Party shall not unreasonably deny access to such facilities for viewing or inspection by the requesting Party.

**8.** **Access During Emergencies.** Either Party shall have rights of access, without prior notice, to the other Party's equipment as necessary during times of a System Emergency.

## SCHEDULE 9

## SUDC OPERATING PROCEDURES

[To be determined.]

## B.11 Pro Forma Congestion Revenue Rights Entity Agreement

**THIS AGREEMENT** is dated this _____ day of _____, _____, and is entered into, by and between:

(1) **[Full Legal Name]** having its registered and principal place of business located at **[Address]** (the "CRR Entity");

and

(2) **California Independent System Operator Corporation** ("CAISO"), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The CRR Entity and the CAISO are hereinafter referred to individually as a "Party" and collectively as the "Parties."

**Whereas:**

**A.** The CAISO Tariff provides that any entity that holds or intends to hold CRRs must register and qualify with the CAISO and comply with the terms of the CAISO Tariff, regardless of whether they are to acquire CRRs through the CRR Allocation or CRR Auction, or through the Secondary Registration System.

**B.** The CRR Entity has completed the Candidate CRR Holder application process and is eligible to participate in the CRR Allocation or CRR Auction or register as a CRR Holder through the Secondary Registration System.

**C.** The CAISO Tariff further provides that any entity who wishes to participate in the CRR Allocation or CRR Auction or register as a CRR Holder through the Secondary Registration System must meet all of the Candidate CRR Holder requirements and creditworthiness provisions in the CAISO Tariff and the relevant Business Practice Manual, including demonstration of its ability to accommodate the financial responsibility associated with holding CRRs.

**D.** The CRR Entity intends to obtain CRRs either through the CRR Allocation or CRR Auction or to register as a CRR Holder through the Secondary Registration System and, therefore, wishes to undertake to the CAISO that it will comply with the applicable provisions of the CAISO Tariff.

**E.** The Parties are entering into this Agreement in order to establish the terms and conditions pursuant to which the CAISO and the CRR Entity will discharge their respective duties and responsibilities under the CAISO Tariff.

**NOW THEREFORE,** in consideration of the mutual covenants set forth herein, **THE PARTIES AGREE** as follows:

## ARTICLE I

## DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** All terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement in Appendix A of the CAISO Tariff.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) "includes" or "including" shall mean "including without limitation";

(e) references to a Section, Article, or Schedule shall mean a Section, Article, or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented, or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced, or restated from time to time;

(h) unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization, or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) any reference to a day, week, month, or year is to a calendar day, week, month, or year; and

(k) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

## ARTICLE II

## ACKNOWLEDGEMENTS OF CRR ENTITY AND CAISO

**2.1 Scope of Application to Parties.** The CRR Entity and CAISO acknowledge that all Candidate CRR Holders or CRR Holders must sign this Agreement in accordance with section 4.10.1.9.1 of the CAISO Tariff.

## ARTICLE III

## TERM AND TERMINATION

**3.1 Effective Date.** This Agreement shall be effective as of the later of the date it is executed by both Parties or the date accepted for filing and made effective by FERC, if such FERC filing is required, and shall remain in full force and effect until terminated pursuant to Section 3.2 of this Agreement.

**3.2 Termination**

**3.2.1 Termination by CAISO.** Subject to Article V, the CAISO may terminate this Agreement by giving written notice to the CRR Entity of termination in the event that the CRR Entity commits any material default under this Agreement and/or the CAISO Tariff as it pertains to this Agreement which, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given, to the CRR Entity, written notice of the default, unless excused by reason of Uncontrollable Forces in accordance with Article X of this Agreement or unless the CAISO agrees, in writing, to an extension of the time to remedy such material default. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement was filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the filing of the notice of termination is made after the preconditions for termination have been met and the CAISO files the notice of termination within sixty (60) days after issuance of the notice of default; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if filed with FERC, or thirty (30) days after the date of the CAISO's notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**3.2.2 Termination by CRR Entity.** In the event that the CRR Entity is no longer a CRR Holder, it may terminate this Agreement, on giving the CAISO not less than ninety (90) days' written notice; provided, however, that any outstanding financial right or obligation or any other obligation under the CAISO Tariff of the Candidate CRR Holder or CRR Holder that have arisen while the CRR Entity was a Candidate CRR Holder or a CRR Holder, and any provision of this Agreement necessary to give effect to such right or obligation shall survive until satisfied. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the request to file a notice of termination is made after the preconditions for termination have been met and the CAISO files the notice of termination within sixty (60) days after receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if such notice is required to be filed with FERC, or upon ninety (90) days after the CAISO's receipt of the CRR Entity's notice of termination, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

## ARTICLE IV

## GENERAL TERMS AND CONDITIONS

**4.1 CRR Holder Requirements.** The CRR Entity must register and qualify with the CAISO and comply with all terms of the CAISO Tariff applicable to Candidate CRR Holders or CRR Holders, regardless of the manner in which they acquire CRRs whether by CRR Allocation, CRR Auction, or through the Secondary Registration System.

**4.2 CRR Holder Creditworthiness Requirements.** The CRR Entity must comply with the requirements for creditworthiness applicable to Candidate CRR Holders or CRR Holders, including the creditworthiness provisions of the CAISO Tariff and the relevant Business Practice Manual.

**4.3 Settlement Account.** The CRR Entity shall maintain at all times an account with a bank capable of Fedwire transfer and, at its option, may also maintain an account capable of ACH transfers, to which credits or debits shall be made in accordance with the billing and Settlement provisions of Section 11 of the CAISO Tariff. Such account shall be the account as notified by the CRR Entity to the CAISO from time to time by giving at least seven (7) days written notice before the new account becomes operational.

**4.4 Electronic Contracting.** All submitted applications, bids, confirmations, changes to information on file with the CAISO and other communications conducted via electronic transfer (e.g., direct computer link, FTP file transfer, bulletin board, e-mail, facsimile or any other means established by the CAISO) shall have the same legal rights, responsibilities, obligations and other implications as set forth in the terms and conditions of the CAISO Tariff as if executed in written format.

**4.5 Agreement Subject to CAISO Tariff.** The Parties will comply with all provisions of the CAISO Tariff applicable to Candidate CRR Holders or CRR Holders. This Agreement shall be subject to the CAISO Tariff, which shall be deemed to be incorporated herein.

## ARTICLE V

## PERFORMANCE

**5.1 Penalties.** The CRR Entity shall be subject to all penalties made applicable to Candidate CRR Holders and CRR Holders set forth in the CAISO Tariff. Nothing in this Agreement, with the exception of the provisions relating to the CAISO ADR Procedures, shall be construed as waiving the rights of the CRR Entity to oppose or protest the specific imposition by the CAISO of any FERC-approved penalty on the CRR Entity.

**5.2 Corrective Measures.** If the CRR Entity or the CAISO fails to meet or maintain the requirements set forth in this Agreement and/or the CAISO Tariff as it pertains to this Agreement, the CAISO or the CRR Entity shall be permitted to take any of the measures, contained or referenced in the CAISO Tariff, which the Party seeking enforcement deems to be necessary to correct the situation.

## ARTICLE VI

## COSTS

**6.1 Operating and Maintenance Costs.** The CRR Entity shall be responsible for all its costs incurred in connection with all its CRR related activities.

## ARTICLE VII

## DISPUTE RESOLUTION

**7.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the CRR Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VIII

## REPRESENTATIONS AND WARRANTIES

**8.1 Representation and Warranties.** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

## ARTICLE IX

## LIABILITY

**9.1 Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the CRR Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE X

## UNCONTROLLABLE FORCES

**10.1 Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the CRR Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE XI

## MISCELLANEOUS

**11.1 Assignments.** Either Party may assign or transfer any or all of its rights and/or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff and other CAISO Tariff requirements as applied to Candidate CRR Holders or CRR Holders. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest was an original Party to this Agreement.

**11.2 Notices.** Any notice, demand, or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the CRR Entity and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 1. A Party must update the information in Schedule 1 of this Agreement as information changes. Such changes to Schedule 1 shall not constitute an amendment to this Agreement.

**11.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**11.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal

action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply, shall be brought in any of the following forums, as appropriate: (i) any court of the State of California, (ii) any federal court of the United States of America located in the State of California, except to the extent subject to the protections of the Eleventh Amendment of the United States Constitution or, (iii) where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**11.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**11.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**11.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**11.8 [NOT USED]**

**11.9 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing herein shall be construed as affecting in any way the right of the CAISO to make unilateral application to FERC for a change in the rates, terms, and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the CRR Entity shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein. The standard of review FERC shall apply when acting upon proposed modifications to this Agreement by the CAISO shall be the "just and reasonable" standard of review rather than the "public interest" standard of review. The standard of review FERC shall apply when acting upon proposed modifications to this Agreement by FERC's own motion or by a signatory other than the CAISO or non-signatory entity shall also be the "just and reasonable" standard of review. Schedule 1 is provided for informational purposes and revisions to that schedule do not constitute a material change in the Agreement warranting FERC review.

**11.10 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF,** the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By:_____

Name:_____

Title:_____

Date:_____

**[Name of CRR Entity]**

By:_____

Name:_____

Title:_____

Date:_____

**SCHEDULE 1**

**NOTICES**

**[Section 11.2]**

**CRR Entity**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**CAISO**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

## Appendix B.12 Metered Subsystem Aggregator CRR Entity Agent Agreement

**THIS AGREEMENT** is dated this _____ day of _____, _____, and is entered into, by and between:

(1) **[INSERT NAME OF MSS AGGREGATOR]**, a **[INSERT TYPE OF ENTITY]**, having its registered and principal place of business located at **[INSERT ADDRESS]**, acting as the agent on behalf of the following principals: **[INSERT NAMES OF MSS OPERATOR LSEs]**, all of which are MSS Operators and Load Serving Entities, ("MSS Operators") pursuant to the terms of that certain **[INSERT TITLE OF MSS AGGREGATOR AGREEMENT]** ("MSSAA") dated _____ (the "CRR Entity Agent");

and

(2) **California Independent System Operator Corporation** ("CAISO"), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The CRR Entity Agent and the CAISO are hereinafter referred to individually as a "Party" and collectively as the "Parties."

**Whereas:**

**A.** The CAISO Tariff provides that any entity that holds or intends to hold CRRs must register and qualify with the CAISO and comply with the terms of the CAISO Tariff (either directly or through its agent), regardless of whether they are to acquire CRRs through the CRR Allocation or CRR Auction, or through the Secondary Registration System.

**B.** The CRR Entity Agent pursuant to the terms of the MSSAA is authorized by the aggregated MSS Operators to act on the behalf of the MSS Operators with regard to matters relating to CRRs, including, but not limited to, allowing the CRR Entity Agent to participate in the CRR nomination process on behalf of the MSS Operators, to accept financial responsibility under this Agreement, to perform settlement functions, and to comply with CAISO Tariff requirements.

**C.** The CRR Entity Agent has completed the Candidate CRR Holder application process on behalf of its aggregated MSS Operators and pursuant to the terms of the MSSAA is eligible to participate on behalf of the MSS Operators in the CRR Allocation or CRR Auction or register through the Secondary Registration System on behalf of the MSS Operators. However, the CRR Entity Agent will not hold title to or ownership of any CRRs issued to any of its aggregated MSS Operators through the CRR Allocation, CRR Auction, or Secondary Registration System processes. Rather, the CRR Entity Agent will hold title for the CRRs allocated to the individual MSS Operator's Load in trust on behalf of the MSS Operator.

**D.** The CAISO Tariff further provides that any entity that wishes to participate in the CRR Allocation or CRR Auction or register as a CRR Holder through the Secondary Registration System must meet all of the Candidate CRR Holder requirements and creditworthiness provisions in the CAISO Tariff and the relevant Business Practice Manual, including demonstration of its ability to accommodate the financial responsibility associated with holding CRRs.

**E.** The aggregated MSS Operators desire to act through the CRR Entity Agent to comply with all requirements referenced in part D, above, in order to obtain CRRs through the CRR Allocation, CRR Auction, or Secondary Registration System.

**F.** The CRR Entity Agent, on behalf of its aggregated MSS Operators, wishes to undertake such necessary tasks and requirements set forth herein to comply with the applicable provisions of the CAISO Tariff in order to allow the MSS Operators to participate in the CRR Allocation, CRR Auction, and Secondary Registration System processes.

**G.** The Parties are entering into this Agreement in order to establish the terms and conditions pursuant to which the CAISO and the CRR Entity Agent will discharge their respective duties and responsibilities under the CAISO Tariff.

**NOW THEREFORE,** in consideration of the mutual covenants set forth herein, **THE PARTIES AGREE** as follows:

## ARTICLE I

## DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** All terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement in Appendix A of the CAISO Tariff, unless otherwise defined herein.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) “includes” or “including” shall mean “including without limitation”;

(e) references to a Section, Article, or Schedule shall mean a Section, Article, or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented, or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced, or restated from time to time;

(h) unless the context otherwise requires, any reference to a “person” includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization, or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) any reference to a day, week, month, or year is to a calendar day, week, month, or year; and

(k) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

## ARTICLE II

## ACKNOWLEDGEMENTS OF CRR ENTITY AGENT AND CAISO

**2.1 Scope of Application to Parties.** The CRR Entity Agent and CAISO acknowledge that all MSS Aggregators that are authorized by their aggregated MSS Operators to act as the agent of those MSS Operators in undertaking all obligations and responsibilities of Candidate CRR Holders or CRR Holders must sign this Agreement in accordance with section 4.10.1.9.1 of the CAISO Tariff.

## ARTICLE III

## TERM AND TERMINATION

**3.1 Effective Date.** This Agreement shall be effective as of the later of the date it is executed by both Parties or the date accepted for filing and made effective by FERC, if such FERC filing is required, and shall remain in full force and effect until terminated pursuant to Section 3.2 of this Agreement.

**3.2 Termination**

**3.2.1 Termination by CAISO.** Upon notice that the agency relationship between all of the aggregated MSS Operators and the CRR Entity Agent has terminated, including any notice that the MSSAA has terminated, the CAISO may terminate this Agreement by giving written notice to the CRR Entity Agent of termination. Further, subject to Article V, the CAISO may terminate this Agreement by giving written notice to the CRR Entity Agent of termination in the event that the CRR Entity Agent commits any material default under this Agreement and/or the CAISO Tariff as it pertains to this Agreement which, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given, to the CRR Entity Agent, written notice of the default, unless excused by reason of Uncontrollable Forces in accordance with Article X of this Agreement or unless the CAISO agrees, in writing, to an extension of the time to remedy such material default. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement was filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the filing of the notice of termination is made after the preconditions for termination have been met and the CAISO files the notice of termination within sixty (60) days after issuance of the notice of default; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if filed with FERC, or thirty (30) days after the date of the CAISO's notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**3.2.2 Termination by CRR Entity Agent.** In the event that the CRR Entity Agent is no longer a CRR Holder as trustee for any or all of its aggregated MSS Operators, the CRR Entity Agent may terminate this Agreement, on giving the CAISO not less than ninety (90) days' written notice; provided, however, that any outstanding financial right or obligation or any other obligation under the CAISO Tariff of the Candidate CRR Holder or CRR Holder (regardless of whether such obligation shall be borne by an aggregated MSS Operator or the CRR Entity Agent) that has arisen while the CRR Entity Agent was a Candidate CRR Holder or a CRR Holder as trustee for any or all of its MSS Operators, and any provision of this Agreement necessary to give effect to such right or obligation, shall survive until satisfied. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if

this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the request to file a notice of termination is made after the preconditions for termination have been met and the CAISO files the notice of termination within sixty (60) days after receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if such notice is required to be filed with FERC, or upon ninety (90) days after the CAISO's receipt of the CRR Entity Agent's notice of termination, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

## ARTICLE IV

## GENERAL TERMS AND CONDITIONS

**4.1 CRR Holder Requirements.** The CRR Entity Agent acting on behalf of its aggregated MSS Operators must register and qualify on behalf of the MSS Operators with the CAISO and comply with all terms of the CAISO Tariff applicable to Candidate CRR Holders or CRR Holders, regardless of the manner in which it acquires the CRRs on behalf of its aggregated MSS Operators, whether by CRR Allocation or CRR Auction, or through the Secondary Registration System. The CRR Entity Agent shall participate in the CRR nomination process on an aggregated basis on behalf of each of its aggregated MSS Operators on the basis of that individual MSS Operator's Load ratio share set forth in Schedule 3. The CAISO shall allocate CRRs to each individual MSS Operator based on its Load ratio share set forth in Schedule 3, which CRRs will be held in the aggregate by the CRR Entity Agent on behalf of its aggregated MSS Operators. The CRR Entity Agent acknowledges and agrees that it shall not hold title to or ownership of any of the CRRs of its aggregated MSS Operators. Ownership and title of any obtained CRRs shall be held in trust by the CRR Entity Agent on behalf of the applicable MSS Operator in accordance with each MSS Operator's Load share ratio as set forth in Schedule 3.

**4.2 CRR Holder Creditworthiness Requirements.** The CRR Entity Agent acting on behalf of its aggregated MSS Operators must comply with the requirements for creditworthiness applicable to Candidate CRR Holders or CRR Holders, including the creditworthiness provisions of the CAISO Tariff and the relevant Business Practice Manual.

**4.3 Settlement Account.** The CRR Entity Agent on behalf of its aggregated MSS Operators shall maintain at all times an account with a bank capable of Fedwire transfer and, at its option, may also maintain an account capable of ACH transfers, to which credits or debits shall be made in accordance with the billing and Settlement provisions of Section 11 of the CAISO Tariff. Such account shall be the as notified by the CRR Entity Agent to the CAISO from time to time by giving at least seven (7) days written notice before the new account becomes operational.

**4.4 CRR Entity Agent Responsibility for MSS Operator Load Share Ratio.** The CRR Entity Agent shall track each aggregated MSS Operator's Load share ratio of CRRs separately as set forth in Schedule 3 and shall be solely responsible for tracking such allocations. The CRR Entity Agent acknowledges and agrees that CAISO shall have no responsibility with regard to such pro rata allocations of CRRs as set forth in Schedule 3. The CAISO shall issue CRRs allocated to the aggregated MSS Operators in aggregate to the CRR Entity Agent, and the CRR Entity Agent shall be solely responsible for ensuring the proper allocation of such CRRs to each aggregated MSS Operator. In the event the MSS Operator and CRR Entity Agent aggregation or agency relationship terminates, the CRR Entity Agent shall be solely responsible for ensuring that the appropriate pro rata share of every CRR Source is properly assigned to the applicable MSS Operator.

**4.5 Provision of Evidence of CRR Entity Agent Authority.** The CRR Entity Agent shall provide the CAISO with a copy of the MSSAA or other sufficient evidence to assure the CAISO of its authority to act as agent on behalf of its aggregated MSS Operators with regard to the matters addressed in this Agreement. The CRR Entity Agent shall provide the CAISO with the contact name, address, e-mail address, and phone number of an individual representative of each of its aggregated MSS Operators whom the CAISO may contact regarding matters addressed in this Agreement. The CRR Entity Agent shall immediately notify the CAISO in writing of any revision to the terms of the MSSAA that affects its authority to act as agent on behalf of its aggregated MSS Operators or any other change in its relationship with any of its aggregated MSS Operators.

**4.6 Electronic Contracting.** All submitted applications, bids, confirmations, changes to information on file with the CAISO and other communications conducted via electronic transfer (e.g., direct computer link, FTP file transfer, bulletin board, e-mail, facsimile or any other means established by the CAISO) shall have the same legal rights, responsibilities, obligations and other implications as set forth in the terms and conditions of the CAISO Tariff as if executed in written format.

**4.7 Agreement Subject to CAISO Tariff.** The Parties will comply with all provisions of the CAISO Tariff applicable to Candidate CRR Holders or CRR Holders. This Agreement shall be subject to the CAISO Tariff, which shall be deemed to be incorporated herein.

## ARTICLE V

## PERFORMANCE

**5.1 Penalties.** The CRR Entity Agent on behalf of its aggregated MSS Operators shall be subject to all penalties made applicable to Candidate CRR Holders and CRR Holders set forth in the CAISO Tariff. Nothing in this Agreement, with the exception of the provisions relating to the CAISO ADR Procedures, shall be construed as waiving the rights of the CRR Entity Agent on behalf of its aggregated MSS Operators to oppose or protest the specific imposition by the CAISO of any FERC-approved penalty on the CRR Entity Agent or any MSS Operator.

**5.2 Corrective Measures.** If the CRR Entity Agent or the CAISO fails to meet or maintain the requirements set forth in this Agreement and/or the CAISO Tariff, the CAISO or the CRR Entity Agent shall be permitted to take any of the measures, contained or referenced in the CAISO Tariff as it pertains to this Agreement, which the Party seeking enforcement deems to be necessary to correct the situation.

## ARTICLE VI

## COSTS

**6.1 Operating and Maintenance Costs.** The CRR Entity Agent shall be responsible for all its costs and any costs of its aggregated MSS Operators incurred in connection with all its CRR related activities.

## ARTICLE VII

## DISPUTE RESOLUTION

**7.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to one or more aggregated MSS Operators and/or the CRR Entity Agent (as applicable) and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VIII

## REPRESENTATIONS AND WARRANTIES

**8.1 Representation and Warranties.** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law, and that the proper agreements providing for the CRR Entity Agent relationship with each aggregated MSS Operator, including, but not limited to, the MSSAA, are in full force and effect.

## ARTICLE IX

## LIABILITY

**9.1 Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to one or more aggregated MSS Operators and/or the CRR Entity Agent (as applicable), and references to the CAISO Tariff shall be read as references to this Agreement. Further, in reliance on the agency relationship between the CRR Entity Agent and each aggregated MSS Operator, CAISO shall treat the CRR Entity Agent as the MSS Operators and shall not be liable to any aggregated MSS Operator for any claims, liabilities, or errors arising from this agency relationship, including, but not limited to, CRR ownership or Settlement Accounts, unless the CAISO causes such claim(s), liability(ies) or error(s) due to its gross negligence or willful conduct.

## ARTICLE X

## UNCONTROLLABLE FORCES

**10.1 Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to one or more aggregated MSS Operators and/or the CRR Entity Agent (as applicable) and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE XI

## MISCELLANEOUS

**11.1 Assignments.** Either Party may assign or transfer any or all of its rights and/or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff and other CAISO Tariff requirements as applied to Candidate CRR Holders or CRR Holders. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest was an original Party to this Agreement.

**11.2 Notices.** Any notice, demand, or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the CRR Entity Agent and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 1. A Party must update the information in Schedule 1 of this Agreement as information changes. Such changes to Schedule 1 shall not constitute an amendment to this Agreement.

**11.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**11.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply, shall be brought in any of the following forums, as appropriate: (i) any court of the State of California, (ii) any federal court of the United States of America located in the State of California, except to the extent subject to the protections of the Eleventh Amendment of the United States Constitution, or (iii) where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**11.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**11.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**11.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**11.8 [NOT USED]**

**11.9 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing herein shall be construed as affecting in any way the right of the CAISO to make unilateral application to FERC for a change in the rates, terms, and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the CRR Entity Agent shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein. The standard of review FERC apply when acting upon proposed modifications to this Agreement by the CAISO shall be the "just and reasonable" standard of review rather than the "public interest" standard of review. The standard of review FERC shall apply when acting upon proposed modifications to this Agreement by FERC's own motion or by a signatory other than the CAISO or non-signatory entity shall also be the "just and reasonable" standard of review.

Schedule 1 is provided for informational purposes and revisions to that schedule do not constitute a material change in the Agreement warranting FERC review.

**11.10 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF,** the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By:_____

Name:_____

Title:_____

Date:_____

**[INSERT NAME OF CRR ENTITY AGENT]**

By:_____

Name:_____

Title:_____

Date:_____

**SCHEDULE 1**

**NOTICES**

**[Section 11.2]**

**CRR Entity Agent**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**CAISO**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**SCHEDULE 3**

**[Pro Rata Load Share per MSS Operator Represented by CRR Entity Agent]**

**[Section 4.4]**

## Appendix B.13 Resource-Specific System Resource Agreement

**THIS AGREEMENT** is dated this _____ day of _____, _____ and is entered into, by and between:

(1) **[Full Legal Name]** having its registered and principal place of business located at **[Address]** (the "System Resource Owner");

and

(2) **California Independent System Operator Corporation** ("CAISO"), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The System Resource Owner and the CAISO are hereinafter referred to as the "Parties".

**Whereas:**

**A.** The CAISO Tariff provides that the CAISO shall not accept Bids for Energy or Ancillary Services otherwise than through a Scheduling Coordinator.

**B.** The CAISO Tariff further provides that the CAISO shall not be obliged to provide Bid Cost Recovery to any Resource-Specific System Resource unless the relevant Resource-Specific System Resource Owner undertakes in writing to the CAISO to comply with all applicable provisions of the CAISO Tariff.

**C.** The Parties are entering into this Agreement in order to establish the terms and conditions on which the CAISO and the System Resource Owner will discharge their respective duties and responsibilities under the CAISO Tariff.

**NOW THEREFORE,** in consideration of the mutual covenants set forth herein, **THE PARTIES AGREE** as follows:

### ARTICLE I

### DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** All terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement to the CAISO Tariff.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) "includes" or "including" shall mean "including without limitation";

(e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) any reference to a day, week, month or year is to a calendar day, week, month or year; and

(k) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

## ARTICLE II

## ACKNOWLEDGEMENTS OF SYSTEM RESOURCE OWNER AND CAISO

**2.1 CAISO Responsibility.** The Parties acknowledge that the CAISO is responsible for the efficient use and reliable operation of the CAISO Controlled Grid consistent with achievement of planning and Operating Reserve criteria no less stringent than those established by the Western Electricity Coordinating Council and the North American Electric Reliability Corporation and further acknowledge that the CAISO may not be able to satisfy fully these responsibilities if the System Resource Owner fails to fully comply with all of its obligations under this Agreement and the CAISO Tariff.

**2.2 Scope of Application to Parties.** The System Resource Owner and CAISO acknowledge that all owners of Resource-Specific System Resources wishing to be eligible for Bid Cost Recovery must sign this Agreement in accordance with Section 4.12 of the CAISO Tariff.

## ARTICLE III

## TERM AND TERMINATION

**3.1 Effective Date.** This Agreement shall be effective as of the date set forth above, unless accepted for filing and made effective by FERC on some other date, if FERC filing is required, and shall remain in full force and effect until terminated pursuant to Section 3.2 of this Agreement.

**3.2 Termination**

**3.2.1 Termination by CAISO.** Subject to Section 3.2.2, the CAISO may terminate this Agreement by giving written notice of termination in the event that the System Resource Owner commits any material default under this Agreement and/or the CAISO Tariff which, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given, to the System

Resource Owner, written notice of the default, unless excused by reason of Uncontrollable Forces in accordance with Article X of this Agreement. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the filing of the notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within sixty (60) days after issuance of the notice of default; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if filed with FERC, or thirty (30) days after the date of the CAISO's notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**3.2.2 Termination by System Resource Owner.** In the event that the System Resource Owner no longer wishes to be eligible for Bid Cost Recovery, it may terminate this Agreement, on giving the CAISO not less than ninety (90) days written notice. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the request to file a notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within thirty (30) days of receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if such notice is required to be filed with FERC, or upon ninety (90) days after the CAISO's receipt of the System Resource Owner's notice of termination, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

## ARTICLE IV

## GENERAL TERMS AND CONDITIONS

**4.1 Resource-Specific System Resource Information.**

**4.1.1 Identification of Resource-Specific System Resources.** The System Resource Owner has identified the generating units comprising its Resource-Specific System Resources that it owns, operates or has a contractual entitlement to in Schedule 1, as required by Section 4.12 of the CAISO Tariff.

**4.1.2 Technical Characteristics.** The System Resource Owner has provided to the CAISO in Schedule 1 the required information regarding the capacity and operating characteristics of each of the Resource-Specific System Resources listed in that schedule. Pursuant to Sections 8.9 and 8.10 of the CAISO Tariff, the CAISO may verify, inspect and test the capacity and operating characteristics provided in Schedule 1.

**4.1.3 Notification of Changes.** Sixty (60) days prior to changing any technical information in Schedule 1, the System Resource Owner shall notify the CAISO of the proposed changes. Pursuant to Sections 8.9 and 8.10 of the CAISO Tariff, the CAISO may verify, inspect and test the capacity and operating characteristics provided in the revised Schedule 1.

**4.2 Agreement Subject to CAISO Tariff.** The Parties will comply with all applicable provisions of the CAISO Tariff. This Agreement shall be subject to the CAISO Tariff which shall be deemed to be incorporated herein.

**4.3 Obligations Relating to Resource-Specific System Resources.**

**4.3.1 Bid Cost Recovery.** In order to be eligible for Bid Cost Recovery, the System Resource Owner must comply with all applicable requirements of the CAISO Tariff, including but not limited to compliance with Start-Up Instructions issued by the CAISO and submittal of its Bid Costs to the CAISO in accordance with CAISO Tariff Sections 4.12, 11.8, 30.4, and 30.5.2.4.

**4.3.2 Telemetry Data for Resource-Specific System Resources.** For purposes of determining compliance with the CAISO's Start-Up Instructions and minimum operation obligations, the System Resource Owner must provide SCADA data by telemetry to the CAISO's EMS for each of its Resource-Specific System Resources in accordance with CAISO Tariff Section 4.12.3. For each of its Non-Dynamic Resource-Specific System Resources, the System Resource Owner has specified in Schedule 1 the manner in which it will provide this telemetry data, as permitted by CAISO Tariff Section 4.12.3.

**4.3.3 Use of CAISO Forecast.** For purposes of participating in the CAISO Markets, the System Resource Owner has the option of using a forecast of their output provided by CAISO, provided that: (1) they agree to provide the CAISO with the meteorological data specified in Appendix Q; and (2) they are certified to do so by the CAISO pursuant to the rules specified in the Business Practice Manuals. Once the election to use the output forecast provided by the CAISO is complete, the CAISO will specify the election status in the Master File. Any changes to this election will be subject to the timeline and rule changes that apply to the Master File as specified in Section 30.7.3.2.

## ARTICLE V

## PENALTIES AND SANCTIONS

**5.1 Penalties.** If the System Resource Owner fails to comply with any provisions of this Agreement, the CAISO shall be entitled to impose penalties and sanctions on the System Resource Owner. No penalties or sanctions may be imposed under this Agreement unless a Schedule or CAISO Tariff provision providing for such penalties or sanctions has first been filed with and made effective by FERC. Nothing in this Agreement, with the exception of the provisions relating to the CAISO ADR Procedures, shall be construed as waiving the rights of the System Resource Owner to oppose or protest any penalty proposed by the CAISO to the FERC or the specific imposition by the CAISO of any FERC-approved penalty on the System Resource Owner.

**5.2 Corrective Measures.** If the System Resource Owner fails to meet or maintain the requirements set forth in this Agreement and/or the CAISO Tariff, the CAISO shall be permitted to take any of the measures, contained or referenced in the CAISO Tariff, which the CAISO deems to be necessary to correct the situation.

## ARTICLE VI

## COSTS

**6.1 Operating and Maintenance Costs.** The System Resource Owner shall be responsible for all its costs incurred in connection with dynamic scheduling and compliance by the Resource-Specific System Resources identified in Schedule 1 for the purpose of meeting its obligations under this Agreement.

## ARTICLE VII

## DISPUTE RESOLUTION

**7.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is

incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the System Resource Owner and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VIII

## REPRESENTATIONS AND WARRANTIES

**8.1 Representation and Warranties.** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

## ARTICLE IX

## LIABILITY

**9.1 Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the System Resource Owner and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE X

## UNCONTROLLABLE FORCES

**10.1 Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the System Resource Owner and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE XI

## MISCELLANEOUS

**11.1 Assignments.** Either Party may assign or transfer any or all of its rights and/or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest was an original Party to this Agreement.

**11.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the System Resource Owner and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 2. A Party must update the information in Schedule 2 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.

**11.3 Waivers.** Any waivers at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**11.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal

action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply, shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**11.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**11.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**11.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**11.8 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder.

**11.9 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF,** the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By:_____

Name:_____

Title:_____

Date:_____

**[NAME OF SYSTEM RESOURCE OWNER]**

By:_____

Name:_____

Title:_____

Date:_____

**SCHEDULE 1**

**RESOURCE-SPECIFIC SYSTEM RESOURCES AND BALANCING AUTHORITY AREA**

**INFORMATION**

**[Sections 4.1 and 4.3.2]**

Description of the capacity and operating characteristics for each Resource-Specific System Resource for which Bid Cost Recovery is being sought:

Description of how the System Resource Owner will demonstrate to the CAISO through telemetry data that its Non-Dynamic Resource-Specific System Resources responded to the CAISO's Start-Up Instructions and maintained minimum operation for the length of time specified:

Host Balancing Authority Area:

**SCHEDULE 2**

**NOTICES**

**[Section 11.2]**

**[System Resource Owner]**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**CAISO**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**Appendix B.14 Demand Response Provider Agreement**

**CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

**AND**

**[DEMAND RESPONSE PROVIDER]**

**DEMAND RESPONSE PROVIDER AGREEMENT (DRPA)**

**THIS AGREEMENT** is dated this _____ day of _____, _____ and is entered into, by and between:

(1) **[Full legal name]**, having its registered and principal place of business located at **[legal address]** (the "Demand Response Provider");

and

(2) **California Independent System Operator Corporation** ("CAISO"), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The Demand Response Provider and the CAISO are hereinafter referred to as the "Parties".

**Whereas:**

**A.** The CAISO Tariff provides that the CAISO shall only accept Bids for a Proxy Demand Resource or a Reliability Demand Response Resource from a Scheduling Coordinator.

**B.** The CAISO Tariff further provides that Demand Response Services may be provided by Demand Response Providers.

**C.** The Demand Response Provider desires to provide Demand Response Services from Proxy Demand Resources and/or Reliability Demand Response Resources through a Scheduling Coordinator and represents to the CAISO that it will comply with the applicable provisions of the CAISO Tariff.

**D.** The Parties are entering into this Agreement in order to establish the terms and conditions on which the CAISO and the Demand Response Provider will discharge their respective duties and responsibilities under the CAISO Tariff.

**NOW THEREFORE,** in consideration of the mutual covenants set forth herein, **THE PARTIES AGREE** as follows:

## ARTICLE I

## DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** All terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement in Appendix A of the CAISO Tariff.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this

Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) "includes" or "including" shall mean "including without limitation";

(e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) any reference to a day, week, month or year is to a calendar day, week, month or year; and

(k) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

## ARTICLE II

## ACKNOWLEDGEMENTS OF DEMAND RESPONSE PROVIDER AND CAISO

**2.1 CAISO Responsibility.** The Parties acknowledge that the CAISO is responsible for the efficient use and reliable operation of the CAISO Controlled Grid consistent with achievement of planning and Operating Reserve criteria no less stringent than those established by the Western Electricity Coordinating Council and the North American Electric Reliability Corporation and further acknowledge that the CAISO may not be able to satisfy fully these responsibilities if the Demand Response Provider fails to fully comply with all of its obligations under this Agreement and the CAISO Tariff.

**2.2 Scope of Application to Parties.** The Demand Response Provider and CAISO acknowledge that to submit Bids for Proxy Demand Resources or Reliability Demand Response Resources to the CAISO through a Scheduling Coordinator, the Demand Response Provider must register its Proxy Demand Resources or Reliability Demand Response Resources in the CAISO's Demand Response System. The Demand Response Provider warrants that it owns, operates, or has sufficient contractual entitlement to provide Demand Response Services from the Proxy Demand Resources and Reliability Demand Response Resources it represents in accordance with the

CAISO Tariff.

## ARTICLE III

## TERM AND TERMINATION

**3.1 Effective Date.** This Agreement shall be effective as of the later of the date it is executed by the Parties or the date accepted for filing and made effective by FERC, if such FERC filing is required, and shall remain in full force and effect until terminated pursuant to Section 3.2 of this Agreement.

**3.2 Termination**

**3.2.1 Termination by CAISO.** Subject to Section 5.2, the CAISO may terminate this Agreement by giving written notice of termination in the event that the Demand Response Provider commits any material default under this Agreement and/or the CAISO Tariff which, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given, to the Demand Response Provider, written notice of the default, unless excused by reason of Uncontrollable Forces in accordance with Article X of this Agreement; provided, however, that any outstanding financial right or obligation or any other obligation under the CAISO Tariff of the Demand Response Provider that has arisen while the Demand Response Provider was submitting Bids for Proxy Demand Resources, or Reliability Demand Response Resources and any provision of this Agreement necessary to give effect to such right or obligation, shall survive until satisfied. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement was filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the filing of the notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within sixty (60) days after issuance of the notice of default; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if filed with FERC, or thirty (30) days after the date of the CAISO's notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**3.2.2 Termination by Demand Response Provider.** In the event that the Demand Response Provider no longer wishes to submit Bids or transmit Energy over the CAISO Controlled Grid, it may terminate this Agreement, on giving the CAISO not less than ninety (90) days written notice, provided, however, that in accordance with Section 4.1.2, the Demand Response Provider may eliminate from the Demand Response System Proxy Demand Resources or Reliability Demand Response Resources which it no longer provides for and such modification shall be effective upon receipt of notice by the CAISO; provided that a Demand Response Provider with Reliability Demand Response Resources is not permitted to terminate this Agreement effective as of a date within a Reliability Demand Response Services Term to which those Reliability Demand Response Resources are subject; and provided further that any outstanding financial right or obligation or any other obligation under the CAISO Tariff of the Demand Response Provider that has arisen while the Demand Response Provider was submitting Bids for Proxy Demand Resources or Reliability Demand Response Resources, and any provision of this Agreement necessary to give effect to such right or obligation, shall survive until satisfied. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the request to file a notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within thirty (30) days of receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This

Agreement shall terminate upon acceptance by FERC of such a notice of termination, if such notice is required to be filed with FERC, or upon ninety (90) days after the CAISO's receipt of the Demand Response Provider's notice of termination, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

## ARTICLE IV

## GENERAL TERMS AND CONDITIONS

### 4.1 General Terms and Conditions Applicable to Both Proxy Demand Resources and Reliability Demand Response Resources.

**4.1.1 Demand Response Provider Requirements.** The Demand Response Provider must register with the CAISO through the Demand Response System and comply with all terms of the CAISO Tariff. A Demand Response Provider that aggregates the demand response of customers for utilities that distribute: (1) over four million MWh in the previous fiscal year must certify to the CAISO that its participation is not prohibited by the Local Regulatory Authority; or (2) four million MWh or less in the previous fiscal year must certify to the CAISO that its participation is permitted by the Local Regulatory Authority applicable to Demand Response Providers, and that it has satisfied all applicable rules and regulations of the Local Regulatory Authority. The Demand Response Provider must certify to the CAISO that any required bilateral agreements between the Demand Response Provider and the Load Servicing Entities or other agreements required by the Local Regulatory Authority are fully executed.

**4.1.2 Agreement Subject to CAISO Tariff.** The Parties will comply with all applicable provisions of the CAISO Tariff. This Agreement shall be subject to the CAISO Tariff, which shall be deemed to be incorporated herein.

**4.1.3 Obligations relating to Major Incidents.** The Demand Response Provider shall promptly provide such information as the CAISO may reasonably require in relation to the CAISO's investigations of operating situations or events, or for the CAISO's reporting to the authorities such as the FERC, California Public Utilities Commission, Western Electricity Coordinating Council, or North American Electric Reliability Corporation.

### 4.2 General Terms and Conditions Applicable Solely to Proxy Demand Resources

**4.2.1 Technical Characteristics.** As required by Sections 8.3.4 and 8.4 of the CAISO Tariff, the Demand Response Provider shall provide the CAISO with all technical and operational information required for each Proxy Demand Resource that it owns, operates, or to which it has a contractual entitlement. For those Proxy Demand Resources designated by the Demand Response Provider as providing Demand Response Services, the Demand Response Provider shall indicate whether the Proxy Demand Resource can submit Bids as qualifying Ancillary Services. Pursuant to Sections 8.9 and 8.10 of the CAISO Tariff, the CAISO may verify, inspect and test the capacity and operating characteristics provided for Proxy Demand Resources. The CAISO will maintain the required technical and operational information, which has been verified by the appropriate Load Serving Entity and Utility Distribution Company, as appropriate.

**4.2.2 Metering and Communication.** Metering requirements for the submittal of Settlement Quality Meter Data for Scheduling Coordinator Metered Entities will be in accordance with Section 10.3 of the CAISO Tariff. Pursuant to Sections 8.4.5 and 8.4.6 of the CAISO Tariff, Demand Response Services that are scheduled or bid as qualifying Ancillary Services are required to comply with the CAISO's communication and metering requirements.

**4.2.3 Notification of Changes.** The Demand Response Provider shall notify the CAISO of any proposed change(s) to registration to technical information. The CAISO will update the Master File in accordance with Section 30.7.3.2 of the CAISO Tariff. Pursuant to Sections 8.9 and 8.10

of the CAISO Tariff, the CAISO may verify, inspect and test the capacity and operating characteristics of the revised information provided. Unless the Proxy Demand Resource fails to test at the values in the proposed change(s), the Demand Response Provider's proposed change(s) will become effective upon the effective date for the next scheduled update of the Master File, provided that the Demand Response Provider submits the changed information by the applicable deadline and is tested by the deadline. Subject to such notification, this Agreement shall not apply to any Proxy Demand Resources which the Demand Response Provider no longer owns, operates or to which it no longer has a contractual entitlement.

**4.2.4 Obligations Relating to Ancillary Services**

**4.2.4.1 Submission of Bids and Self-provided Schedules.** When the Scheduling Coordinator on behalf of the Demand Response Provider submits a Bid, the Demand Response Provider will, by the operation of this Section 4.2.4.1, warrant to the CAISO that it has the capability to provide that service in accordance with the CAISO Tariff and that it will comply with CAISO Dispatch Instructions for the provision of the service in accordance with the CAISO Tariff.

**4.2.4.2 Ancillary Service Certification.** The Demand Response Provider shall not use a Scheduling Coordinator to submit a Bid for the provision of an Ancillary Service or submit a Submission to Self-Provide an Ancillary Service unless the Scheduling Coordinator serving that Demand Response Provider is in possession of a current Ancillary Service certificate pursuant to Sections 8.3.4 and 8.4 of the CAISO Tariff.

**4.3 General Terms and Conditions Applicable Solely to Reliability Demand Response Resources**

**4.3.1 Metering.** Metering requirements for the submittal of Settlement Quality Meter Data for Scheduling Coordinator Metered Entities will be in accordance with Section 10.3 of the CAISO Tariff.

**4.3.2 Notification of Changes.** The Demand Response Provider shall notify the CAISO of any proposed change(s) to the registration of technical information. The CAISO will update the Master File in accordance with Section 30.7.3.2 of the CAISO Tariff. This Agreement shall not apply to any Reliability Demand Response Resources which the Demand Response Provider no longer owns or operates or to which it no longer has a contractual entitlement.

## ARTICLE V

## PENALTIES AND SANCTIONS

**5.1 Penalties.** If the Demand Response Provider fails to comply with any provisions of this Agreement, the CAISO shall be entitled to impose penalties and sanctions on the Demand Response Provider, including, solely with regard to Proxy Demand Resources, the penalties set forth in Sections 8.9.7 and 8.10.7 of the CAISO Tariff. No penalties or sanctions may be imposed under this Agreement unless a Schedule or CAISO Tariff provision providing for such penalties or sanctions has first been filed with and made effective by FERC. Nothing in this Agreement, with the exception of the provisions relating to the CAISO ADR Procedures, shall be construed as waiving the rights of the Demand Response Provider to oppose or protest any penalty proposed by the CAISO to the FERC or the specific imposition by the CAISO of any FERC-approved penalty on the Demand Response Provider.

**5.2 Corrective Measures.** If the Demand Response Provider fails to meet or maintain the requirements set forth in this Agreement and/or the CAISO Tariff, the CAISO shall be permitted to take any of the measures, contained or referenced in the CAISO Tariff, which the CAISO deems to be necessary to correct the situation.

## ARTICLE VI

## COSTS

**6.1 Operating and Maintenance Costs.** The Demand Response Provider shall be responsible for all its costs incurred in meeting its obligations under this Agreement for the Proxy Demand Resources and Reliability Demand Response Resources identified in the Demand Response System.

## ARTICLE VII

## DISPUTE RESOLUTION

**7.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the Demand Response Provider and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VIII

## REPRESENTATIONS AND WARRANTIES

**8.1 Authorization to Enter Into Agreement.** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

**8.2 Necessary Approvals as to Proxy Demand Resources and Reliability Demand Response Resources.** The Demand Response Provider represents that all necessary leases, approvals, permits, licenses, easements, rights of way or access to install, own and/or operate the Proxy Demand Resources and Reliability Demand Response Resources for which it will Bid or otherwise act under this Agreement have been obtained by the Demand Response Provider prior to submitting technical information.

**8.3 Local Regulatory Authority.** A Demand Response Provider that aggregates the demand response of customers for utilities that distribute: (1) over four million MWh in the previous fiscal year must represent and warrant to the CAISO that its participation is not prohibited by the Local Regulatory Authority; or (2) four million MWh or less in the previous fiscal year must represent and warrant to the CAISO that its participation is permitted by the Local Regulatory Authority.

## ARTICLE IX

## LIABILITY

**9.1 Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the Demand Response Provider and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE X

## UNCONTROLLABLE FORCES

**10.1 Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the Demand Response Provider and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE XI

## MISCELLANEOUS

**11.1 Assignments.** Either Party may assign or transfer any or all of its rights and/or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest was an original Party to this Agreement.

**11.2 Notices.** Any notice, demand, or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the Demand Response Provider and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 2. A Party must update the information in Schedule 2 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.

**11.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**11.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply, shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**11.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**11.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**11.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public

interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**11.8 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing herein shall be construed as affecting in any way the right of the CAISO to make unilateral application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the Demand Response Provider shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein. The standard of review FERC shall apply when acting upon proposed modifications to this Agreement by the CAISO shall be the "just and reasonable" standard of review rather than the "public interest" standard of review. The standard of review FERC shall apply when acting upon proposed modifications to this Agreement by FERC's own motion or by a signatory other than the CAISO or non-signatory entity shall also be the "just and reasonable" standard of review. Schedules 1, and 2 are provided for informational purposes and revisions to those schedules do not constitute a material change in the Agreement warranting FERC review.

**11.9 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF,** the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By:_____

Name:_____

Title:_____

Date:_____

**Demand Response Provider**

By:_____

Name:_____

Title:_____

Date:_____

**SCHEDULE 1**

**CAISO IMPOSED PENALTIES AND SANCTIONS**

**[Section 5.1]**

**TO BE INSERTED UPON FERC APPROVAL**

**SCHEDULE 2**

**NOTICES**

**[Section 11.2]**

**Demand Response Provider**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**CAISO**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

**AND**

**[CONVERGENCE BIDDING ENTITY]**

**CONVERGENCE BIDDING ENTITY AGREEMENT**

**THIS AGREEMENT** is dated this _____ day of _____, _____, and is entered into, by and between:

(1) **[Full Legal Name]** having its registered and principal place of business located at **[Address]** (the "Convergence Bidding Entity");

and

(2) **California Independent System Operator Corporation** ("CAISO"), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The Convergence Bidding Entity and the CAISO are hereinafter referred to individually as a "Party" and collectively as the "Parties."

**Whereas:**

**A.** The CAISO Tariff provides that any entity that intends to submit Virtual Bids (which can only be submitted through a Scheduling Coordinator that is either the entity itself or a representative of the entity) must register and qualify with the CAISO and comply with the terms of the CAISO Tariff.

**B.** The Convergence Bidding Entity has completed the Convergence Bidding Entity application process and is eligible to submit Virtual Bids.

**C.** The CAISO Tariff further provides that any entity who wishes to submit Virtual Bids must meet all of the Convergence Bidding Entity requirements in the CAISO Tariff and the relevant Business Practice Manual.

**D.** The Convergence Bidding Entity intends to submit Virtual Bids and, therefore, wishes to undertake to the CAISO that it will comply with the applicable provisions of the CAISO Tariff.

**E.** The Parties are entering into this Agreement in order to establish the terms and conditions pursuant to which the CAISO and the Convergence Bidding Entity will discharge their respective duties and responsibilities under the CAISO Tariff.

**NOW THEREFORE,** in consideration of the mutual covenants set forth herein, **THE PARTIES AGREE** as follows:

## ARTICLE I

## DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** All terms and expressions used in this Agreement shall have the same meanings as those contained in the Master Definitions Supplement in Appendix A of the CAISO Tariff.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) "includes" or "including" shall mean "including without limitation";

(e) references to a Section, Article, or Schedule shall mean a Section, Article, or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented, or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced, or restated from time to time;

(h) unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization, or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) any reference to a day, week, month, or year is to a calendar day, week, month, or year; and

(k) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

## ARTICLE II

## ACKNOWLEDGEMENTS OF CONVERGENCE BIDDING ENTITY AND CAISO

**2.1 Scope of Application to Parties.** The Convergence Bidding Entity and CAISO acknowledge that all Convergence Bidding Entities must sign a form of this Agreement in accordance with Section 4.14 of the CAISO Tariff.

## ARTICLE III

## TERM AND TERMINATION

**3.1 Effective Date.** This Agreement shall be effective as of the later of the date it is executed by both Parties or the date accepted for filing and made effective by FERC, if such FERC filing is required, and shall remain in full force and effect until terminated pursuant to Section 3.2 of this Agreement.

**3.2 Termination**

**3.2.1 Termination by CAISO.** Subject to Article V, the CAISO may terminate this Agreement by giving written notice to the Convergence Bidding Entity of termination in the event that the Convergence Bidding Entity commits any material default under this Agreement and/or the CAISO Tariff as it pertains to this Agreement which, if capable of being remedied, is not remedied within the time frame specified in the CAISO Tariff after the CAISO has given written notice of the material default to the Convergence Bidding Entity. The CAISO will not terminate this Agreement if the material default of the Convergence Bidding Entity is excused by reason of Uncontrollable Forces in accordance with Article X of this Agreement or if the CAISO agrees, in writing, to an extension of the time to remedy such material default. Any outstanding financial right or obligation or any other obligation under the CAISO Tariff of the Scheduling Coordinator that represents the Convergence Bidding Entity that has arisen while that Scheduling Coordinator was submitting Virtual Bids, and any provision of this Agreement necessary to give effect to such right or obligation, shall survive until satisfied. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement was filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the filing of the notice of termination is made after the preconditions for termination have been met and the CAISO files the notice of termination within sixty (60) days after issuance of the notice of default; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if filed with FERC, or thirty (30) days after the date of the CAISO's notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**3.2.2 Termination by Convergence Bidding Entity.** In the event that the Convergence Bidding Entity no longer intends to submit Virtual Bids, it may terminate this Agreement, on giving the CAISO not less than ninety (90) days' written notice; provided, however, that any outstanding financial right or obligation or any other obligation under the CAISO Tariff of the Scheduling Coordinator that represents the Convergence Bidding Entity that has arisen while that Scheduling Coordinator was submitting Virtual Bids, and any provision of this Agreement necessary to give effect to such right or obligation, shall survive until satisfied. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the request to file a notice of termination is made after the preconditions for termination have been met and the CAISO files the notice of termination within sixty (60) days after receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if such notice is required to be filed with FERC, or upon ninety (90) days after the CAISO's receipt of the Convergence Bidding Entity's notice of termination, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

## ARTICLE IV

## GENERAL TERMS AND CONDITIONS

**4.1 Convergence Bidding Entity Requirements.** The Convergence Bidding Entity must register and qualify with the CAISO and comply with all terms of the CAISO Tariff applicable to Convergence Bidding Entities.

**4.2 Electronic Contracting.** All submitted applications, bids, confirmations, changes to information on file with the CAISO and other communications conducted via electronic transfer (e.g., direct computer link, FTP file transfer, bulletin board, e-mail, facsimile or any other means established by the CAISO) shall have the same legal rights, responsibilities, obligations and other implications as set forth in the terms and conditions of the CAISO Tariff as if executed in written format.

**4.3 Agreement Subject to CAISO Tariff.** The Parties will comply with all applicable provisions of the CAISO Tariff. This Agreement shall be subject to the CAISO Tariff, which shall be deemed to be incorporated herein.

## ARTICLE V

## PERFORMANCE

**5.1 Penalties.** The Convergence Bidding Entity shall be subject to all penalties made applicable to Convergence Bidding Entities set forth in the CAISO Tariff. Nothing in this Agreement, with the exception of the provisions relating to the CAISO ADR Procedures, shall be construed as waiving the rights of the Convergence Bidding Entity to oppose or protest the specific imposition by the CAISO of any FERC-approved penalty on the Convergence Bidding Entity.

**5.2 Corrective Measures.** If the Convergence Bidding Entity fails to meet or maintain the requirements set forth in this Agreement and/or the CAISO Tariff, the CAISO shall be permitted to take any of the measures, contained or referenced in the CAISO Tariff, which the CAISO deems to be necessary to correct the situation.

## ARTICLE VI

## COSTS

**6.1 Operating and Maintenance Costs.** The Convergence Bidding Entity shall be responsible for all its costs incurred in connection with all its activities related to submittal of Virtual Bids.

## ARTICLE VII

## DISPUTE RESOLUTION

**7.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the Convergence Bidding Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VIII

## REPRESENTATIONS AND WARRANTIES

**8.1 Representation and Warranties.** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

## ARTICLE IX

## LIABILITY

**9.1 Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the Convergence Bidding Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE X

## UNCONTROLLABLE FORCES

**10.1 Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the Convergence Bidding Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE XI

## MISCELLANEOUS

**11.1 Assignments.** Either Party may assign or transfer any or all of its rights and/or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff and other CAISO Tariff requirements as applied to Convergence Bidding Entities. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest was an original Party to this Agreement.

**11.2 Notices.** Any notice, demand, or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the Convergence Bidding Entity and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 1. A Party must update the information in Schedule 1 of this Agreement as information changes. Such changes to Schedule 1 shall not constitute an amendment to this Agreement.

**11.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**11.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal

action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply, shall be brought in any of the following forums, as appropriate: (i) any court of the State of California, (ii) any federal court of the United States of America located in the State of California, except to the extent subject to the protections of the Eleventh Amendment of the United States Constitution or, (iii) where subject to its jurisdiction, before FERC.

**11.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**11.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**11.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**11.8 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing herein shall be construed as affecting in any way the right of the CAISO to make unilateral application to FERC for a change in the rates, terms, and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the Convergence Bidding Entity shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein. The standard of review FERC shall apply when acting upon proposed modifications to this Agreement by the CAISO shall be the "just and reasonable" standard of review rather than the "public interest" standard of review. The standard of review FERC shall apply when acting upon proposed modifications to this Agreement by FERC's own motion or by a signatory other than the CAISO or non-signatory entity shall also be the "just and reasonable" standard of review. Schedule 1 is provided for informational purposes and revisions to that schedule do not constitute a material change in the Agreement warranting FERC review.

**11.9 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF,** the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By:_____

Name:_____

Title:_____

Date:_____

**[Name of Convergence Bidding Entity]**

By:_____

Name:_____

Title:_____

Date:_____

**SCHEDULE 1**

**NOTICES**

**[Section 11.2]**

**Convergence Bidding Entity**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**CAISO**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

## Appendix B.16 Pseudo-Tie Participating Generator Agreement

**THIS AGREEMENT** is dated this _____ day of _____, ____ and is entered into, by and between:

(1) **[Full Legal Name]** having its registered and principal place of business located at **[Address]** (the "Participating Generator");

and

(2) **California Independent System Operator Corporation** ("CAISO"), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The Participating Generator and the CAISO are hereinafter referred to as the "Parties."

**Whereas:**

**A.** The CAISO Tariff provides that the CAISO shall not accept Bids for Energy or Ancillary Services generated by any Generating Unit otherwise than through a Scheduling Coordinator.

**B.** The CAISO Tariff further provides that the CAISO shall not be obliged to accept Bids relating to Generation from any Generating Unit unless the relevant Generator undertakes in writing to the CAISO to comply with all applicable provisions of the CAISO Tariff.

**C.** The Participating Generator owns a Generating Unit physically interconnected in a Native Balancing Authority Area other than the CAISO Balancing Authority Area.

**D.** The Participating Generator and the CAISO wish to implement and operate a Pseudo-Tie for the Generating Unit to allow the Participating Generator to submit Self-Schedules and Bids for Energy and Ancillary Services to the CAISO through a Scheduling Coordinator dynamically from the Pseudo-Tie into the CAISO Balancing Authority Area from the Native Balancing Authority Area.

**E.** The Participating Generator wishes to undertake to the CAISO that it will comply with the applicable provisions of the CAISO Tariff that are applicable to a Participating Generator with a Pseudo-Tie.

**F.** The Parties are entering into this Agreement in order to establish the terms and conditions on which the CAISO and the Participating Generator will discharge their respective duties and responsibilities under the CAISO Tariff.

**NOW THEREFORE,** in consideration of the mutual covenants set forth herein, **THE PARTIES AGREE** as follows:

### ARTICLE I

### DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** All terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement to the CAISO Tariff.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, this Agreement will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) "includes" or "including" shall mean "including without limitation";

(e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) any reference to a day, week, month or year is to a calendar day, week, month or year; and

(k) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

## ARTICLE II

## ACKNOWLEDGEMENTS OF PARTICIPATING GENERATOR AND CAISO

**2.1 CAISO Responsibility.** The Parties acknowledge that the CAISO is responsible for the efficient use and reliable operation of the CAISO Controlled Grid and the CAISO Balancing Authority Area consistent with achievement of planning and Operating Reserve criteria no less stringent than those established by the Western Electricity Coordinating Council and the North American Electric Reliability Corporation and further acknowledges that the CAISO may not be able to satisfy fully these responsibilities if the Participating Generator fails to fully comply with all of its obligations under this Agreement and the CAISO Tariff.

## ARTICLE III

## TERM AND TERMINATION

**3.1 Effective Date.** This Agreement shall be effective as of the later of the date it is executed by the Parties or the date accepted for filing and made effective by FERC, if such FERC filing is required, and shall remain in full force and effect until terminated pursuant to Section 3.2 of this Agreement.

### 3.2 Termination

**3.2.1 Termination by CAISO.** Subject to Section 5.2, the CAISO reserves the right to suspend or terminate this Agreement in the event the CAISO reasonably determines that the Pseudo-Tie established under this Agreement poses a risk to System Reliability or the risk of a violation of Applicable Reliability Criteria, unless excused by reason of Uncontrollable Forces in accordance with Article X of this Agreement, by giving immediate notice of suspension or thirty (30) days advance written notice of termination. Additionally, the CAISO may terminate this Agreement by giving written notice of termination in the event that the Native Balancing Authority provides notice to the CAISO of its withdrawal from its agreement with the CAISO to participate in the Pseudo-Tie arrangement or the Participating Generator commits any material default under this Agreement and/or the CAISO Tariff which, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given the Participating Generator written notice of the default, unless excused by reason of Uncontrollable Forces in accordance with Article X of this Agreement. With respect to any notice of termination or default given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement was filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the filing of the notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within sixty (60) days after issuance of the notice of default or termination to the Participating Generator; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if filed with FERC, or thirty (30) days after the date of the CAISO's notice of default or termination to the Participating Generator, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**3.2.2 Termination by Participating Generator.** In the event that the Participating Generator no longer wishes to be considered part of the CAISO Balancing Authority Area, it may terminate this Agreement, on giving the CAISO not less than ninety (90) days advance written notice. With respect to any notice of termination given by the Participating Generator pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the request to file a notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within thirty (30) days of receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if such notice is required to be filed with FERC, or ninety (90) days after the CAISO's receipt of the Participating Generator's notice of termination, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

## ARTICLE IV

## GENERAL TERMS AND CONDITIONS

### 4.1 Pseudo-Tie Requirements and Participating Generator Obligations

4.1.1 The Pseudo-Tie established under this Agreement shall be implemented and operated in accordance with this Agreement, Appendix N and other applicable provisions of the CAISO Tariff, the operating agreement between the CAISO and the Balancing Authority for the Native Balancing Authority Area for the Generating Unit, and all applicable NERC and WECC reliability standards, policies, requirements, and provisions.

4.1.2 The technical characteristics of the Generating Unit and associated Pseudo-Tie are set forth in Schedule 1. The Participating Generator may request, and the CAISO may agree, at its sole discretion, to change the CAISO Intertie association.

4.1.3 Any unique characteristics of the Pseudo-Tie to the CAISO Balancing Authority Area from the Participating Generator's Generating Unit are set forth in Schedule 1.

**4.1.4 Notification of Changes.** Sixty (60) days prior to changing any technical information in Schedule 1, the Participating Generator shall notify the CAISO of the proposed changes. Pursuant to Sections 8.9 and 8.10 of the CAISO Tariff, the CAISO may verify, inspect and test the capacity and operating characteristics provided in the revised Schedule 1. The CAISO shall post on the CAISO Website a schedule showing, for at least one year in advance: (i) the proposed dates on which the CAISO's Master File will be updated, which dates shall occur at least every three months; (ii) the dates on which the information contained in the revised Master File will become effective; and (iii) the deadlines by which changed technical information must be submitted to the CAISO in order to be tested and included in the next scheduled update of the CAISO's Master File. Unless the Participating Generator fails to test at the values in the proposed change(s), the change will become effective upon the effective date for the next scheduled update of the CAISO's Master File, provided the Participating Generator submits the changed information by the applicable deadline and is tested by the deadline. Subject to such notification, this Agreement shall not apply to any generating unit identified in Schedule 1 which the Participating Generator no longer owns or no longer has contractual entitlement to.

**4.2 Agreement Subject to CAISO Tariff.** The Parties will comply with all applicable provisions of the CAISO Tariff. This Agreement shall be subject to the CAISO Tariff, which shall be deemed to be incorporated herein.

**4.3 Obligations Relating to Ancillary Services.**

**4.3.1 Submission of Bids.** When the Scheduling Coordinator on behalf of the Participating Generator submits a Bid for Ancillary Services, the Participating Generator will, by the operation of this Section 4.3.1, warrant to the CAISO that it has the capability to provide that service in accordance with the CAISO Tariff and that it will comply with CAISO Dispatch Instructions for the provision of the service in accordance with the CAISO Tariff.

**4.3.2 Certification.** The Participating Generator shall not use a Scheduling Coordinator to submit a Bid for the provision of an Ancillary Service or submit a Submission to Self-Provide an Ancillary Service unless the Scheduling Coordinator serving that Participating Generator is in possession of a current certificate pursuant to Sections 8.3.4 and 8.4 of the CAISO Tariff.

**4.4 Obligations relating to Major Incidents.**

**4.4.1 Major Incident Reports.** The Participating Generator shall promptly provide such information as the CAISO may reasonably request in relation to major incidents, in accordance with Section 4.6.7.3 of the CAISO Tariff.

## ARTICLE V

## PENALTIES AND SANCTIONS

**5.1 General.** The Participating Generator shall be subject to all penalties made applicable to Participating Generators within the CAISO Balancing Authority Area. No penalties or sanctions may be imposed under this Agreement unless a Schedule or CAISO Tariff provision providing for such penalties or sanctions has first been filed with and made effective by FERC. Nothing in the Agreement, with the exception of the provisions relating to the CAISO ADR Procedures, shall be construed as waiving the rights of the Participating Generator to oppose or protest any penalty proposed by the CAISO to the FERC or the specific imposition by the CAISO of any FERC-approved penalty on the Participating Generator.

**5.2 Corrective Measures.** If the Participating Generator fails to meet or maintain the requirements set forth in this Agreement and/or the CAISO Tariff, the CAISO shall be permitted to take any of the measures, contained or referenced in the CAISO Tariff, which the CAISO deems to be necessary to correct the situation.

## ARTICLE VI

## COSTS

**6.1 Operating and Maintenance Costs.** The Participating Generator shall be responsible for all its costs incurred for the purpose of meeting its obligations under this Agreement.

## ARTICLE VII

## DISPUTE RESOLUTION

**7.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the Participating Generator and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VIII

## REPRESENTATIONS AND WARRANTIES

**8.1 Representation and Warranties.** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

## ARTICLE IX

## LIABILITY

**9.1 Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the Participating Generator and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE X

## UNCONTROLLABLE FORCES

**10.1 Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the Participating Generator and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE XI

## MISCELLANEOUS

**11.1 Assignments.** Subject to Section 3.2.1 of this Agreement, either Party may assign or transfer any or all of its rights and/or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest was an original Party to this Agreement.

**11.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the Participating Generator and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 2. A Party must update the information in Schedule 2 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.

**11.3 Waivers.** Any waivers at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**11.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply, shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**11.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**11.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereto and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**11.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**11.8 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the Participating Generator shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**11.9 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF,** the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By:_____

Name:_____

Title:_____

Date:_____

**[NAME OF PARTICIPATING GENERATOR]**

By:_____

Name:_____

Title:_____

Date:_____

**SCHEDULE 1**

**(The following is a placeholder for Schedule 1 information, which contains the GENERATING UNIT, PSEUDO-TIE, AND NATIVE BALANCING AUTHORITY AREA Technical Information and Other Unique Characteristics)**

**[Sections 4.1.2 and 4.1.3]**

**(The following is a placeholder for Schedule 1 information associated with a Pseudo-Tie Generating Unit participating in the CAISO Markets pursuant to Section 3 of Appendix N]**

**[Section 4.1.2]**

**SCHEDULE 2**

**NOTICES**

**[Section 11.2]**

Participating Generator

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**CAISO**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**Appendix B.17 EIM Entity Agreement (EIMEA)**

**THIS ENERGY IMBALANCE MARKET ENTITY AGREEMENT** ("AGREEMENT") is established this ____ day of _____, ____ and is accepted by and between:

**[Full legal name]** ("EIM Entity"), having its registered and principal executive office at **[address]**,

and

**California Independent System Operator Corporatio**n ("CAISO"), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The EIM Entity and the CAISO are hereinafter referred to as the "Parties."

**Whereas:**

**A.** The Parties named above operate Balancing Authority Areas.

**B.** The EIM Entity provides transmission service in accordance with an open access transmission tariff ("OATT"), including balancing Energy services.

**C.** The CAISO operates the Real-Time Market pursuant to the CAISO Tariff.

**D.** There [are/are not] third party transmission service providers within the EIM Entity Balancing Authority Area that intend to enable Energy Imbalance Market services on their transmission systems.

**E.** The Parties are entering into this Agreement to enable the EIM Entity to participate in the CAISO's Real-Time Market and to provide Energy Imbalance Market services within the EIM Entity Balancing Authority Area, including Real-Time transfers of Energy among the CAISO Balancing Authority Area and other EIM Entity Balancing Authority Areas.

**NOW THEREFORE,** in consideration of the mutual covenants set forth herein, **THE PARTIES AGREE** as follows:

## ARTICLE I

## DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** All terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement to the CAISO Tariff.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) "includes" or "including" shall mean "including without limitation";

(e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) any reference to a day, week, month or year is to a calendar day, week, month or year;

(k) unless the context requires otherwise, "or" is used in the conjunctive sense; and

(l) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

## ARTICLE II

## RESPONSIBILITIES OF EIM ENTITY AND CAISO

**2.1 Scope of Responsibilities.** The Parties are individually responsible for the efficient use and reliable operation of their Balancing Authority Areas consistent with the Reliability Standards established by the Western Electricity Coordinating Council ("WECC") and the North American Electric Reliability Corporation ("NERC"), and in accordance with their respective tariffs on file with the Federal Energy Regulatory Commission ("FERC"). Nothing in this Agreement is intended to change, supersede, or alter either Party's obligations to abide by NERC and WECC Reliability Standards or to provide open and non-discriminatory transmission access in accordance with the terms of their respective FERC tariffs.

**2.2 Tariff Provisions.** The CAISO shall provide open access to the Real-Time Market in accordance with the terms of the CAISO Tariff. The EIM Entity shall have in effect provisions in its OATT to enable operation of the Real-Time Market in its Balancing Authority Area in accordance with the CAISO Tariff.

**2.3 EIM Entity Scheduling Coordinator.** The EIM Entity shall be represented by an EIM Entity Scheduling Coordinator, which may be the EIM Entity or another entity certified by the CAISO to perform the functions of an EIM Entity Scheduling Coordinator.

**2.4 EIM Transmission Service and Resource Information.** The EIM Entity shall provide information to the CAISO for Energy Imbalance Market purposes regarding the network topology of its Balancing Authority Area, non-participating resources, and loads in accordance with the CAISO Tariff and the Business Practice Manual for the Energy Imbalance Market. The EIM Entity is responsible for the accuracy and completeness of this information.

**2.5 EIM Transmission Availability.** The EIM Entity shall make available for use in the Real-Time Market transmission capacity on its system that is not otherwise encumbered, reserved, scheduled, or being used by its transmission customers or by others and shall make arrangements with third party transmission service providers within its Balancing Authority Area that intend to enable Energy Imbalance Market services on their transmission systems to provide such transmission capacity on their systems for use in the Real-Time Market. The EIM Entity shall provide the CAISO with real time information regarding the availability of transmission capacity for use in the Energy Imbalance Market as provided in the CAISO Tariff and Business Practice Manual for the Energy Imbalance Market.

**2.6 EIM Entity Corrective Actions.** The EIM Entity may take corrective action, subject to the provision of its OATT, to address an issue with Energy Imbalance Market implementation or operation consistent with Section 29 of the CAISO Tariff.

## ARTICLE III

## TERM AND TERMINATION

**3.1 Effective Date.** This Agreement shall be effective as of the later of the date it is executed by the Parties or the date it is accepted for filing and made effective by FERC and shall remain in full force and effect until terminated pursuant to Section 3.2 of this Agreement.

**3.2 Termination**

**3.2.1 Termination by CAISO.** The CAISO may terminate this Agreement by giving written notice of termination pursuant to Section 29.1(d) of the CAISO Tariff or in the event that the EIM Entity commits any material default under this Agreement or Section 29 of the CAISO Tariff that, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given the EIM Entity written notice of the default, unless the default is excused by reason of Uncontrollable Forces in accordance with Article IX of this Agreement. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if (1) the filing of the notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within sixty (60) days after issuance of the notice of default; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination or thirty (30) days after the date of the CAISO's notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**3.2.2 Termination by EIM Entity.** In the event that the EIM Entity no longer wishes to enable Energy Imbalance Market services within its Balancing Authority Area pursuant to the CAISO Tariff, it may terminate this Agreement on giving the CAISO not less than one-hundred and eighty (180) days written notice. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if (1) the request to file a notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within thirty (30) days of receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination or upon the next production date of the Full-Network Model release following the one-hundred and eighty (180) days after the CAISO's receipt of the EIM Entity's notice of termination, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**3.3 No Termination Charge.** The CAISO shall not levy an exit fee or other charge associated with CAISO systems, procedures, or other changes required by the termination of the EIM Entity's participation in the Energy Imbalance Market as of the effective date of such notice, provided that EIM Entity obligations incurred under this Agreement prior to the effective date of such notice shall survive termination until satisfied.

## ARTICLE IV

## CAISO TARIFF

**4.1 Agreement Subject to CAISO Tariff.** This Agreement shall be subject to Section 29 of the CAISO Tariff, which shall be deemed to be incorporated herein. The EIM Entity shall abide by, and shall perform, all of the obligations of EIM Entities under the CAISO Tariff.

## ARTICLE V

## COSTS

**5.1 Operating and Maintenance Costs.** The EIM Entity shall be responsible for all its costs incurred in connection with meeting its obligations under this Agreement.

## ARTICLE VI

## DISPUTE RESOLUTION

**6.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VII

## REPRESENTATIONS AND WARRANTIES

**7.1 Representation and Warranties.** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

**7.2 Necessary Approvals.** The EIM Entity represents that all necessary rights, leases, approvals, permits, licenses, easements, access to operate in compliance with this Agreement have been or will be obtained by the EIM Entity prior to the effective date of this Agreement, including any arrangement with third party Balancing Authorities.

## ARTICLE VIII

## LIABILITY

**8.1 Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the EIM Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE IX

## UNCONTROLLABLE FORCES

**9.1 Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE X

## MISCELLANEOUS

**10.1 Assignments.** Either Party may assign or transfer any or all of its rights or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff and no Party may assign or transfer any or all of its rights or obligations under this Agreement without such consent. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights or obligations under this Agreement as if said successor in interest were an original Party to this Agreement.

**10.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Entity and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 1. A Party must update the information in Schedule 1 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.

**10.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**10.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**10.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**10.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**10.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**10.8 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the EIM Entity shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**10.9 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF,** the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By:_____

Name:_____

Title:_____

Date:_____

**[NAME OF EIM ENTITY]**

By:_____

Name:_____

Title:_____

Date:_____

**SCHEDULE 1**

**NOTICES**

**[Section 10.2]**

**EIM Entity**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**CAISO**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

## Appendix B.18 EIM Entity Scheduling Coordinator Agreement (EIMESCA)

**THIS AGREEMENT** is made this ___ day of _____, _____ and is entered into, by and between:

(1) **[Full legal name]** having a registered or principal executive office at **[address]** (the "EIM Entity Scheduling Coordinator")

and

(2) **CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**, a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate (the "CAISO").

The EIM Entity Scheduling Coordinator and the CAISO are hereinafter referred to as the "Parties."

**Whereas:**

**A.** The EIM Entity Scheduling Coordinator has applied for certification or has been certified by the CAISO under the certification procedure referred to in Section 29 of the CAISO Tariff.

**B.** The EIM Entity Scheduling Coordinator wishes to represent an EIM Entity under the terms and conditions set forth in Section 29 of the CAISO Tariff.

**NOW IT IS HEREBY AGREED** as follows:

**1 Definitions and Interpretation.**

**1.1 Master Definitions Supplement.** Terms and expressions used in this Agreement shall have the same meanings as those contained in the Master Definitions Supplement to the CAISO Tariff.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) "includes" or "including" shall mean "including without limitation";

(e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a "person" includes any

individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) unless the context otherwise requires, “or” is used in the conjunctive sense;

(k) any reference to a day, week, month or year is to a calendar day, week, month or year; and

(l) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

**2 Covenant of the EIM Entity Scheduling Coordinator.**

**2.1 The EIM Entity Scheduling Coordinator agrees that:**

**2.1.1** CAISO Tariff Section 29 governs all aspects of Energy Imbalance Market information submission, including the financial and technical criteria for EIM Entity Scheduling Coordinator EIM Base Schedule submissions, Settlement, information reporting requirements, and confidentiality restrictions;

**2.1.2** It will abide by and will perform all of the obligations under Section 29 of the CAISO Tariff placed on EIM Entity Scheduling Coordinators in respect of all matters set forth therein, including ongoing obligations in respect of scheduling, Settlement, system security policy and procedures to be developed by the CAISO from time to time, billing and payments, confidentiality and dispute resolution;

**2.1.3** It shall ensure that each EIM Entity that it represents enters into an EIM Entity Agreement in accordance with Section 29 of the CAISO Tariff;

**2.1.4** It shall have the primary responsibility to the CAISO, as principal, for all EIM Entity Scheduling Coordinator payment obligations under Section 29 of the CAISO Tariff; and

**2.1.5** Its status as an EIM Entity Scheduling Coordinator is at all times subject to Section 29 of the CAISO Tariff.

**3 Term and Termination.**

**3.1** This Agreement shall commence on the later of (a) _____ or (b) the date the EIM Entity Scheduling Coordinator is certified by the CAISO as an EIM Entity Scheduling Coordinator.

**3.2** This Agreement may be terminated in accordance with the provisions of Section 4.5.4.4 and 4.5.4.5 of the CAISO Tariff; provided, however, that any outstanding financial right or obligation or any other right or obligation under the CAISO Tariff of the EIM Entity Scheduling Coordinator that may have arisen under this Agreement, and any provision of this Agreement necessary to give effect to such right or obligation, shall survive such termination until satisfied. The CAISO shall timely file any notice of termination with FERC, if this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC rules regarding termination.

**4 Settlement Account.**

**4.1** The EIM Entity Scheduling Coordinator shall maintain at all times an account with a bank capable of Fedwire transfer and, at its option, may also maintain an account capable of ACH transfers, to which credits or debits that arise under Section 29 of the CAISO Tariff shall be made in accordance with the billing and Settlement provisions of Section 11 of the CAISO Tariff. Such account shall be the account as notified by the EIM Entity Scheduling Coordinator to the CAISO from time to time by giving at least 20 days written notice before the new account becomes operational, together with all information necessary for the CAISO's processing of a change in that account.

**5 Agreement to be bound by CAISO Tariff.**

**5.1** Section 29 of the CAISO Tariff is incorporated herein and made a part hereof. In the event of a conflict between the terms and conditions of this Agreement and any other terms and conditions set forth in the CAISO Tariff that may apply to EIM Entity Scheduling Coordinators, the terms and conditions of the CAISO Tariff shall prevail.

**6 Electronic Contracting.**

**6.1** All submitted information, applications, schedules, Bids, confirmations, changes to information on file with the CAISO and other communications conducted via electronic transfer (e.g. direct computer link, FTP file transfer, bulletin board, e-mail, facsimile or any other means established by the CAISO) shall have the same legal rights, responsibilities, obligations and other implications as set forth in the terms and conditions of Section 29 of the CAISO Tariff as if executed in written format.

**7 Penalties and Sanctions.**

**7.1** The EIM Entity Scheduling Coordinator shall be subject to all penalties made applicable to EIM Entity Scheduling Coordinators set forth in Section 29 of the CAISO Tariff.

**8 Costs.**

**8.1** The EIM Entity Scheduling Coordinator shall be responsible for all its costs incurred for the purpose of meeting its obligations under this Agreement.

**9 Dispute Resolution.**

**9.1** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Entity Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement.

**10 Representation and Warranties.**

**10.1** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

**11 Liability.**

11.1 The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the EIM Entity Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement.

**12 Uncontrollable Forces.**

**12.1** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Entity Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement.

**13 Miscellaneous.**

**13.1 Assignments.** Either Party may assign or transfer any or all of its rights and/or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff and no Party may assign or transfer any or all of its rights or obligations under this Agreement without such consent. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest was an original Party to this Agreement.

**13.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Entity Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 1. A Party must update the information in Schedule 1 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.

**13.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**13.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply, shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**13.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**13.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with

respect to such subject matter.

**13.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**13.8 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the EIM Entity Scheduling Coordinator shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**13.9 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF,** the Parties have caused this Agreement to be executed by their respective authorized officials.

**California Independent System Operator Corporation**

By:_____

Name:_____

Title:_____

Date:_____

**[Name of EIM Entity Scheduling Coordinator]**

By:_____

Name:_____

Title:_____

Date:_____

**SCHEDULE 1**

**NOTICES**

**[Section 13.2]**

**EIM Entity Scheduling Coordinator**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**CAISO**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

## Appendix B.19 EIM Participating Resource Agreement (EIMPRA)

**THIS ENERGY IMBALANCE MARKET PARTICIPATING RESOURCE AGREEMENT ("AGREEMENT")** is established this ____ day of _____, ____ and is accepted by and between:

**[Full legal name]** ("EIM Participating Resource"), having its registered and principal executive office at [address],

and

**California Independent System Operator Corporation** ("CAISO"), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The EIM Participating Resource and the CAISO are hereinafter referred to as the "Parties."

**Whereas:**

**A.** The CAISO operates a Real-Time Market for Energy pursuant to the CAISO Tariff.

**B.** The EIM Participating Resource receives balancing Energy service from an EIM Entity in accordance with the EIM Entity's open access transmission tariff or from another transmission service provider within the EIM Entity Balancing Authority Area.

**C.** The Parties wish to enter into this Agreement to establish the terms and conditions for participation in the CAISO's Real-Time Market by the EIM Participating Resource in accordance with Section 29 of the CAISO Tariff.

NOW THEREFORE, in consideration of the mutual covenants set forth herein, **THE PARTIES AGREE** as follows:

### ARTICLE I

### DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** All terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement to the CAISO Tariff.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) "includes" or "including" shall mean "including without limitation";

(e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of

this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) unless the context otherwise requires, "or" is used in the conjunctive sense;

(k) any reference to a day, week, month or year is to a calendar day, week, month or year; and

(l) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

## ARTICLE II

## RESPONSIBILITIES OF EIM PARTICIPATING RESOURCE

**2.1 EIM Participating Resource Scheduling Coordinator.** The EIM Participating Resource shall be represented by an EIM Participating Resource Scheduling Coordinator, which may be the EIM Participating Resource or another entity certified by the ISO to perform the functions of an EIM Participating Resource Scheduling Coordinator.

**2.2 EIM Resources.** The EIM Participating Resource has identified on Schedule 1 all EIM Resources that it owns, operates, has a contractual entitlement to, or that otherwise will be included in the Master File.

**2.2.1 Technical Characteristics.** The EIM Participating Resource has provided to the CAISO in Schedule 1 the required information regarding the operating characteristics of each EIM Resource listed in Schedule 1, in addition to any further level of detail that may be required by Section 29 of the CAISO Tariff.

**2.2.2 Notification of Changes.** Sixty (60) days prior to changing any technical information in Schedule 1, the EIM Participating Resource shall notify the CAISO of the proposed changes. The CAISO shall post on the CAISO Website a schedule showing, for at least one year in advance, (i) the proposed dates on which the CAISO's Master File will be updated, which dates shall occur at least every three months; (ii) the dates on which the information contained in the revised Master File will become effective; and (iii) the deadlines by which changed technical information must be submitted to the CAISO in order to be tested and included in the next scheduled update of the CAISO's Master File. Unless the EIM Resource fails to test at the values in the proposed change(s), the change will become effective upon the effective date for the next scheduled update of the Master File, provided the EIM Participating Resource submits the changed information by the applicable deadline and is tested by the deadline. Subject to

such notification this Agreement shall not apply to any EIM Resource identified in Schedule 1 which the EIM Participating Resource no longer owns or no longer has contractual entitlement to.

## ARTICLE III

## TERM AND TERMINATION

**3.1 Effective Date.** This Agreement shall be effective as of the later of the date it is executed by the Parties or the date it is accepted for filing and made effective by FERC, if such FERC filing is required, and shall remain in full force and effect until terminated pursuant to Section 3.2 of this Agreement.

**3.2 Termination**

**3.2.1 Termination by CAISO.** Subject to Section 5.2, the CAISO may terminate this Agreement by giving written notice of termination in the event that the EIM Participating Resource commits any material default under this Agreement and/or the CAISO Tariff which, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given, to the EIM Participating Resource, written notice of the default, unless excused by reason of Uncontrollable Forces in accordance with Article X of this Agreement. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement was filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the filing of the notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within sixty (60) days after issuance of the notice of default; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if filed with FERC, or thirty (30) days after the date of the CAISO's notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**3.2.2 Termination by EIM Participating Resource.** In the event that the EIM Participating Resource no longer wishes to submit Bids and transmit Energy over the CAISO Controlled Grid, it may terminate this Agreement, on giving the CAISO not less than ninety (90) days written notice, provided, however, that in accordance with Section 2.2.2, the EIM Participating Resource may modify Schedule 1 to remove EIM Resources which it no longer owns or no longer has contractual entitlement to and such modification shall be effective upon receipt by the CAISO. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the request to file a notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within thirty (30) days of receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if such notice is required to be filed with FERC, or upon ninety (90) days after the CAISO's receipt of the EIM Participating Resource's notice of termination, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

## ARTICLE IV

## CAISO TARIFF

**4.1 Agreement Subject to CAISO Tariff.** This Agreement shall be subject to Section 29 of the CAISO Tariff, which shall be deemed to be incorporated herein. The EIM Participating Resource

shall abide by, and shall perform all of the obligations under the CAISO Tariff placed on EIM Participating Resources in respect of all matters set forth therein.

## ARTICLE V

## PENALTIES AND SANCTIONS

**5.1 Penalties.** If the EIM Participating Resource fails to comply with any provisions of this Agreement, the CAISO shall be entitled to impose penalties and sanctions on the EIM Participating Resource. No penalties or sanctions may be imposed under this Agreement unless a CAISO Tariff provision providing for such penalties or sanctions has first been filed with and made effective by FERC. Nothing in the Agreement, with the exception of the provisions relating to the CAISO ADR Procedures, shall be construed as waiving the rights of the EIM Participating Resource to oppose or protest any penalty proposed by the CAISO to the FERC or the specific imposition by the CAISO of any FERC-approved penalty on the EIM Participating Resource.

**5.2 Corrective Measures.** If the EIM Participating Resource fails to meet or maintain the requirements set forth in this Agreement or Section 29 of the CAISO Tariff, the CAISO shall be permitted to take any of the measures, contained or referenced in Section 29 of the CAISO Tariff, which the CAISO deems to be necessary to correct the situation.

## ARTICLE VI

## COSTS

**6.1 Operating and Maintenance Costs.** The EIM Participating Resource shall be responsible for all its costs incurred in connection with meeting its obligations under this Agreement.

## ARTICLE VII

## DISPUTE RESOLUTION

**7.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Participating Resource and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VIII

## REPRESENTATIONS AND WARRANTIES

**8.1 Representation and Warranties.** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

**8.2 Necessary Approvals.** The EIM Participating Resource represents that all necessary rights, leases, approvals, permits, licenses, easements, access to operate in compliance with this Agreement have been or will be obtained by the EIM Participating Resource prior to the effective date of this Agreement, including any arrangement with third party Balancing Authorities.

## ARTICLE IX

## LIABILITY

**9.1 Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the EIM Participating Resource and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE X

## UNCONTROLLABLE FORCES

**10.1 Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Participating Resource and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE XI

## MISCELLANEOUS

**11.1 Assignments.** Either Party may assign or transfer any or all of its rights or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff and no Party may assign or transfer any or all of its rights or obligations under this Agreement without such consent. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest were an original Party to this Agreement.

**11.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Participating Resource and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 2. A Party must update the information in Schedule 2 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.

**11.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**11.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**11.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**11.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**11.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**11.8 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the EIM Participating Resource shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**11.9 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF**, the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By: _____

Name: _____

Title: _____

Date: _____

**[NAME OF EIM PARTICIPATING RESOURCE]**

By: _____

Name: _____

Title: _____

Date: _____

**SCHEDULE 1**

**EIM Resources**

**[Section 2.4]**

**SCHEDULE 2**

**NOTICES**

**[Section 11.2]**

**EIM Participating Resource**

Name of Primary

Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

Name of Alternative

Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

**CAISO**

Name of Primary

Representative: _____

Title: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

Name of Alternative

Representative: _____

Title: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

## Appendix B.20 EIM Participating Resource Scheduling Coordinator Agreement (EIMPRSCA)

**THIS AGREEMENT** is made this ___ day of _____, _____ and is entered into, by and between:

(1) **[Full legal name]** having a registered or principal executive office at [address] (the "EIM Participating Resource Scheduling Coordinator")

and

(2) **CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**, a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate (the "CAISO").

The EIM Participating Resource Scheduling Coordinator and the CAISO are hereinafter referred to as the "Parties."

**Whereas:**

**A.** The EIM Participating Resource Scheduling Coordinator has applied for or has been certified by the CAISO under the certification procedure referred to in Section 29 of the CAISO Tariff.

**B.** The EIM Participating Resource Scheduling Coordinator wishes to represent EIM Participating Resources under the terms and conditions set forth in Section 29 of the CAISO Tariff.

**NOW IT IS HEREBY AGREED** as follows:

### 1 Definitions and Interpretation.

**1.1 Master Definitions Supplement.** Terms and expressions used in this Agreement shall have the same meanings as those contained in the Master Definitions Supplement to the CAISO Tariff.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) "includes" or "including" shall mean "including without limitation";

(e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) unless the context otherwise requires, "or" is used in the conjunctive sense;

(k) any reference to a day, week, month or year is to a calendar day, week, month or year; and

(l) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

**2 Covenant of the EIM Participating Resource Scheduling Coordinator.**

**2.1 The EIM Participating Resource Scheduling Coordinator agrees that:**

**2.1.1** CAISO Tariff Section 29 governs all aspects of bidding and scheduling of Energy in the Real-Time Market, including (without limitation), the financial and technical criteria applicable to EIM Participating Resource Scheduling Coordinators, and other bidding, Settlement, information reporting requirements, and confidentiality restrictions applicable to EIM Participating Resource Scheduling Coordinators;

**2.1.2** It shall abide by, and shall perform all of the obligations under Section 29 of the CAISO Tariff placed on EIM Participating Resource Scheduling Coordinators in respect of all matters set forth therein, including, without limitation, ongoing obligations in respect of scheduling, Settlement, system security policy and procedures to be developed by the CAISO from time to time, billing and payments, confidentiality, and dispute resolution;

**2.1.3** It shall ensure that each EIM Participating Resource for which it submits Bids enters into an EIM Participating Resource Agreement in accordance with Section 29 of the CAISO Tariff;

**2.1.4** It shall have the primary responsibility to the CAISO, as principal, for all EIM Participating Resource Scheduling Coordinator payment obligations pursuant to Section 29 of the CAISO Tariff; and

**2.1.5** Its status as an EIM Participating Resource Scheduling Coordinator is at all times subject to Section 29 of the CAISO Tariff.

**3 Term and Termination.**

**3.1** This Agreement shall commence on the later of (a) _____ or (b) the date the EIM Participating Resource Scheduling Coordinator is certified by the CAISO as an EIM Participating Resource Scheduling Coordinator.

**3.2** This Agreement may be terminated in accordance with the provisions of Section 4.5.4.4 and 4.5.4.5 of the CAISO Tariff; provided, however, that any outstanding financial right or obligation or any other right or obligation under the CAISO Tariff of the EIM Participating Resource Scheduling Coordinator that may have arisen under this Agreement, and any provision of this Agreement necessary to give effect to such right or obligation, shall survive such termination until satisfied. The CAISO shall timely file any notice of termination with FERC, if this Agreement has been filed

with FERC, or must otherwise comply with the requirements of FERC rules regarding termination.

**4 Settlement Account.**

**4.1** The EIM Participating Resource Scheduling Coordinator shall maintain at all times an account with a bank capable of Fedwire transfer and, at its option, may also maintain an account capable of ACH transfers, to which credits or debits that arise under Section 29 of the CAISO Tariff shall be made in accordance with the billing and Settlement provisions of Section 11 of the CAISO Tariff. Such account shall be the account as notified by the EIM Participating Resource Scheduling Coordinator to the CAISO from time to time by giving at least 20 days written notice before the new account becomes operational, together with all information necessary for the CAISO's processing of a change in that account.

**5 Agreement to be bound by CAISO Tariff.**

**5.1** CAISO Tariff Section 29 is incorporated herein and made a part hereof. In the event of a conflict between the terms and conditions of this Agreement and any other terms and conditions set forth in the CAISO Tariff, the terms and conditions of the CAISO Tariff shall prevail.

**6 Electronic Contracting.**

**6.1** All submitted information, applications, schedules, Bids, confirmations, changes to information on file with the CAISO and other communications conducted via electronic transfer (e.g. direct computer link, FTP file transfer, bulletin board, e-mail, facsimile or any other means established by the CAISO) shall have the same legal rights, responsibilities, obligations and other implications as set forth in the terms and conditions of Section 29 of the CAISO Tariff as if executed in written format.

**7 Penalties and Sanctions.**

**7.1** The EIM Participating Resource Scheduling Coordinator shall be subject to all penalties made applicable to EIM Participating Resource Scheduling Coordinators set forth in Section 29 of the CAISO Tariff.

**8 Costs.**

**8.1** The EIM Participating Resource Scheduling Coordinator shall be responsible for all its costs incurred for the purpose of meeting its obligations under this Agreement.

**9 Dispute Resolution.**

**9.1** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Participating Resource Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement.

**10 Representation and Warranties.**

**10.1** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

**11 Liability.**

**11.1** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the EIM Participating Resource Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement.

**12 Uncontrollable Forces.**

**12.1** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Participating Resource Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement.

**13 Miscellaneous.**

**13.1 Assignments.** Either Party may assign or transfer any or all of its rights and/or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff and no Party may assign or transfer any or all of its rights or obligations under this Agreement without such consent. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest was an original Party to this Agreement.

**13.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Participating Resource Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 1. A Party must update the information in Schedule 1 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.

**13.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**13.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply, shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**13.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**13.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**13.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**13.8 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the EIM Participating Resource Scheduling Coordinator shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**13.9 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be executed by their respective authorized officials.

**California Independent System Operator Corporation**

By:_____

Name:_____

Title:_____

Date:_____

**[Name of EIM Participating Resource Scheduling Coordinator]**

By:_____

Name:_____

Title:_____

Date:_____

**SCHEDULE 1**

**NOTICES**

**[Section 13.2]**

**EIM Participating Resource Scheduling Coordinator**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**CAISO**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**Appendix B.21 Distributed Energy Resource Provider Agreement**

**CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

**AND**

**[DISTRIBUTED ENERGY RESOURCE PROVIDER]**

**DISTRIBUTED ENERGY RESOURCE PROVIDER AGREEMENT**

**THIS AGREEMENT** is dated this _____ day of _____, _____ and is entered into, by and between:

(1) **[Full legal name]**, having its registered and principal place of business located at **[legal address]** (the "Distributed Energy Resource Provide");

and

(2) **California Independent System Operator Corporation** ("CAISO"), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The Distributed Energy Resource Provider and the CAISO are hereinafter referred to as the "Parties".

**Whereas:**

**A.** The CAISO Tariff provides that the CAISO shall only accept Bids for a Distributed Energy Resource Aggregation from a Scheduling Coordinator.

**B.** The CAISO Tariff further provides that Energy and Ancillary Services may be provided by Distributed Energy Resource Providers.

**C.** The Distributed Energy Resource Provider desires to provide Energy and/or Ancillary Services from one or more Distributed Energy Resource Aggregations through a Scheduling Coordinator and represents to the CAISO that it will comply with the applicable provisions of the CAISO Tariff.

**D.** The Parties are entering into this Agreement in order to establish the terms and conditions on which the CAISO and the Distributed Energy Resource Provider will discharge their respective duties and responsibilities under the CAISO Tariff.

**NOW THEREFORE,** in consideration of the mutual covenants set forth herein, **THE PARTIES AGREE** as follows:

**ARTICLE I**

**DEFINITIONS AND INTERPRETATION**

**1.1 Master Definitions Supplement.** All terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement in Appendix A of the CAISO Tariff.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) “includes” or “including” shall mean “including without limitation”;

(e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a “person” includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) any reference to a day, week, month or year is to a calendar day, week, month or year; and

(k) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

## ARTICLE II

## ACKNOWLEDGEMENTS OF DISTRIBUTED ENERGY RESOURCE PROVIDER AND CAISO

**2.1 CAISO Responsibility.** The Parties acknowledge that the CAISO is responsible for the efficient use and reliable operation of the CAISO Controlled Grid consistent with achievement of planning and Operating Reserve criteria no less stringent than those established by the Western Electricity Coordinating Council and the North American Electric Reliability Corporation and further acknowledge that the CAISO may not be able to satisfy fully these responsibilities if the Distributed Energy Resource Provider fails to fully comply with all of its obligations under this Agreement and the CAISO Tariff.

**2.2 Scope of Application to Parties.** The Distributed Energy Resource Provider and CAISO acknowledge that to submit Bids for Distributed Energy Resource Aggregations to the CAISO through a Scheduling Coordinator, the Distributed Energy Resource Provider must sign this Agreement in accordance with Section 4.17 of the CAISO Tariff.

**2.3 Distributed Energy Resource Provider Responsibility.** The Distributed Energy Resource Provider acknowledges that is has the responsibility to ensure that it owns, operates, or has sufficient contractual entitlement to provide Energy and/or Ancillary Services from the Distributed Energy Resource Aggregation(s) it represents in accordance with the CAISO Tariff.

## ARTICLE III

## TERM AND TERMINATION

**3.1 Effective Date.** This Agreement shall be effective as of the later of the date it is executed by the Parties or the date accepted for filing and made effective by FERC, if such FERC filing is required, and shall remain in full force and effect until terminated pursuant to Section 3.2 of this Agreement.

**3.2 Termination**

**3.2.1 Termination by CAISO.** Subject to Section 5.2, the CAISO may terminate this Agreement by giving written notice of termination in the event that the Distributed Energy Resource Provider commits any material default under this Agreement and/or the CAISO Tariff which, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given, to the Distributed Energy Resource Provider, written notice of the default, unless excused by reason of Uncontrollable Forces in accordance with Article X of this Agreement; provided, however, that any outstanding financial right or obligation or any other obligation under the CAISO Tariff of the Distributed Energy Resource Provider that has arisen while the Distributed Energy Resource Provider was submitting Bids for Distributed Energy Resource Aggregation(s), and any provision of this Agreement necessary to give effect to such right or obligation, shall survive until satisfied. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement was filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the filing of the notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within sixty (60) days after issuance of the notice of default; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if filed with FERC, or thirty (30) days after the date of the CAISO's notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**3.2.2 Termination by Distributed Energy Resource Provider.** In the event that the Destructed Energy Resource Provider no longer wishes to submit Bids or transmit Energy over the CAISO Controlled Grid, it may terminate this Agreement, on giving the CAISO not less than ninety (90) days written notice, provided, however, that in accordance with Section 4.1.2, the Distributed Energy Resource Provider may eliminate from the Distributed Energy Resource Aggregations(s) which it no longer provides for and such modification shall be effective upon receipt of notice by the CAISO. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the request to file a notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within thirty (30) days of receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if such notice is required to be filed with FERC, or upon ninety (90) days after the CAISO's receipt of the Distributed Energy Resource Provider's notice of termination, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

## ARTICLE IV

## GENERAL TERMS AND CONDITIONS

### 4.1 General Terms and Conditions Applicable to Distributed Energy Resource Providers

**4.1.1 Distributed Energy Resource Provider Requirements.** A Distributed Energy Resource Provider must satisfy all applicable rules and regulations of the Utility Distribution Company or Metered Subsystem tariffs as well as any requirements of the applicable Local Regulatory Authority, as well as applicable interconnection requirements, if any. A Distributed Energy Resource Provider must ensure that Distributed Energy Resources that comprise its Distributed Energy Resource Aggregation satisfy all applicable rules and regulations of Utility Distribution Company or Metered Subsystem tariffs, any requirements of the Local Regulatory Authority, as well as applicable interconnection requirements, if any. The Distributed Energy Resource Provider must certify to the CAISO that any required agreements between the Distributed Energy Resource Provider and the Load Serving Entities or other agreements required by the Local Regulatory Authority are fully executed.

**4.1.2 Agreement Subject to CAISO Tariff.** The Distributed Energy Resource Provider must comply with all applicable terms of the CAISO Tariff. This Agreement shall be subject to the CAISO Tariff, which shall be deemed to be incorporated herein.

**4.1.3 Obligations relating to Major Incidents.** The Distribution Energy Resource Provider shall promptly provide such information as the CAISO may reasonably require in relation to the CAISO's investigations of operating situations or events, or for the CAISO's reporting to the authorities such as the FERC, California Public Utilities Commission, Western Electricity Coordinating Council, or North American Electric Reliability Corporation.

**4.1.4 Small Utility Limits.** A Distributed Energy Resource Provider that aggregates Distributed Energy Resources that are customers of utilities that distribute four million MWh or less in the previous fiscal year must certify to the CAISO that its participation is permitted by the Local Regulatory Authority applicable to Distributed Energy Resources, and that it has satisfied all applicable rules and regulations of the Local Regulatory Authority. Distributed Energy Resource Providers that met this requirement previously must notify the CAISO immediately if the Local Regulatory Authority prohibits participation.

**4.2.1 Technical Characteristics.** The Distributed Energy Resource Provider has identified the Distributed Energy Resources that it owns, operates, or has a contractual entitlement to as part of a Distributed Energy Resource Aggregation in Schedule 1, as required by Section 4.17 of the CAISO Tariff. The Distributed Energy Resource Provider has also provided to the CAISO in Schedule 1 the required information regarding the capacity and operating characteristics of each of the Distributed Energy Resource Aggregations listed in that schedule. Pursuant to Sections 8.9 and 8.10 of the CAISO Tariff, the CAISO may verify, inspect, and test the capacity and operating characteristics of the Distributed Energy Resource Aggregations identified in Schedule 1.

**4.2.2 Metering and Communication.** Metering requirements for the submittal of Settlement Quality Meter Data for Scheduling Coordinator Metered Entities will be in accordance with Section 10.3 of the CAISO Tariff. Pursuant to Sections 8.4.5 and 8.4.6 of the CAISO Tariff, Distributed Energy Resource Aggregations that are scheduled or bid as qualifying Ancillary Services are required to comply with the CAISO's communication and metering requirements.

**4.2.3 Notification of Changes.** The Distributed Energy Resource Provider shall notify the CAISO of any proposed change(s) to the registration of technical information for its Distributed Energy Resource Aggregation(s). The CAISO will update its Master File in accordance with Section 30.7.3.2 of the CAISO Tariff. Pursuant to Sections 8.9 and 8.10 of the CAISO Tariff, the CAISO

may verify, inspect and test the capacity and operating characteristics of the revised information provided. Unless the Distributed Energy Resource fails to test at the values in the proposed change(s), the Distributed Energy Resource Provider's proposed change(s) will become effective upon the effective date for the next scheduled update of the Master File, provided that the Distributed Energy Resource Provider submits the changed information by the applicable deadline and is tested by the deadline. Subject to such notification, this Agreement shall not apply to any Distributed Energy Resources which the Distributed Energy Resource Provider no longer owns, operates or to which it no longer has a contractual entitlement.

**4.2.4 Obligations Relating to Energy and Ancillary Services**

**4.2.4.1 Submission of Bids and Self-provided Schedules.** When the Scheduling Coordinator on behalf of the Distributed Energy Resource Provider submits a Bid, the Distributed Energy Resource Provider will, by the operation of this Section 4.2.4.1, warrant to the CAISO that it has the capability to provide that service in accordance with the CAISO Tariff and that it will comply with CAISO Dispatch Instructions for the provision of the service in accordance with the CAISO Tariff.

**4.2.4.2 Ancillary Service Certification.** The Distributed Energy Resource Provider shall not use a Scheduling Coordinator to submit a Bid for the provision of an Ancillary Service or submit a Submission to Self-Provide an Ancillary Service unless the Scheduling Coordinator serving that Distributed Energy Resource Provider is in possession of a current Ancillary Service certificate pursuant to Sections 8.3.4 and 8.4 of the CAISO Tariff.

**4.2.5 Distribution System Communications.** Where the Utility Distribution Company requires its own direct communication with the Distributed Energy Resource Provider for the safety and reliability of the Distribution System, those communication and data protocols will be established in Schedule 4 to the Distributed Energy Resource Provider Agreement.

## ARTICLE V

## PENALTIES AND SANCTIONS

**5.1 Penalties.** If the Distributed Energy Resource Provider fails to comply with any provisions of this Agreement, the CAISO shall be entitled to impose penalties and sanctions on the Distributed Energy Resource Provider. No penalties or sanctions may be imposed under this Agreement unless a Schedule or CAISO Tariff provision providing for such penalties or sanctions has first been filed with and made effective by FERC. Nothing in this Agreement, with the exception of the provisions relating to the CAISO ADR Procedures, shall be construed as waiving the rights of the Distributed Energy Resource Provider to oppose or protest any penalty proposed by the CAISO to the FERC or the specific imposition by the CAISO of any FERC-approved penalty on the Distributed Energy Resource Provider.

**5.2 Corrective Measures.** If the Distributed Energy Resource Provider fails to meet or maintain the requirements or its responsibilities set forth in this Agreement and/or the CAISO Tariff, the CAISO shall be permitted to take any of the measures, contained or referenced in the CAISO Tariff, which the CAISO deems to be necessary to correct the situation.

## ARTICLE VI

## COSTS

**6.1 Operating and Maintenance Costs.** The Distributed Energy Resource Provider shall be responsible for all its costs incurred in meeting its obligations under this Agreement for the Distributed Energy Resource Aggregation(s) identified in Schedule 1.

## ARTICLE VII

## DISPUTE RESOLUTION

**7.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the Distributed Energy Resource Provider and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VIII

## REPRESENTATIONS AND WARRANTIES

**8.1 Authorization to Enter Into Agreement.** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

**8.2 Necessary Approvals as to Distributed Energy Resources.** The Distributed Energy Resource Provider represents that all necessary leases, approvals, permits, licenses, easements, rights of way or access to install, own and/or operate the Distributed Energy Resource Aggregation(s) for which it will Bid or otherwise act under this Agreement have been obtained by the Distributed Energy Resource Provider prior to submitting technical information to the CAISO.

## ARTICLE IX

## LIABILITY

**9.1 Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the Distributed Energy Resource Provider and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE X

## UNCONTROLLABLE FORCES

**10.1 Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the Distributed Energy Resource Provider and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE XI

## MISCELLANEOUS

**11.1 Assignments.** Either Party may assign or transfer any or all of its rights and/or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest was an original Party to this Agreement.

**11.2 Notices.** Any notice, demand, or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the Distributed Energy Resource Provider and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 2. A Party must update the information in Schedule 2 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.

**11.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter

arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**11.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply, shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**11.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**11.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**11.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**11.8 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing herein shall be construed as affecting in any way the right of the CAISO to make unilateral application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the Distributed Energy Resource Provider shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein. The standard of review FERC shall apply when acting upon proposed modifications to this Agreement by the CAISO shall be the "just and reasonable" standard of review rather than the "public interest" standard of review. The standard of review FERC shall apply when acting upon proposed modifications to this Agreement by FERC's own motion or by a signatory other than the CAISO or non-signatory entity shall also be the "just and reasonable" standard of review. Schedules 1, and 2 are provided for informational purposes and revisions to those schedules do not constitute a material change in the Agreement warranting FERC review.

**11.9 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF,** the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By:_____

Name:_____

Title:_____

Date:_____

**Distributed Energy Resource Provider**

By:_____

Name:_____

Title:_____

Date:_____

**SCHEDULE 1**

**SCHEDULE 2**

**NOTICES**

**[Section 11.2]**

**Distributed Energy Resource Provider**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**CAISO**

Name of Primary

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

Name of Alternative

Representative:_____

Title:_____

Company:_____

Address:_____

City/State/Zip Code:_____

Email Address:_____

Phone:_____

Fax No:_____

**SCHEDULE 3**

**CAISO IMPOSED PENALTIES AND SANCTIONS**

**[Section 5.1]**

**TO BE INSERTED UPON FERC APPROVAL**

# SCHEDULE 4

# COMMUNICATION AND DATA PROTOCOLS

**Appendix B.22 Reliability Coordinator Services Agreement**

**CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

**AND**

**[RC CUSTOMER]**

**RELIABILITY COORDINATOR SERVICES AGREEMENT (RCSA)**

**THIS AGREEMENT** is dated this _____ day of _____, _____, and is entered into, by and between:

(1) **[Full Legal Name]**, having its registered and principal place of business located at [Address] (the "RC Customer");

and

(2) **California Independent System Operator Corporation** (the "CAISO"), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The RC Customer and the CAISO are hereinafter referred to as the "Parties".

**Whereas:**

**A.** WHEREAS, the CAISO has registered with and will be certified by NERC as a Reliability Coordinator prior to the RC Services Date identified in this Agreement;

**B.** WHEREAS, the RC Customer is registered with and certified by NERC as a Balancing Authority and/or Transmission Operator;

**C.** WHEREAS, the RC Customer has determined that there is a need for the RC Customer to identify a Reliability Coordinator for its operations, currently and into the foreseeable future; and

**D.** WHEREAS, pursuant to this Agreement, the CAISO agrees to provide to the RC Customer services as set forth herein.

NOW THEREFORE, in consideration of the mutual covenants set forth herein, the Parties agree as follows:

**ARTICLE I**

**DEFINITIONS AND INTERPRETATION**

**1.1 Specific Definitions.**

**1.1.1 CAISO Tariff:** The CAISO electric tariff, as amended from time to time.

**1.1.2 Confidential Information:** Documents, materials, data, or information ("Data") provided to it by any other Party that reflects or contains: (a) Data treated as confidential or commercially sensitive under the confidentiality provisions of Section 20 of the CAISO Tariff; (b) Critical Energy Infrastructure Information, as defined in Section 388.113(c)(1) of FERC's regulations; (c) Critical

Electric Infrastructure Information defined in Section 215A of the Federal Power Act and regulations published by the Department of Energy; (d) pricing of third party vendor software costs for services under this Agreement; or (e) technical information and materials that constitute valuable, confidential, and proprietary information, know-how, and trade secrets belonging to a Party, including, but not limited to, information relating to drawings, maps, reports, specifications, and records and/or software, data, computer models, and related documentation.

**1.1.3 FERC:** The Federal Energy Regulatory Commission.

**1.1.4 Initial Term:** The Initial Term of the Agreement is eighteen (18) months from the RC Services Date.

**1.1.5 Person:** Any individual, corporation, cooperative corporation, municipal corporation, quasi-municipal corporation, non-profit corporation, joint operating entity, limited liability company, mutual association, partnership, limited partnership, limited liability partnership, association, joint stock company, trust, unincorporated organization, government entity or political subdivision thereof (including a federal power marketing administration), or organization recognized as a legal entity by law in the United States, Mexico, or Canada, as applicable.

**1.1.6 RC Services:** The Reliability Coordinator services provided by the CAISO and described in Section 19 of the CAISO Tariff. RC Services do not include the supplemental services also offered under this Agreement, as described in Sections 2.2.1 and 2.2.2.

**1.1.7 RC Services Date:** The date upon which the CAISO becomes the Reliability Coordinator of record for an RC Customer and the RC Customer begins receiving RC Services from the CAISO.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions will apply to this Agreement:

(a) if there is any inconsistency between this Agreement and Section 19 of the CAISO Tariff, Section 19 of the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular will include the plural and vice versa;

(c) the masculine will include the feminine and neutral and vice versa;

(d) “includes” or “including” will mean “including without limitation”;

(e) references to a Section, Article or Schedule will mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument will be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law will be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(i) any reference to a day, week, month or year is to a calendar day, week, month or year;

(j) the captions and headings in this Agreement are inserted solely to facilitate reference and will not have any bearing upon the interpretation of any of the terms and conditions of this Agreement; and

(k) unless otherwise defined in this Agreement, terms and expressions used in this Agreement will have the same meanings as those contained in the "NERC Glossary of Terms Used in Reliability Standards".

## ARTICLE II

## GENERAL RESPONSIBILITIES OF THE PARTIES

**2.1 Agreement.** This Agreement is subject to Section 19 of the CAISO Tariff, which is incorporated herein.

**2.2 Description of CAISO Responsibilities.** The CAISO agrees to provide RC Services to the RC Customer, commencing on the RC Services Date, in accordance with Section 19 of the CAISO Tariff. The CAISO will establish a Reliability Coordinator Oversight Committee in accordance with Section 19.11 of the CAISO Tariff.

**2.2.1 Supplemental Services – Hosted Advanced Network Application (HANA).** The CAISO agrees to provide HANA services to the RC Customer at its request for an additional charge, as set forth in Section 19.3 of the CAISO Tariff.

(a) The RC Customer shall: (i) notify the CAISO 90 calendar days in advance of the RC Customer's requested start date of initial HANA services and which HANA services the RC Customer desires to take in accordance with Section 19.3(c) of the CAISO Tariff; and (ii) pay for such services in accordance with Section 19.8 of the CAISO Tariff. The start date of taking the initial HANA services will establish the anniversary date for the minimum three years of taking the HANA services and the billing date.

(b) Each subsequent year, the RC Customer will notify the CAISO in writing 90 calendar days in advance of the anniversary date of the HANA services as to which HANA services it is electing to take for the following calendar year. If the RC Customer does not provide such notice to the CAISO 90 calendar days in advance of the anniversary date of the HANA services, the CAISO will continue to provide the RC Customer with the same HANA services it is providing to the RC Customer during the then current year.

(c) If the RC Customer elects to receive HANA services, the RC Customer agrees to pay for three years of services regardless of whether it takes HANA services for the entire three year term, and will be invoiced one-third of that amount annually during the initial three year term. Thereafter, the RC Customer will be invoiced annually for HANA services as described in Section 2.2.1(b) above.

(d) The CAISO will post the HANA service costs on the RC secure website.

**2.2.2 Supplemental Services – Physical Security Review.** The CAISO agrees to provide physical security review services to the RC Customer at its request for an additional charge, as set forth in Section 19.4 of the CAISO Tariff, in accordance with applicable Reliability Standards (currently, NERC CIP-014).

**2.3 Description of RC Customer Responsibilities.** The RC Customer agrees to comply with the provisions of Section 19 of the CAISO Tariff. The RC Customer shall notify the CAISO in the event there is a change in the registered reliability functions applicable to the RC Customer or, if it is a Transmission Operator, a change in its Balancing Authority Area.

**2.4 RC Customer Entity Status.** The RC Customer is either a (check all of the boxes that apply):

(a) Balancing Authority (settled based on Net Energy for Load (NEL) of the BAA) ☐

(b) Generator Only Balancing Authority (settled based on Net Generation (NG) of the BAA) ☐

(c) Transmission Operator:

1) Outside CAISO BAA with no load (settled based on fee) ☐

2) Outside CAISO BAA with load (settled based on Transmission Owner load or share of BAA NEL) ☐

3) Inside CAISO BAA with no load (settled based on fee) ☐

4) Inside CAISO BAA with load (settled based on share of CAISO BAA NEL) ☐

**2.4.1 Conflict of Designation.** If there is a conflict between the Balancing Authority and the Transmission Operator regarding who will be billed and pay for the RC Services, the CAISO will give precedence to the Balancing Authority.

**2.5 Identification of Transmission Operators and Transmission Owners.** Each RC Customer that is a Balancing Authority will provide the CAISO with a list of the Transmission Operators and corresponding Transmission Owners it is representing for RC Services in Schedule 1, if any. Each RC Customer that is a Transmission Operator will provide the CAISO with a list of the Transmission Owners it is representing for RC Services in Schedule 1 and will identify the Balancing Authority Area in which it and any Transmission Owners are located. Any changes to Schedule 1 will not constitute an amendment to this Agreement.

**2.6 Non-Jurisdictional Entities.** For an RC Customer that is an exempt entity as described in section 201(f) of the Federal Power Act, 16 U.S.C. 824(f), the CAISO acknowledges that this Agreement does not extend FERC's jurisdiction over the RC Customer.

## ARTICLE III

## TERM AND TERMINATION

**3.1 Term.** This Agreement will be effective as of the later of the date it is executed by the Parties or the date accepted for filing and made effective by FERC ("Effective Date"). The Agreement will remain in full force and effect for eighteen (18) months from the RC Services Date ("Initial Term"). Upon expiration of the Initial Term, this Agreement will automatically renew and will remain in full force and effect until terminated pursuant to Sections 3.2.1 or 3.2.2 of this Agreement.

**3.2 Termination.**

**3.2.1 Termination by CAISO.** In the event the RC Customer commits any material default under this Agreement, which, if capable of being remedied, is not remedied within sixty (60) days after the CAISO has given written notice to the RC Customer of the default, the CAISO may terminate this Agreement at any time upon thirty (30) days prior written notice of termination, provided the notice of termination incorporates a transition plan for the RC Customer to transition to a new Reliability Coordinator to ensure that the termination of this Agreement results in no harm to the Western grid. The CAISO shall inform all RC Customers at the time it sends written notice of termination to any RC Customer. Any outstanding financial right or obligation or any other obligation under the CAISO Tariff of the RC Customer that has arisen while that RC Customer was receiving services under this Agreement, and any provision of this Agreement necessary to give effect to such right or obligation, will survive until satisfied. With respect to any notice of termination given pursuant to this Section, the CAISO must file a notice of termination with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. For avoidance of doubt, if the CAISO terminates the Agreement under this Section 3.2.1 prior to expiration of the Initial Term, the RC Customer will still be required to pay the RC Service Charge for the remainder of the Initial Term and the HANA services charge, if applicable.

**3.2.2 Termination by RC Customer.** The RC Customer may terminate this Agreement, without penalty, by giving the CAISO not less than twelve (12) months advance written notice after the Initial Term. This notice will be given on or before April 1 of the current calendar year and such termination will become effective on April 1 of the following year. If the RC Customer gives the CAISO less than twelve (12) months' notice after the Initial Term and is being billed directly for the RC Services in accordance with Section 5.3, the RC Customer will be charged an amount equal to the balance of the RC Service Charge remaining on the twelve (12) month required notice period. Any outstanding financial right or obligation or any other obligation under the CAISO Tariff of the RC Customer that has arisen while that RC Customer was receiving services under this Agreement, and any provision of this Agreement necessary to give effect to such right or obligation, will survive until satisfied. With respect to any notice of termination given pursuant to this Section, the CAISO must timely file a notice of termination with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. For entities defined under Section 201(f) of the Federal Power Act, 16 U.S.C. 824(f), termination will be effective upon twelve (12) months' notice irrespective of acceptance by FERC.

**3.2.3 Transition Assistance.** Except in the case of a CAISO termination for a default by the RC Customer, if the RC Customer requests in their notice of termination, the CAISO will reasonably assist the RC Customer to transition to another Reliability Coordinator prior to the effective date of the transition, including providing data and assistance, provided that the RC Customer will reimburse the CAISO for its reasonable costs for such assistance.

## ARTICLE IV

## PENALTIES AND SANCTIONS

**4.1 Allocation of Reliability Related Penalty Costs.** The CAISO will have the right to allocate reliability-related penalty costs assessed to the CAISO by FERC, NERC and/or WECC to the RC Customer in accordance with Section 19.14 of the CAISO Tariff.

## ARTICLE V

## BILLINGS AND SETTLEMENTS

**5.1 Data and Submission.** The RC Customer will be responsible for submitting its RC Services' settlements data and related information to the CAISO in accordance with Section 19.6 of the CAISO Tariff.

**5.2 Default MWh.** At the time it executes this Agreement, the RC Customer will provide an initial default MWh volume in Schedule 1. The default MWh volume will be used to calculate the RC Customer's Net Energy for Load or Net Generation to the extent it fails to submit the Net Energy for Load or Net Generation in accordance with Section 19.6 of the CAISO Tariff. If the RC Customer's installed capacity changes, the default Net Generation MWh volume set forth in Schedule 1 must be amended.

**5.2.1 Validation of Default MWh Amount.** The CAISO reserves the right to request that the RC Customer provide it with data to validate the RC Customer's stated default MWh amount in Schedule 1. The RC Customer agrees to provide in a timely manner such requested data necessary for the CAISO to perform such validation, and the CAISO agrees to use this information solely for this purpose.

**5.3 Invoice and Payment Process.** If the RC Customer is a Balancing Authority, or if it is a Transmissions Operator who elects to be billed directly in exchange for the RC Services provided by this Agreement, said RC Customer will be invoiced for RC Services in accordance with Section 19.7 of the CAISO Tariff and will have the right to dispute the RC Services invoiced amount in accordance with Sections 19.7 and 19.10 of the CAISO Tariff. If the RC Customer is a Transmission Operator and does not elect to be billed directly, the costs for its RC Services will be borne by its Balancing Authority. If the RC Customer is within the CAISO Balancing Authority Area, the Transmission Operator will be billed in accordance with Section 11.20.9 of the CAISO Tariff.
For billing purposes in accordance with this Section, the RC Customer represents that it is either a (check the box that applies):

**(a) Balancing Authority** ☐

**(b) Transmission Operator (direct billing elected)** ☐

**(c) Transmission Operator (billed to Balancing Authority)** ☐

**(d) Transmission Operator within the CAISO BAA** ☐

The invoice and payment process for the HANA services will be in accordance with Section 19.8 of the CAISO Tariff. The invoice and payment process for other supplemental services will be in accordance with Section 19.9 of the CAISO Tariff.

**5.4 Payment Default.** The CAISO will have the right to recover unpaid RC Services invoiced amounts from the RC Customer pursuant to Section 19.7 of the CAISO Tariff. For RC Customers in the CAISO Balancing Authority Area, the CAISO will have the right to recover unpaid RC Services invoiced amounts from the RC Customer pursuant to Section 11.20.9 of the CAISO Tariff.

## ARTICLE VI

## CONFIDENTIALITY

**6.1 Confidentiality.** Each Party's Confidential Information will be treated in accordance with the NERC Operating Reliability Data agreement and Section 19.15 of the CAISO Tariff and any other applicable confidentiality rules such as provided in the NERC Rules of Procedure, or data sharing agreements in effect between the Parties.

## ARTICLE VII

## GOVERNING LAW

**7.1 Governing Law and Forum.** This Agreement will be deemed to be a contract made under, and for all purposes will be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply will be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the FERC.

## ARTICLE VIII

## LIABILITY

**8.1 Liability.** Except as expressly provided in this Agreement, neither Party, nor any of its directors, officers, employees, consultants or agents will be liable to the other Party under any circumstances, whether any claim is based in contract in tort, in equity for any punitive, or otherwise, for any special, consequential, indirect or incidental damages of any nature whatsoever, including, but not limited to, lost profits, loss of earnings or revenue, loss of use, loss of contract or loss of goodwill, or for any costs or expenses (including legal expenses) arising out of or in connection the performance or non-performance of its obligations under this Agreement.

**8.2 No Third-Party Enforcement.** No third-party will be entitled to enforce this Agreement against any Party hereto. This Agreement is made and entered into for the sole protection and legal benefit of the Parties. No other Person will be a direct or indirect legal beneficiary, or have any direct or indirect cause of action or claim in connection with, this Agreement. No other Person will be a third-party beneficiary under this Agreement.

**8.3 Recovery for Third-Party Indemnity.** To the extent that the CAISO suffers any loss as a result of any third-party claims arising out of the performance of this Agreement, the CAISO will be entitled to seek recovery of such loss through Section 14.4 of the CAISO Tariff, except that any reference in Section 14.4 of the CAISO Tariff to Market Participants will be read to include a reference to the RC Customer and references to the CAISO Tariff will be read to include a reference to this Agreement.

## ARTICLE IX

## DISPUTE RESOLUTION

**9.1 Dispute Resolution.** The Parties will make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties must adhere to the dispute resolution procedures as set forth in Section 19.10 of the CAISO Tariff.

## ARTICLE X

## MISCELLANEOUS

**10.1 Representation and Warranties.** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

**10.1.1 Information Exchange.** All information, including Confidential Information provided by any Party under this Agreement, is accurate to the extent of the providing Party's knowledge. The receiving Party receives the information "as is" and with the understanding that the information is accurate to the best of the providing Party's knowledge at the time of receipt.

**10.2 Uncontrollable Forces Tariff Provisions.** Section 19.12 of the CAISO Tariff will be incorporated by reference into this Agreement.

**10.3 Consistency with Federal Laws and Regulations.** This Agreement incorporates by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**10.3.1 Federal Entity Contract Requirements.** The provisions of Schedule 2 hereto contain provisions applicable to certain contracts entered into with the federal government. The provisions of Schedule 2 are applicable to a Party that is a federal entity if and to the extent required by applicable law and if not otherwise exempted.

**10.3.2 No Waiver of Federal Rights.** By entering into this Agreement, no federal entity shall be deemed to have waived its rights to protest or challenge in any action or proceeding, any allocation of reliability related penalties, nor does any federal entity waive its sovereign immunity.

**10.4 Assignments.** The RC Customer may assign or transfer any or all of its rights and/or obligations under this Agreement with the CAISO's prior written consent. Such consent will not be unreasonably withheld. Any such transfer or assignment will be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest was an original Party to this Agreement.

**10.5 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement will be deemed properly served, given, or made: (a) upon delivery if delivered in person, (b) five (5) days after deposit in the mail if sent by first class United States mail, postage prepaid, (c) upon receipt of confirmation by return e-mail if sent by e-mail, or (d) upon delivery if delivered by prepaid commercial courier service, and unless otherwise stated or agreed must be made to the representative of the other Party indicated in Schedule 3. A Party must update the information in Schedule 3 of this Agreement as information changes. Such changes will not constitute an amendment to this Agreement.

**10.6 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, will not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement will not constitute or be deemed a waiver of such right.

**10.7 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**10.8 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition will remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application will not be affected thereby, but will remain in force and effect and the Parties will be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**10.9 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval will not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein will be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the RC Customer will have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party will have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement will limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**10.10 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which will be regarded as an original and all of which, taken together, will constitute one and the same Agreement. Each individual signing this Agreement certifies that the Party represented has duly authorized such individual to sign, bind, and obligate such Party.

**IN WITNESS WHEREOF**, the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By: _____

Name: _____

Title: _____

Date: _____

**[RC Customer]**

By: _____

Name: _____

Title: _____

Date: _____

## SCHEDULE 1

### RC Customer Required Information

### (Sections 1.1.6, 2.5 and 5.2)

The RC Customer represents the following Transmission Operators and corresponding Transmission Owners for RC Services:

| Balancing Authority Area ("BAA") | Transmission Operator ("TOP") | | Transmission Owner ("TO") |
|---|---|---|---|
| | Name | Direct Billed (Yes/No) | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

**RC Services Date:** _____

**Default MWh:** _____

**SCHEDULE 2**

**FEDERAL GOVERNMENT CONTRACT PROVISIONS**

**(Section 10.3.1)**

This Schedule 2 contains provisions that are necessary for the United States of America, acting by and through the Western Area Power Administration ("Western") and the Bonneville Power Administration ("Bonneville") to enter into the Agreement.

**1. Billing and Payment**

Notwithstanding Section 5.3 of the body of the Agreement, the CAISO will submit an annual invoice to Bonneville and Western for RC Services for the current year. The invoice will contain information specified in 5 C.F.R. § 1315.9(b). The amount of the invoice will be paid on a monthly basis to the CAISO in an amount equal to 1/12 of the invoiced amount calculated for Bonneville and Western, respectively, pursuant to Section 19.7 of the CAISO Tariff and sent to the persons designated by Bonneville and Western. Bonneville and Western may change the persons designated to receive the invoices at any time by written notice to the CAISO. Bonneville and Western will make each monthly payment by the twentieth day of the month, and such payments will be in accordance with the Prompt Payment Act, 31 U.S.C. § 3900 et seq.

**2. Contingent Upon Appropriations and Authorization**

Where activities provided for in this Agreement extend beyond the current fiscal year, continued expenditures by Western are contingent upon Congress making the necessary appropriations required for the continued performance of Western's obligations under the Agreement. In case such appropriation is not made, (i) Western will promptly give each of the other Parties written notice of such failure. (ii) Western will from and after the occurrence of any such failure no longer be a party to this Agreement, and (iii) the Parties hereby release Western from its contractual obligations and from all liability due to the failure of Congress to make such appropriation.

**3. Covenant Against Contingent Fees**

Each of the Parties warrants to each of the other Parties that no person or selling agency has been employed or retained by it to solicit or secure the Agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by any Party for the purpose of securing business. For breach or violation of this warranty by any Party other than Western or Bonneville, Western and Bonneville will have the right to annul the contract with respect to Western and Bonneville without liability or in its discretion to deduct from the contract price or consideration the full amount of such commission, percentage, brokerage, or contingent fee.

**4. Contract Work Hours and Safety Standards**

The Agreement, to the extent that it is of a character specified in Section 103 of the Contract Work Hours and Safety Standards Act (Act), 40 U.S.C. § 3701, as amended or supplemented, is subject to the provisions of the Act, 40 U.S.C. §§ 3701-3708, as amended or supplemented, and to regulations promulgated by the Secretary of Labor pursuant to the Act.

**5. Equal Opportunity Employment Practices**

Section 202 of Executive Order No. 11246, 30 Fed. Reg. 12319 (1965), as amended by Executive Order No. 12086, 43 Fed. Reg. 46501 (1978), as amended or supplemented, which provides, among other things, that the Parties will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin, is incorporated herein by reference the same as if the specific

language had been written into the contract.

**6. Use of Convict Labor**

The Parties agree not to employ any person undergoing sentence of imprisonment in performing the Agreement except as provided by 18 U.S.C. § 3622(c), as amended or supplemented, and Executive Order No. 11755, 39 Fed. Reg. 779 (1973), as amended or supplemented.

**SCHEDULE 3**

**NOTICES**

**(Section 10.5)**

**RC Customer**

Name of Primary Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email address: _____

Phone: _____

Name of Alternative Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email address: _____

Phone: _____

**CAISO**

| | |
|---|---|
| Name of Primary Representative: | Regulatory Contracts |
| Title: | N/A |
| Address: | 250 Outcropping Way |
| City/State/Zip Code: | Folsom, CA 95630 |
| Email address: | RegulatoryContracts@caiso.com |
| Phone: | (916) 351-4400 |

| | |
|---|---|
| Name of Alternative Representative: | Christopher J. Sibley |
| Title: | Manager, Regulatory Contracts |
| Address: | 250 Outcropping Way |
| City/State/Zip Code: | Folsom, CA 95630 |
| Email address: | csibley@caiso.com |
| Phone: | (916) 608-7030 |

**Appendix B.23**

**[Not Used]**

**Appendix B.24**

# ENERGY IMBALANCE MARKET SUB-ENTITY

# IMPLEMENTATION AGREEMENT

**THIS ENERGY IMBALANCE MARKET SUB-ENTITY IMPLEMENTATION AGREEMENT ("Agreement")** is established this ____ day of _____, ____, and is accepted by and between:

(1) [Full legal name] having its registered and principal executive office at [address] ("Short Legal Name" or "Prospective EIM Sub-Entity"),

and

(2) California Independent System Operator Corporation, a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate, ("CAISO").

[Short Legal Name] and the CAISO each are hereinafter referred to as a "Party," or collectively as the "Parties."

## RECITALS

A. **WHEREAS**, [Short Legal Name], has requested to participate in the CAISO's Real-Time Market as an EIM Sub-Entity.

B. **WHEREAS**, the Parties acknowledge that the rules and procedures governing participation in the CAISO's Real-Time Market as an EIM Sub-Entity are set forth in the provisions of the CAISO Tariff as filed with the Federal Energy Regulatory Commission ("FERC") and that implementation as an EIM Sub-Entity requires corresponding revisions to [Short Legal Name's] Open Access Transmission Tariff/retail distribution tariff and the execution of associated service agreements;

C. **WHEREAS**, [Short Legal Name] meets the CAISO Tariff requirements for participation as an EIM Sub-Entity, including any EIM Entity Balancing Authority requirements necessary for the [Short Legal Name] to separately participate in the CAISO's Real-Time Market.

D. **WHEREAS**, implementation of participation by [Short Legal Name] in the CAISO's Real-Time Market as an EIM Sub-Entity requires the CAISO to incur costs to set up its business and software systems on behalf of [Short Legal Name].

E. **WHEREAS**, [Short Legal Name] has requested the CAISO to conduct or cause to be performed work to implement [Short Legal Name] as an EIM Sub-Entity into the CAISO systems and [Short Legal Name] will reimburse the CAISO for the actual costs incurred.

F. **WHEREAS,** the Parties are entering into this Agreement to set forth the terms upon which the CAISO will timely configure its systems to incorporate [Short Legal Name] as an EIM Sub-Entity on or before [date] ("EIM Sub-Entity Implementation Date").

**NOW, THEREFORE**, in consideration of the mutual covenants contained herein, the Parties agree as follows:

## ARTICLE I

## DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** All terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement to the CAISO Tariff.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) “includes” or “including” shall mean “including without limitation”;

(e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a “person” includes any individual, partnership, firm, company, corporation, joint venture, trust,

association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) any reference to a day, week, month or year is to a calendar day, week, month or year;

(k) unless the context requires otherwise, “or” is used in the conjunctive sense; and

(l) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

## ARTICLE II

## RESPONSIBILITIES OF EIM SUB-ENTITY AND CAISO

**2.1 Scope of Responsibilities.** The CAISO shall conduct or cause to be performed changes to the CAISO business and software systems, in accordance with the CAISO Tariff, to allow [Short Legal Name] to participate in the CAISO Real-Time Market as an EIM Sub-Entity. The scope of the implementation will include, but is not limited to, planning and project management; full network modeling of resources; system integration and testing; metering and settlements; and operations readiness and training. The CAISO shall also provide [Short Legal Name] a project plan of implementation activities, including a schedule by which information and data will be required to be sent to the CAISO; testing to be performed by [Short Legal Name]; and training to meet the EIM Sub-Entity Implementation Date.

**2.2 Implementation Deposit and Cost Allocation.** Consistent with Section 29.11(g) of the CAISO tariff, [Short Legal Name] will provide a deposit and pay the actual costs of the implementation, including any actual amounts in excess of the initial deposit. The CAISO will provide invoices and refunds on a timely basis. Any difference between the deposit(s) made toward the implementation of [Short Legal Name] and associated administrative costs, and the actual cost of the implementation of [Short Legal Name] shall be paid by or refunded to [Short Legal Name], in accordance with Article V of this Agreement.

**2.3 Technical Data.** [Short Legal Name] will provide the CAISO technical data to facilitate the implementation in the Real-Time Market as an EIM Sub-Entity and assumptions used for the data, such as system conditions, existing and planned generation, and unit modeling. The CAISO shall not be responsible for any additional costs, including, without limitation, costs of new or additional facilities, system

upgrades, or schedule changes, that may be incurred by [Short Legal Name] as a result of implementation in the Real-Time Market as an EIM Sub-Entity.

**2.4 Compliance with CAISO Tariff Requirements for an EIM Sub-Entity.** Prior to the EIM Sub-Entity Implementation Date, [Short Legal Name] will satisfy all requirements of the CAISO Tariff applicable to an EIM Sub-Entity, including: (1) demonstrating that [Short Legal Name] satisfies all qualifications for participation as an EIM Sub-Entity; (2) showing that [Short Legal Name] has been authorized by the EIM Entity for the Balancing Authority Area in which the EIM Sub-Entity is located to participate as an EIM Sub-Entity; (3) entering into an EIM Sub-Entity Agreement with the CAISO governing [Short Legal Name's] participation in the Real-Time Market; and (4) securing representation by an EIM Sub-Entity Scheduling Coordinator.

## ARTICLE III

## TERM AND TERMINATION

**3.1 Effective Date.** This Agreement shall be effective as of the later of the date it is executed by the Parties or the date it is accepted for filing and made effective by FERC (if applicable) and shall remain in full force and effect until terminated pursuant to Section 3.2 of this Agreement.

**3.2 Termination**

**3.2.1 Termination by CAISO.** The CAISO may terminate this Agreement by giving written notice of termination pursuant to Section 29.1(d) of the CAISO Tariff or in the event that (i) [Short Legal Name] commits any material default under this Agreement or Section 29 of the CAISO Tariff that, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given [Short Legal Name] written notice of the default, unless the default is excused by reason of Uncontrollable Forces in accordance with Article IX of this Agreement, or (ii) the EIM Entity for the Balancing Authority Area in which [Short Legal Name] is located terminates participation in the EIM. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if (1) the filing of the notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within sixty (60) days after issuance of the notice of default; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall

terminate upon acceptance by FERC of such a notice of termination or thirty (30) days after the date of the CAISO's notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**3.2.2 Termination by [Short Legal Name].** In the event that [Short Legal Name] no longer wishes to participate in the CAISO's Real-Time Market as an EIM Sub-Entity pursuant to the CAISO Tariff, it may terminate this Agreement on giving the CAISO not less than (30) days written notice. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if (1) the request to file a notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within thirty (30) days of receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination or upon the next production date of the Full-Network Model release following the thirty (30) days after the CAISO's receipt of [Short Legal Name]'s notice of termination, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**3.3 No Termination Charge.** With the exception of the implementation costs, the CAISO shall not levy an exit fee or other charge associated with CAISO systems, procedures, or other changes required by the termination of [Short Legal Name]'s participation in the Energy Imbalance Market as of the effective date of such notice, provided that [Short Legal Name] obligations incurred under this Agreement shall survive termination until satisfied.

## ARTICLE IV

## CAISO TARIFF

**4.1 Agreement Subject to CAISO Tariff.** This Agreement shall be subject to Section 29 of the CAISO Tariff and all other provisions of the CAISO Tariff applicable to an EIM Sub-Entity, which shall be deemed to be incorporated herein. [Short Legal Name] shall abide by, and shall perform, all of the obligations of EIM Sub-Entities under the CAISO Tariff.

## ARTICLE V

## COSTS AND ACCOUNTING

**5.1 Costs.** The CAISO shall maintain records and accounts of all costs incurred in performing the implementation of the EIM Sub-Entity in sufficient detail to allow verification of all costs incurred, including associated overheads.

**5.2 Settlement of Deposit(s).** The deposit provided in accordance with Section 2.2 of this Agreement shall be applied to the prudent costs of the CAISO in implementing [Short Legal Name] as an EIM Sub-Entity in the Real-Time Market. If the actual costs of the implementation of [Short Legal Name] are greater than the initial deposit provided by [Short Legal Name], the CAISO will invoice [Short Legal Name] for an additional deposit amount to cover expenses. Payment of invoices shall be due no later than thirty (30 days) after the date of receipt. Any invoice payment past due will accrue interest, per annum, calculated in accordance with 5 C.F.R. 1315.10.

At the end of the implementation, the CAISO will provide a report that details deposit(s) received, actual costs incurred, and applicable interest earnings (on deposit balance) for each implementation project. Interest will be calculated at the end of the implementation project, from the time the deposit(s) was received until the implementation is completed. The calculation will be based on the average earning of the bank account, in which the deposit is held, on the remaining amount of the deposit. Any unused deposit remaining after the implementation is completed plus interest on the remaining deposit will be returned to [Short Legal Name] within ninety (90) calendar days after the implementation is completed; the CAISO and [Short Legal Name] approve the completion; and all required documents for the refund are received by the CAISO. All refunds will be processed following the CAISO's generally accepted accounting practices. Any deadline for CAISO action will be tolled to the extent [Short Legal Name] has not provided the CAISO with the appropriate documents to facilitate an eligible refund.

In the event this agreement is terminated by either party or both parties after [Short Legal Name]'s implementation has begun then the CAISO will make every attempt to halt work and related costs on the implementation as soon as practical and begin the refund process for any payments provided by [Short Legal Name] in excess of costs incurred by the CAISO, if applicable.

**5.3 Audit.** [Short Legal Name] shall have the right, upon reasonable notice, within a reasonable time at the CAISO's offices and at its own expense, to audit the CAISO's records as necessary and as appropriate in order to verify costs incurred by the CAISO. Any audit requested by [Short Legal Name] shall be completed, and written notice of any audit dispute provided to the CAISO representative, within one hundred eighty (180) calendar days following receipt by [Short Legal Name] of the CAISO's notification of the final costs of the implementation of [Short Legal Name].

## ARTICLE VI

## DISPUTE RESOLUTION

**6.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to [Short Legal Name] and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VII

## REPRESENTATIONS AND WARRANTIES

**7.1 Representation and Warranties.** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

**7.2 Necessary Approvals.** [Short Legal Name] represents that all necessary rights, leases, approvals, permits, licenses, easements, access to operate in compliance with this Agreement have been or will be obtained by [Short Legal Name] prior to the effective date of this Agreement, including any arrangement with the EIM Entity for the Balancing Authority Area in which [Short Legal Name] is located and any third party Balancing Authorities.

## ARTICLE VIII

## LIABILITY

**8.1 Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to [Short Legal Name] and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE IX

## UNCONTROLLABLE FORCES

**9.1 Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to [Short Legal Name] and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE X

## MISCELLANEOUS

**10.1 Assignments.** Either Party may assign or transfer any or all of its rights or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff and no Party may assign or transfer any or all of its rights or obligations under this Agreement without such consent. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights or obligations under this Agreement as if said successor in interest were an original Party to this Agreement.

**10.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to [Short Legal Name] and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other

Party indicated in Schedule 1. A Party must update the information in Schedule 1 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.

**10.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**10.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**10.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**10.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**10.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**10.8 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the Federal Power Act ("FPA") and pursuant to FERC's rules and regulations promulgated thereunder, and [Short Legal Name] shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**10.9 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF**, the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By: _____

Name: _____

Title: _____

Date: _____

**[NAME OF PROSPECTIVE EIM SUB-ENTITY]**

By: _____

Name: _____

Title: _____

Date: _____

**SCHEDULE 1**

**NOTICES**

**[Section 10.2]**

**[Short Legal Name]**

Name of Primary

Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

Name of Alternative

Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

**CAISO**

| | |
|---|---|
| Name of Primary Representative: | Regulatory Contracts |
| Title: | N/A |
| Address: | 250 Outcropping Way |
| City/State/Zip Code: | Folsom, CA 95630 |
| Email address: | RegulatoryContracts@caiso.com |
| Phone: | (916) 351-4400 |
| Fax: | (916) 608-5063 |

| | |
|---|---|
| Name of Alternative Representative: | Christopher J. Sibley |
| Title: | Manager, Regulatory Contracts |
| Address: | 250 Outcropping Way |
| City/State/Zip Code: | Folsom, CA 95630 |
| Email address: | csibley@caiso.com |
| Phone: | (916) 608-7030 |
| Fax: | (916) 608-5063 |

## Appendix B.25

## EIM SUB-ENTITY AGREEMENT

**THIS ENERGY IMBALANCE MARKET SUB-ENTITY AGREEMENT ("AGREEMENT")** is established this ____ day of _____, ____, and is accepted by and between:

(1) **[Full legal name]** ("EIM Sub-Entity"), having its registered and principal executive office at [address],

and

(2) **California Independent System Operator Corporation** ("CAISO"), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The EIM Sub-Entity and the CAISO are hereinafter referred to as the "Parties."

**Whereas:**

**A.** The EIM Sub-Entity is an electric utility located in an EIM Entity Balancing Authority Area that has been authorized by the EIM Entity for the Balancing Authority Area in which it is located to participate in the CAISO's Real-Time Market as an EIM Sub-Entity.

**B.** The CAISO operates the Real-Time Market pursuant to the CAISO Tariff.

**C.** The Parties are entering into this Agreement to enable the EIM Sub-Entity to participate in the CAISO's Real-Time Market.

NOW THEREFORE, in consideration of the mutual covenants set forth herein, **THE PARTIES AGREE** as follows:

### ARTICLE I

### DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** All terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement to the CAISO Tariff.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) “includes” or “including” shall mean “including without limitation”;

(e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a “person” includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) any reference to a day, week, month or year is to a calendar day, week, month or year;

(k) unless the context requires otherwise, “or” is used in the conjunctive sense; and
(l) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

## ARTICLE II

## RESPONSIBILITIES OF EIM SUB-ENTITY AND CAISO

**2.1 Scope of Responsibilities.** The Parties are individually responsible for compliance with the Reliability Standards established by the Western Electricity Coordinating Council (“WECC”) and the North American Electric Reliability Corporation (“NERC”), and in accordance with their respective tariffs on file with the Federal Energy Regulatory Commission (“FERC”), if applicable. Nothing in this Agreement is intended to change, supersede, or alter either Party's obligations to abide by NERC and WECC Reliability Standards or to provide open and non-discriminatory transmission access in accordance with the terms of their respective FERC tariffs, if applicable.

**2.2 Tariff Provisions.** The CAISO shall provide open access to the Real-Time Market in accordance with the terms of the CAISO Tariff. The EIM Sub-Entity shall have in

effect provisions in its OATT to enable operation of the Real-Time Market in accordance with the CAISO Tariff, if applicable.

**2.3 EIM Sub-Entity Scheduling Coordinator.** The EIM Sub-Entity shall be represented by an EIM Sub-Entity Scheduling Coordinator, which may be the EIM Sub-Entity or another entity certified by the CAISO to perform the functions of an EIM Sub-Entity Scheduling Coordinator.

**2.4 EIM Transmission Service and Resource Information.** The EIM Sub-Entity may, if authorized by the EIM Entity for the Balancing Authority Area in which the EIM Sub-Entity is located, provide information to the CAISO for Energy Imbalance Market purposes regarding the network topology of its facilities within the EIM Entity Balancing Authority Area, non-participating resources, and loads in accordance with the CAISO Tariff and the Business Practice Manual for the Energy Imbalance Market. The EIM Sub-Entity will be responsible for the accuracy and completeness of this information.

**2.5 EIM Transmission Availability.** The EIM Sub-Entity shall make available for use in the Real-Time Market transmission capacity on its system that is not otherwise encumbered, reserved, scheduled, or being used by its transmission customers or by others. The EIM Sub-Entity shall provide the CAISO with real time information regarding the availability of transmission capacity for use in the Energy Imbalance Market as authorized by the EIM Entity for the Balancing Authority Area in which the EIM Sub-Entity is located and provided in the CAISO Tariff and Business Practice Manual for the Energy Imbalance Market.

## ARTICLE III

## TERM AND TERMINATION

**3.1 Effective Date.** This Agreement shall be effective as of the later of the date it is executed by the Parties or the date it is accepted for filing and made effective by FERC and shall remain in full force and effect until terminated pursuant to Section 3.2 of this Agreement.

**3.2 Termination**

**3.2.1 Termination by CAISO.** The CAISO may terminate this Agreement by giving written notice of termination pursuant to Section 29.1(d) of the CAISO Tariff or in the event that (i) the EIM Sub-Entity commits any material default under this Agreement or Section 29 of the CAISO Tariff that, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given the EIM Sub-Entity written notice of the default, unless the default is excused by reason of Uncontrollable Forces in accordance with Article IX of this Agreement, or (ii) the EIM Entity for the Balancing Authority Area in which the EIM Sub-Entity is located terminates participation in the EIM. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if (1) the filing of the notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within sixty (60) days

after issuance of the notice of default; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination or thirty (30) days after the date of the CAISO's notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**3.2.2 Termination by EIM Sub-Entity.** In the event that the EIM Sub-Entity no longer wishes to separately account for its non-participating resources and loads pursuant to the CAISO Tariff, it may terminate this Agreement on giving the CAISO not less than one-hundred and eighty (180) days written notice. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if (1) the request to file a notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within thirty (30) days of receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination or upon the next production date of the Full-Network Model release following the one-hundred and eighty (180) days after the CAISO's receipt of the EIM Sub-Entity's notice of termination, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**3.3 No Termination Charge.** The CAISO shall not levy an exit fee or other charge associated with CAISO systems, procedures, or other changes required by the termination of the EIM Sub-Entity's participation in the Energy Imbalance Market as of the effective date of such notice, provided that EIM Sub-Entity obligations incurred under this Agreement prior to the effective date of such notice shall survive termination until satisfied.

## ARTICLE IV

## CAISO TARIFF

**4.1 Agreement Subject to CAISO Tariff.** This Agreement shall be subject to Section 29 of the CAISO Tariff, which shall be deemed to be incorporated herein. The EIM Sub-Entity shall abide by, and shall perform, all of the obligations of EIM Sub-Entities under the CAISO Tariff.

## ARTICLE V

## COSTS

**5.1 Operating and Maintenance Costs.** The EIM Sub-Entity shall be responsible for all its costs incurred in connection with meeting its obligations under this Agreement.

## ARTICLE VI

## DISPUTE RESOLUTION

**6.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Sub-Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VII

## REPRESENTATIONS AND WARRANTIES

**7.1 Representation and Warranties.** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

**7.2 Necessary Approvals.** The EIM Sub-Entity represents that all necessary rights, leases, approvals, permits, licenses, easements, access to operate in compliance with this Agreement have been or will be obtained by the EIM Sub-Entity prior to the effective date of this Agreement, including any arrangement with the EIM Entity for the Balancing Authority Area in which the EIM Sub-Entity is located and any third party Balancing Authorities.

## ARTICLE VIII

## LIABILITY

**8.1 Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the EIM Sub-Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE IX

## UNCONTROLLABLE FORCES

**9.1 Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Sub-Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE X

## MISCELLANEOUS

**10.1 Assignments.** Either Party may assign or transfer any or all of its rights or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff and no Party may assign or transfer any or all of its rights or obligations under this Agreement without such consent. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights or obligations under this Agreement as if said successor in interest were an original Party to this Agreement.

**10.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Sub-Entity and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 1. A Party must update the information in Schedule 1 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.

**10.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**10.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**10.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**10.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**10.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person,

entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**10.8 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the EIM Sub-Entity shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**10.9 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF**, the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By: _____

Name: _____

Title: _____

Date: _____

**[NAME OF EIM SUB-ENTITY]**

By: _____

Name: _____

Title: _____

Date: _____

**SCHEDULE 1**

**NOTICES**

**[Section 10.2]**

**EIM Sub-Entity**

Name of Primary Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

Name of Alternative Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

**CAISO**

| | |
|---|---|
| Name of Primary Representative: | Regulatory Contracts |
| Title: | N/A |
| Address: | 250 Outcropping Way |
| City/State/Zip Code: | Folsom, CA 95630 |
| Email address: | RegulatoryContracts@caiso.com |
| Phone: | (916) 351-4400 |
| Fax: | (916) 608-5063 |

| | |
|---|---|
| Name of Alternative Representative: | Christopher J. Sibley |
| Title: | Manager, Regulatory Contracts |
| Address: | 250 Outcropping Way |
| City/State/Zip Code: | Folsom, CA 95630 |
| Email address: | csibley@caiso.com |
| Phone: | (916) 608-7030 |
| Fax: | (916) 608-5063 |

**Appendix B.26**

# ENERGY IMBALANCE MARKET SUB-ENTITY SCHEDULING COORDINATOR AGREEMENT

**THIS ENERGY IMBALANCE MARKET SUB-ENTITY SCHEDULING COORDINATOR AGREEMENT ("AGREEMENT")** is established this ____ day of _____, ____, and is accepted by and between:

(1) **[Full legal name]** having its registered and principal executive office at [address] ("EIM Sub-Entity Scheduling Coordinator"),

and

(2) **CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**, a California nonprofit public benefit *c*orporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate (the "CAISO").

The EIM Sub-Entity Scheduling Coordinator and the CAISO are hereinafter referred to as the "Parties."

**Whereas:**

**A.** The EIM Sub-Entity Scheduling Coordinator has applied for certification or has been certified by the CAISO under the certification procedure referred to in Section 29 of the CAISO Tariff.

**B.** The EIM Sub-Entity Scheduling Coordinator wishes to represent an EIM Sub-Entity under the terms and conditions set forth in Section 29 of the CAISO Tariff.

**NOW IT IS HEREBY AGREED as follows**:

## 1. Definitions and Interpretation.

**1.1 Master Definitions Supplement.** All terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement to the CAISO Tariff.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) "includes" or "including" shall mean "including without limitation";

(e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) any reference to a day, week, month or year is to a calendar day, week, month or year;

(k) unless the context requires otherwise, "or" is used in the conjunctive sense; and

(l) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

**2. Covenant of the EIM Sub-Entity Scheduling Coordinator.**

**2.1 The EIM Sub-Entity Scheduling Coordinator agrees that**:

**2.1.1** CAISO Tariff Section 29 governs all aspects of Energy Imbalance Market information submission, including the financial and technical criteria for EIM Sub-Entity Scheduling Coordinator EIM Base Schedule submissions, Settlement, information reporting requirements, and confidentiality restrictions;

**2.1.2** It will abide by and will perform all of the obligations under Section 29 of the CAISO Tariff placed on EIM Sub-Entity Scheduling Coordinators in respect of all matters set forth therein, including ongoing obligations in respect of scheduling, Settlement, system security policy and procedures to be developed by the CAISO from time to time, billing and payments, confidentiality and dispute resolution;

**2.1.3** It shall ensure that each EIM Sub-Entity that it represents enters into an EIM Sub-Entity Agreement in accordance with Section 29 of the CAISO Tariff;

**2.1.4** It shall have the primary responsibility to the CAISO, as principal, for all EIM Sub-Entity Scheduling Coordinator payment obligations under Section 29 of the CAISO Tariff; and

**2.1.5** Its status as an EIM Sub-Entity Scheduling Coordinator is at all times subject to Section 29 of the CAISO Tariff.

**3. Term and Termination.**

**3.1** This Agreement shall commence on the later of (a) the date of execution of this Agreement or (b) the date the EIM Sub-Entity Scheduling Coordinator is certified by the CAISO as an EIM Sub-Entity Scheduling Coordinator.

**3.2** This Agreement may be terminated in accordance with the provisions of Section 4.5.4.4 and 4.5.4.5 of the CAISO Tariff; provided, however, that any outstanding financial right or obligation or any other right or obligation under the CAISO Tariff of the EIM Sub-Entity Scheduling Coordinator that may have arisen under this Agreement, and any provision of this Agreement necessary to give effect to such right or obligation, shall survive such termination until satisfied. The CAISO shall timely file any notice of termination with FERC, if this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC rules regarding termination.

**4. Settlement Account.**

**4.1** The EIM Sub-Entity Scheduling Coordinator shall maintain at all times an account with a bank capable of Fedwire transfer and, at its option, may also maintain an account capable of ACH transfers, to which credits or debits that arise under Section 29 of the CAISO Tariff shall be made in accordance with the billing and Settlement provisions of Section 11 of the CAISO Tariff. Such account shall be the account as notified by the EIM Sub-Entity Scheduling Coordinator to the CAISO from time to time by giving at least 20 days written notice before the new account becomes operational, together with all information necessary for the CAISO's processing of a change in that account.

**5. Agreement to be bound by CAISO Tariff.**

**5.1** Section 29 of the CAISO Tariff is incorporated herein and made a part hereof. In the event of a conflict between the terms and conditions of this Agreement and any other terms and conditions set forth in the CAISO Tariff that may apply to EIM Sub-Entity Scheduling Coordinators, the terms and conditions of the CAISO Tariff shall prevail.

**6. Electronic Contracting.**

**6.1** All submitted information, applications, schedules, Bids, confirmations, changes to information on file with the CAISO and other communications conducted via electronic transfer (*e.g.* direct computer link, FTP file transfer, bulletin board, e-mail, facsimile or any other means established by the CAISO) shall have the same legal rights, responsibilities, obligations and other implications as set forth in the terms and conditions of Section 29 of the CAISO Tariff as if executed in written format.

**7. Penalties and Sanctions.**

**7.1** The EIM Sub-Entity Scheduling Coordinator shall be subject to all penalties made applicable to EIM Sub-Entity Scheduling Coordinators set forth in Section 29 of the CAISO Tariff.

**8. Costs.**

**8.1** The EIM Sub-Entity Scheduling Coordinator shall be responsible for all its costs incurred for the purpose of meeting its obligations under this Agreement.

**9. Dispute Resolution.**

**9.1** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Sub-Entity Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement.

**10. Representation and Warranties.**

**10.1** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

**11. Liability.**

**11.1** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the EIM Sub-Entity Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement.

**12. Uncontrollable Forces.**

**12.1** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Sub-Entity Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement.

**13. Miscellaneous.**

**13.1 Assignments.** Either Party may assign or transfer any or all of its rights and/or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff and no Party may assign or transfer any or all of its rights or obligations under this Agreement without such consent. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations

under this Agreement as if said successor in interest was an original Party to this Agreement.

**13.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the EIM Sub-Entity Scheduling Coordinator and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 1. A Party must update the information in Schedule 1 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.

**13.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**13.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply, shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**13.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**13.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**13.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**13.8 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the EIM Sub-Entity Scheduling Coordinator shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**13.9 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be executed by their respective authorized officials.

**California Independent System Operator Corporation**

By: _____

Name: _____

Title: _____

Date: _____

**[NAME OF EIM SUB-ENTITY SCHEDULING COORDINATOR]**

By: _____

Name: _____

Title: _____

Date: _____

**SCHEDULE 1**

**NOTICES**

**[Section 13.2]**

**EIM Sub-Entity Scheduling Coordinator**

Name of Primary
Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

Name of Alternative
Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

**CAISO**

| | |
|---|---|
| Name of Primary Representative: | Regulatory Contracts |
| Title: | N/A |
| Address: | 250 Outcropping Way |
| City/State/Zip Code: | Folsom, CA 95630 |
| Email address: | RegulatoryContracts@caiso.com |
| Phone: | (916) 351-4400 |
| Fax: | (916) 608-5063 |

| | |
|---|---|
| Name of Alternative Representative: | Christopher J. Sibley |
| Title: | Manager, Regulatory Contracts |
| Address: | 250 Outcropping Way |
| City/State/Zip Code: | Folsom, CA 95630 |
| Email address: | csibley@caiso.com |
| Phone: | (916) 608-7030 |
| Fax: | (916) 608-5063 |

**APPENDIX B.27**

**EDAM ADDENDUM TO EIM ENTITY AGREEMENT**

Effective [Date], [Full Legal Name] ("[Short Legal Name]") and the California Independent System Operator Corporation ("CAISO") (collectively the "Parties") make and enter into this EDAM Addendum to the Parties' [Date] EIM Entity Agreement (the "Agreement").

**WHEREAS:**

A. Pursuant to the Agreement, [Short Legal Name] participates as an EIM Entity in the CAISO's Real-Time Market and provides Energy Imbalance Market services within the EIM Entity Balancing Authority Area, including Real-Time transfers of Energy among the CAISO Balancing Authority Area and other EIM Entity Balancing Authority Areas;

B. The CAISO also operates the Day-Ahead Market pursuant to the CAISO Tariff, which the CAISO will extend to an EIM Entity that enters into an EDAM Entity Implementation Agreement; and

C. [Short Legal Name] has entered into an EDAM Entity Implementation Agreement to extend its participation to the CAISO's Day-Ahead Market and to provide Extended Day-Ahead Market services within the EDAM Entity Balancing Authority Area, including Day-Ahead transfers of Energy, Reliability Capacity, and Imbalance Reserves among the CAISO Balancing Authority Area and other EDAM Entity Balancing Authority Areas.

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, the Parties agree that the Agreement is hereby supplemented as follows:

1. **Agreement to be Bound by CAISO Tariff.** Section 33 of the CAISO Tariff is incorporated into the Agreement and made a part thereof.

2. **Interpretation.** All references in the Agreement to the "EIM" or the "Energy Imbalance Market" will also be read as references to the "EDAM" or the "Extended Day-Ahead Market." All references in the Agreement to the "Real-Time Market" will also be read as references to the "Day-Ahead Market." All references in the Agreement to an "EIM Entity" will also be read as references to an "EDAM Entity." All references in the Agreement to "EIM Entity Scheduling Coordinator(s)" will also be read as references to the "EDAM Entity Scheduling Coordinator(s)." All references to "non-participating resources" will also be read as references to "EDAM Resources." All references in the Agreement to Sections 29 or 29.1(d) of the CAISO Tariff will also be read as references to Sections 33 or 33.1.1 of the CAISO Tariff, respectively.

3. **Effective Date and Termination.** This EDAM Addendum will be effective as of the later of the date it is executed by the Parties and shall remain in full force and effect until terminated pursuant to the same process as is set forth in Section 3.2 of the Agreement. If [Short Legal Name] terminates its participation as an EDAM Entity, it may continue to participate as an EIM Entity under the terms of the Agreement.

4. **Miscellaneous.** Except as expressly modified by this EDAM Addendum, all other terms and conditions of the Agreement shall remain unchanged and in full force and effect.

**[Full Legal Name]**

By:_____

Printed Name:_____

Title:_____

Date:_____

**California Independent System Operator Corporation**

By:_____

Printed Name:_____

Title:_____

Date:_____

**APPENDIX B.28**

**EDAM ADDENDUM TO EIM ENTITY SCHEDULING COORDINATOR AGREEMENT**

Effective [Date], [Full Legal Name] ("[Short Legal Name]") and the California Independent System Operator Corporation ("CAISO") (collectively the "Parties") make and enter into this EDAM Addendum to the Parties' [Date] EIM Entity Scheduling Coordinator Agreement (the "Agreement").

**WHEREAS:**

A. Pursuant to the Agreement, [Short Legal Name] is certified as an EIM Entity Scheduling Coordinator by the CAISO under the certification procedure referenced in Section 29 of the CAISO Tariff;

B. The CAISO also operates the Day-Ahead Market pursuant to the CAISO Tariff;

C. [Short Legal Name] has chosen to extend its role as a Scheduling Coordinator in the EIM to the CAISO Day-Ahead Market so that it can represent an EDAM Entity under the terms and conditions set forth in Section 33 of the CAISO Tariff; and

D. [Short Legal Name] has applied for certification or has been certified as an EDAM Entity Scheduling Coordinator by the CAISO under the certification procedure referenced in Section 33 of the CAISO Tariff.

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, the Parties agree that the Agreement is hereby supplemented as follows:

1. **Agreement to be Bound by CAISO Tariff.** Section 33 of the CAISO Tariff is incorporated into the Agreement and made a part thereof.

2. **Interpretation.** All references in the Agreement to the "EIM" or the "Energy Imbalance Market" will also be read as references to the "EDAM" or the "Extended Day-Ahead Market." All references in the Agreement to "EIM Entity Scheduling Coordinator(s)" will also be read as references to the "EDAM Entity Scheduling Coordinator(s)." All references in the Agreement to Section 29 of the CAISO Tariff will also be read as references to Section 33 of the CAISO Tariff.

3. **Effective Date and Termination.** This EDAM Addendum will be effective as of the later of the date it is executed by the Parties and shall remain in full force and effect until terminated pursuant to the same process as is set forth in Section 3.2 of the Agreement. If [Short Legal Name] terminates its participation as an EDAM Entity Scheduling Coordinator, it may continue to participate as an EIM Entity Scheduling Coordinator under the terms of the Agreement.

4. **Miscellaneous.** Except as expressly modified by this EDAM Addendum, all other terms and conditions of the Agreement shall remain unchanged and in full force and effect.

**[Full Legal Name]**

By:_____

Printed Name:_____

Title:_____

Date:_____

**California Independent System Operator Corporation**

By:_____

Printed Name:_____

Title:_____

Date:_____

**APPENDIX B.29**

**EDAM ADDENDUM TO EIM PARTICIPATING RESOURCE AGREEMENT**

Effective [Date], [Full Legal Name] ("[Short Legal Name]") and the California Independent System Operator Corporation ("CAISO") (collectively the "Parties") make and enter into this EDAM Addendum to the Parties' [Date] EIM Participating Resource Agreement (the "Agreement").

**WHEREAS:**

A. Pursuant to the Agreement, [Short Legal Name] has participated or will participate as an EIM Participating Resource in the CAISO's Real-Time Market and is located in an EDAM Entity Balancing Authority Area;

B. The CAISO also operates the Day-Ahead Market pursuant to the CAISO Tariff; and

C. [Short Legal Name] extends its participation to the CAISO's Day-Ahead Market in accordance with the EDAM Entity's open access transmission tariff or the tariff of another transmission service provider within the EDAM Entity Balancing Authority Area.

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, the Parties agree that the Agreement is hereby supplemented as follows:

1. **Agreement to be Bound by CAISO Tariff.** Section 33 of the CAISO Tariff is incorporated herein and made a part hereof.

2. **Interpretation.** All references in the Agreement to the "EIM" or the "Energy Imbalance Market" will also be read as references to the "EDAM" or the "Extended Day Ahead Market." All references in the Agreement to an "EIM Entity" will also be read as references to an "EDAM Entity." All references in the Agreement to "EIM Participating Resource(s)" will also be read as references to the "EDAM Resource(s)." All references in the Agreement to "EIM Resources" will also be read as references to "EDAM Resource Facilities." All references in the Agreement to an "EIM Participating Resource Scheduling Coordinator" will also be read as references to an "EDAM Resource Scheduling Coordinator." All references in the Agreement to Section 29 of the CAISO Tariff will also be read as references to Section 33 of the CAISO Tariff.

3. **EDAM Resource Facilities.** Schedule 1 of the Agreement will be updated to include all EDAM Resource Facilities not already included in Schedule 1 as an EIM Resource.

4. **Effective Date and Termination.** This EDAM Addendum will be effective as of the later of the date it is executed by the Parties and shall remain in full force and effect until terminated pursuant to the same process as is set forth in Section 3.2 of the Agreement, or until the EDAM Entity for the Balancing Authority Area in which the EDAM Resource is located ceases its participation in EDAM. If [Short Legal Name] terminates its participation as an EDAM Resource, it may continue to participate as an EIM Participating Resource under the terms of the Agreement.

5. **Miscellaneous.** Except as expressly modified by this EDAM Addendum, all other terms and conditions of the Agreement shall remain unchanged and in full force and effect.

**[Full Legal Name]**

By:_____

Printed Name:_____

Title:_____

Date:_____

**California Independent System Operator Corporation**

By:_____

Printed Name:_____

Title:_____

Date:_____

**APPENDIX B.30**

**EDAM ADDENDUM TO EIM PARTICIPATING RESOURCE SCHEDULING COORDINATOR AGREEMENT**

Effective [Date], [Full Legal Name] ("[Short Legal Name]") and the California Independent System Operator Corporation ("CAISO") (collectively the "Parties") make and enter into this EDAM Addendum to the Parties' [Date] EIM Participating Resource Scheduling Coordinator Agreement (the "Agreement").

**WHEREAS:**

A. Pursuant to the Agreement, [Short Legal Name] is certified as an EIM Participating Resource Scheduling Coordinator by the CAISO under the certification procedure referenced in Section 29 of the CAISO Tariff and represents EIM Participating Resources in an EDAM Entity Balancing Authority Area;

B. [Short Legal Name] extends its role as an EIM Participating Resource Scheduling Coordinator to the CAISO Day-Ahead Market so that it can represent EDAM Resources under the terms and conditions set forth in Section 33 of the CAISO Tariff; and

C. [Short Legal Name] has applied for certification or has been certified as an EDAM Resource Scheduling Coordinator by the CAISO under the certification procedure referenced in Section 33 of the CAISO Tariff.

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, the Parties agree that the Agreement is hereby supplemented as follows:

1. **Agreement to be Bound by CAISO Tariff.** Section 33 of the CAISO Tariff is incorporated into the Agreement and made a part thereof.

2. **Interpretation.** All references in the Agreement to the "EIM" or the "Energy Imbalance Market" will also be read as references to the "EDAM" or the "Extended Day-Ahead Market." All references in the Agreement to the "Real-Time Market" will also be read as references to the "Extended Day-Ahead Market." All references in the Agreement to "EIM Participating Resources" will also be read as references to "EDAM Resources." All references in the Agreement to "EIM Participating Resource Scheduling Coordinator(s)" will also be read as references to the "EDAM Resource Scheduling Coordinator(s)." All references in the Agreement to Section 29 of the CAISO Tariff will also be read as references to Section 33 of the CAISO Tariff.

3. **Effective Date and Termination.** This EDAM Addendum will be effective as of the later of the date it is executed by the Parties and shall remain in full force and effect until terminated pursuant to the same process as is set forth in Section 3.2 of the Agreement. If [Short Legal Name] terminates its participation as an EDAM Resource Scheduling Coordinator, it may continue to participate as an EIM Participating Resource Scheduling Coordinator under the terms of the Agreement.

4. **Miscellaneous.** Except as expressly modified by this EDAM Addendum, all other terms and conditions of the Agreement shall remain unchanged and in full force and effect.

**[Full Legal Name]**

By:_____

Printed Name:_____

Title:_____

Date:_____

**California Independent System Operator Corporation**

By:_____

Printed Name:_____

Title:_____

Date:_____

## Appendix B.31 EDAM Entity Implementation Agreement

**THIS EXTENDED DAY-AHEAD MARKET ENTITY IMPLEMENTATION AGREEMENT** ("Agreement") is established this ____ day of _____, ____, and is accepted by and between:

(1) [Full legal name] having its registered and principal executive office at [address] ("[Short Legal Name]" or "EDAM Entity"),

and

(2) California Independent System Operator Corporation, a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate, ("CAISO").

The EDAM Entity and the CAISO each are hereinafter referred to as the "Parties."

**Whereas:**

A. The CAISO operates the Day-Ahead Market pursuant to the CAISO Tariff, and will extend the Day-Ahead Market to an EIM Entity that executes and performs in accordance with an EDAM Entity Implementation Agreement.

B. [Short Legal Name] is an EIM Entity, or is in a concurrent implementation process to become an EIM Entity, and has requested to participate in the CAISO's Day-Ahead Market as an EDAM Entity.

C. The Parties acknowledge that the rules and procedures governing participation in the CAISO's Day-Ahead Market as an EDAM Entity are set forth in the provisions of the CAISO Tariff as filed with the Federal Energy Regulatory Commission ("FERC") and that implementation as an EDAM Entity requires corresponding revisions to [Short Legal Name's] Open Access Transmission Tariff/retail distribution tariff and the execution of associated service agreements;

D. Implementation of participation by [Short Legal Name] in the CAISO's Day-Ahead Market as an EDAM Entity requires the CAISO to incur costs to set up its business and software systems on behalf of [Short Legal Name].

E. [Short Legal Name] has requested the CAISO to conduct or cause to be performed work to implement [Short Legal Name] as an EDAM Entity into the CAISO systems, and [Short Legal Name] will reimburse the CAISO for the actual costs incurred.

F. The Parties are entering into this Agreement to set forth the terms upon which the CAISO will timely configure its systems to incorporate [Short Legal Name] as an EDAM Entity on or before [date] ("EDAM Entity Implementation Date").

**NOW, THEREFORE**, in consideration of the mutual covenants contained herein, the Parties agree as follows:

## ARTICLE I

## DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** All terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement to the CAISO Tariff.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) "includes" or "including" shall mean "including without limitation";

(e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) any reference to a day, week, month or year is to a calendar day, week, month or year;

(k) unless the context requires otherwise, "or" is used in the conjunctive sense; and

(l) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

## ARTICLE II

## RESPONSIBILITIES OF EDAM ENTITY AND CAISO

**2.1 Scope of Responsibilities.** The CAISO shall conduct or cause to be performed changes to the CAISO business and software systems, in accordance with the CAISO Tariff, to allow

[Short Legal Name] to participate in the CAISO's Day-Ahead Market as an EDAM Entity. The scope of the implementation will include planning and project management; full network modeling of resources; system integration and testing; metering and settlements; and operations readiness and training. The CAISO shall also provide [Short Legal Name] a project plan of implementation activities, including a schedule by which information and data will be required to be sent to the CAISO; testing to be performed by [Short Legal Name]; and training to meet the EDAM Entity Implementation Date.

**2.2 Implementation Deposit and Cost Allocation.** Consistent with Section 33.11.5 of the CAISO tariff, [Short Legal Name] will provide a deposit and pay the actual costs of the implementation, including any actual amounts in excess of the initial deposit. The CAISO will provide invoices and refunds on a timely basis. Any difference between the deposit(s) made toward the implementation of [Short Legal Name] and associated administrative costs, and the actual cost of the implementation of [Short Legal Name] shall be paid by or refunded to [Short Legal Name], in accordance with Article V of this Agreement.

**2.3 Technical Data.** [Short Legal Name] will provide the CAISO technical data to facilitate the implementation in the Day-Ahead Market as an EDAM Entity and assumptions used for the data, such as system conditions, existing and planned generation, and unit modeling. The CAISO shall not be responsible for any additional costs, including, without limitation, costs of new or additional facilities, system upgrades, or schedule changes, that may be incurred by [Short Legal Name] as a result of implementation in the Day-Ahead Market as an EDAM Entity.

**2.4 Compliance with CAISO Tariff Requirements for an EDAM Entity.** Prior to the EDAM Entity Implementation Date, [Short Legal Name] will satisfy all requirements of the CAISO Tariff applicable to an EDAM Entity, including: (1) demonstrating that [Short Legal Name] satisfies all qualifications for participation as an EDAM Entity; (2) showing that [Short Legal Name] is authorized to make transmission available in its Balancing Authority Area consistent with the CAISO Tariff and the applicable transmission service tariffs, contracts, rules, procedures or other arrangements; (3) entering into an addendum to its EIM Entity Agreement with the CAISO governing [Short Legal Name's] participation in the Extended Day-Ahead Market; and (4) securing representation by an EDAM Entity Scheduling Coordinator.

## ARTICLE III

## TERM AND TERMINATION

**3.1 Effective Date.** This Agreement shall be effective as of the later of the date it is executed by the Parties or the date it is accepted for filing and made effective by FERC (if applicable) and shall remain in full force and effect until terminated pursuant to Section 3.2 of this Agreement.

**3.2 Termination**

**3.2.1 Termination by CAISO.** The CAISO may terminate this Agreement by giving written notice of termination pursuant to Section 33.1 of the CAISO Tariff or in the event that [Short Legal Name] commits any material default under this Agreement or Section 33 of the CAISO Tariff that, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given [Short Legal Name] written notice of the default, unless the default is excused by reason of Uncontrollable Forces in accordance with Article IX of this Agreement. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if (1) the filing of the notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within sixty (60) days after issuance of the notice of default; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination or thirty (30) days after the date of the CAISO's notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**3.2.2 Termination by EDAM Entity.** In the event that [Short Legal Name] no longer wishes to participate in the CAISO's Extended Day-Ahead Market as an EDAM Entity pursuant to the CAISO Tariff, it may terminate this Agreement on giving the CAISO not less than thirty (30) days written notice. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if (1) the request to file a notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within thirty (30) days of receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination or upon the next production date of the Full-Network Model release following the thirty (30) days after the CAISO's receipt of [Short Legal Name]'s notice of termination, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**3.3 No Termination Charge.** With the exception of the implementation costs, the CAISO shall not levy an exit fee or other charge associated with CAISO systems, procedures, or other changes required by the termination of [Short Legal Name]'s participation in the Extended Day-Ahead Market as of the effective date of such notice, provided that [Short Legal Name] obligations incurred under this Agreement shall survive termination until satisfied.

## ARTICLE IV

## CAISO TARIFF

**4.1 Agreement Subject to CAISO Tariff.** This Agreement shall be subject to Section 33 of the CAISO Tariff and all other provisions of the CAISO Tariff applicable to an EDAM Entity.

## ARTICLE V

## COSTS AND ACCOUNTING

**5.1 Costs.** The CAISO shall maintain records and accounts of all costs incurred in performing the implementation of the EDAM Entity in sufficient detail to allow verification of all costs incurred, including associated overheads.

**5.2 Settlement of Deposit(s).** The deposit provided in accordance with Section 2.2 of this Agreement shall be applied to the prudent costs of the CAISO in implementing [Short Legal Name] as an EDAM Entity in the Day-Ahead Market. If the actual costs of the implementation of [Short Legal Name] are greater than the initial deposit provided by [Short Legal Name], the CAISO will invoice [Short Legal Name] for an additional deposit amount to cover expenses. Payment of invoices shall be due no later than thirty (30) days after the date of receipt. Any invoice payment past due will accrue interest, per annum, calculated in accordance with 5 C.F.R. 1315.10.

At the end of the implementation, the CAISO will provide a report that details deposit(s) received, actual costs incurred, and applicable interest earnings (on deposit balance) for each implementation project. Interest will be calculated at the end of the implementation project, from the time the deposit(s) was received until the implementation is completed. The calculation will be based on the average earning of the bank account, in which the deposit is held, on the remaining amount of the deposit. Any unused deposit remaining after the implementation is completed plus interest on the remaining deposit will be returned to [Short Legal Name] within ninety (90) calendar days after the implementation is completed; the CAISO and [Short Legal Name] approve the completion; and all required documents for the refund are received by the CAISO. All refunds will be processed following the CAISO's generally accepted accounting practices. Any deadline for CAISO action will be tolled to the extent [Short Legal Name] has not provided the CAISO with the appropriate documents to facilitate an eligible refund.

In the event this agreement is terminated by either party or both parties after [Short Legal Name]'s implementation has begun, then the CAISO will make every attempt to halt work and related costs on the implementation as soon as practical and begin the refund process for any payments provided by [Short Legal Name] in excess of costs incurred by the CAISO, if applicable.

**5.3 Audit.** [Short Legal Name] shall have the right, upon reasonable notice, within a reasonable time at the CAISO's offices and at its own expense, to audit the CAISO's records as necessary and as appropriate in order to verify costs incurred by the CAISO. Any audit requested by [Short Legal Name] shall be completed, and written notice of any audit dispute provided to the CAISO representative, within one hundred eighty (180) calendar days following receipt by [Short Legal Name] of the CAISO's notification of the final costs of the implementation of [Short Legal Name].

## ARTICLE VI

## DISPUTE RESOLUTION

**6.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to [Short Legal Name] and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VII

## REPRESENTATIONS AND WARRANTIES

**7.1 Representation and Warranties.** Each Party represents and warrants that the execution, delivery and performance of this Agreement has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

**7.2 Necessary Approvals.** [Short Legal Name] represents that all necessary rights, leases, approvals, permits, licenses, easements, access to operate in compliance with this Agreement have been or will be obtained by [Short Legal Name] prior to the effective date of this Agreement, including any arrangement with any third party Balancing Authorities.

## ARTICLE VIII

## LIABILITY

**8.1 Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market

Participants shall be read as references to [Short Legal Name] and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE IX

## UNCONTROLLABLE FORCES

**9.1 Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to [Short Legal Name] and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE X

## MISCELLANEOUS

**10.1 Assignments.** Either Party may assign or transfer any or all of its rights or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff and no Party may assign or transfer any or all of its rights or obligations under this Agreement without such consent. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights or obligations under this Agreement as if said successor in interest were an original Party to this Agreement.

**10.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to [Short Legal Name] and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 1. A Party must update the information in Schedule 1 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.

**10.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**10.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**10.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**10.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**10.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**10.8 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the Federal Power Act ("FPA") and pursuant to FERC's rules and regulations promulgated thereunder, and [Short Legal Name] shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**10.9 Electronic Signatures.** The Parties agree that this Agreement may be executed by either handwritten signature or digitally signed using Adobe Sign, Adobe E-Sign, or DocuSign. A digital signature is the same as a handwritten signature and shall be considered valid and acceptable.

**10.10 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF**, the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By: _____

Name: _____

Title: _____

Date: _____

**[NAME OF PROSPECTIVE EDAM ENTITY]**

By: _____

Name: _____

Title: _____

Date: _____

**SCHEDULE 1**

**NOTICES**

**[Section 10.2]**

**[Short Legal Name]**

Name of Primary

Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

Name of Alternative

Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

**CAISO**

| | |
|---|---|
| Name of Primary Representative: | Regulatory Contracts |
| Title: | N/A |
| Address: | 250 Outcropping Way |
| City/State/Zip Code: | Folsom, CA 95630 |
| Email address: | RegulatoryContracts@caiso.com |
| Phone: | (916) 351-4400 |
| Fax: | (916) 608-5063 |

| | |
|---|---|
| Name of Alternative Representative: | Christopher J. Sibley |
| Title: | Manager, Regulatory Contracts |
| Address: | 250 Outcropping Way |
| City/State/Zip Code: | Folsom, CA 95630 |
| Email address: | csibley@caiso.com |
| Phone: | (916) 608-7030 |
| Fax: | (916) 608-5063 |

**Appendix B.32 EDAM Load Serving Entity Agreement (EDAMLSEA)**

**THIS EXTENDED DAY-AHEAD MARKET LOAD SERVING ENTITY AGREEMENT ("AGREEMENT")** is established this ____ day of _____, ____ and is accepted by and between:

**[Full legal name]** ("EDAM Load Serving Entity"), **[legal description]** having its registered and principal executive office at [**address**],

and

**California Independent System Operator Corporation** ("CAISO"), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The EDAM Load Serving Entity and the CAISO are hereinafter referred to as the "Parties."

**Whereas:**

**A.** The CAISO operates the Day-Ahead Market and Real-Time Market pursuant to the CAISO Tariff.

**B.** The EDAM Load Serving Entity is responsible for Load within an EDAM Entity Balancing Authority Area not represented by an EDAM Entity and authorized by the EDAM Entity to represent its Load in the Day-Ahead Market and Real-Time Market; and

**C.** The Parties wish to enter into this Agreement to establish the terms and conditions for participation in the CAISO's Day-Ahead Market and Real-Time Market by the EDAM Load Serving Entity in accordance with Section 33 and Section 29 of the CAISO Tariff.

NOW THEREFORE, in consideration of the mutual covenants set forth herein, the Parties agree as follows:

## ARTICLE I

## DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** All terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement to the CAISO Tariff.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) "includes" or "including" shall mean "including without limitation";

(e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of

this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) unless the context otherwise requires, "or" is used in the conjunctive sense;

(k) any reference to a day, week, month or year is to a calendar day, week, month or year; and

(l) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

[***1.3*** ***EDAM Load Serving Entity's Non-Jurisdictional Status.*** *The CAISO acknowledges that the EDAM Load Serving Entity is a exempt/non-jurisdictional entity as described in section 201(f) of the Federal Power Act, 16 U.S.C. 824(f), and understands that this Agreement does not extend the authority that FERC has over the EDAM Load Serving Entity apart from any authority it has to interpret or enforce this Agreement.*]

## ARTICLE II

## RESPONSIBILITIES OF EDAM LOAD SERVING ENTITY

**2.1** **EDAM Load Serving Entity Scheduling Coordinator.** The EDAM Load Serving Entity shall be represented by an EDAM Load Serving Entity Scheduling Coordinator, which may be the EDAM Load Serving Entity or another entity certified by the CAISO to perform the functions of an EDAM Load Serving Entity Scheduling Coordinator.

**2.2** **EDAM Load Serving Entity Information.** The EDAM Load Serving Entity shall provide information regarding its Load to the CAISO for Extended Day-Ahead Market purposes, in accordance with the CAISO Tariff and applicable Business Practice Manuals. The EDAM Load Serving Entity is responsible for the accuracy and completeness of this information.

## ARTICLE III

## TERM AND TERMINATION

**3.1** **Effective Date.** This Agreement shall be effective as of the later of the date it is executed by the Parties or the date it is accepted for filing and made effective by FERC, if such FERC filing is

required, and shall remain in full force and effect until terminated pursuant to Section 3.2 of this Agreement.

**3.2 Termination**

**3.2.1 Termination by CAISO.** Subject to Section 10.2, the CAISO may terminate this Agreement by giving written notice of termination in the event that (i) the EDAM Load Serving Entity commits any material default under this Agreement and/or the CAISO Tariff which, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given written notice of the default, unless excused by reason of Uncontrollable Forces in accordance with Article IX of this Agreement, or (ii) the EDAM Entity for the Balancing Authority Area in which the EDAM Load Serving Entity is located terminates participation in the CAISO's Extended Day-Ahead Market. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement was filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the filing of the notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within sixty (60) days after issuance of the notice of default; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if filed with FERC, or thirty (30) days after the date of the CAISO's notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**3.2.2 Termination by EDAM Load Serving Entity.** In the event that the EDAM Load Serving Entity no longer wishes to participate in the CAISO's Extended Day-Ahead Market, it may terminate this Agreement, on giving the CAISO not less than ninety (90) days written notice. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the request to file a notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within thirty (30) days of receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if such notice is required to be filed with FERC, or upon ninety (90) days after the CAISO's receipt of the EDAM Load Serving Entity's notice of termination, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

## ARTICLE IV

## CAISO TARIFF

**4.1 Agreement Subject to CAISO Tariff.** This Agreement shall be subject to Section 33 and Section 29 of the CAISO Tariff, which shall be deemed to be incorporated herein. The EDAM Load Serving Entity shall abide by, and shall perform all of the obligations under the CAISO Tariff placed on EDAM Load Serving Entities in respect of all matters set forth therein.

## ARTICLE V

## COSTS

**5.1 Operating and Maintenance Costs.** The EDAM Load Serving Entity shall be responsible for all its costs incurred in connection with meeting its obligations under this Agreement.

## ARTICLE VI

## DISPUTE RESOLUTION

**6.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the EDAM Load Serving Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VII

## REPRESENTATIONS AND WARRANTIES

**7.1 Representation and Warranties.** Each Party represents and warrants that the execution, delivery and performance of this Agreement has been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

**7.2 Necessary Approvals.** The EDAM Load Serving Entity represents that all necessary rights, leases, approvals, permits, licenses, easements, access to operate in compliance with this Agreement have been or will be obtained by the EDAM Load Serving Entity prior to the effective date of this Agreement, including any arrangement with the EDAM Entity for the Balancing Authority Area in which the EDAM Load Serving Entity is located and any third party Balancing Authorities.

## ARTICLE VIII

## LIABILITY

**8.1 Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the EDAM Load Serving Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE IX

## UNCONTROLLABLE FORCES

**9.1 Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the EDAM Load Serving Entity and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE X

## MISCELLANEOUS

**10.1 Assignments.** Either Party may assign or transfer any or all of its rights or obligations under

this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff and no Party may assign or transfer any or all of its rights or obligations under this Agreement without such consent. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest were an original Party to this Agreement.

**10.2 Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff, provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the EDAM Load Serving Entity and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 1 of this Agreement. A Party must update the information in Schedule 1 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.

**10.3 Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**10.4 Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**10.5 Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**10.6 Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**10.7 Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**10.8 Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made

them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the EDAM Load Serving Entity shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

[***10.9 Federal Provisions.*** *The CAISO hereby affirmatively agrees to incorporate into this Agreement the federal law provisions as provided by the EDAM Load Serving Entity and previously agreed to by the CAISO.*]

**10.10 Electronic Signatures.** The Parties agree that this Agreement may be executed by either handwritten signature or digitally signed using Adobe Sign, Adobe E-Sign, or DocuSign. A digital signature is the same as a handwritten signature and shall be considered valid and acceptable.

**10.11 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF**, the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By: _____

Name: _____

Title: _____

Date: _____

**[NAME OF EDAM LOAD SERVING ENTITY]**

By: _____

Name: _____

Title: _____

Date: _____

**SCHEDULE 1**

**NOTICES**

**[Section 10.2]**

**EDAM Load Serving Entity**

Name of Primary

Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

Name of Alternative

Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

**CAISO**

Name of Primary

Representative: _____

Title: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

Name of Alternative

Representative: _____

Title: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

**Appendix B.33 EDAM Transmission Service Provider Agreement (EDAMTSPA)**

**THIS EXTENDED DAY-AHEAD MARKET TRANSMISSION SERVICE PROVIDER AGREEMENT ("AGREEMENT")** is established this ____ day of _____, ____ and is accepted by and between:

**[Full legal name]** ("EDAM Transmission Service Provider"), [**legal description]** having its registered and principal executive office at [**address**],

and

**California Independent System Operator Corporation** ("CAISO"), a California nonprofit public benefit corporation having a principal executive office located at such place in the State of California as the CAISO Governing Board may from time to time designate.

The EDAM Transmission Service Provider and the CAISO are hereinafter referred to as the "Parties."

**Whereas:**

**A.** The CAISO operates the Day-Ahead Market for Energy pursuant to the CAISO Tariff;

**B.** The EDAM Transmission Service Provider is a transmission service provider that owns transmission or has transmission service rights on an EDAM Intertie or within an EDAM Entity Balancing Authority Area, provides transmission service, and that makes transmission service available for use in the Day-Ahead Market through an EDAM Entity. (The term "EDAM Transmission Provider" does not include network integration transmission service customers or other transmission customers of an EDAM Transmission Service Provider, EDAM Legacy Contract Rights or EDAM Transmission Ownership Rights); and

**C.** The Parties wish to enter into this Agreement to establish the terms and conditions for participation in the CAISO's Day-Ahead Market by the EDAM Transmission Service Provider in accordance with Section 33 of the CAISO Tariff.

NOW THEREFORE, in consideration of the mutual covenants set forth herein, the Parties agree as follows:

## ARTICLE I

## DEFINITIONS AND INTERPRETATION

**1.1 Master Definitions Supplement.** All terms and expressions used in this Agreement shall have the same meaning as those contained in the Master Definitions Supplement to the CAISO Tariff.

**1.2 Rules of Interpretation.** The following rules of interpretation and conventions shall apply to this Agreement:

(a) if there is any inconsistency between this Agreement and the CAISO Tariff, the CAISO Tariff will prevail to the extent of the inconsistency;

(b) the singular shall include the plural and vice versa;

(c) the masculine shall include the feminine and neutral and vice versa;

(d) “includes” or “including” shall mean “including without limitation”;

(e) references to a Section, Article or Schedule shall mean a Section, Article or a Schedule of this Agreement, as the case may be, unless the context otherwise requires;

(f) a reference to a given agreement or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made;

(g) unless the context otherwise requires, references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;

(h) unless the context otherwise requires, any reference to a “person” includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal personality;

(i) unless the context otherwise requires, any reference to a Party includes a reference to its permitted successors and assigns;

(j) unless the context otherwise requires, “or” is used in the conjunctive sense;

(k) any reference to a day, week, month or year is to a calendar day, week, month or year; and

(l) the captions and headings in this Agreement are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the terms and conditions of this Agreement.

## ARTICLE II

## RESPONSIBILITIES OF EDAM TRANSMISSION SERVICE PROVIDER

**2.1 Agreement Subject to CAISO Tariff.** This Agreement shall be subject to Section 33 of the CAISO Tariff, which shall be deemed to be incorporated herein. The EDAM Transmission Service Provider shall abide by, and shall perform all of the obligations under the CAISO Tariff placed on EDAM Transmission Service Providers in respect of all matters set forth therein.

## ARTICLE III

## TERM AND TERMINATION

**3.1 Effective Date.** This Agreement shall be effective as of the later of the date it is executed by the Parties or the date it is accepted for filing and made effective by FERC, if such FERC filing is required, and shall remain in full force and effect until terminated pursuant to Section 3.2 of this Agreement.

**3.2 Termination**

**3.2.1 Termination by CAISO.** Subject to Section 9.2, the CAISO may terminate this Agreement by giving written notice of termination in the event that (i) the EDAM Transmission Service Provider commits any material default under this Agreement and/or the CAISO Tariff which, if capable of being remedied, is not remedied within thirty (30) days after the CAISO has given, to the EDAM Transmission Service Provider, written notice of the default, unless excused by reason of Uncontrollable Forces in accordance with Article VII of this Agreement, or (ii) the EDAM Entity for the Balancing Authority Area in which the EDAM Transmission Service Provider is located terminates participation in the CAISO's Extended Day-Ahead Market. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement was filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the filing of the notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within sixty (60) days after issuance of the notice of default; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if filed with FERC, or thirty (30) days after the date of the CAISO's notice of default, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

**3.2.2 Termination by EDAM Transmission Service Provider.** In the event that the EDAM Transmission Service Provider no longer wishes to make transmission service available for use in the Day-Ahead Market through an EDAM Entity, it may terminate this Agreement on giving the CAISO not less than one-hundred and eighty (180) days written notice and so long as such termination is concurrent with the termination of participation in the Day-Ahead Market by the EDAM Entity for the Balancing Authority Area within which the EDAM Transmission Service Provider operates or holds transmission rights. With respect to any notice of termination given pursuant to this Section, the CAISO must file a timely notice of termination with FERC, if this Agreement has been filed with FERC, or must otherwise comply with the requirements of FERC Order No. 2001 and related FERC orders. The filing of the notice of termination by the CAISO with FERC will be considered timely if: (1) the request to file a notice of termination is made after the preconditions for termination have been met, and the CAISO files the notice of termination within thirty (30) days of receipt of such request; or (2) the CAISO files the notice of termination in accordance with the requirements of FERC Order No. 2001. This Agreement shall terminate upon acceptance by FERC of such a notice of termination, if such notice is required to be filed with FERC, or upon ninety (90) days after the CAISO's receipt of the EDAM Transmission Service Provider's notice of termination, if terminated in accordance with the requirements of FERC Order No. 2001 and related FERC orders.

## ARTICLE IV

## COSTS

**4.1 Operating and Maintenance Costs.** The EDAM Transmission Service Provider shall be responsible for all its costs incurred in connection with meeting its obligations under this Agreement.

## ARTICLE V

## DISPUTE RESOLUTION

**5.1 Dispute Resolution.** The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. In the event any dispute is not settled, the Parties shall

adhere to the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff, which is incorporated by reference, except that any reference in Section 13 of the CAISO Tariff to Market Participants shall be read as a reference to the EDAM Transmission Service Provider, and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VI

## REPRESENTATIONS AND WARRANTIES

**6.1** **Representation and Warranties.** Each Party represents and warrants that the execution, delivery and performance of this Agreement by it have been duly authorized by all necessary corporate and/or governmental actions, to the extent authorized by law.

**6.2** **Necessary Approvals.** The EDAM Transmission Service Provider represents that all necessary rights, leases, approvals, permits, licenses, easements, access to operate in compliance with this Agreement have been or will be obtained by the EDAM Transmission Service Provider prior to the effective date of this Agreement, including any arrangement with the EDAM Entity within which the EDAM Transmission Service provider operates or holds transmission rights or third party Balancing Authorities.

## ARTICLE VII

## LIABILITY

**7.1** **Liability.** The provisions of Section 14 of the CAISO Tariff will apply to liability arising under this Agreement, except that all references in Section 14 of the CAISO Tariff to Market Participants shall be read as references to the EDAM Transmission Service Provider, and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE VIII

## UNCONTROLLABLE FORCES

**8.1** **Uncontrollable Forces Tariff Provisions.** Section 14.1 of the CAISO Tariff shall be incorporated by reference into this Agreement except that all references in Section 14.1 of the CAISO Tariff to Market Participants shall be read as a reference to the EDAM Transmission Service Provider, and references to the CAISO Tariff shall be read as references to this Agreement.

## ARTICLE IX

## MISCELLANEOUS

**9.1** **Assignments.** Either Party may assign or transfer any or all of its rights or obligations under this Agreement with the other Party's prior written consent in accordance with Section 22.2 of the CAISO Tariff and no Party may assign or transfer any or all of its rights or obligations under this Agreement without such consent. Such consent shall not be unreasonably withheld. Any such transfer or assignment shall be conditioned upon the successor in interest accepting the rights and/or obligations under this Agreement as if said successor in interest were an original Party to this Agreement.

**9.2** **Notices.** Any notice, demand or request which may be given to or made upon either Party regarding this Agreement shall be made in accordance with Section 22.4 of the CAISO Tariff,

provided that all references in Section 22.4 of the CAISO Tariff to Market Participants shall be read as a reference to the EDAM Transmission Service Provider, and references to the CAISO Tariff shall be read as references to this Agreement, and unless otherwise stated or agreed shall be made to the representative of the other Party indicated in Schedule 1. A Party must update the information in Schedule 1 of this Agreement as information changes. Such changes shall not constitute an amendment to this Agreement.

**9.3** **Waivers.** Any waiver at any time by either Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**9.4** **Governing Law and Forum.** This Agreement shall be deemed to be a contract made under, and for all purposes shall be governed by and construed in accordance with, the laws of the State of California, except its conflict of law provisions. The Parties irrevocably consent that any legal action or proceeding arising under or relating to this Agreement to which the CAISO ADR Procedures do not apply shall be brought in any of the following forums, as appropriate: any court of the State of California, any federal court of the United States of America located in the State of California, or, where subject to its jurisdiction, before the Federal Energy Regulatory Commission.

**9.5** **Consistency with Federal Laws and Regulations.** This Agreement shall incorporate by reference Section 22.9 of the CAISO Tariff as if the references to the CAISO Tariff were referring to this Agreement.

**9.6** **Merger.** This Agreement constitutes the complete and final agreement of the Parties with respect to the subject matter hereof and supersedes all prior agreements, whether written or oral, with respect to such subject matter.

**9.7** **Severability.** If any term, covenant, or condition of this Agreement or the application or effect of any such term, covenant, or condition is held invalid as to any person, entity, or circumstance, or is determined to be unjust, unreasonable, unlawful, imprudent, or otherwise not in the public interest by any court or government agency of competent jurisdiction, then such term, covenant, or condition shall remain in force and effect to the maximum extent permitted by law, and all other terms, covenants, and conditions of this Agreement and their application shall not be affected thereby, but shall remain in force and effect and the Parties shall be relieved of their obligations only to the extent necessary to eliminate such regulatory or other determination unless a court or governmental agency of competent jurisdiction holds that such provisions are not separable from all other provisions of this Agreement.

**9.8** **Amendments.** This Agreement and the Schedules attached hereto may be amended from time to time by the mutual agreement of the Parties in writing. Amendments that require FERC approval shall not take effect until FERC has accepted such amendments for filing and made them effective. Nothing contained herein shall be construed as affecting in any way the right of the CAISO to unilaterally make application to FERC for a change in the rates, terms and conditions of this Agreement under Section 205 of the FPA and pursuant to FERC's rules and regulations promulgated thereunder, and the EDAM Transmission Service Provider shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the FPA and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by the other Party and to participate

fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under Sections 205 or 206 of the FPA and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**9.9 Electronic Signatures.** The Parties agree that this Agreement may be executed by either handwritten signature or digitally signed using Adobe Sign, Adobe E-Sign, or DocuSign. A digital signature is the same as a handwritten signature and shall be considered valid and acceptable.

**9.10 Counterparts.** This Agreement may be executed in one or more counterparts at different times, each of which shall be regarded as an original and all of which, taken together, shall constitute one and the same Agreement.

**IN WITNESS WHEREOF**, the Parties hereto have caused this Agreement to be duly executed on behalf of each by and through their authorized representatives as of the date hereinabove written.

**California Independent System Operator Corporation**

By: _____

Name: _____

Title: _____

Date: _____

**[NAME OF EDAM TRANSMISSION SERVICE PROVIDER]**

By: _____

Name: _____

Title: _____

Date: _____

**SCHEDULE 1**

**NOTICES**

**[Section 9.2]**

**EDAM Transmission Service Provider**

Name of Primary

Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

Name of Alternative

Representative: _____

Title: _____

Company: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

**CAISO**

Name of Primary

Representative: _____

Title: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

Name of Alternative

Representative: _____

Title: _____

Address: _____

City/State/Zip Code: _____

Email Address: _____

Phone: _____

Fax No: _____

# Appendix C

# Locational Marginal Price

## A. Locational Marginal Price for Energy

The CAISO shall calculate the price of Energy at Generation PNodes, Scheduling Points, and Aggregated Pricing Nodes, as provided in the CAISO Tariff. The CAISO establishes Trading Hub prices and LAPs as provided in the CAISO Tariff. The LMPs at PNodes, Scheduling Points, and Aggregated Pricing Nodes include separate components for the Marginal Energy Cost, Marginal Cost of Congestion, Marginal Cost of Losses, and Marginal GHG Cost. As provided in Sections 6.5.3.2.2 and 6.5.5.2.4, LMPs are calculated and posted for each hour of the Day-Ahead Market and for each interval of the Real-Time Market.

### A.1 LMP Composition in the Day-Ahead Market and the Real-Time Market

In each hour of the Day-Ahead Market, each 15-minute interval of the Fifteen-Minute Market, and each 5-minute interval of the Real-Time Dispatch, the CAISO calculates the LMP for each PNode, which is based on the Bids of sellers and buyers selected in the Day-Ahead or Real-Time Market as calculated below. The CAISO uses a Reference Bus for the calculation of the Locational Marginal Prices. The Reference Bus in the base scenario is the distributed load in the Market Area used in the AC power flow solution to distribute the deviations for Transmission Losses between iterations, and in sensitivity calculations that yield rates for Marginal Losses and the Power Transfer Distribution Factors. If the CAISO Market solution reverts to a DC power flow solution, the Reference Bus is not used because Transmission Losses are not included. Nevertheless, the CAISO reflects the Transmission Losses for the Market Area in the DC power flow solution by adjusting the load by the average loss factor. The Locational Marginal Prices are not determined by resources that are not eligible to set the Locational Marginal Price as defined in Sections 31.3.1.4 and 34.20.2.3. For each PNode, the CAISO determines separate components of the LMP for the Marginal Energy Cost, Marginal Cost of Congestion, Marginal Cost of Losses, and Marginal GHG Cost, as follows:

$$LMP_i = MEC_i + MCC_i + MCL_i + MCG_i$$

where:

- $i$ is the PNode index.
- $MEC_i$ is the LMP component representing the Marginal Energy Cost at PNode $i$.

- $MCC_i$ is the LMP component representing the Marginal Cost of Congestion at PNode $i$.
- $MCL_i$ is the LMP component representing the Marginal Cost of Losses at PNode $i$.
- $MCG_i$ is the LMP component representing the Marginal GHG Cost at PNode $i$.

### A.2 Marginal Energy Cost Component of the LMP

The MEC is the same for all PNodes in each Balancing Authority Area in the Market Area. The MEC is the Shadow Price of the power balance constraint for the respective Balancing Authority Area at the optimal solution. The power balance constraint for each Balancing Authority Area in the Market Area ensures that the physical law of conservation of Energy (the sum of Generation and imports equals the sum of Demand, including exports and Transmission Losses, plus the Net Market Transfer) is accounted for in the market solution. The MEC for the Transfer System Resources (TSRs) on each side of the Market Transfer that they model is the MEC of the respective Balancing Authority Area. The MEC may be different between two Balancing Authority Areas in the Market Area when Market Transfers between these Balancing Authority Areas are scheduled at their respective scheduling limits. The MEC difference between the Balancing Authority Areas on either side of a specific Market Transfer generates Market Transfer revenue.

### A.3 Marginal Congestion Component of the LMP

The CAISO calculates the Marginal Cost of Congestion at each PNode as the net contribution of the Shadow Prices of the binding Transmission Constraints at the optimal solution, weighed by the respective Power Transfer Distribution Factors, as follows:

$$MCC_i = -\sum_{k=0}^{K}\sum_{m=1}^{M}\sum_{j=1}^{J_m} c_{j,m}\, PTDF_{i,j,m,k}\, \mu_{m,k} - \sum_{k=0}^{K}\sum_{m=1}^{M}\sum_{j=1}^{J_m} c_{j,m}\, PTDF^{(IRU)}_{i,j,m,k}\, \mu^{(IRU)}_{m,k}$$

$$-\sum_{k=0}^{K}\sum_{m=1}^{M}\sum_{j=1}^{J_m} c_{j,m}\, PTDF^{(IRD)}_{i,j,m,k}\, \mu^{(IRD)}_{m,k}$$

Where:

- $i$ is the PNode index.
- $m$ is the Transmission Constraint index in the Market Area; transmission constraints outside the Market Area are not enforced.

- $k$ is the constraint case index; zero (0) indicates the base case where all transmission and generation facilities are in service, whereas a positive case indicates a preventive transmission or generation contingency case, as applicable.
- $j$ is the transmission component index of Transmission Constraint $m$. When Transmission Constraint $m$ is a Nomogram, there can be more than one transmission components in it; otherwise, there is only one transmission component.
- $K$ is the number of constraint cases, besides the base case.
- $M$ is the number of Transmission Constraints.
- $J_m$ is the number of transmission components of Transmission Constraint $m$.
- $PTDF_{i,j,m,k}$, $PTDF_{i,j,m,k}^{(IRU)}$, and $PTDF_{i,j,m,k}^{(IRD)}$ is the Power Transfer Distribution Factor (PTDF) for PNode $i$ on transmission component $j$ of Transmission Constraint $m$ in constraint case $k$ in the base, IRU deployment, or IRD deployment scenario, respectively; it is the flow contribution on that transmission component $j$ when an increment of power is injected at PNode $i$ and an equivalent amount of power is withdrawn at the Reference Bus. For Market Area Intertie Resources at a Scheduling Point, and TSRs at a Transfer Location, the PTDF to an intertie constraint or intertie scheduling limit at that Scheduling Point is +1 for an import and –1 for an export. The CAISO does not consider the effect of Transmission Losses in the calculation of PTDFs; they depend only on the network configuration. Furthermore, the difference between the PTDFs at two PNodes with respect to any binding Transmission Constraint, and thus the difference between the MCCs of the LMPs at these PNodes, is independent from the selection of the Reference Bus.
- $C_{j,m}$ is the constraint coefficient for transmission component $j$ of Transmission Constraint $m$ when Transmission Constraint $m$ is a Nomogram; otherwise, this constraint coefficient is always one.
- $\mu_{m,k}$, $\mu_{m,k}^{(IRU)}$, and $\mu_{m,k}^{(IRD)}$ is the Shadow Price of Transmission Constraint $m$ in constraint case $k$ in the base, IRU deployment, or IRD deployment scenario, respectively.

### A.4 Marginal Losses Component of the LMP

The CAISO calculates the Marginal Cost of Losses at each PNode as the product of the MEC and the rate for Marginal Losses at that PNode, as follows:

$$MCL_i = -MEC_i \frac{\partial L}{\partial P_i}$$

Where the rate for Marginal Losses at PNode $i$ ($\partial L/\partial P_i$) is the sensitivity (partial derivative) of system losses ($L$) to an increment of power injected at that PNode ($P_i$) and absorbed by the Reference Bus. This calculation reflects the area interchange control feature of the AC power flow where the net scheduled interchange (NSI) of a Balancing Authority Area in the FNM is kept constant while the iterative solution distributes loss deviation from the previous iteration to the Reference Bus. Consequently, the rate for Marginal Losses of the TSRs that model a Market Transfer at a Transfer Location between two Balancing Authority Areas in the Market Area may be different because these TSRs belong to different Balancing Authority Areas. The CAISO sets the MCL for both of these TSRs to the average rate for Marginal Losses between the two so that there is no MCL difference between the TSRs on either side of a specific Market Transfer. The Marginal Losses on transmission facilities outside the Market Area are ignored in the calculation of the MCL.

### A.5 Marginal Greenhouse Gas Cost Component of the LMP

The CAISO employs a GHG model in the DAM and RTM as described in Sections 29.32 and 33.32. The GHG model calculates an optimal GHG Transfer for each GHG Regulation Area. If the GHG Transfer for a GHG Regulation Area is an import, it is allocated optimally to resources outside that GHG Regulation Area based on those resources' GHG Bid Adders. In that case, the Marginal GHG Cost for all PNodes in a specific GHG Regulation Area is the Shadow Price of the GHG Transfer allocation constraint for that GHG Regulation Area and it represents the marginal cost of GHG regulation for net import transfer into that GHG Regulation Area. If the GHG Transfer is an export, the GHG Transfer allocation constraint is not binding, all GHG attributions are zero for that GHG Regulation Area, and the Marginal GHG Cost for all PNodes in that GHG Regulation Area is zero. The Marginal GHG Cost outside of all GHG Regulation Areas is always zero. Furthermore, the Marginal GHG Cost of a TSR is always zero, even when its Transfer Location is within or at the border of a GHG Regulation Area, because the associated GHG

regulation cost is collected from the LMP settlement of all physical resources within the GHG Regulation Area and paid explicitly to the respective resources outside the GHG Regulation Area with GHG Attributions for that GHG Regulation Area.

### A.6 Trading Hub Price Calculation

The CAISO calculates Existing Zone Generation Trading Hub prices, as provided in Section 27.3, based on the LMP calculations described in this Attachment and in Section 27.2.

### A.7 Load Aggregation Point Price Calculation

The CAISO calculates LAP prices as described in Section 27.2.2.

### A.8 Intertie Scheduling Point Price Calculation

The CAISO calculates LMPs for intertie resources at Scheduling Points, which are represented in the FNM as PNodes or aggregations of PNodes external to the Market Area (*i.e.*, at the boundary of a Balancing Authority Area inside the Market Area with a Balancing Authority Area outside the Market Area), through the same process that is used to calculate LMPs for PNodes within the Market Area. In some cases, facilities that are part of the CAISO Controlled Grid but are external to the CAISO Balancing Authority Area connect some intertie Scheduling Points to the CAISO Balancing Authority Area, and in these cases, the Scheduling Points are within external Balancing Authority Areas. In these cases, the Scheduling Points are represented in the FNM at the relevant Locations and used to schedule imports and exports to/from the CAISO Balancing Authority Area. The MCC of the LMP at a Scheduling Point includes contributions from binding intertie constraints and intertie scheduling limits that constrain import/export Schedules at the relevant Scheduling Point.

In most cases, System Resources are registered at a Scheduling Point to a Balancing Authority Area in the Market Area to model Energy or capacity imports/exports from/to another Balancing Authority Area. When the Balancing Authority Area in the Market Area is not the CAISO Balancing Authority Area and the System Resource is not a Resource Adequacy Resource, the CAISO distributes the import/export Energy Schedule or capacity award of the System Resource to the associated GAP and the MCL and MCC of the LMP of the System Resource reflect the Marginal Losses and Congestion at the relevant GAP.

When the Balancing Authority Area in the Market Area is the CAISO Balancing Authority Area or if Balancing Authority Area in the Market Area is not the CAISO Balancing Authority Area but the System

Resource is a Resource Adequacy Resource, the CAISO distributes the import/export Energy Schedule or capacity award of the System Resource to the relevant Scheduling Point and the MCL and MCC of the LMP of the System Resource reflects the Marginal Losses and Congestion at the relevant Scheduling Point.

In certain cases, System Resources are registered at a Scheduling Point to a Balancing Authority Area in the Market Area to model Energy imports/exports from/to another Balancing Authority Area inside the Market Area. This occurs because of differences in the Market Area between the Day-Ahead Market and the Real-Time Market when a Balancing Authority Area is outside the EDAM Area in the Day-Ahead Market, but inside the EIM Area in the Real-Time Market. In this case, the day-ahead Energy schedule of the relevant System Resource is distributed in the Real-Time Market to the Scheduling Point, for a CAISO Balancing Authority Area intertie, or the relevant DGAP of the source/sink Balancing Authority Area that is in the EIM Area, but cancelled with an opposite base Energy schedule of an EIM Mirror System Resource at the same Scheduling Point with the same distribution. The EIM Mirror System Resource belongs to the source/sink Balancing Authority Area and its base Energy schedule matches the day-ahead Energy schedule of the System Resource it mirrors. The EIM Mirror System Resource that mirrors a System Resource has an export base schedule that matches the day-ahead import schedule of its mirrored System Resource, or a base import schedule that matches the day-ahead export schedule of its mirrored System Resource. The LMPs of the EIM Mirror System Resource and the System Resource it mirrors are different in general because the MEC, MCL, and MCC components differ since the two resources belong to different Balancing Authority Areas in the Market Area.

### A.8.1 Intertie Scheduling Point Price Calculation for IBAAs

#### A.8.1.1 Scheduling Point Prices

As described in Section 27.5.3, the CAISO's FNM includes a full model of the network topology of each IBAA. The CAISO will specify Resource IDs that associate Intertie Scheduling Point Bids and Schedules with supporting injection and withdrawal locations on the FNM. These Resource IDs may be specified by the CAISO based on the information available to it, or developed pursuant to a Market Efficiency Enhancement Agreement. Once these Resource IDs are established, the CAISO will determine Intertie Scheduling Point LMPs based on the injection and withdrawal locations associated with each Intertie

Scheduling Point Bid and Schedule by the appropriate Resource ID. In calculating these LMPs the CAISO follows the provisions specified in Section 27.5.3 regarding the treatment of Transmission Constraints and losses on the IBAA network facilities. Unless otherwise required pursuant to an effective MEEA, the default pricing for all imports from the IBAA(s) to the CAISO Balancing Authority Area will be based on the SMUD/TID IBAA Import LMP and all exports to the IBAA(s) from the CAISO Balancing Authority Area will be based on the SMUD/TID IBAA Export LMP. The SMUD/TID IBAA Import LMP will be calculated based on modeling of supply resources that assumes all supply is from the Captain Jack substation as defined by WECC. The SMUD/TID IBAA Export LMP will be calculated based on the Sacramento Municipal Utility District hub that reflects Intertie distribution factors developed from a seasonal power flow base case study of the WECC region using an equivalencing technique that requires the Sacramento Municipal Utility District hub to be equivalenced to only the buses that comprise the aggregated set of load resources in the IBAA, with all generation also being retained at its buses within the IBAA. The resulting load distribution within each aggregated set of load resources within the IBAA defines the Intertie distribution factors for exports from the CAISO Balancing Authority Area.

**A.8.1.2 Applicable Marginal Losses Adjustment**

For import Schedules to the CAISO Balancing Authority Area at the southern terminus of the California-Oregon Transmission Project at the Tracy substation or at the applicable Scheduling Point that connects the CAISO Balancing Authority and the Western Area Power Administration system, the CAISO will replace the Marginal Cost of Losses at the otherwise applicable source for such Schedules with the Marginal Cost of Losses at the Tracy substation or at the applicable Scheduling point that connects the CAISO Balancing Authority Area and the Western Area Power Administration system, provided that the Scheduling Coordinators certify as discussed further below that the Schedules originate from transactions that use: (a) the California-Oregon Transmission Project; or (b) transmission facilities owned by the Western Area Power Administration within the SMUD/TID IBAA. In addition, as described further below, the Scheduling Coordinator must certify that the Schedules are subject to: (a) charges for losses by the Western Area Power Administration for the use of transmission facilities owned by the Western Area Power Administration within the SMUD/TID IBAA; or (b) charges for losses by the Transmission Agency of Northern California for the use of the California-Oregon Transmission Project. The CAISO will establish

Resource IDs that are to be used only to submit Bids, including Self-Schedules, for the purpose of establishing Schedules that are eligible for this loss adjustment.

Prior to obtaining such Resource IDs, the relevant Scheduling Coordinator shall certify that it will only use this established Resource ID for Bids, including Self-Schedules, that originate from transactions that use: (a) the California-Oregon Transmission Project; or (b) transmission facilities owned by the Western Area Power Administration within the SMUD/TID IBAA. In addition, the Scheduling Coordinator must certify that the Schedules are subject to: (a) charges for losses by the Western Area Power Administration for the use of transmission facilities owned by the Western Area Power Administration within the SMUD/TID IBAA; or (b) Transmission Agency of Northern California for the use of the California-Oregon Transmission Project. Further, by actually using such Resource ID, the Scheduling Coordinator represents that such Bids, including Self-Schedules, that originate from transactions that use: (a) the California-Oregon Transmission Project; or (b) transmission facilities owned by the Western Area Power Administration within the SMUD/TID IBAA. Schedules and Dispatches settled under such Resource IDs shall be subject to an LMP which has accounted for the Marginal Cost of Losses as if there were an actual physical generation facility at the Tracy Scheduling Point or at the applicable Scheduling Point that connects the CAISO Balancing Authority Area and the Western Area Power Administration system as opposed to the Marginal Cost of Losses under the IBAA LMPs specified in Section I.1.1 of this Appendix. The CAISO may request information on a monthly basis from such Scheduling Coordinators to verify these certifications. Any such request shall be limited to transactions that use the designated Resource IDs during the six month prior period to the date of the request. The CAISO will calculate a re-adjustment of the Marginal Cost of Losses at the Tracy substation or at the applicable Scheduling Point that connects the CAISO Balancing Authority Area and the Western Area Power Administration system to reflect the otherwise applicable source for such Schedules for any Settlement Interval in which the CAISO has determined that the Scheduling Coordinator's payments did not reflect transactions that meet the above specified certification requirements. Any amounts owed to the CAISO for such Marginal Cost of Losses re-adjustments will be recovered by the CAISO from the affected Scheduling Coordinator by netting the amounts owed from payments due in subsequent Settlements Statements until the outstanding amounts are fully recovered.

For export Schedules from the CAISO Balancing Authority Area at the southern terminus of the California-Oregon Transmission Project at the Tracy substation or at the applicable Scheduling Point that connects the CAISO Balancing Authority Area and the Western Area Power Administration system, the CAISO will replace the Marginal Cost of Losses at the otherwise applicable sink for such Schedules with the Marginal Cost of Losses at the Tracy substation or at the applicable Scheduling Point that connects the CAISO Balancing Authority Area and the Western Area Power Administration system, provided that the Scheduling Coordinator certifies, as discussed below, where the export Schedules use: (a) the California-Oregon Transmission Project; or (b) any transmission facilities owned by the Western Area Power Administration within the SMUD/TID IBAA. In addition, the Scheduling Coordinator must certify that the affected Schedules are charged losses by: (a) the Western Area Power Administration for the use of transmission facilities owned by the Western Area Power Administration within the SMUD/TID IBAA; or (b) Transmission Agency of Northern California for the use of the California-Oregon Transmission Project. The CAISO will establish Resource IDs that are to be used only to submit Bids, including Self-Schedules, for the purpose of establishing Schedules that are eligible for this loss adjustment. Prior to obtaining such Resource IDs, the relevant Scheduling Coordinator shall certify that it will only use this established Resource ID for Bids, including Self-Schedules, where the export Schedules use: (a) the California-Oregon Transmission Project; or (b) any transmission facilities owned by the Western Area Power Administration within the SMUD/TID IBAA. In addition the Scheduling Coordinator must certify that the affected Schedules are charged losses by: (a) the Western Area Power Administration for the use of transmission facilities owned by the Western Area Power Administration within the SMUD/TID IBAA; or (b) Transmission Agency of Northern California for the use of the California-Oregon Transmission Project. Further, by actually using such Resource ID, the Scheduling Coordinator represents that such Bids, including Self-Schedules, are used for the above specified conditions.

Schedules and Dispatches settled under such Resource IDs shall be subject to an LMP which has accounted for the Marginal Cost of Losses as if there were an actual physical generation facility at the Tracy Scheduling Point or at the applicable Scheduling Point that connects the CAISO Balancing Authority Area and the Western Area Power Administration system as opposed to the Marginal Cost of Losses under the IBAA LMPs specified in Section I.1.1 of this Appendix. The CAISO may request

information on a monthly basis from such Scheduling Coordinators to verify that schedules for such Resource IDs meet the above specified conditions. Any such request shall be limited to transactions that use the designated Resource IDs during the six month prior period to the date of the request.

The CAISO will calculate a re-adjustment of the Marginal Cost of Losses at the Tracy substation or at the applicable Scheduling Point that connects the CAISO Balancing Authority Area and the Western Area Power Administration system to reflect the otherwise applicable sink for such Schedules for any Settlement Interval in which the CAISO has determined that the Scheduling Coordinator's payments did not reflect transactions that met the above specified conditions. Any amounts owed to the CAISO for such Marginal Cost of Losses re-adjustments will be recovered by the CAISO from the affected Scheduling Coordinator by netting the amounts owed from payments due in subsequent Settlements Statements until the outstanding amounts are fully recovered.

### B. Locational Marginal Price for Imbalance Reserves

The CAISO shall calculate the Locational IRU Price and Locational IRD Price at Generation PNodes, Scheduling Points, and Aggregated Pricing Nodes, as provided in the CAISO Tariff. The Locational IRU Price and Locational IRD Price at PNodes, Scheduling Points, and Aggregated Pricing Nodes include separate components for the Marginal IRU or IRD Cost, and the Marginal IRU or IRD Cost of Congestion, respectively. As provided in Section 6.5.3.2.2, Locational IRU Prices and Locational IRD Prices are calculated and posted for each hour of the Day-Ahead Market. There are different Locational Marginal Prices for IRU and IRD at any given Location in the Market Area.

### B.1. Locational IRU and IRD Price Composition

In each hour of the Day-Ahead Market, the CAISO calculates the Locational IRU Price and Locational IRD Price for each PNode, which is based on the IRU and IRD Bids of sellers selected in the Day-Ahead Market as calculated below. The CAISO uses a Reference Bus for the calculation of the Locational IRU Price and Locational IRD Price. The Reference Bus for the Locational IRU Price is the distributed IRU requirement in the Market Area, whereas the Reference Bus for the Locational IRD Price is the distributed IRD requirement in the Market Area. The Reference Bus is used in sensitivity calculations that yield the Power Transfer Distribution Factors. The CAISO does not employ an AC power flow in the IRU and IRD deployment scenarios in the IFM. The Transmission Constraints in the IRU and IRD deployment

scenarios are formulated as linear extensions of the Transmission Constraints in the base scenario using the AC power flow solution for the base scenario. Therefore, there is no marginal loss component in the Locational IRU Price and Locational IRD Price. For each PNode, the CAISO determines separate components of the Locational IRU Price and Locational IRD Price for the Marginal IRU and IRD Cost, and the Marginal Cost of Congestion for IRU and IRD, as follows:

$$LMP_i^{(IRU)} = MEC_i^{(IRU)} + MCC_i^{(IRU)}$$

$$LMP_i^{(IRD)} = MEC_i^{(IRD)} + MCC_i^{(IRD)}$$

where:

- $i$ is the PNode index.
- $MEC_i^{(IRU)}$ is the Locational IRU Price component representing the Marginal IRU Cost at PNode $i$.
- $MCC_i^{(IRU)}$ is the Locational IRU Price component representing the Marginal Cost of Congestion for IRU at PNode $i$.
- $MEC_i^{(IRD)}$ is the Locational IRD Price component representing the Marginal IRD Cost at PNode $i$.
- $MCC_i^{(IRD)}$ is the Locational IRD Price component representing the Marginal Cost of Congestion for IRD at PNode $i$.

### B.2. Marginal IRU and IRD Cost Component

The Marginal IRU and IRD Cost Component is the same for all PNodes in each Balancing Authority Area in the Market Area. It is the Shadow Price of the power balance constraint in the IRU or IRD deployment scenario for the respective Balancing Authority Area at the optimal solution in the IFM. The power balance constraint for each Balancing Authority Area in the Market Area ensures that the physical law of conservation of Energy and deployed capacity (the sum of physical resource energy schedules from the base scenario plus the deployed IRU or IRD awards equals the IRU or IRD requirement minus the IRU or IRD demand relaxation plus the Net IRU or IRD Transfer) is accounted for in the solution of the IRU or IRD deployment scenario. The Marginal IRU or IRD Cost for the Transfer System Resources (TSRs) on each side of an EDAM Transfer is the Marginal IRU or IRD Cost of the respective Balancing Authority Area. The Marginal IRU or IRD Cost may be different between two Balancing Authority Areas in the Market Area when EDAM Transfers between these Balancing Authority Areas are scheduled at their

respective scheduling limits. The Marginal IRU or IRD Cost difference between the Balancing Authority Areas on either side of a specific EDAM Transfer generates EDAM Transfer revenue.

**B.3. Marginal Congestion Component for IRU and IRD**

The CAISO calculates the Marginal Cost of Congestion for IRU and IRD at each PNode as the net contribution of the Shadow Prices of the binding Transmission Constraints in the IRU or IRD deployment scenarios at the optimal solution for IFM, weighed by the respective Power Transfer Distribution Factors, as follows:

$$MCC_i^{(IRU)} = -\sum_{k=0}^{K}\sum_{m=1}^{M}\sum_{j=1}^{J_m} c_{j,m}\, PTDF_{i,j,m,k}^{(IRU)}\, \mu_{m,k}^{(IRU)}$$

$$MCC_i^{(IRD)} = -\sum_{k=0}^{K}\sum_{m=1}^{M}\sum_{j=1}^{J_m} c_{j,m}\, PTDF_{i,j,m,k}^{(IRD)}\, \mu_{m,k}^{(IRD)}$$

Where:

- $i$ is the Pnode index.
- $m$ is the Transmission Constraint index in the Market Area; transmission constraints outside the Market Area are not enforced.
- $k$ is the constraint case index; zero (0) indicates the base case where all transmission and generation facilities are in service, whereas a positive case indicates a preventive transmission or generation contingency case, as applicable.
- $j$ is the transmission component index of Transmission Constraint $m$. When Transmission Constraint $m$ is a Nomogram, there can be more than one transmission components in it; otherwise, there is only one transmission component.
- $K$ is the number of constraint cases, besides the base case.
- $M$ is the number of Transmission Constraints.
- $J_m$ is the number of transmission components of Transmission Constraint $m$.
- $PTDF_{i,j,m,k}^{(IRU)}$ and $PTDF_{i,j,m,k}^{(IRD)}$ is the Power Transfer Distribution Factor (PTDF) for PNode $i$ on transmission component $j$ of Transmission Constraint $m$ in constraint case $k$ in the IRU or IRD deployment scenario; it is the power flow contribution on that transmission

component $j$ when an increment of power is injected at PNode $i$ and an equivalent amount of power is withdrawn at the Reference Bus. For Market Area Intertie resources at a Scheduling Point, and TSRs at a Transfer Location, the PTDF to an intertie constraint or intertie scheduling limit at that Scheduling Point is +1 for an import and –1 for an export. The CAISO does not consider the effect of Transmission Losses in the calculation of PTDFs; they depend only on the network configuration. Furthermore, the difference between the PTDFs at two PNodes with respect to any binding Transmission Constraint, and thus the difference between the Marginal Cost of Congestion for IRU or IRD at these PNodes, is independent from the selection of the Reference Bus. The PTDFs in the IRU or IRD deployment scenarios are different from the ones in the base scenario of the IFM because although the network configuration is the same, the Reference Bus is different; furthermore, the binding constraints in the base and the IRU or IRD deployment scenarios may be different.

- $c_{j,m}$ is the constraint coefficient for transmission component $j$ of Transmission Constraint $m$ when Transmission Constraint $m$ is a Nomogram; otherwise, this constraint coefficient is always one.
- $\mu_{m,k}^{(IRU)}$ and $\mu_{m,k}^{(IRD)}$ is the Shadow Price of Transmission Constraint $m$ in constraint case $k$ at the IRU or IRD deployment scenario in the optimal solution of the IFM.

**C. Locational Marginal Price for Reliability Capacity**

The CAISO shall calculate the Locational RCU Price and Locational RCD Price at Generation PNodes, Scheduling Points, and Aggregated Pricing Nodes, as provided in the CAISO Tariff. The Locational RCU Price and Locational RCD Price at PNodes, Scheduling Points, and Aggregated Pricing Nodes include separate components for the Marginal RCU or RCD Cost, Marginal RCU or RCD Cost of Congestion, and Marginal RCU or RCD Cost of Losses, respectively. As provided in Section 6.5.3.2.2, Locational RCU Prices and Locational RCD Prices are calculated and posted for each hour of the Day-Ahead Market. There is a single Locational Marginal Price for Reliability Capacity that applies to both Reliability Capacity Up and Reliability Capacity Down at any given Location in the Market Area.

**C.1. Locational RCU and RCD Price Composition**

In each hour of the Day-Ahead Market, the CAISO calculates the Locational RCU Price and Locational RCD Price for each PNode, which is based on the RCU and RCD Bids of sellers selected in the Day-Ahead Market as calculated below. The CAISO uses a Reference Bus for the calculation of the Locational RCU Price and Locational RCD Price. The Reference Bus is the distributed demand forecast in the Market Area, used in the AC power flow solution in RUC to distribute the deviations for Transmission Losses between iterations, and in sensitivity calculations that yield rates for Marginal Losses and the Power Transfer Distribution Factors. If the CAISO Market solution reverts to a DC power flow solution, the Reference Bus is not used because Transmission Losses are not included. Nevertheless, the CAISO reflects the Transmission Losses for the Market Area in the DC power flow solution by adjusting the load by the average loss factor. For each PNode, the CAISO determines separate components of the Locational RCU Price and Locational RCD Price for the Marginal RCU and RCD Cost, Marginal Cost of Congestion for RCU and RCD, and Marginal Cost of Losses for RCU and RCD, as follows:

$$LMP_i^{(RUC)} = MEC_i^{(RUC)} + MCC_i^{(RUC)} + MCL_i^{(RUC)}$$

where:

- $i$ is the PNode index.
- $MEC_i^{(RUC)}$ is the Locational RCU Price and Locational RCD Price component representing the Marginal Reliability Capacity Cost at PNode $i$.
- $MCC_i^{(RUC)}$ is the Locational RCU Price and Locational RCD Price component representing the Marginal Cost of Congestion for RCU and RCD at PNode $i$.
- $MCL_i^{(RUC)}$ is the Locational RCU Price and Locational RCD Price component representing the Marginal Cost of Losses for RCU and RCD at PNode $i$.

### C.2. Marginal Reliability Capacity Cost Component

The Marginal Reliability Capacity Cost Component is the same for all PNodes in each Balancing Authority Area in the Market Area. It is the Shadow Price of the power balance constraint for the respective Balancing Authority Area at the optimal solution in the RUC. The power balance constraint for each Balancing Authority Area in the Market Area ensures that the physical law of conservation of Energy (the sum of physical resource energy schedules from the IFM plus the deployed Reliability Capacity awards

equals the demand forecast plus the Net Reliability Capacity Transfer) is accounted for in the RUC solution. The Marginal Reliability Capacity Cost for the Transfer System Resources (TSRs) on each side of an EDAM Transfer is the Marginal Reliability Capacity Cost of the respective Balancing Authority Area. The Marginal Reliability Capacity Cost may be different between two Balancing Authority Areas in the Market Area when EDAM Transfers between these Balancing Authority Areas are scheduled at their respective scheduling limits. The Marginal Reliability Capacity Cost difference between the Balancing Authority Areas on either side of a specific EDAM Transfer generates EDAM Transfer revenue.

**C.3. Marginal Congestion Component for RCU and RCD**

The CAISO calculates the Marginal Cost of Congestion for RCU and RCD at each PNode as the net contribution of the Shadow Prices of the binding Transmission Constraints at the optimal solution for RUC, weighed by the respective Power Transfer Distribution Factors, as follows:

$$MCC_i^{(RUC)} = -\sum_{k=0}^{K}\sum_{m=1}^{M}\sum_{j=1}^{J_m} c_{j,m}\, PTDF_{i,j,m,k}\, \mu_{m,k}^{(RUC)}$$

where:

- $i$ is the PNode index.
- $m$ is the Transmission Constraint index in the Market Area; transmission constraints outside the Market Area are not enforced.
- $k$ is the constraint case index; zero (0) indicates the base case where all transmission and generation facilities are in service, whereas a positive case indicates a preventive transmission or generation contingency case, as applicable.
- $j$ is the transmission component index of Transmission Constraint $m$. When Transmission Constraint $m$ is a Nomogram, there can be more than one transmission components in it; otherwise, there is only one transmission component.
- $K$ is the number of constraint cases, besides the base case.
- $M$ is the number of Transmission Constraints.
- $J_m$ is the number of transmission components of Transmission Constraint $m$.
- $PTDF_{i,j,m,k}$ is the Power Transfer Distribution Factor (PTDF) for PNode $i$ on transmission component $j$ of Transmission Constraint $m$ in constraint case $k$; it is the power flow

contribution on that transmission component $j$ when an increment of power is injected at PNode $i$ and an equivalent amount of power is withdrawn at the Reference Bus. For Market Area Intertie resources at a Scheduling Point, and TSRs at a Transfer Location, the PTDF to an intertie constraint or intertie scheduling limit at that Scheduling Point is +1 for an import and –1 for an export. The CAISO does not consider the effect of Transmission Losses in the calculation of PTDFs; they depend only on the network configuration. Furthermore, the difference between the PTDFs at two PNodes with respect to any binding Transmission Constraint, and thus the difference between the Marginal Cost of Congestion for RCU and RCD at these PNodes, is independent from the selection of the Reference Bus. The PTDFs in the RUC are the same as the ones in the IFM base scenario because the network configuration is the same; however, the binding constraints in the RUC may be different from the ones in the IFM.

- $c_{j,m}$ is the constraint coefficient for transmission component $j$ of Transmission Constraint $m$ when Transmission Constraint $m$ is a Nomogram; otherwise, this constraint coefficient is always one.
- $\mu_{m,k}^{(RUC)}$ is the Shadow Price of Transmission Constraint $m$ in constraint case $k$ at the optimal solution of the RUC.

**D. Marginal Loss Component for RCU and RCD**

The CAISO calculates the Marginal Cost of Losses for RCU and RCD at each PNode as the product of the Marginal Reliability Capacity Cost Component and the rate for Marginal Losses at that PNode, as follows:

$$MCL_i^{(RUC)} = -MEC_i^{(RUC)} \frac{\partial L}{\partial P_i}$$

Where the rate for Marginal Losses at PNode i ($\partial L/\partial P_i$) is the sensitivity (partial derivative) of system losses (L) to an increment of power injected at that PNode ($P_i$) and absorbed by the Reference Bus for the RUC. This calculation reflects the area interchange control feature of the AC power flow where the net scheduled interchange (NSI) of a Balancing Authority Area in the FNM is kept constant while the iterative solution distributes loss deviation from the previous iteration to the Reference Bus for the RUC.

Consequently, the Marginal Cost of Losses for RCU and RCD of the TSRs that model a Market Transfer at a Transfer Location between two Balancing Authority Areas in the Market Area may be different because these TSRs belong to different Balancing Authority Areas. The CAISO sets the Marginal Cost of Losses for RCU and RCD for both of these TSRs to the average rate for Marginal Losses between the two so that there is no difference between the Marginal Cost of Losses for RCU and RCD between the TSRs on either side of a specific Market Transfer. The Marginal Losses on transmission facilities outside the Market Area are ignored in the calculation of the Marginal Cost of Losses for RCU and RCD.

**Appendix D**

**Black Start Generating Units**

The following requirements must be met by Black Start Generating Units:

(a) Black Start Generating Units must be capable of starting and paralleling with the CAISO Controlled Grid without aid from the CAISO Controlled Grid;

(b) Black Start Generating Units must be capable of making a minimum number of starts per event (to be without aid from the CAISO Controlled Grid as determined by the CAISO);

(c) Black Start Generating Units must be equipped with governors capable of operating in the stand alone (asynchronous) and parallel (synchronous) modes.

(d) Black Start Generating Units must have Start-Up load pickup capabilities at a level to be determined by the CAISO, including total Start-Up load (MW) and largest Start-Up load (MW) for such power output levels as the CAISO may specify. Each Black Start Generating Unit must be able to start up with a dead primary and station service bus within ten (10) minutes of issuance of an Exceptional Dispatch by the CAISO requiring a Black Start. Each Black Start Generating Unit must be capable of sustaining its output for a minimum period of twelve (12) hours from the time when it first starts delivering Energy. Black Start Agreements may specify a different minimum period.

(e) All Black Start Generating Units must be capable of producing reactive Power (boost) and absorbing reactive Power (buck) as required by the CAISO to control system voltages. Each Black Start Generating Unit must provide sufficient reactive capability to keep the energized transmission bus voltages within emergency Voltage Limits over the range of no load to full load. This requirement may be met by the operation of more than one Black Start Generating Unit in parallel providing that:

(i) the Black Start Generation supplier demonstrates that the proposed Generation resource shares reactive burden equitably;

(ii) all Participating Generators associated with the proposed Black Start source are located in the same general area.

Buck/boost capability requirement shall be dependent on the location of the proposed resource in relation to Black Start load.

(f) All Black Start Generating Units must have the following communication/control requirements:

(i) dial-up telephone;

(ii) backup radio;

(iii) manning levels which accord with Good Utility Practice.

(iv) Each Black Start Generator must ensure that normal and emergency voice communications are available to permit effective Exceptional Dispatch of Black Start Generating Units.

(g) The Scheduling Coordinator for the Black Start Generating Unit shall not use the Black Start Generating Unit to serve any Load other than station service Load required by the Black Start Generating Unit until the CAISO has confirmed that the need for such Black Start service has

passed.

(h) Black Start Generating Units must pass performance tests for demonstrating Black Start capability, which the CAISO may periodically undertake in accordance with the CAISO's Operating Procedures for Black Start testing.

(i) All Black Start Generating Units will comply with Applicable Reliability Criteria.

# Appendix E

## Submitted Ancillary Services Data Verification

The CAISO shall use the following procedures for verifying the Bid information submitted by Scheduling Coordinators for Ancillary Services.

**1** **Bid File and Schedule Format.** The CAISO shall verify that the Bids conform to the format specified for the type of Ancillary Service Bid submitted. If the Bid file does not conform to specifications, it shall be annotated by the CAISO to indicate the location of the errors, and returned to the Scheduling Coordinator for corrections. Any changes made by a Scheduling Coordinator shall require a new submittal of Bid information, and all validity checks shall be performed on the re-submitted Bid.

**2** **Generation Bids.**

**2.1** **Quantity Data.** The CAISO shall verify that no Scheduling Coordinator is submitting a Bid quantity for Regulation, Spinning Reserve, or Non-Spinning Reserve which exceeds available capacity for Regulation and Operating Reserves on the Generating Units, Loads and resources scheduled for that Settlement Period.

**2.2** **Location Data.** The CAISO shall verify that the Location data corresponds to the CAISO Controlled Grid Interconnection data.

**2.3** **Operating Capability.** The CAISO shall verify that the operating capability data corresponds to the CAISO Controlled Grid Interconnection data for each Generating Unit, Load or other resource for which a Scheduling Coordinator is submitting an Ancillary Service Bid.

**3** **[Not Used]**

**4** **Notification of Validity or Invalidity of Ancillary Services Bids.** The CAISO shall, as soon as reasonably practical following the receipt of competitive Bids or Self-Provided Ancillary Service Self-Schedules, send to the Scheduling Coordinator who submitted the Bid the following information:

(a) acknowledgment of receipt of the competitive Bid or Self-Provided Ancillary Service Self-Schedule;

(b) notification that the Bid has been accepted or rejected for non-compliance with the rules specified in this Appendix. If a Bid is rejected, such notification shall contain an explanation of why the Bid was not accepted;

(c) a copy of the Bid or Self-Schedule as processed by the CAISO.

In response to an invalid Bid, the Scheduling Coordinator shall be given a period of time to respond to the notification. The Scheduling Coordinator shall respond by resubmitting a corrected Bid. If the Scheduling Coordinator does not respond to the notification within the required time frame, the CAISO shall proceed without that Scheduling Coordinator's Bid.

**5** **Treatment of Missing Values.**

**5.1** **Missing Location Values.** Any Bid submitted without a Location Code shall be deemed to have a zero Bid quantity for that Settlement Period.

**5.2** **Missing Quantity Values.** Any Bid submitted without a quantity value shall be deemed to have a zero Bid quantity for Ancillary Service capacity for that Settlement Period.

**5.3** **Missing Price Values.** Any Bid submitted with non-zero quantity value, but with a missing price value, shall be rejected.

**6** **Treatment of Equal Price Bids.** The CAISO shall allow these Scheduling Coordinators to resubmit, at their own discretion, their Bid no later than two (2) hours the same day the original Bid was submitted. In the event identical prices still exist following resubmission of Bids, the CAISO shall determine the merit order for each Ancillary Service by considering applicable constraint information for each Generating Unit, Load or other resource, and optimize overall costs for the Trading Day. If equal Bids still remain, the CAISO shall proportion participation in the Day-Ahead Schedule or FMM Schedule (as the case may be) amongst the bidding Generating Units, Loads and resources with identical Bids to the extent permitted by operating constraints and in a manner deemed appropriate by the CAISO.

**7** **Receipt of Bids.** The CAISO shall maintain an audit trail relating to the receipt of Bids and the processing of those Bids.

**Appendix F Rate Schedules**

**Schedule 1**

**Grid Management Charge**

**Part A – Calculation of Grid Management Charge (GMC)**

The GMC consists of the following separate service charges for 2024 and 2025: (1) the Market Services Charge; (2) the System Operations Charge; and (3) the CRR Services Charge. The GMC revenue requirement, determined in accordance with Part C of this Schedule 1, will be allocated to the service charges specified in Part A of this Schedule 1 as follows: forty-nine (49) percent to Market Services; forty-nine (49) percent to System Operations; and two (2) percent to CRR Services. Beginning in 2026, the GMC will consist of the following separate service charges: (1) the Market Services Charge; (2) the System Operations Real-Time Dispatch Charge; (3) the System Operations Balancing Authority Area Services Charge; and (4) the CRR Services Charge. The GMC revenue requirement, determined in accordance with Part C of this Schedule 1, will be allocated to the service charges specified in Part A of this Schedule 1 as follows: forty-nine (49) percent to Market Services; twenty-three (23) percent to System Operations Real-Time Dispatch Charge; twenty-six (26) percent to System Operations Balancing Authority Area Services Charge; and two (2) percent to CRR Services.

Every three (3) years, the CAISO will conduct an updated cost-of-service study, in consultation with stakeholders and using costs from the previous year. Notwithstanding the foregoing, the CAISO will not conduct a cost-of-service study in 2026 or 2027. The CAISO will resume cost-of-service studies every three (3) years beginning with a cost-of-service study in 2028. In conducting each cost-of-service study, the CAISO will recalculate the service charge percentages and the rates for the fees and charges that constitute the Grid Management Charge as set forth in Section 11.22. In addition, the cost-of-service study results will be used to update the RC Funding Percentage used to calculate the annual RC Funding Requirement, as well as the real-time percentages of the Market Services Charge. The cost of service study results will also be used to update the real-time market percentage used to calculate the EDAM System Operations charge. If, based on the cost-of-service study results, the service category revenue requirement allocation percentages or the level of fees and charges have changed, the CAISO will submit tariff amendments to reflect such changes pursuant to Section 205 of the FPA.

1. The rate for the Market Services Charge will be calculated by dividing the annual GMC revenue requirement allocated to this service category net the projected Bid Segment Fees, Inter-SC Trade Transaction Fees, and the SCID Charge by the forecast annual gross absolute value of MW per hour of Ancillary Services capacity awarded in the Day-Ahead and Real-Time Markets, MWh of Energy cleared in the Day-Ahead market, MWh of Imbalance Reserves cleared in the Day-Ahead market, MWh of Reliability capacity cleared in the Day-Ahead market, Virtual Demand Award, Virtual Supply Award, and FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy, less the forecast annual gross absolute value of such Energy as may be excluded for a load following MSS pursuant to an MSS agreement, Standard Ramping Energy, Regulation Energy, Ramping Energy Deviation, Residual Imbalance Energy, Exceptional Dispatch Energy and Operational Adjustments for the Day-Ahead and Real-Time.

2. The rate for the System Operations Charge will be calculated by dividing the annual GMC revenue requirement allocated to this service category, net the projected TOR Charges by forecast annual gross absolute value of MWh of real-time energy flows on the CAISO Controlled Grid.

3. Beginning in 2026, the rate for the System Operations Real-Time Dispatch Charge will be calculated by dividing the annual GMC revenue requirement allocated to this service category net the proportional projected TOR Charges by forecast annual gross absolute value of MWh of real-time energy flows of CAISO, EIM, and EDAM Market Participants.

4. Beginning in 2026, the rate for the System Operations Balancing Authority Area Services Charge will be calculated by dividing the annual GMC revenue requirement allocated to this service category by forecast annual gross absolute value of MWh of real-time energy flows on the CAISO Controlled Grid.

5. The rate for the CRR Services Charge will be calculated by dividing the annual GMC revenue requirement allocated to this service category, net the projected CRR Auction Bid Fees, by the forecast annual sum of awarded MW of CRRs per hour.

The rates for the foregoing charges will be adjusted automatically each year, effective January 1 for the following twelve (12) months, in the manner set forth in Part D of this Schedule.

**Part B – Quarterly Adjustment, If Required**

Each component rate of the GMC will be adjusted automatically on a quarterly basis, up or down, so that rates reflect the annual revenue requirement as posted on the CAISO Website, as applicable, if the estimated revenue collections for that component, after accounting for revenue collected from the Bid Segment Transaction Fee, the CRR Transaction Fee, the Inter-Scheduling Coordinator Trade Transaction Fee, the Scheduling Coordinator ID Charge and the TOR Charge, on an annual basis, change by more than two (2) percent or $1 million, whichever is greater, during the year. Such adjustment may be implemented not more than once per calendar quarter, and will be effective the first day of the next calendar month.

The rates will be adjusted according to the formulae listed in Appendix F, Schedule 1, Part A with the billing determinant(s) readjusted on a going-forward basis to reflect the change of more than two (2) percent or $1 million, whichever is greater, from the estimated revenue collections provided in the annual informational filing.

**Part C – Costs Recovered through the GMC**

As provided in Section 11.22.2 of the CAISO Tariff, the GMC includes the following costs, as projected in the CAISO's budget for the year to which the GMC applies:

- CAISO Operating Costs;
- CAISO Financing Costs, including debt service on CAISO capital expenditures;
- CAISO Other Costs and Revenues, including penalties, interest earnings and other revenues;
- CAISO Operating Cost Reserve adjustment; and
- CAISO Cash Funded Capital and Project Costs

Such costs, for the CAISO as a whole, are allocated to the service charges that comprise the GMC: (1) market services, (2) system operations, and (3) CRR services, according to the factors listed in Part A of this Schedule 1, and

**adjusted annually for:**

- any surplus revenues from the previous year as deposited in the CAISO Operating Reserve Account, or deficiency of revenues, as recorded in a memorandum account;

**divided by:**

- forecasted annual billing determinant volumes;

**adjusted quarterly for:**

- a change in the volume estimate used to calculate the individual GMC components, if, on an annual basis, the change is two (2) percent or $1 million, whichever is greater, from the estimated revenue collections provided in the annual informational filing.

The GMC revenue requirement formula is as follows:

GMC revenue requirement =

CAISO Operating Costs + CAISO Financing Costs + CAISO Other Costs and Revenues + CAISO Operating Cost Reserve adjustment + CAISO Cash Funded Capital and Project Costs,

[The "USoA" reference below is the FERC Uniform System of Accounts, and is intended to include subsequent re-numbering or re-designation of the same accounts or subaccounts.]

Where,

(1) CAISO Operating Costs include:

(a) Transmission expenses (USoA 560-574);

(b) Regional market expenses (USoA 575.1-575.8);

(c) Maintenance accounts (USoA 576-576.5)

(d) Customer accounting expenses (USoA 901-905);

(e) Customer service and informational expenses (USoA 906-910);

(f) Sales expenses (USoA 911-917);

(g) Administrative & general expenses (USoA 920-935);

(h) Taxes other than income taxes that relate to CAISO operating income (USoA 408.1); and

(i) Miscellaneous, non-operating expenses, penalties and other deductions (USoA 426 subaccounts).

(2) CAISO Financing Costs include:

(a) For any fiscal year, scheduled principal and interest payments, sinking fund payments related to balloon maturities, repayment of commercial paper notes, net payments required pursuant to a payment obligation, or payments due on any CAISO notes. This amount includes the current year accrued principal and

interest payments due in the first one hundred twenty (120) days of the following year.

(b) The debt service coverage requirement, which is a percentage of the senior lien debt service, i.e., all debt service that has a first lien on CAISO net operating revenues. The coverage requirement is twenty-five (25) percent, unless otherwise specified by the rate covenants of the official statements for each CAISO bond offering.

(3) CAISO Other Costs and Revenues include:

(a) Interest earnings (USoA 419) on funds not restricted by bond or note proceeds specifically designated for capital projects or capitalized interest. Unrealized gains or losses shall be excluded and realized gains and losses shall be included. If it has been determined that a permanent impairment in an investment has occurred, it shall be included.

(b) Miscellaneous revenues, which includes fees and fines assessed and collected by the CAISO (USoA 421, 456, 457.1 and 457.2 subaccounts).

(c) Other interest expenses (USoA 431) not provided for elsewhere.

(4) CAISO Operating Cost Reserve adjustment is the sum of:

(a) The actual excess or shortfall in collections of the prior year's rates compared to the budgeted amounts;

(b) The actual excess or shortfall in CAISO Operating Costs, CAISO Other Costs and Revenues and CAISO Financing Costs for the prior year compared to the budgeted amounts except any excess in the prior year budgeted amount for self-insured healthcare costs compared to actual self-insured healthcare costs;

(c) The estimate of current year collections and costs compared to budgeted amounts for the current year; and

(d) The change in CAISO Operating Cost Reserve consistent with the level of the CAISO Operating Cost Reserve requirement.

(5) CAISO Cash-Funded Capital and Project Costs include funding from current year

revenue for approved capital and projects.

A separate revenue requirement shall be established for each component of the GMC by developing the revenue requirement for the CAISO as a whole and then assigning such costs to the service categories using the allocation factors provided in Appendix F, Schedule 1, Part A.

**Part D – Information Requirements**

**Budget Schedule**

The CAISO will convene, prior to the commencement of the annual budget process, an initial meeting with stakeholders to: (a) receive ideas to control CAISO costs; (b) receive ideas for projects to be considered in the capital budget development process; and, (c) receive suggestions for reordering CAISO priorities in the coming year.

Within two (2) weeks of the initial meeting, the ideas presented by the stakeholders shall be communicated in writing to the CAISO's officers, directors and managers as part of the budget development process, and a copy of this communication shall be made available to stakeholders.

The CAISO shall submit the following information either at the initial meeting with stakeholders or subsequent to the initial submission of the draft budget to the CAISO Governing Board: (a) proposed capital budget with indicative projects for the next subsequent calendar year, a budget-to-actual review for capital expenditures for the previous calendar year, and a budget-to-actual review of current year capital costs; and, (b) budget-to-actual review of expenditures and activities for the previous calendar year, and a budget-to-actual review of expenditures for the current year.

Subsequent to the initial submission of the draft budget to the CAISO Governing Board, the CAISO will provide stakeholders expenditures and activities in detail for the next subsequent calendar year (in the form of a draft of the budget book for the CAISO Governing Board). Certain of this detailed information which is deemed commercially sensitive will only be made available to parties that pay the CAISO's GMC (or regulators) who execute a confidentiality agreement.

The CAISO shall provide such materials on a timely basis to provide stakeholders at least one full Board meeting cycle to review and prepare comments on the draft annual budget to the CAISO Governing Board.

At least one month prior to the CAISO Governing Board meeting scheduled to consider approval of the proposed budget, the CAISO will hold a meeting open to all stakeholders to discuss the details of the CAISO's budget and revenue requirement for the forthcoming year.

Prior to a final recommendation by the CAISO Governing Board on the CAISO's draft annual budget, the CAISO shall respond in writing to all written comments on the draft annual budget submitted by stakeholders and/or the CAISO shall issue a revised draft budget indicating in detail the manner in which the stakeholders' comments have been taken into consideration.

The CAISO will provide no fewer than forty-five (45) days for stakeholder review of its annual budget between initial budget posting and final approval of the budget by the CAISO Governing Board.

**Budget Posting**

After the approval of the annual budget by the CAISO Governing Board, the CAISO will post on the CAISO Website the CAISO operating and capital budget to be effective during the subsequent fiscal year, and the billing determinant volumes used to develop the rate for each component of the GMC, together with workpapers showing the calculation of such rates.

**Periodic Financial Reports**

The CAISO will create periodic financial reports consisting of an income statement, balance sheet, capital projects report and such other reports as are required by the CAISO Governing Board. The periodic financial reports will be posted on the CAISO Website not less than quarterly.

**Part E - [Not Used]**

**Part F – [Not Used]**

**Schedule 2**

**[Not Used]**

**Schedule 3**

**Regional Access Charge and Wheeling Access Charge**

## 1 Objectives and Definitions.

### 1.1 Objectives.

(a) The Access Charge is the charge assessed for using the CAISO Controlled Grid. It consists of two components, the Regional Access Charge (RAC) and the Local Access Charge (LAC).

(b) The RAC is based on one CAISO Grid-wide rate.

(c) The LAC will be determined by each Participating TO. The LAC of Non-Load-Serving Participating TOs may also be project specific. Each Participating TO will charge for and collect the LAC, subject to Section 26.1 of the CAISO Tariff and Section 13 of this Schedule 3.

(d) The Wheeling Access Charge is paid by Scheduling Coordinators for Wheeling as set forth in Section 26.1.4 of the CAISO Tariff. The CAISO will collect the Wheeling revenues from Scheduling Coordinators on a Trading Interval basis and repay these to the Participating TOs based on the ratio of each Participating TO's Transmission Revenue Requirement to the sum of all Participating TOs' Transmission Revenue Requirements.

(e) The Non-Subscriber Usage Payment Amount (NSUPA) is provided by the CAISO to Subscriber Participating TOs for Non-Subscriber use of the Subscriber Participating TO's transmission assets and Entitlements and Subscriber Encumbrances used to provide Subscriber Rights, subject to Section 26.1.4 of the CAISO Tariff, provided that a Subscriber Participating TO will not otherwise be entitled to establish any other element of a Transmission Revenue Requirement unless justified for the recovery of costs associated with transmission facilities authorized in accordance with Section 24 or Section 25 of the CAISO Tariff.

### 1.2 Definitions

Unless the context otherwise requires, any word or expression defined in the Master Definition

Supplement shall have the same meaning where used in this Schedule 3.

**2 Assessment of Regional Access Charge.**

All UDCs and MSS Operators in a PTO Service Territory serving Gross Loads directly connected to the transmission facilities or Distribution System of a UDC or MSS Operator in a PTO Service Territory shall pay to the CAISO a charge for transmission service on the Regional Transmission Facilities included in the CAISO Controlled Grid. A UDC or MSS Operator that is also a Participating TO shall pay, or receive payment of, if applicable, the difference between (i) the Regional Access Charge applicable to its transactions as a UDC or MSS Operator; and (ii) the disbursement of Regional Access Charge revenues to which it is entitled pursuant to Section 26.1.3 of the CAISO Tariff.

**3 TAC Areas.**

**3.1** TAC Areas are based on the Control Areas in California prior to the CAISO Operations Date. Three TAC Areas will be established based on the Original Participating TOs: (1) a Northern Area consisting of the PTO Service Territory of Pacific Gas and Electric Company and the PTO Service Territory of any entity listed in Section 3.3 or 3.5 of this Schedule; (2) an East Central Area consisting of the PTO Service Territory of Southern California Edison Company and the PTO Service Territory of any entity listed in Section 3.4, 3.5 or 3.6 (as indicated therein) of this Schedule 3; and (3) a Southern Area consisting of the PTO Service Territory of San Diego Gas & Electric Company. Participating TOs that are not in one of the above cited PTO Service Territories are addressed below.

**3.2** If the Los Angeles Department of Water and Power joins the CAISO and becomes a Participating TO, its PTO Service Territory will form a fourth TAC Area, the West Central Area.

**3.3** If any of the following entities becomes a Participating TO, its PTO Service Territory will become part of the Northern Area: Sacramento Municipal Utility District, Western Area Power Administration - Sierra Nevada Region, the Department of Energy California Labs, Northern California Power Agency, City of Redding, Silicon Valley Power, City of Palo Alto, City and County of San Francisco, Alameda Bureau of Electricity, City of Biggs, City of Gridley, City of Healdsburg, City of Lodi, City of Lompoc Utility Department, Modesto Irrigation District, Turlock Irrigation District, Plumas County Water Agency, City of Roseville Electric Department, City of

Shasta Lake, and City of Ukiah or any other entity owning or having contractual rights to Regional or Local Transmission Facilities in Pacific Gas and Electric Company's Control Area prior to the CAISO Operations Date.

**3.4** If any of the following entities becomes a Participating TO, its PTO Service Territory will become part of the East Central Area: City of Anaheim Public Utility Department, City of Riverside Public Utility Department, City of Azusa Light and Water, City of Banning Electric, City of Colton, City of Pasadena Water and Power Department, The Metropolitan Water District of Southern California and City of Vernon or any other entity owning or having contractual rights to Regional or Local Transmission Facilities in Southern California Edison Company's Control Area prior to the CAISO Operations Date.

**3.5** If the California Department of Water Resources becomes a Participating TO, its Regional Transmission Revenue Requirements associated with Regional Transmission Facilities in the Northern Area would become part of the Regional Transmission Revenue Requirement for the Northern Area while the remainder would be included in the East Central Area.

**3.6** If the City of Burbank Public Service Department (Burbank) and/or the City of Glendale Public Service Department (Glendale) become Participating TOs after or at the same time as the Los Angeles Department of Water and Power becomes a Participating TO, then the PTO Service Territory of Burbank and/or Glendale would become part of the West Central Area. Otherwise, if Burbank or Glendale becomes a Participating TO, prior to Los Angeles, its PTO Service Territory will become part of the East Central Area. Once either Burbank or Glendale are part of the East Central Area, they will not move to the West Central Area if such area is established.

**3.7** If the Imperial Irrigation District or an entity outside the State of California should apply to become a Participating TO (other than a Subscriber Participating TO), the CAISO Governing Board will review the reasonableness of integrating the entity into one of the existing TAC Areas. If the entity cannot be integrated without the potential for significant cost shifts, the CAISO Governing Board may establish a separate TAC Area. Each Subscriber Participating TO will have its own TAC Area.

**4 [NOT USED]**

**5 Determination of the Access Charge.**

**5.1** The Access Charge consists of a Regional Access Charge (RAC) and a Local Access Charge (LAC) that is based on a utility-specific rate established by each Participating TO in accordance with its TO Tariff.

**5.2** Each Participating TO and Approved Project Sponsor will develop, in accordance with Section 6 of this Schedule 3, a Regional Transmission Revenue Requirement (RTRR PTO) consisting of a Transmission Revenue Requirement for (i) Regional Transmission Facilities; (2) Transmission Facilities that are not yet in operation but have been approved under Section 24 and assigned to the Approved Project Sponsor, that will be Regional Transmission Facilities when placed under the CAISO's Operational Control; and (iii) to the extent the costs have not been recovered, Location Constrained Interconnection Facilities. The RTRR PTO includes the TRBA adjustment described in Section 6.1 of this Schedule 3. If an Approved Project Sponsor that is a Non-Load-Serving Participating Transmission Owner has been assigned responsibility to construct and own a Local Transmission Facility because the CAISO concluded, pursuant to Section 24.4.10, that it was not reasonable to divide construction responsibility, the Approved Project Sponsor shall include any authorized pre-operational cost recovery for the Local Transmission Facility in its Local Transmission Revenue Requirement. The division of the total revenue requirement associated with the facility between Regional and Local Transmission Revenue Requirements shall be consistent with Appendix F, Schedule 3, Sections 11 and 12.

**5.3** The Gross Load amount in MWh shall be established by each Participating TO and filed at FERC with each Participating TO's Transmission Revenue Requirement (GLPTO).

**5.4** The Regional Access Charge shall be equal to the sum of the Regional Transmission Revenue Requirements of all Participating TOs and Approved Project Sponsors, divided by the sum of the Gross Loads of all Participating TOs.

**6 Regional Transmission Revenue Requirement.**

**6.1** The Regional Transmission Revenue Requirement of a Participating TO or an Approved Project Sponsor will be determined consistent with CAISO procedures posted on the CAISO Website and shall be the sum of:

(a) the Participating TO's Regional Transmission Revenue Requirement (including costs related to Existing Contracts associated with transmission by others and deducting transmission revenues actually expected to be received by the Participating TO related to transmission for others in accordance with Existing Contracts and Interregional Transmission Projects, less the sum of the Standby Transmission Revenues) or the Approved Project Sponsors Regional Transmission Revenue Requirement; and

(b) the annual Regional TRBA adjustment, which shall be based on the principal balance in the Regional TRBA as of September 30 and shall be calculated as a dollar amount based on the projected Transmission Revenue Credits as adjusted for the true up of the prior year's difference between projected and actual credits. A Non-Load-Serving Participating TO shall include any over- or under-recovery of its annual Regional Transmission Revenue Requirement in its Regional TRBA. If the annual Regional TRBA adjustment involves only a partial year of operations, the Non-Load-Serving Participating TO's over- or under-recovery shall be based on a partial year revenue requirement, calculated by multiplying the Non-Load-Serving Participating TO's Regional Transmission Revenue Requirement by the number of days the Regional Transmission Facilities were under the CAISO's Operational Control divided by the number of days in the year. An Approved Project Sponsor shall include any over- or under-recovery of its annual Regional Transmission Revenue Requirement in its Regional TRBA. If the annual Regional TRBA adjustment involves only a partial year, the Approved Project Sponsor's over- or under-recovery shall be based on a partial year revenue requirement, calculated by multiplying the Approved Project Sponsor's Regional Transmission Revenue Requirement by the number of days the transmission facilities were under construction based on the construction plan required in accordance with Section 24.6.1, as such plan may be updated by the construction plan status report, divided by the number of days in the year.

## 7 Determination of and Updates to the Non-Subscriber Usage Rate

**7.1** Each Subscriber Participating TO shall develop a Non-Subscriber Usage Rate in accordance with its TO Tariff, including a $/MWh charge that will be no greater than the applicable Regional

Access Charge rate at the time the Subscriber Participating TO files its Non-Subscriber Usage Rate for approval by FERC.

**7.2** If the applicable Regional Access Charge rate later decreases below the $/MWh charge contained in a Subscriber Participating TO's FERC-approved Non-Subscriber Usage Rate, the CAISO will limit the disbursement of revenues pursuant to Section 15 of this Schedule 3 to the applicable Regional Access Charge rate until the Subscriber Participating TO refiles its Non-Subscriber Usage Rate to be no greater than the applicable Regional Access Charge rate.

**8 Updates to Regional Access Charges.**

**8.1** Regional Access Charges and Regional Wheeling Access Charges shall be adjusted: (1) on January 1 and July 1 of each year when necessary to reflect the addition of any New Participating TO and (2) on the date FERC makes effective a change to the Regional Transmission Revenue Requirements of any Participating TO or Approved Project Sponsor. Using the Regional Transmission Revenue Requirement accepted or authorized by FERC, consistent with Section 9 of this Schedule 3, for each Participating TO and Approved Project Sponsor, the CAISO will recalculate on a monthly basis the Regional Access Charge applicable during such period. Revisions to the Transmission Revenue Balancing Account adjustment shall be made effective annually on January 1 based on the principal balance in the TRBA as of September 30 of the prior year and a forecast of Transmission Revenue Credits for the next year. If a Subscriber Participating TO joins the CAISO, the Non-Subscriber Usage Payment Amount will be adjusted in accordance with Section 8.4 of this Schedule 3. The CAISO will not adjust or recalculate Regional Access Charges or Regional Wheeling Access Charges to account for FERC-approved Non-Subscriber Usage Rates.

**8.2** Any refund associated with a Participating TO's or Approved Project Sponsor's Transmission Revenue Requirement that has been accepted by FERC, subject to refund, shall be provided as ordered by FERC. Such refund shall be invoiced in the CAISO Market Invoice.

**8.3** If the Participating TO withdraws one or more of its transmission facilities from the CAISO

Operational Control in accordance with Section 3.4 of the Transmission Control Agreement, then the CAISO will no longer collect the TRR for that transmission facility through the CAISO's Access Charge effective upon the date the transmission facility is no longer under the Operational Control of the CAISO. The withdrawing Participating TO shall be obligated to provide the CAISO with all necessary information to implement the withdrawal of the Participating TO's transmission facilities and to make any necessary filings at FERC to revise its TRR. The CAISO shall revise its transmission Access Charge to reflect the withdrawal of one or more transmission facilities from CAISO Operational Control.

**8.4** After receiving notice of a change to the Non-Subscriber Usage Rates of any Subscriber Participating TO, the CAISO will recalculate on a monthly basis the Non-Subscriber Usage Payment Amount, if necessary, as of the date on which FERC makes effective a change to the Non-Subscriber Usage Rates.

**9 Approval of Updated Regional Revenue Requirements.**

**9.1** Participating TOs and Approved Project Sponsors will make the appropriate filings at FERC to establish their Transmission Revenue Requirements for their Local Access Charges and the Regional Access Charge, and to obtain approval of any changes thereto. All such filings with the FERC will include a separate appendix that states the RTRR, LTRR (if applicable) and the appropriate Gross Load data and other information required by the FERC to support the Access Charges. The Participating TO or Approved Project Sponsor will provide a copy of its filing to the CAISO and the other Participating TOs and Approved Project Sponsors in accordance with the notice provisions in the Transmission Control Agreement.

**9.2** Federal power marketing agencies whose transmission facilities are under CAISO Operational Control shall develop their Regional Transmission Revenue Requirements pursuant to applicable federal laws and regulations, including filing with FERC. All such filings with FERC will include a separate appendix that states the RTRR, LTRR (if applicable) and the appropriate Gross Load data and other information required by the FERC to support the Access Charges. The procedures for public participation in a federal power marketing agency's ratemaking process shall be posted on the federal power marketing agency's website. The federal power marketing

agency shall also post on the website the Federal Register Notices and FERC orders for rate making processes that impact the federal power marketing agency's Regional Transmission Revenue Requirement. The Participating TO will provide a copy of its filing to the CAISO and the other Participating TOs in accordance with the notice provisions in the Transmission Control Agreement.

**9.3** Subscriber Participating TOs will make the appropriate filings at FERC to establish their $/MWh Non-Subscriber Usage Rates, and to obtain approval of any changes thereto. All such filings with FERC will include a separate appendix that states the Non-Subscriber Usage Rate and other information required by the FERC to support the Non-Subscriber Usage Rate. The Subscriber Participating TO will provide a copy of its filing to the CAISO and the other Participating TOs and Approved Project Sponsors in accordance with the notice provisions in the Transmission Control Agreement.

**10 Disbursement of Regional Access Charge Revenues.**

**10.1** Regional Access Charge revenues shall be calculated for disbursement to each Participating TO, Approved Project Sponsor, and Subscriber Participating TO on a monthly basis as follows:

(a) the amount determined in accordance with Section 26.1.2 of the CAISO Tariff ("Billed RAC").

(b)

(i) for a Participating TO that is a UDC or MSS Operator and has Gross Load in its TO Tariff in accordance with Appendix F, Schedule 3, Section 9, then calculate the amount each UDC or MSS Operator would have paid and the Participating TO would have received by multiplying the Regional Utility-Specific Rates for the Participating TO whose Regional Transmission Facilities served such UDC and MSS Operator times the actual Gross Load of such UDCs and MSS Operators;

(ii) for a Non-Load-Serving Participating TO and Approved Project Sponsors, then calculate the Non-Load-Serving Participating TO's or Approved Project Sponsor's portion of the total Billed RAC in subsection (a) based on the ratio of the Non-Load-Serving Participating TO's and Approved Project Sponsors

Regional Transmission Revenue Requirement to the sum of all Participating TOs' and Approved Project Sponsor's Regional Revenue Requirements; or

(iii) for a Subscriber Participating TO, then calculate the Subscriber Participating TO's portion of the total Billed RAC in subsection (a) based on the absolute value of MWh, in each direction, of Non-Subscriber usage on the Subscriber Participating TO's transmission assets and Entitlements and Subscriber Encumbrances used to provide Subscriber Rights, pursuant to Section 15 of this Schedule 3 of Appendix F.

(c) if the total Billed RAC in subsection (a) received by the CAISO less the total dollar amounts calculated in subsection (b)(i), subsection (b)(ii), and subsection (b)(iii) is different from zero, the CAISO shall allocate the positive or negative difference among those Participating TOs that are subject to the calculations in subsection (b)(i) based on the ratio of each Participating TO's Regional Transmission Revenue Requirement to the sum of all of those Participating TOs' Regional Transmission Revenue Requirements that are subject to the calculations in subsection (b)(i). This monthly distribution amount is the "RAC Revenue Adjustment."

(d) the sum of the RAC revenue share determined in subsection (b) and the RAC Revenue Adjustment in subsection (c) will be the monthly disbursement to the Participating TO.

**10.2** If the same entity is both a Participating TO and a UDC or MSS Operator, then the monthly Regional Access Charge amount billed by the CAISO will be the charges payable by the UDC or MSS Operator in accordance with Section 26.1.2 of the CAISO Tariff less the disbursement determined in accordance with Section 10.1(d) of this Schedule 3. If this difference is negative, that amount will be paid by the CAISO to the Participating TO.

**11 Determination of Transmission Revenue Requirement Allocation Between Regional and Local Transmission Facilities.**

**11.1** Each Participating TO shall allocate its Transmission Revenue Requirement between the Regional Transmission Revenue Requirement and Local Transmission Revenue Requirement based on the Procedure for Division of Certain Costs Between the Regional and Local

Transmission Access Charges contained in Section 12 of this Schedule.

**12 Procedure for Division of Certain Costs Between the Regional and Local Transmission Access Charges.**

**12.1** Division of Costs:

(a) Substations

Costs for substations and substation equipment, including transformers:

(i) If the Participating TO has substation TRR information by facility and voltage, then the TRR for facilities and equipment at or above 200 kV should be allocated to the RTRR and the TRR for facilities and equipment below 200 kV should be allocated to the LTRR;

(ii) If the Participating TO has substation TRR information by facility but not by voltage, then the TRR for facilities and equipment should be allocated to the RTRR and to the LTRR based on the ratio of gross substation investment allocated to RTRR to gross substation investment allocated to LTRR pursuant to Section 12.1(a)(i); or

(iii) If the Participating TO does not have substation TRR information by facility or voltage, then the TRR for facilities and equipment should be allocated to the RTRR and to the LTRR based on the Participating TO's transmission system-wide gross plant ratio. The system-wide gross plant ratio is determined once the costs that can be split between Regional Transmission Facilities and Local Transmission Facilities for all facilities has been developed in accordance with Sections 12.1(a) through (c), then the resulting cost ratio between Regional Transmission Facilities and Local Transmission Facilities shall be used as the system-wide gross plant ratio.

(iv) Costs of transformers that step down from Regional Transmission Facility to a Local Transmission Facility, to the extent the Participating TO does not have the revenue requirement information available to allocate the costs, should be allocated consistent with the procedures for substations addressed above.

(b) Transmission Towers and Land with Circuits on Multiple Voltages

For transmission towers that carry both Regional Transmission Facilities and Local Transmission Facilities on the same tower, the cost of these assets should be allocated two-thirds to the RTRR and one-third to the LTRR. If the transmission tower has only Regional Transmission Facilities, then the costs of these assets should be allocated entirely to the RTRR. If the transmission tower has only Local Transmission Facilities, then the TRR of these assets should be allocated entirely to the LTRR. Provided that the Participating TO does not have land cost information available on a basis that distinguishes the Local and Regional Transmission Facilities, in which case the costs should be allocated on that basis, the costs for land used for transmission rights-of-way for towers that carry both Local and Regional Transmission Facilities should be allocated two-thirds to the RTRR component and one-third to the LTRR.

(c) Operation and Maintenance, Transmission Wages & Salaries, Taxes, Depreciation and Amortization, and Capital Costs

If the Participating TO can delineate costs for transmission operations and maintenance (O&M), transmission wages and salaries, taxes, depreciation and amortization, or capital costs on a voltage basis, the costs shall be applied on a bright-line voltage basis. If the costs for O&M, transmission wages and salaries, taxes, depreciation and amortization, or capital costs, are not available on voltage levels, the allocation to the RTRR and the LTRR should be based on the Participating TO's system-wide gross plant ratio defined in Section 12.1(a).

(d) Existing Transmission Contracts

If the Take-Out Point for the Existing Contract is a Regional Transmission Facility, the Existing Contract revenue will be credited to the RTRR of the Participating TO receiving such revenue. Similarly, the Participating TO that is paying charges under such an Existing Contract may include the costs in its RTRR. If the Take-Out Point for the Existing Contract is a Local Transmission Facility, the Existing Contract revenue will be credited to the RTRR and the LTRR of the receiving Participating TO based on the ratio of the Participating TO's RTRR to its LTRR, prior to any adjustments for such revenues. The Participating TO that is paying the charges under the Existing Contract will include the costs in its RTRR and LTRR in the same ratio as the revenues are recognized by the Participating TO receiving the payments.

(e) Division of the TRBA Adjustment between RTRR and LTRR

(i) Wheeling revenues associated with transactions exiting the CAISO Controlled Grid at Scheduling Points or Take-Out Points that are at Regional Transmission Facilities shall be reflected as Regional TRBA adjustment components;

(ii) Wheeling revenues associated with transactions exiting the CAISO Controlled Grid at Scheduling Points or Take-Out Points that are at Local Transmission Facilities shall be attributed between Regional and Local TRBA adjustment components based on the Regional and Local Wheeling Access Charge rates assessed to such transactions by the CAISO and/or the Participating TO;

(iii) Any Local Access Charge amounts paid pursuant to Section 26.1 of the CAISO Tariff for the Local Transmission Facilities of a Non-Load-Serving Participating TO shall be reflected as a component of the Local TRBA adjustment associated with the Local Access Charge;

(iv) CRR revenues from CRRs allocated to Participating TOs shall be assigned to Regional or Local TRBA adjustment components based on whether the path related to the CRR is Regional or Local; and,

(v) Other Transmission Revenue Credits shall be allocated between Regional and Local TRBA adjustment components on a gross plant basis.

**13 Local Access Charge for a Non-Load-Serving Participating TO. Pursuant to Section 26.1 of the CAISO Tariff, the provisions of this Section 13 of this Schedule 3 shall apply to a Non-Load-Serving Participating TO that has Local Transmission Facilities.**

**13.1 Local Transmission Revenue Requirement.** The Local Transmission Revenue Requirement of a Non-Load-Serving Participating TO shall be calculated separately for each individual project that includes one or more Local Transmission Facilities or shall be calculated for a group of Local Transmission Facilities if all are part of projects directly connected to the facilities of the same Participating TO(s). The Local Transmission Revenue Requirement will be determined consistent with CAISO procedures posted on the CAISO Website and shall be the sum of:

(a) the Non-Load-Serving Participating TO's Local Transmission Revenue Requirement for the relevant Local Transmission Facility or group of facilities; and

(b) the annual Local TRBA adjustment for the relevant Local Transmission Facility or group of facilities, which shall be based on the principal balance in the Local TRBA as of September 30 and shall be calculated as a dollar amount based on the projected

Transmission Revenue Credits as adjusted for the true up of the prior year's difference between projected and actual credits. In accordance with Section 26.1 of the CAISO Tariff, the Non-Load-Serving Participating TO shall include any over- or under-recovery of its annual Local Transmission Revenue Requirement in its Local TRBA. If the annual Local TRBA adjustment involves only a partial year of operations, the Non-Load-Serving Participating TO's over- or under-recovery shall be based on a partial year revenue requirement, calculated by multiplying the Non-Load-Serving Participating TO's Local Transmission Revenue Requirement by the number of days the Local Transmission Facilities were under the CAISO's Operational Control divided by the number of days in the year.

**13.2 Updates to Local Access Charges.** Unless otherwise agreed by the affected Participating TOs, a Non-Load-Serving Participating TO shall adjust its Local Access Charges and Local Wheeling Access Charges (1) when necessary to reflect any new transmission addition directly connecting a Participating TO to the Local Transmission Facilities of the Non-Load-Serving Participating TO; (2) on the date FERC makes effective a change to the Local Transmission Revenue Requirement of the Non-Load-Serving Participating TO; and (3) on the date FERC makes effective a change to Gross Load of a Participating TO directly connected to the Non-Load-Serving Participating TO. Using the Local Transmission Revenue Requirement accepted or authorized by FERC, consistent with Section 9 of this Schedule 3, for the Non-Load-Serving Participating TO, the CAISO will recalculate the Local Access Charge applicable during such period. Revisions to the Local TRBA adjustment shall be made effective annually on January 1 based on the principal balance in the Local TRBA as of September 30 of the prior year and a forecast of Transmission Revenue Credits for the next year.

For service provided by a Non-Load-Serving Participating TO, any refund associated with a Non-Load-Serving Participating TO’s Transmission Revenue Requirement that has been accepted by FERC, subject to refund, shall be provided as ordered by FERC. Such refund shall be invoiced in the CAISO

Market Invoice.

If the Non-Load-Serving Participating TO withdraws one or more of its transmission facilities from the CAISO Operational Control in accordance with Section 3.4 of the Transmission Control Agreement, then the CAISO will no longer collect the TRR for that transmission facility through the CAISO's Access Charge effective upon the date the transmission facility is no longer under the Operational Control of the CAISO. The withdrawing Non-Load-Serving Participating TO shall be obligated to provide the CAISO will all necessary information to implement the withdrawal of the Participating TO's transmission facilities and to make any necessary filings at FERC to revise its TRR. The CAISO shall revise its transmission Access Charge to reflect the withdrawal of one or more transmission facilities from CAISO Operational Control.

**13.3 Approval of Updated Local Transmission Revenue Requirement.** A Non-Load-Serving Participating TO will make the appropriate filings at FERC to establish its Transmission Revenue Requirement for its Local Access Charge, and to obtain approval of any changes thereto. All such filings with the FERC will include a separate appendix that states the LTRR and other information required by the FERC to support the Local Access Charge. The Non-Load-Serving Participating TO will provide a copy of its filing to the CAISO and the other Participating TOs in accordance with the notice provisions in the Transmission Control Agreement.

Federal power marketing agencies whose transmission facilities are under CAISO Operational Control shall develop their Local Transmission Revenue Requirements pursuant to applicable federal laws and regulations, including filing with FERC. All such filings with FERC will include a separate appendix that states the LTRR and other information required by the FERC to support the Access Charges. The procedures for public participation in a federal power marketing agency's ratemaking process shall be posted on the federal power marketing agency's website. The federal power marketing agency shall also post on the website the Federal Register Notices and FERC orders for rate making processes that impact the federal power marketing agency's Local Transmission Revenue Requirement.

**13.4 Disbursement of Local Access Charge Revenues.** Unless otherwise agreed by the affected Participating TOs, Local Access Charge revenues of a Non-Load-Serving Participating TO shall be calculated for disbursement to that Non-Load-Serving Participating TO on a monthly basis as the sum of Local Access Charges billed by the CAISO to the UDCs or MSS Operators of

Participating TOs pursuant to Section 26.1 of the CAISO Tariff.

**13.5 Payment of Local Access Charge.** Notwithstanding the separate accounting for the Local Access Charge specified in Section 26.1 of the CAISO Tariff and this Section 13 of this Schedule 3, if the same entity is both a Participating TO and a UDC or MSS Operator, then the monthly Regional Access Charge amount, and any Local Access Charge amount pursuant to this Section 13 of this Schedule 3, billed by the CAISO will be the charges payable by the UDC or MSS Operator in accordance with Sections 26.1.2 and 26.1 of the CAISO Tariff less the disbursement determined in accordance with Section 10.1(d) of this Schedule 3. If this difference is negative, that amount will be paid by the CAISO to the Participating TO.

**14 Wheeling Access Charges.**

**14.1 CAISO Charges on Scheduling Coordinators for Wheeling.** The CAISO will charge Scheduling Coordinators for a Wheeling Out or a Wheeling Through transaction the product of the Wheeling Access Charge and the total of the hourly Schedules or awards of Wheeling in MWh for each Trading Interval at each Scheduling Point associated with that transaction pursuant to Section 26.1.4 of the CAISO Tariff.

**14.2 Wheeling Access Charge.** The Wheeling Access Charge for each Participating TO shall be as specified in Section 26.1.4 of the CAISO Tariff.

**14.3 CAISO Payments to Transmission Owners for Wheeling.** The CAISO will pay all Wheeling revenues to Participating TOs on the basis of the ratio of each Participating TO's Transmission Revenue Requirement (less the TRR associated with Existing Rights and Interregional Transmission Projects) to the sum of all Participating TOs' TRRs (less the TRRs associated with Existing Rights and Interregional Transmission Projects) as specified in Section 26.1.4.3 of the CAISO Tariff and in the applicable Business Practice Manual. The Local Wheeling Access Charge shall be disbursed to the appropriate Participating TO in accordance with the applicable Business Practice Manual.

**14.4 Weighted Average Rate for Wheeling Service.** The weighted average rate payable for Wheeling over joint facilities at each Scheduling Point shall be calculated as the sum of the

applicable Wheeling Access Charge rates for each applicable TAC Area or Participating TO as these rates are weighted by the ratio of the Available Transfer Capability for each Participating TO that is not a Subscriber Participating TO at the particular Scheduling Point to the total Available Transfer Capability for the Scheduling Point. The calculation of this rate is set forth in more detail in the applicable Business Practice Manual.

**15 Payments by Non-Subscribers for Use of Subscriber Participating TO Facilities.**

**15.1 Subscriber Participating TO Facilities Used to Provide Subscriber Rights.**

(a) **Provision of Non-Subscriber Usage Payment Amounts.** The CAISO will provide Non-Subscriber Usage Payment Amounts to a Subscriber Participating TO for Non-Subscriber use of the Subscriber Participating TO's transmission assets and Entitlements and Subscriber Encumbrances used to provide Subscriber Rights each month. The Non-Subscriber Usage Payment Amounts will be funded first by using Wheeling Access Charge revenue received by the CAISO pursuant to this Section 15.1(a) of Schedule 3 and, if the Wheeling Access Charge revenue is insufficient to fully pay the Non-Subscriber Usage Payment Amounts, second by using Access Charge revenue received by the CAISO. Each Non-Subscriber Usage Payment Amount equals (i) the applicable Non-Subscriber Usage Rate, not to exceed the applicable Regional Access Charge rate, multiplied by (ii) the sum of the absolute value of the MWh flow of a Non-Subscriber's imports at the applicable Scheduling Point plus the sum of the absolute value of the MWh flow of a Non-Subscriber's exports at the applicable Scheduling Point. If any Subscriber Participating TO's Non-Subscriber Usage Rate exceeds the then-applicable Regional Access Charge rate, that Subscriber Participating TO will promptly file for FERC acceptance of an update to its Non-Subscriber Usage Rate so it is no greater than the decreased applicable Regional Access Charge rate and will propose that the decreased $/MWh charge become effective as of the same date the decreased applicable Regional Access Charge rate went into effect. The CAISO will limit the disbursement of the Non-Subscriber Usage Payment Amounts to a maximum rate of the applicable Regional Access Charge as of the date the FERC-approved decreased Non-Subscriber Usage

Rate is made effective.

(b) **Treatment of Excess Amounts.** For each month and Subscriber Participating TO,

(i) If the total Regional Access Charge and Wheeling Access Charge revenue received by the CAISO pursuant to this Section 15.1 of Schedule 3 exceeds the total calculated Non-Subscriber Usage Payment Amounts, then the excess amount will be added back to the RAC for allocation to the other Participating TOs besides the Subscriber Participating TO.

**15.2 Subscriber Participating TO Facilities Not Used to Provide Subscriber Rights.** Each Non-Subscriber that uses Subscriber Participating TO transmission assets, Entitlements, or Subscriber Encumbrances other than those used to provide Subscriber Rights will pay for such use pursuant to the applicable provisions of the CAISO Tariff rather than this Section 15.1 of Schedule 3.

## Schedule 4

## Eligible Intermittent Resources Forecast Fee

A charge up to $.10 per MWh shall be assessed on the metered Energy from (a) Eligible Intermittent Resources; (b) Variable Energy Resources that are EIM Participating Resources; and (c) the variable component of Hybrid Resources as a Forecast Fee, provided that Generating Units smaller than 10 MW that are not Participating Intermittent Resources and that sell power pursuant to a power purchase agreement entered into pursuant to PURPA prior to entering into a PGA or Net Scheduled PGA shall be exempt from the Forecast Fee.

The rate of the Forecast Fee shall be determined so as to recover the projected annual costs related to developing Energy forecasting systems, generating forecasts, validating forecasts, and monitoring forecast performance, that are incurred by the CAISO as a direct result of participation by Eligible Intermittent Resources, Variable Energy Resources that are EIM Participating Resources, and the variable component of Hybrid Resources in CAISO Markets, divided by their projected annual Energy production.

The initial Forecast Fee, and all subsequent changes as may be necessary from time to time to recover costs incurred by the CAISO for the forecasting conducted on the behalf of Eligible Intermittent Resources, Variable Energy Resources that are EIM Participating Resources, and the variable component of Hybrid Resources pursuant to the foregoing rate formula, shall be set forth in a Business Practice Manual.

**Schedule 5**

**[NOT USED]**

## Schedule 6

## CPM SCHEDULES FOR CPM DESIGNATIONS UNDER SECTION 43A

### Monthly CPM Capacity Payment

The monthly CPM Capacity Payment shall be calculated in accordance with Section 43A.7.1.

### Availability

The target availability for a resource designated under CPM is 95%. Incentives and penalties for availability above and below the target are as set forth in the table below, entitled "Availability Factor Table." The CAISO shall calculate availability on a monthly basis using actual availability data. The CPM Availability Factor for Forced Outages for each month shall be calculated using the following curve:

### AVAILABILITY FACTOR TABLE

| Availability | Capacity Payment Factor | CPM Availability Factor |
|---|---|---|
| 100% | 3.3% | 1.1.39 |
| 99% | 3.3% | 1.106 |
| 98% | 3.3% | 1.073 |
| 97% | 2.5% | 1.040 |
| 96% | 1.5% | 1.015 |
| 95% | - | 1.000 |
| 94% | - 1.5% | .985 |
| 93% | -1.5% | .970 |
| 92% | -1.5% | .955 |
| 91% | -1.5% | .940 |
| 90% | -1.5% | .925 |
| 89-80% | -1.7%* | .908-.755 |
| 79-41% | -1.9%* | .736-.014 |
| -40% | - | 0.0 |

*The "Capacity Payment Factor" decreases by 1.7% and 1.9% respectively for every 1% decrease in availability.

The CPM Capacity Payment shall be adjusted upward from the 95% availability starting point by the positive percentages listed as the "Capacity Payment Factor" above, by multiplication by the amounts listed for each CPM Availability Factor above 95%, so that, for example, if a 97% availability is achieved for the month, then the CPM Capacity Payment for that month would be the monthly value for 95% plus an additional 4% (1.5% for the first percent availability above 95%, and 2.5% for the second percent availability above 95%), i.e., multiplication of the otherwise applicable CPM Capacity Payment by the CPM Availability Factor of 1.040. Reductions in the CPM Capacity Payment shall be made correspondingly according to the "Capacity Payment Factor" above for monthly availability levels falling short of the 95% availability starting point, by multiplication by the amounts listed for each CPM Availability Factor below 95%.

## Schedule 7

## Reliability Coordinator Services Charge

The Reliability Coordinator Services Charge shall be based on the RC Funding Requirement. The RC Funding Requirement will consist of the annual costs associated with the CAISO's provision of Reliability Coordinator Services, including the annual costs associated with maintaining shared reliability coordinator tools such as the Western Interchange Tool and the Enhanced Curtailment Calculator. The CAISO will determine the RC Funding Requirement based on the percentage of its overall revenue requirement attributable to the cost of providing RC Services. This percentage, known as the RC Funding Percentage, will initially be determined by assessing the costs associated with providing RC Services, using data from the CAISO's 2016 cost-of-service study modified to reflect the assessed RC Services costs, and based on the expected number of customers that will have committed to take RC Services by the RC Services Dates provided in Section 19.2(b)(6). This percentage will be updated in conjunction with the triennial cost-of-service study conducted by the CAISO as described in Schedule 1, Part A of this Appendix F. The RC Funding Requirement will be calculated, on an annual basis, as the product of this percentage multiplied by the annual revenue requirement for the same year.

The RC Funding Requirement will be developed utilizing the procedures associated with the development of the GMC revenue requirement, as set forth in Schedule 1, Part D of this Appendix F. Entities taking RC Services from the CAISO will have the opportunity to participate in that annual budget process. The RC Funding Percentage will be 8%, which will thereafter be used to calculate the annual RC Funding Requirement. The annual RC Funding Requirement will be assessed to applicable RC Customers, including Scheduling Coordinators that serve load in the CAISO Balancing Authority Area, in proportion to the Net Energy for Load or Net Generation for the period during which this rate is in effect.

The RC Funding Requirement will be treated as a component of the revenue in the CAISO Other Costs and Revenues category, for purposes of calculating the costs recovered through the GMC, as set forth in Schedule 1, Part C of this Appendix F.

The annual RC rate per MWh is calculated by taking the annual RC Funding Requirement less the known minimum RC Services Charge for the applicable year divided by the sum of 1) the annual Net Energy for Load MWh for all Balancing Authorities with load and Transmission Operators and 2) the annual Net Generation MWh for all generators connected to generation-only Balancing Authorities and Transmission Operators that the CAISO anticipates will take RC Services for the applicable year. The rates for the RC Services Charge shall be adjusted each year, effective January 1.

The annual RC Services Charge for each RC Customer will be calculated as follows**:**

- For RC Customers that that are, or are located in, generation-only Balancing Authorities, multiplying the annual RC Services Charge rate by the total Net Generation in MWh as determined in accordance with Section 19.6. The RC Services Charge for such RC Customers that are Balancing Authorities shall be calculated by removing any total Net Generation associated with Transmission Operators within such Balancing Authorities that have elected to receive direct billing of RC Services from the CAISO.

- For RC Customers that are, or are located in, Balancing Authority Areas with load, multiplying the annual RC Services Charge rate by the total Net Energy for Load in MWh as determined in accordance with Section 19.6 of the CAISO Tariff. The RC Services Charge for such RC Customers that are Balancing Authorities shall be calculated by removing any total Net Energy for Load associated with transmission operators within such Balancing Authorities that have elected to receive direct billing of RC Services from the CAISO.

- For RC Customers that are located in the CAISO's Balancing Authority Area and Scheduling Coordinators that serve load in the CAISO Balancing Authority Area, multiplying the annual RC Services Charge rate by the RC Customer's share of the total NERC/WECC Metered

Demand in MWh for the CAISO Balancing Authority Area determined in accordance with Section 11.20.9.

- There will be a minimum annual RC Services Charge of $5,000. This charge will be applied to RC Customers that either have no Net Energy for Load or Net Generation for a particular period as set forth in Section 19.6 of the CAISO Tariff, as well as RC Customers whose annual RC Services Charge, as calculated in accordance with this Schedule 7, would otherwise be less than $5,000.

- For RC Customers that take RC Services for less than a full year in either the initial or final year of participation, the annual RC Services Charge will be pro-rated according to the period that the RC Customer takes service during such year, rounded up to the nearest month.

Any excess or shortfall in the RC Services Charge collected as compared to the RC Funding Requirement for a particular year will be credited or debited, as applicable, to the CAISO Operating Reserve Account.

**Appendix G**

**Pro Forma Reliability Must-Run Contract**

## MUST-RUN SERVICE AGREEMENT

THIS MUST-RUN SERVICE AGREEMENT is made as of the ___ day of _____, 20___, between _____, a [corporation/limited liability company/municipal corporation] organized under the laws of the State of _____ (the "Owner"), and the CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION, a nonprofit public benefit corporation incorporated under the laws of the State of California (the "CAISO").

RECITALS

A. Owner is the owner or lessee of, or is otherwise entitled to dispatch and market the Energy, Ancillary Services, Black Start, and other reliability services produced from and provided by, the electrical generating Units located at the Facility described in Schedule A to this Agreement;

B. Under Section 345 of the California Public Utilities Code, CAISO is responsible for the efficient use and reliable operation of the CAISO Controlled Grid;

C. CAISO has determined that it needs the ability to dispatch Units under the terms and conditions of this Agreement to have Owner deliver Energy into or provide Ancillary Services, Black Start, or other reliability services to the CAISO Controlled Grid when required by CAISO to ensure the reliability of the CAISO Controlled Grid; and

D. Each Unit covered by this Agreement has been designated as a Reliability Must-Run Unit.

In consideration of the covenants and agreements contained in this Agreement, the Parties agree as follows:

### ARTICLE 1

### DEFINITIONS

Terms, when used with initial capitalization in this Agreement and the attached schedules shall have the meanings set out below. The singular shall include the plural and vice versa. "Includes" or "including" shall mean "including without limitation." References to a section, article or schedule shall mean a section, article or schedule of this Agreement, unless another agreement or instrument is specified. Unless the context otherwise requires, references to any law shall be deemed references to such law as amended, replaced or restated from time to time. Unless the context otherwise requires, any reference to a "person" includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having separate legal identity. References to "Owner" or "CAISO" shall, unless the context otherwise requires, mean Owner and CAISO respectively and their permitted assigns and successors. References to sections or provisions of the CAISO Tariff include any succeeding sections or provisions of the CAISO Tariff.

**"ADR"** means alternative dispute resolution pursuant to Section 11.1 and Schedule K.

**"Agreement"** means this Must-Run Service Agreement, including schedules, as amended from time to time.

**"Ancillary Services"** is defined in Appendix A to the CAISO Tariff.

**"Applicable UDC Tariff"** means the applicable retail tariff(s), of the utility distribution company in whose service territory the Unit is located, under which the Unit is eligible to purchase power to meet its auxiliary power requirements, whether or not the Unit actually purchases auxiliary power under the tariff(s). The Applicable UDC Tariff for the Facility is set out on Schedule A.

**"Black Start"** is defined in Appendix A to the CAISO Tariff.

**"BPM"** is defined in Appendix A to the CAISO Tariff.

**"Business Day"** is defined in Appendix A to the CAISO Tariff.

**"CAISO Controlled Grid"** is defined in Appendix A to the CAISO Tariff.

**"CAISO's Repair Share"** is defined in Section 7.5 (g).

**"CAISO Tariff"** means the California Independent System Operator Tariff on file with FERC and in effect from time to time.

**"CPUC"** means the California Public Utilities Commission, or its successor.

**"Capital Item"** means an addition or modification to, change in or repair, replacement or renewal of plant, equipment or facilities used by Owner to fulfill Owner's obligations under this Agreement. A Capital Item does not include Repairs to such plant, equipment or facilities. A Capital Item does not include an Upgrade, unless recovery of costs of the Upgrade has been approved by CAISO. For purposes of this Agreement, Capital Items are "retirement units" or other items the costs of which are properly capitalized in accordance with the FERC Uniform System of Accounts, 18 C.F.R. Part 101.

**"Closed"** is defined in Section 2.5.

**"Commitment Costs"** is defined Appendix A to the CAISO Tariff.

**"Confidential Information"** is defined in Section 12.5.

**"Contract Year"** means a calendar year; provided, however, that the initial Contract Year shall commence on the Effective Date and expire at the end of the calendar year in which the Effective Date occurred. If the Agreement terminates during a calendar year, the last Contract Year shall end on the termination date.

**"Daily Availability Payment"** is defined in Schedule B.

**"Daily Payment"** is defined in Schedule B.

**"Day-Ahead Schedule"** is defined in Appendix A to the CAISO Tariff.

**"Delivery Point"** means the point identified in Section 4 of Schedule A where Energy and Ancillary Services are to be delivered.

**"Direct Contract"** means a contract between Owner and one or more identified persons for the sale of Energy or Ancillary Services other than under this Agreement, and shall in no event include a transaction in a market run by CAISO.

**"Distribution Grid"** means the radial lines, distribution lines and other facilities used to transmit or distribute Energy from the Facility other than the CAISO Controlled Grid.

**"Effective Date"** means the date this Agreement becomes effective pursuant to Section 2.1 thereof.

**"Energy"** means electrical energy.

**"Energy Bid"** is defined in Appendix A to the CAISO Tariff.

**"Exceptional Dispatch"** is defined in Appendix A to the CAISO Tariff.

**"Facility"** means the electrical generating facility described in Schedule A. A hydroelectric facility may include one or more electric generating facilities which are hydraulically linked by a common water system.

**"FERC"** means the Federal Energy Regulatory Commission, any successor agency, or any other agency to whom authority under the Federal Power Act affecting this Agreement has been delegated.

**"Financing Agreement"** means agreements for financing the Facility or any portion of the Facility.

**"Force Majeure Event"** means any occurrence beyond the reasonable control of a Party which causes the Party to be unable to perform an obligation under this Agreement in whole or in part and which could not have been avoided by the exercise of Good Industry Practice. Force Majeure Event includes an act of God, war, civil disturbance, riot, strike or other labor dispute, acts or failures to act of Governmental Authority, fire, explosion, flood, earthquake, storm, drought, lightning and other natural catastrophes. A Force Majeure Event shall not include lack of finances or the price of fossil fuel.

**"Gas Price Index"** is defined in Appendix A to the CAISO Tariff.

**"Good Industry Practice"** means any of the practices, methods, and acts engaged in or approved by a significant portion of the electric power industry during the relevant time period, or any of the practices, methods, and acts which, in the exercise of reasonable judgment in the light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety, and expedition. Good Industry Practice does not require use of the optimum practice, method, or act, but only requires use of practices, methods, or acts generally accepted in the region covered by the Western Systems Coordinating Council.

**"Governmental Authority"** means the government of any nation, any state or other political subdivision thereof, including any entity exercising executive, legislative, judicial, regulatory or administrative functions of or pertaining to a government.

**"Interest Rate"** means the lesser of the rate of interest per annum calculated in accordance with 18 C.F.R. 35.19a of the FERC's Regulations or the maximum rate permitted by law.

**"Local Capacity Area"** is defined in Appendix A to the CAISO Tariff.

**"Maser File"** is defined in Appendix A to the CAISO Tariff.

**"Month"** means a calendar month.

**"Motoring Charge"** means the payment in accordance with Schedule E for the Energy required to spin a generator or condenser that is electrically connected to the CAISO Controlled Grid or Distribution Grid to provide Ancillary Services in circumstances where the generator is not producing Energy.

**"MW"** means one megawatt.

**"MWh"** means one megawatt hour.

**"Net Repair Costs"** is defined in Section 7.5(a).

**"Operating Procedures"** is defined in Appendix A to the CAISO Tariff.

**"Opportunity Costs"** as defined in Appendix A to the CAISO Tariff.

**"Owner's Repair Cost Obligation"** is an allowance for Repairs to be made during the Contract Year calculated pursuant to Section 7.5 (k). Owner's Repair Cost Obligation is set out in Section 13 of Schedule A.

**"Party"** means either CAISO or Owner, and "Parties" means CAISO and Owner.

**"PMax"** is defined in Appendix A to the CAISO Tariff.

**"Proxy Cost"** is defined in Appendix A to the CAISO Tariff.

**"Proxy Cost Methodology"** is defined in Appendix A to the CAISO Tariff.

**"Reasonable Efforts"** is defined in Appendix A to the CIAOS Tariff.

**"Repair"** means repairs or replacement required to remedy or prevent any loss or damage that impairs the capability of the Unit to Deliver Energy or Ancillary Services, the cost of which is properly treated as an expense in accordance with the FERC Uniform System of Accounts, 18 C.F.R. Part 101.

**"Repair Payment Factor"** is determined pursuant to Section 7.5(g).

**"Requested Operation Period"** means the time during which CAISO requests that a Unit Deliver Ancillary Services, Voltage Support, Black Start, or other reliability services under this Agreement, pursuant to an RMR Dispatch Notice.

**"Residual Unit Commitment,"** or **"RUC,"** is defined in Appendix A to the CAISO Tariff.

**"Response Notice"** is defined in Section 14.3(b)(ii).

**"RMR Contract Capacity"** means the PMax value reflected in Schedule A of this Agreement and maintained in the CAISO Master File.

**"RMR Dispatch"** is as defined in Appendix A to the CAISO Tariff.

**"RMR Dispatch Notice"** means a notice delivered manually by CAISO to Owner's Scheduling Coordinator on a daily, hourly, or real-time basis requesting dispatch of one or more Unit(s) to provide Ancillary Services, Voltage Support or Black Start under this Agreement.

**"RMR Invoice"** is defined Schedule C.

**"Scheduling Coordinator"** means an entity certified by CAISO for the purposes of undertaking the functions specified in Section 4.5 of the CAISO Tariff with respect to a unit.

**"Small Project Estimate"** is defined in Section 7.4 (b).

**"Termination Fee"** means amounts determined pursuant to the termination fee formula contained in Section 2.5(b).

**"Termination Fee Invoice"** is defined in Section 9.9(a).

**"Unit"** means an individual electricity generating unit which has been designated a Reliability Must-Run Unit and is part of the Facility identified in Schedule A.

**"Unplanned Capital Item Notice"** is defined in Section 7.6(b).

**"Unplanned Repair Notice"** is defined in Section 7.5(b).

**"Upgrade"** means any change or modification to the Facility that increases the nameplate capacity rating of an existing Unit or adds a new unit.

**"Variable Cost Default Energy Bid"** is defined in Appendix A to the CAISO Tariff.

**"Variable Cost Payment"** means the payment to Owner for delivery of Energy and Ancillary Services as described in Section 8.

**"Voltage Support"** is defined in Appendix A to the CAISO Tariff.

**"WECC"** is defined in Appendix A to the CAISO Tariff.

## ARTICLE 2

## TERM

**2.1 Term**

(a) This Agreement shall become effective on the later of January 31, 2020, or the date it is permitted to become effective by FERC, and shall continue in effect for one Contract Year.

(b) CAISO may extend the term of this Agreement for an additional calendar year as to one or more Unit by notice given not later than October 1 of the expiring Contract Year. CAISO may extend the term for less than a full calendar year as to one or more Unit but only if CAISO gives notice not less than 12 months prior to the date to which it proposes to extend the term.

**2.2 Termination**

(a) Subject to any necessary authorization from FERC, this Agreement may be terminated as to one or more Unit in accordance with this Section 2.2; provided, however, that if this Agreement applies to a Facility having hydroelectric Unit, this Agreement may be terminated only as to all hydroelectric Units at the Facility. If this Agreement terminates as to fewer than all Units, the Agreement shall remain in effect as to the remaining Units. If this Agreement terminates as to all Units, the Agreement shall terminate.

(b) This Agreement may be terminated as to one or more Units:

(i) by CAISO pursuant to Section 11.4 in the event of default by Owner;

(ii) by Owner pursuant to Section 11.4 in the event of default by CAISO;

(iii) by Owner pursuant to Section 7.4 (f), 7.5 (i) or 7.6 (h);

(iv) by Owner or CAISO, if the Unit is condemned by a Governmental Authority; or

(v) by Owner or CAISO, if Owner's authorization from a Governmental Authority (including, where applicable, licenses under Part I of the Federal Power Act) that is necessary to site, operate or obtain access to such Unit is terminated or expires or is reissued or modified so that it becomes illegal, uneconomical or otherwise impractical for the Owner to continue operating the Facility. Owner shall be obligated to use its best efforts to renew and keep effective its licenses and authorizations and to oppose conditions or modifications which would make continued operation illegal, uneconomical or otherwise impractical.

(c) To the extent that Owner transfers the right to control the dispatch of the Facility or Unit which right is necessary to satisfy its obligations under this Agreement, Owner shall assign this Agreement to the transferee in accordance with Section 13.1.

(d) If CAISO terminates the Agreement or does not extend the term of the Agreement as to a Unit, CAISO shall not redesignate the same Unit, or designate another non-reliability must-run unit at the same Facility, as a Reliability Must-Run Unit during the one year period following termination or expiration of the Agreement as to that Unit unless (i) CAISO demonstrates that the unit is required to maintain the reliability of the CAISO Controlled Grid or any portion thereof and the need to designate the unit as a Reliability Must-Run Unit is caused by an extended outage of a generation or transmission facility not known to CAISO at the time of the termination or expiration or (ii) the unit is selected through an CAISO competitive process in which Owner participated. For purposes of the foregoing, CAISO's need for spinning reserves, nonspinning reserves, replacement reserves or regulation as defined in the CAISO Tariff shall not be grounds for redesignating the Unit or designating another unit at the Facility as a Reliability Must-Run Unit.

(e) Subject to any necessary authorization from FERC, this Agreement shall terminate as to any Unit leased by Owner in the event that, for any reason, the lease expires or is terminated unless Owner acquires ownership of such Unit upon such expiration or termination. Any termination under this Section 2.2 (e)

shall not affect any right CAISO may have thereafter to designate such Unit as a Reliability Must-Run Unit and the conditions in Section 2.2 (d) shall not apply to such redesignation.

**2.3 Effective Date of Expiration or Termination**

If FERC authorization is required to give effect to expiration or termination of this Agreement as to one or more Units, the effective date of the expiration or termination shall be the date FERC permits the expiration or termination to become effective. Owner shall promptly file for the requisite FERC authorizations to terminate service under this Agreement as of the proposed effective date of expiration or termination; provided, that nothing in this Agreement shall prejudice the right of either Party to contest the other Party's claim that a termination or expiration has occurred. If FERC authorization is not required to terminate service under this Agreement, the effective date of expiration or termination shall be the later of (i) the date specified in CAISO or Owner's notice of termination or (ii) the date that all conditions to the termination or expiration have been satisfied.

**2.4 Effect of Expiration or Termination**

Expiration or termination of this Agreement shall not affect the accrued rights and obligations of either Party, including either Party's obligations to make all payments to the other Party pursuant to this Agreement or post-termination audit rights under Section 12.2.

**2.5 Termination Fee**

(a) CAISO shall pay Owner a Termination Fee calculated pursuant to Section 2.5 (b) if the Unit is Closed within six months after the Unit ceases to be subject to this Agreement as a result of termination pursuant to Sections 2.2 (b) (ii), (iii), (iv) or (v) or because CAISO does not extend the term under Section 2.1 (b). Within 60 days after the Unit is Closed, Owner will send CAISO a notice stating (i) the date the Unit Closed and (ii) the amount of the Termination Fee due Owner pursuant to this Section 2.5 including detailed calculations of each component of the formula in Section 2.5(b) identifying the source of each input used. For purposes of this Section, "Closed" shall mean that the Unit is not producing Energy or providing capacity and there are no Direct Contracts obligating any entity to deliver Energy or provide capacity from the Unit during the 36 month period beginning at the date the Unit Closed. A Unit shall cease to be Closed if, during the 36 month period beginning at the date the Unit Closed, any entity: (i) sells Energy or capacity; (ii) executes a Direct Contract for service or (iii) obtains a new permit from any Governmental Authority for operations, in each case that would involve use of the Capital Item for which a Termination Fee is being paid.

(b) The Termination Fee shall be determined using the following formula:

T = NCI + CWIP - S

Where:

T = Termination Fee ($)

NCI = Undepreciated portion of the cost of Capital Items which constitute part of the Closed Unit which were approved in accordance with Section 7.4 or 7.6 and were in

service at the date the Unit Closed with the cost and depreciation rates determined under Section 7.4 or 7.6, as applicable. In calculating NCI, the undepreciated cost of each Capital Item shall be multiplied by the Surcharge Payment Factor applicable to that Capital Item.

CWIP = The actual cost, at the date the Unit Closed, of Capital Items for the Closed Unit which were approved in accordance with Section 7.4 or 7.6, as applicable, but were not in service at the date the Unit Closed, plus the cost to pay or terminate any remaining obligations incurred in connection with installation of the Capital Items. In calculating CWIP, the cost of each Capital Item shall be multiplied by the Surcharge Payment Factor applicable to that Capital Item.

S = The salvage value, if any, of the Capital Items included in the calculation of either NCI or CWIP.

The cost for each Capital Item shall be determined by agreement or ADR pursuant to Section 7.4 or 7.6. Except for those items for which a ten-year depreciation life is specified in Section 7.4 of this Agreement, the depreciation rate for each Capital Item shall be determined by agreement or ADR in connection with the applicable Capital Item approval process under Section 7.4 or 7.6.

(c) The Termination Fee shall be payable in 36 equal monthly installments calculated using the following formula:

$$M = T\,[r/1-(1+r)^{-36}]$$

Where

M = the monthly payment,

T = Termination Fee under Section 2.5(b), and

r = an annual discount rate equal to the interest rate used by FERC for the calculation of refunds (as set forth in 18 C.F.R. § 35.19a) in effect on the date that Owner provides notice to the CAISO pursuant to Section 2.5(a) of this Agreement, divided by 12.

(d) If the Unit ceases to be Closed at any time within 36 months following the date the Unit Closed, CAISO shall cease payment of Termination Fee installments as of the Month in which the Unit ceased to be Closed, but Owner shall not be obligated to refund installments for any Month in which the Unit was Closed. Once a Unit has ceased to be Closed, CAISO shall not be required to pay any remaining Termination Fee installments even if the Unit again Closes.

(e) Any dispute regarding an element of the Termination Fee (e.g. salvage value) not resolved at the time the Capital Item was approved shall be subject to ADR.

## ARTICLE 3

## INTENTIONALLY LEFT BLANK

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**3.2 Intentionally left blank.**

## ARTICLE 4

## DISPATCH OF UNITS

### 4.1 CAISO's Right to Dispatch

(a) CAISO will dispatch the Units in accordance with Day-Ahead Market and Real-Time Market awards in accordance with the CAISO Tariff and Article 6.

(b) CAISO has the right to issue any dispatch notice for any product and service pursuant to the terms and conditions of the CAISO Tariff that the Unit is capable of providing.

(c) CAISO has the right to issue Exceptional Dispatch instructions for any Energy product or service pursuant to the CAISO Tariff, including but not limited to CAISO Tariff Section 34.11. An Exceptional Dispatch instruction issued to a Unit is not eligible for compensation under the Capacity Procurement Mechanism, CAISO Tariff Section 43A.

### 4.2 RMR Dispatch Notices for Ancillary Services, Voltage Support, and Black Start

CAISO can an issue AN RMR Dispatch Notices to the Owner's Scheduling Coordinator for Ancillary Services, Voltage Support (including synchronous condenser operation), Black Start, or any other reliability service available under this Agreement to meet reliability requirements.

### 4.3 Form and Content of RMR Dispatch Notices

For any product or service available under the CAISO Tariff, CAIOS will issue the appropriate CAISO Tariff instruction. If CAISO needs to dispatch the resource for any product or service that is not available under the CAISO Tariff but is available under this Agreement, CAISO will issue an RMR Dispatch Notice.

### 4.4. Non-complying RMR Dispatch Notices

Owner shall not be obligated to comply with a, RMR Dispatch Notice that does not comply with Section 4.3 or 4.6 and Owner shall not be liable, suffer any penalties or suffer any reduction in payments for failure to comply with an RMR Dispatch Notice which is not in compliance with those Sections, provided that Owner promptly notifies CAISO that the notice does not comply with Section 4.3 or 4.6 and provides the reasons the RMR Dispatch Notice does not comply. Owner may provide such notice after the Requested Operation Period if the notice concerns an RMR Dispatch Notice given during, or less than one-half hour prior to, the Requested Operation Period. Compliance with an RMR Dispatch Notice shall not be deemed a waiver of objections to the RMR Dispatch Notice.

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**4.6 Limitations on CAISO's Right to Dispatch**

CAISO will honor performance characteristics in accordance with the CAISO Tariff.

**4.7 Intentionally left blank.**

**4.8 Intentionally left blank.**

**4.9 Unit Testing**

(a) Availability Tests (PMax test)

(i) CAISO may from time to time test the PMax of a Unit by requiring the Unit to Deliver Energy pursuant to an Exceptional Dispatch instruction provided to Owner's Scheduling Coordinator using the procedures described for PMax testing in CAISO BPM rules and Operating Procedures . CAISO, without cause, may request one Availability Test each Contract Year. CAISO may request additional Availability Tests if the Unit fails to comply fully with an Exceptional Dispatch instruction for the Availability Test. Start-up and min-load cost for any re-test of an Availability Test shall not be recoverable by the Owner within the Contract Year.

(ii) Owner may request an Availability Test at any time and CAISO shall conduct the Availability Test in accordance with the applicable CAISO BPM rules and Operating Procedures for PMax testing. Start-up and min-load cost for any Owner-requested Availability Test shall not be recoverable by the Owner within the Contract Year.

(b) Other Tests

The CAISO and the Owner can request and conduct all other tests for the Unit in accordance with the CAISO Tariff, CAISO BPMs, and Operating Procedures.

**4.10 Intentionally left blank.**

**4.11 Intentionally left blank.**

## ARTICLE 5

## DELIVERY OF ENERGY AND ANCILLARY SERVICES, VOLTAGE SUPPORT, AND BLACK START BY OWNER

**5.1 Owner's Delivery of Energy and Ancillary Services**

(a) In accordance with the CAISO Tariff and this Agreement and subject to limits in this Agreement, the Owner shall provide Energy, Ancillary Services, Voltage Support, Black Start, or other reliability service available under this Agreement, in accordance with each RMR Dispatch Notice, CAISO Schedules, Awards, or

CAISO Dispatch Instructions, including Exceptional Dispatches. Owner shall deliver the requested Energy, Ancillary Services, Voltage Support, Black Start, or other reliability service at the Delivery Point or such other point(s) reasonably acceptable to CAISO.

(b) If Owner would have been able to deliver the requested Energy, Ancillary Services, Voltage Support, or Black Start but for an outage in the CAISO Controlled Grid or Distribution Grid beyond Owner's reasonable control, Owner shall be deemed to have complied with the RMR Dispatch Notice, CAISO Schedules, Awards, or CAISO Dispatch Instructions, including Exceptional Dispatches, for purposes of Section 5.4.

**5.2 Intentionally left blank.**

**5.3 Intentionally left blank. Rules for Calculating Counted Start-ups, Counted MWh and Counted Service Hours**

**5.4 Owner's Failure to Deliver Requested Ancillary Services, Voltage Support, or Black Start**

(a) Owner shall promptly notify CAISO if Owner will not be able to deliver in accordance with its RMR Dispatch Notice, CAISO's Schedules, Awards, or CAISO Dispatch Instructions, including Exceptional Dispatches, for requested Energy, Ancillary Services, Voltage Support, Black Start, or other reliability services available under this Agreement, from the Unit identified in the RMR Dispatch Notice.

(b) If a Unit fails to deliver the full amount of its RMR Dispatch Notice, CAISO Schedules, Awards, or CAISO Dispatch Instructions, including Exceptional Dispatches, for Energy, Ancillary Services, Voltage Support, Black Start, or other reliability services under this Agreement, CAISO's only other remedies for Owner's failure to deliver the requested Energy, Ancillary Services, Voltage Support, Black Start, or other reliability services under this Agreement as set out in Sections 8.5, 11.3, and 12.6.

**5.5 Intentionally left blank.**

## ARTICLE 6

## OBLIGATIONS TO PARTICIPATE IN CAISO MARKETS

**6.1 Must-Offer Obligation**

(a) All Units are subject to all applicable CAISO Tariff provisions based on resource type and all applicable Resource Adequacy CAISO Tariff provisions, including the must-offer obligation to submit Energy, Ancillary Services, and Residual Unit Commitment bids for all RMR Contract Capacity in all hours as applicable. Consistent with Section 40 of the CAISO Tariff, Units subject to this Agreement will be subject to Resource Adequacy bid generation provisions unless otherwise exempted pursuant to CAISO Tariff Section 40.

(b) All Units must seek to establish a major maintenance adder pursuant to CAISO Tariff Section 30.4.5.4.

(c) If the Unit has an eligible use limit Owner must establish an Opportunity Cost, if applicable under CAISO Tariff Section 30.4.6. In addition, Owner must provide on Schedule L, on an annual basis, the number of remaining start-ups, run hours and MWhs for each Unit prior to the need for Capital Items to perform major maintenance. If the resource can safely provide the reliability service that is needed for the Contract Year in issue, CAISO may direct Owner to include these limits in the Opportunity Cost calculation process established under CAISO Tariff Section 30.4.6.

(d) Owner has the obligation to submit marginal cost-based bids that include 100 percent of Commitment Costs using the Proxy Cost Methodology set forth in CAISO Tariff Section 30.4.5, including any major maintenance adder and Opportunity Cost using limits established under Section 6.1(c) and calculated pursuant to CAISO Tariff Section 30.4.5. Marginal cost-based Commitment Cost and Energy Bids must be based on the same cost-based components used in CAISO's generated Proxy Costs and Variable Cost Default Energy Bids set forth in the CAISO Tariff and applicable CAISO BPM, plus 100 percent of any approved adders. Cost-based Ancillary Services and Residual Unit Commitment bids must equal $0/MW. Units may not exercise any bidding flexibility with respect to Commitment Cost or Energy bidding with the exception of fuel costs, where the fuel cost component can be higher than the price reflected in the CAISO Gas Price Index if the actual fuel costs exceed the Gas Price Index. The Owner shall procure all required fuel for operation of the Unit using prudent and good utility practice.

(e) For Units exempt from bid insertion, CAISO will monitor compliance with the bidding obligation.

(f) If the Unit has eligible use-limits under the CAISO Tariff or this Agreement, CAISO may order Owner to submit an appropriate outage card pursuant to the applicable CAISO BPM if CAISO determines that participation in CAISO Markets would impair CAISO's ability to dispatch the Unit to meet reliability needs at other times during the Contract Year.

## ARTICLE 7

## OPERATION AND MAINTENANCE

### 7.1 Owner's Obligation

Owner shall fuel, operate and maintain each Unit, or cause the Unit to be fueled, operated and maintained, in accordance with applicable law and Good Industry Practice and with due regard for the reliability purpose of this Agreement

### 7.2 Outages and Overhauls

Owner shall be entitled to take a Unit out of operation or reduce the Availability of the Unit to repair and maintain the Unit in accordance with Good Industry Practice by taking outages in accordance with the requirements of Section 9 of the CAISO Tariff.

### 7.3 Intentionally left blank.

**7.4 Planned Capital Items**

(a) On or before March 1 of each year, Owner shall provide CAISO a preliminary report in the form required by this Section 7.4 showing Owner's proposed Capital Items for the next Contract Year and a five-year forecast of anticipated Capital Items in the Form attached as Schedule L-1, assuming the Agreement will be extended. Owner shall submit a final report in the form required by this Section 7.4 reflecting updated information by August 1 of each year. Owner may, but shall not be obligated to, include an Upgrade as a proposed Capital Item in either the preliminary or final report.

(b) The preliminary and final reports for proposed Capital Items for the next Contract Year shall be submitted on the form attached as Schedule L-1. Owner shall provide additional information requested by the CAISO necessary to evaluate the proposal. Each preliminary and final report shall separately list individual projects expected to cost more than $500,000 and shall include two "Small Project Estimates." One Small Project Estimate shall identify Capital Items (projected to cost less than $500,000 each) required to maintain or enhance reliability. The second Small Project Estimate shall identify all other Capital Items projected to cost less than $500,000 each. Individual Capital Items projected to cost more than $50,000 shall be identified separately in one of the two Small Project Estimates. All Capital Items covered by the Small Project Estimate will be depreciated over 10 years.

(c) Within 60 days after submission of the final report, CAISO will notify Owner of the proposed Capital Items CAISO has approved and the Capital Items it has not approved. If CAISO fails to provide notice within such 60 day period, all Capital Items included in the final report shall be deemed approved as proposed by Owner. Approval constitutes CAISO agreement that the CAISO's share of the estimated cost of the Capital Item will be recovered through Surcharge Payment under Article 8 and will be eligible for recovery through a Termination Fee pursuant to Section 2.5. If the actual cost of the Capital Item exceeds the estimated cost, CAISO may initiate ADR to determine whether the additional costs were reasonable and shall not be obligated to pay through Surcharge Payments or as a Termination Fee any portion of the overrun found to be unreasonable in such ADR proceeding. If CAISO contests the additional costs, Owner shall have the burden of proving that the additional costs were reasonable. If CAISO does not initiate ADR or makes a separate agreement with Owner, the additional costs shall be deemed reasonable and CAISO shall be obligated to pay CAISO's share of the actual costs through Surcharge Payments or as a Termination Fee.

(d) If a proposed Capital Item is not approved, CAISO shall provide Owner a detailed statement of the reasons for the disapproval and, if the proposal would be acceptable with modifications, a detailed list of the proposed modifications. Owner may accept the modifications proposed by CAISO, or CAISO or Owner may initiate an ADR proceeding to review CAISO's rejection or proposed modification if the Capital Item is necessary for Owner to meet its obligations under this Agreement. In such proceeding, CAISO may not support its disapproval on any basis not shown in its detailed statement of the reasons for disapproval. Any Capital Items approved through such ADR proceeding shall be recovered by Owner through Surcharge Payments under Article 8 and will be eligible for recovery through a Termination Fee pursuant to Section 2.5. Owner shall not be obligated to install any Capital Item unless CAISO is obligated to pay a Surcharge Payment for the Capital Item.

(e) The preliminary and final reports and all additional information about proposed Capital Items provided to CAISO shall be treated as Confidential Information in accordance with Section 12.5.

(f) If CAISO rejects a proposed Capital Item, such rejection is not reversed by ADR and it would be uneconomical, impractical or illegal to continue operation without the Capital Item, then Owner, subject to obtaining authorization from FERC (if required by law to do so), may terminate this Agreement with respect to the affected Unit without cost or liability therefor, except as provided in Section 2.4.

**7.5 Unplanned Repairs**

(a) In the event of any loss or damage to the Facility that impairs the capability of one or more Units to deliver Energy, Ancillary Services, Voltage Support, Black Start, or any other reliability service available under this Agreement, Owner shall, without additional charge, make necessary Repairs, to the extent that:

(i) the total cost (net of proceeds received by Owner from Insurers and other third parties pursuant to applicable insurance, warranties and other contracts in connection with all Repairs and excluding costs covered by clause (ii)) of all Repairs for all Units ("Net Repair Costs") during the Contract Year does not exceed Owner's Repair Cost Obligation for the Facility; or

(ii) the loss or damage impairing the Unit's capability to produce Energy. Ancillary Services, Voltage Support, Black Start, or any other reliability service available under this Agreement, was caused by Owner's failure to comply with Good Industry Practice or by any wrongful act or omission by Owner. The reference to "Units" in clause (i) includes all Reliability Must-Run Units located at the Facility, but no other Reliability Must-Run Units. Except as provided above, Owner shall not be obligated to make any Repairs unless CAISO is obligated to pay CAISO's Repair Share for the Repairs.

(b) If the Net Repair Costs incurred by Owner for all Repairs since the beginning of the Contract Year exceed Owner's Repair Cost Obligation, then Owner shall provide a notice thereof ("Unplanned Repair Notice") in the form attached as Schedule L-1 to CAISO. Owner shall provide such additional information as CAISO may reasonably require to evaluate such proposed Repairs.

(c) CAISO shall submit a written acceptance or objection to Owner's proposal within 21 days of receipt of an Unplanned Repair Notice. CAISO shall be deemed to have accepted Owner's proposal in the Unplanned Repair Notice if CAISO does not submit a written objection within 21 days after receipt of the Unplanned Repair Notice, as provided above. Any objection shall be based on one or more of the following grounds:

(i) the loss or damage was caused by Owner's failure to comply with Good Industry Practice;

(ii) the loss or damage was caused by a wrongful act or omission by Owner;

(iii) the Repairs are not required or are more extensive than required in order to make good the loss or damage concerned or to comply with applicable law;

(iv) the Net Repair Costs for the Contract Year will not exceed or has not exceeded the Owner's Repair Cost Obligation;

(v) the estimated cost of Repairs exceeds that which is reasonably necessary to effect such Repairs;

(vi) the Repair will not result in benefits to CAISO as compared to alternatives available to CAISO;

(vii) Owner's proposals for carrying out the Repairs or the proposed CAISO's Repair Share are unreasonable;

(viii) Owner's proposal includes estimated costs which are not properly treated as an expense under FERC's Uniform System of Accounts; or

(ix) Owner has not provided sufficient information to evaluate Owner's proposal. In addition to providing the basis of the objection, any objection of CAISO shall include a list of all changes CAISO contends should be made to Owner's proposal and justification of all such changes.

(d) If CAISO submits an objection to an Unplanned Repair Notice, the Parties shall attempt to reach agreement on changes to Owner's proposal. If the Parties have not reached agreement within 30 days after CAISO's receipt of the Unplanned Repair Notice, Owner or CAISO may refer the matter to ADR under a schedule (specified by the arbitrator if the participants cannot agree) requiring a decision within 30 days following appointment of the arbitrator. The ADR decision will be effective without delay.

(e) Owner shall proceed with the Repairs if it is agreed or determined pursuant to ADR that CAISO will pay CAISO's Repair Share or that Owner is otherwise obligated to make the Repairs. Owner shall keep full and detailed records of the cost of the Repairs and shall make them available to CAISO for inspection upon reasonable request.

(f) If the actual cost of the Repairs exceeds the estimated cost, CAISO may initiate ADR to determine whether the additional costs were reasonable and shall not be obligated to pay any portion of the additional cost found to be unreasonable in such ADR proceeding. Owner shall have the burden of proving that the additional costs were reasonable.

(g) If it is agreed or determined pursuant to ADR that CAISO will pay for a Repair, CAISO shall pay CAISO's Repair Share of the actual cost as a lump sum within 60 days after the later of (i) the completion of the Repair and (ii) the effective date of authorization by FERC, if any is necessary, for Owner to charge such cost to CAISO. "CAISO's Repair Share" means the Repair Payment Factor for the Repair at issue multiplied by the amount by which (i) the agreed or determined cost of Repairs at issue plus the Net Repair Costs of all prior Repairs for the Contract Year minus the cost of all prior Repairs for which CAISO is obligated to pay CAISO's Repair Share during the Contract Year exceeds (ii) Owner's Repair Cost Obligation. The Repair Payment Factor shall be as agreed to by Owner and CAISO.

(h) Owner shall use commercially reasonable efforts to recover its full entitlements under applicable insurance policies, warranties and other contracts even after

CAISO has paid CAISO's Repair Share. Owner shall keep CAISO informed of the status of such recovery efforts and will refund to CAISO any portions of CAISO's Repair Share payment that is later recovered from any other party as a credit to CAISO on the next invoice with interest at the Interest Rate from the date such proceeds are received by Owner to the Due Date of such next invoice, or if this Agreement is terminated, as a payment upon submission of the Final Invoice.

(i) If Owner is not obligated to make a Repair and does not do so, and if it would be uneconomical, impractical or illegal to continue operation without the Repair, then Owner, subject to obtaining authorization from FERC (if required by law to do so), may terminate this Agreement with respect to the affected Unit without cost or liability therefor, except as provided in Section 2.4.

(j) If Owner makes a Repair notwithstanding that CAISO is not obligated to pay for the Repair, Owner shall not be entitled to recover the costs of the Repair from CAISO unless FERC approves recovery of the costs.

(k) Owner's Repair Cost Obligation shall be an amount computed as follows:

(i) Intentionally left blank

(ii) The Owner's Repair Cost Obligation shall be equal to 3% of the fixed operation and maintenance costs for all Units at the Facility, underlying the rates in effect at the beginning of the Contract Year.

**7.6 Unplanned Capital Items**

(a) To the extent a Capital Item is required to remedy or prevent impairment of the Unit's capability to deliver Energy, Ancillary Services, Voltage Support, Black Start, or other reliability service available under this Agreement, and the impairment was caused by Owner's failure to comply with Good Industry Practice or by any wrongful act or omission by Owner, Owner shall install such Capital Item at Owner's expense. Otherwise, Owner shall not be obligated to install any Capital Item unless CAISO is obligated to pay a Surcharge Payment for the Capital Item. The issue of whether Owner is obligated to install a Capital Item is subject to ADR.

(b) If, during the Contract Year, Owner determines it is necessary to install Capital Items not approved under Section 7.4 and Owner has expended all amounts covered by the approved Small Project Estimates under Section 7.4, Owner shall provide a notice thereof ("Unplanned Capital Item Notice") on the form attached as Schedule L-1 to CAISO. Owner shall provide such information as CAISO may reasonably require in order to evaluate the proposed Capital Items.

(c) CAISO shall submit a written acceptance or objection to Owner's proposal within 21 days after receipt of a complete Unplanned Capital Item Notice provided that if the proposal does not involve either loss or damage to the Facility or a Capital Item required by law or regulation, CAISO shall respond within 60 days. If CAISO fails to provide notice within such period, Owner's proposal in the Unplanned Capital Item Notice shall be deemed approved. Any objection shall be based on one or more of the following grounds:

(i) the impairment being remedied or prevented was caused by Owner's failure to comply with Good Industry Practice;

(ii) the impairment being remedied or prevented was caused by a wrongful act or omission by Owner;

(iii) the Capital Item is not required or is more extensive than required in order to remedy or prevent impairment to the Facility or to comply with applicable law;

(iv) the estimated cost of the Capital Item exceeds that which is reasonably necessary;

(v) installation of the Capital Item will not result in benefits to CAISO as compared to alternatives available to CAISO;

(vi) Owner's proposals for installing or testing the Capital Item are unreasonable;

(vii) Owner's proposals for depreciation of the cost of the Capital Item or calculation of the Annual Capital Item Cost and Surcharge Payment Factor are unreasonable; or

(viii) Owner has not provided sufficient information to evaluate Owner's proposal. In addition to providing the basis of the objection, any objection of CAISO shall include a list of all changes CAISO contends should be made to Owner's proposal and justification of all such changes.

(d) If CAISO submits an objection to an Unplanned Capital Item Notice, the Parties shall attempt to reach agreement on changes to Owner's proposal. If Owner's proposal involves either loss or damage to the Facility or the Capital Item is required by law and the Parties have not reached agreement 30 days after CAISO's receipt of the Unplanned Capital Item Notice, either Owner or CAISO may refer the matter to ADR under a schedule (specified by the arbitrator if the participants cannot agree) requiring a decision within 30 days following appointment of the arbitrator. The ADR decision will be effective without delay. Failure to agree on other proposed Capital Items may also be referred to ADR but without an expedited schedule.

(e) Owner shall proceed to install the Capital Item if it is agreed or determined pursuant to ADR that CAISO will pay a Surcharge Payment for the Capital Item or that Owner is otherwise required to install the Capital Item. Owner shall keep full and detailed records of the cost of the Capital Item and shall make them available to CAISO for inspection upon reasonable request.

(f) If the actual cost of the Capital Item exceeds the estimated cost, CAISO may initiate ADR to determine whether the additional costs were reasonable and shall not be obligated to pay any portion of the additional cost found to be unreasonable in such ADR proceeding. Owner shall have the burden of proving that the additional costs were reasonable.

(g) If it is agreed or determined pursuant to ADR that CAISO will pay for the Capital Item, CAISO shall be deemed to have agreed that the cost of the Capital Item will be recovered through a Surcharge Payment under Article 8 and will be eligible for recovery through a Termination Fee pursuant to Section 2.5. The costs included in Surcharge Payments and Termination Fees to be paid by CAISO shall be net of all proceeds received by Owner from insurers and other third

parties pursuant to applicable insurance, warranties and other contracts after deducting all costs Owner incurred to collect the proceeds. Owner shall use commercially Reasonable Efforts to recover its full entitlements under applicable insurance policies, warranties and other contracts. Owner shall keep CAISO informed of the status of such recovery efforts and will adjust future Surcharge Payments to reflect proceeds later recovered from any other party.

(h) If the capability or performance of a Unit is impaired, if Owner is not obligated to install a Capital Item to remedy such impairment under Section 7.6(a) and does not do so, and if it would be uneconomical, impractical or illegal to continue operation without the Capital Item, then Owner, subject to obtaining authorization from FERC (if required by law to do so), may terminate this Agreement with respect to the affected Unit without cost or liability therefor except as provided in Section 2.4.

(i) If Owner installs a Capital Item notwithstanding that CAISO is not obligated to pay for the Capital Item, Owner shall not be entitled to recover the costs of the Capital Item from CAISO unless FERC approves recovery of the costs.

(j) Notwithstanding any other provision of this Agreement, if a Capital Item is required to remedy impairment of the Facility, the Unit's Daily Payment shall not be decreased for any of the period of time during which Owner is waiting for CAISO's response to an Unplanned Capital Item Notice or during which ADR concerning an Unplanned Capital Item Notice is pending unless it is determined that Owner is required to install the Capital Item pursuant to Section 7.6 (a).

**7.7 Adjustments to Performance Characteristics**

(a) If Owner installs any Capital Item or makes any Repairs the costs of which are paid by CAISO under this Agreement, Owner shall modify the RMR Contract Capacity, Unit Availability Limit, and performance characteristics of the affected Unit to reflect the resulting changes in operating costs effective as of the date CAISO's payment of CAISO's Repair Share of the Repairs is made, or in the case of a Capital Item, the date the cost of the Capital Item is included in a Surcharge Payment or the rates paid by CAISO.

(b) If FERC authorization is required to permit Owner to recover the CAISO's Repair Share from CAISO or to include the costs of a Capital Item in a Surcharge Payment or the rates paid by CAISO hereunder, Owner shall make a Section 205 filing limited to recovery of the costs and implementation of related changes to performance characteristics, shall request that the filing become effective as of the date the Capital Item or Repair was placed in service and request expedited consideration of the filing. If CAISO has approved the Capital Item or Repair, CAISO shall intervene in support of such filing including support of requests to place the change in effect without suspension or hearing.

(c) If Owner makes Repairs or installs a Capital Item when not required to do so and CAISO has not agreed or is not required by ADR to pay for such Repair or Capital Item, Owner may either:

(i) make an appropriate adjustment to the RMR Contract Capacity and performance characteristics of the affected Unit to reflect the capability the Unit would have had if the Capital Item had not been installed or the Repairs had not been made; or

(ii) make appropriate adjustment to the RMR Contract Capacity and performance characteristics of the affected Unit to reflect the Repairs or installation of the Capital Item.

### 7.8 Upgrades of Generating Units

Owner may Upgrade any Unit at the Facility, provided that no Upgrade shall release Owner from Owner's performance obligations under this Agreement. CAISO shall secure no rights under this Agreement to any capacity or services increased or enhanced by any Upgrade unless the Parties agree as to the terms of CAISO's rights and the amount of CAISO's payment for such Upgrade. If the Parties so agree, the RMR Contract Capacity and performance characteristics of the affected Unit shall be adjusted to reflect CAISO's agreed upon rights to the Upgrade , with any changes of performance characteristics of the Unit being reflected in the Master File. If FERC authorization is required to permit Owner to recover the portion of the Upgrade cost CAISO has agreed to pay for the agreed revisions to the Unit characteristics, Owner shall make a Section 205 filing limited to recovery of the costs and implementation of related changes to the RMR Contract Capacity and performance characteristics, shall request that the filing become effective as of the date CAISO begins paying its agreed portion of the cost of the Upgrade and request expedited consideration of the filing. CAISO shall intervene in support of such filing including support of requests to place the change in effect without suspension or hearing.

### 7.9 Third-Party Participation in CAISO Review Process

(a) Subject to fulfillment of the requirements of Section 7.9 (b), CAISO shall consult with the CPUC prior to approving Capital Items or Repairs. CAISO may approve Capital Items or Repairs for the Facility in a Contract Year without approval of the CPUC.

(b) The requirement of Section 7.9 (a) relating to the CPUC shall apply only if and to the extent that the CPUC agrees to waive its right to challenge Owner's recovery of costs associated with the proposed Repairs or Capital Item on any grounds not set out in written objections provided by the CPUC to CAISO and Owner within 30 days of the CPUC's receipt of the preliminary and final reports under Section 7.5 or Section 7.6.

(c) Provided that the CPUC is bound by the provisions of the Confidentiality and Non-disclosure Agreement attached as Schedule N and make the waivers required in Section 7.9 (b), Owner will provide copies of the required reports and notices under Section 7.4, Section 7.5 or Section 7.6, and any additional information provided to the CAISO pursuant to Sections 7.4, 7.5 and 7.6, as the case may be, to the CPUC at the same time as the reports, notices and information are provided to CAISO, and CAISO will provide copies of all information provided to Owner pursuant to such Sections to the CPUC.

## ARTICLE 8

## RATES AND CHARGES

### 8.1 Owner Rates and Charges

CAISO shall pay Owner:

(a) the Daily RMR Capacity Payment, which shall be equal to the Daily Availability

Payment plus the Daily Surcharge Payment. In no event shall (i) the Daily RMR Capacity Payment for any day be less than zero, (ii) the sum of the Daily Availability Payments for a Contract Year exceed the Annual Fixed Revenue Requirement for the Contract Year, or (iii) the sum of the Daily Surcharge Payments for the Contract Year exceed the Annual Capital Item Cost (as defined in Schedule B) for the Contract Year. The Daily Availability Payment and the Daily Surcharge Payment shall each be computed in accordance with Schedule B, and the Daily RMR Capacity Payment shall be adjusted by RMR Excess Revenues pursuant to CAISO Tariff Section 11.13.5;

(b) the Daily Variable Cost Payment computed in accordance with CAISO Tariff Section 11.13.3;

(c) Daily Additional Cost Settlement for variable cost associated with Exceptional Dispatches pursuant to CAISO Tariff Section 11.13.4; and

(d) the RMR Invoice payment for RMR costs payable pursuant to this Agreement that are not recoverable through the CAISO Tariff shall be paid in accordance Schedule C and CAISO Tariff Section 11.18.6.

**8.2 Intentionally left blank.**

**8.3 Intentionally left blank.**

**8.4 Intentionally left blank.**

**8.5 Availability Incentive Mechanism**

Units shall be subject to the same availability incentive mechanism that Resource Adequacy Resource are subject to in the CAISO Tariff. In the event CAISO determines the default availability incentive mechanism is inadequate with respect to reliability needs and the performance characteristics of the Unit, CAISO will off an alternative availability incentive mechanism.

**8.6 Intentionally left blank.**

## ARTICLE 9

## STATEMENTS AND PAYMENTS

**9.1 Settlement Statements and Invoicing**

(a) The settlement, invoicing, market clearing, and payments and charges will be under CAISO Tariff Section 11 generally, including the settlement, invoicing, and market clearing processes, as well as the resolution process for settlement-related disputes. The payments and charges pursuant to this Agreement shall be provided in this Agreement and Section 11.18.6 and Section 41 of the CAISO Tariff. CAISO shall not modify any provision of Section 41 or Section 11.13 of Section 11.18.6 of the CAISO Tariff as they apply to this Agreement without Owner's consent, provided that Owner's consent shall not be required for a change of allocations of RMR costs among market participants under the CAISO Tariff.

(b) For any other charges payable by CAISO to Owner pursuant to this Agreement, and not recovered through Section 11.13 of the CAISO Tariff, Owner will invoice

the CAISO pursuant to Schedule C of this Agreement and Section 11.18.6 of the CAISO Tariff.

**9.2 Intentionally left blank.**

**9.3 Intentionally left blank.**

**9.4 Payment Default**

Payment default is subject to CAISO Tariff Section 11.29.

**9.5 Intentionally left blank.**

**9.6 Intentionally left blank.**

**9.7 Intentionally left blank.**

**9.8 Intentionally left blank.**

**9.9 Payment of Termination Fee**

(a) Each Month during the period in which any Termination Fee is payable under Section 2.5, Owner shall submit an invoice ("Termination Fee Invoice") in accordance with Schedule C for all Termination Fee amounts due for the Month. Each Termination Fee Invoice shall: (i) be broken down by Unit and (ii) clearly identify the source of each input used.

(b) CAISO shall pay Owner amounts invoiced under this Section 9.9 in accordance with Schedule C and CAISO Tariff Section 11.18.6. If CAISO or has disputed the amount of a Termination Fee stated in a Termination Fee Invoice, then CAISO shall not be required to give notice of the same disputed amount as to subsequent Termination Fee Invoices.

**9.10 Intentionally left blank.**

## ARTICLE 10

## FORCE MAJEURE EVENTS

**10.1 Notice of Force Majeure Events**

If either Party is unable to perform its obligations under this Agreement due to a Force Majeure Event, the Party unable to perform shall notify the other Party of the Force Majeure Event promptly after the occurrence thereof. The Party's notice may be given orally but shall promptly be confirmed in writing or electronically.

**10.2 Effect of Force Majeure Event**

(a) If a Force Majeure Event prevents a Party from performing, in whole or in part, its obligations under this Agreement, such Party's obligations, other than obligations to pay money (unless the means of transferring funds is affected), shall be suspended and such Party shall have no liability with respect to such obligations; provided, that the suspension of the Party's obligations is of no greater scope and of no longer duration than is required by the Force Majeure Event.

(b) If a Force Majeure Event (other than a flood, storm or drought affecting a hydroelectric Unit) reduces the Availability of a Unit, the Availability shall be determined as if the Unit were available up to the Unit Availability Limit in effect prior to the Force Majeure Event through the earlier of the 120th day following the Force Majeure Event or until the Unit's Availability is restored, whichever occurs first. If a flood or storm Force Majeure Event reduces the Availability of a hydroelectric Unit, the Availability shall be determined as if the Unit were available up to its Unit Availability Limit in effect prior to the Force Majeure Event through the earlier of the 120th day following the Force Majeure Event or until the Unit's Availability is restored, and as if the Unit were available up to one-half of such Unit Availability Limit from the 120th day through the earlier of the 240th day or the date on which the Unit's Availability is restored. If a drought Force Majeure Event reduces the Availability of a hydroelectric Unit, the Availability shall be determined as if the Unit were available up to its Unit Availability Limit in effect prior to the Force Majeure Event until the Unit's Availability is restored following the end of the drought Force Majeure Event.

**10.3 Remedial Efforts**

The Party that is unable to perform by reason of a Force Majeure Event shall use commercially Reasonable Efforts to remedy its inability to perform and to mitigate the consequences of the Force Majeure Event as soon as reasonably practicable; provided, that no Party shall be required to obtain replacement power or to settle any strike or other labor dispute on terms which, in the Party's sole discretion, are contrary to its interest and Owner shall not be required to obtain or use fuel oil to operate a Unit. The Party unable to perform shall advise the other Party of its efforts to remedy its inability to perform and to mitigate the consequences of the Force Majeure Event, and shall advise the other Party of when it believes it will be able to resume performance of its obligations under this Agreement.

## ARTICLE 11

## REMEDIES

**11.1 Dispute Resolution**

The Parties shall make reasonable efforts to settle all disputes arising out of or in connection with this Agreement. Unless this Agreement expressly provides that a particular type of dispute is not subject to ADR, the Parties shall use ADR procedures in Schedule K to resolve all disputes which are not otherwise settled. Owner and CAISO will promptly join with all other owners of Reliability Must-Run Units and all Responsible Utilities to jointly develop ADR procedures to be used in connection with such disputes. Following unanimous agreement of Owner, CAISO and Responsible Utilities to the ADR procedures, such procedures shall be posted on CAISO Website. Until there is unanimous agreement on such procedures, the Parties shall use the ADR procedures contained in Schedule K.

**11.2 Waiver of Damages**

(a) Except for the obligations set forth in Section 11.4 (Termination for Default) and Section 12.6 (Indemnity), neither Party shall be liable to the other Party for any claim, loss or damage of any nature arising out of or relating to the performance or breach of this Agreement including replacement power costs, loss of revenue, loss of anticipated profits or loss of use of, or damage to, plant or other property, personal injury, or death; provided, however, that this waiver of liability shall not include or cover any claim, damage or loss arising out of the willful misconduct of

either Party. Amounts that are specifically payable or reimbursable by the other Party under the terms of this Agreement shall not be considered "claims, losses or damages" for purposes of this Section.

(b) Neither Party shall be liable to the other for any special, indirect, incidental or consequential damages suffered by the other Party or by third parties arising out of, or relating to, this Agreement or the performance of, or breach of any obligation under, this Agreement, or the negligence of any Party. This limitation shall apply even if the Party is advised of the possibility of these damages.

(c) Except for the obligations to make or adjust payments or pay penalties expressly provided in Section 2.5 (Termination Fee), Section 7.4 (Planned Capital Items), Section 7.5 (Unplanned Repairs), Section 7.6 (Unplanned Capital Items), Section 7.8 (Upgrades of Generating Units), Article 8 (Rates and Charges) and Article 9 (Statements and Payments), of this Agreement, either Party's maximum aggregate liability for any and all claims arising out of or relating to performance or breach of this Agreement during the Contract Year, whether based upon contract, tort (regardless of degree of fault or negligence), strict liability, warranty, or otherwise, including any liability for Owner's failure to deliver Requested Energy, Ancillary Services, Voltage Support, Black Start, or other reliability services available under this Agreement, shall not exceed $20 million.

**11.3 Injunctive Relief**

In addition to any other remedy to which a Party may be entitled by reason of the other Party's breach of this Agreement, the Party not in default shall be entitled to seek temporary, preliminary and permanent injunctive relief from any court of competent jurisdiction restraining the other Party from committing or continuing any breach of this Agreement.

**11.4 Termination For Default**

(a) If either Party shall fail to perform any material obligation imposed on it by this Agreement and that obligation has not been suspended pursuant to Section 10, the other Party, at its option, may terminate this Agreement by giving the Party in default notice setting out specifically the circumstances constituting the default and declaring its intention to terminate this Agreement. If the Party receiving the notice disputes the notice, it shall notify the other Party within 14 days after receipt of the notice setting out specifically the grounds of such disputes. Time is of the essence in remedying a default. If the Party receiving the notice does not, within 30 days after receiving the notice, remedy the default or refer the dispute to ADR, the Party not in default shall be entitled by a further notice to terminate this Agreement. The Party not in default shall have a duty to mitigate damages.

(b) Termination of this Agreement pursuant to this Section 11.4 shall be without prejudice to the right of Owner or CAISO to collect any amounts due to it prior to the time of termination. If CAISO terminates this Agreement as to any Unit(s) due to Owner's default, Owner shall reimburse to CAISO the amount, if any, by which costs incurred by CAISO as a direct result of the termination through the end of the then current Contract Year exceed the costs which CAISO would have incurred absent such termination.

**11.5 Cumulative and Nonexclusive**

Except as provided in Section 5.4(b), each remedy provided for in this Agreement shall

be cumulative and not exclusive.

**11.6 Beneficiaries**

Except as is specifically set forth in this Agreement, nothing in this Agreement, whether express or implied, confers any rights or remedies under, or by reason of, this Agreement on any persons other than the Parties and their respective successors and assigns, nor is anything in this Agreement intended to relieve or discharge the obligations or liability of any third party, nor give any third person any rights of subrogation or action against any Party. The owner of title to a Unit that is leased to Owner is an intended beneficiary of Section 2.2(e).

## ARTICLE 12

## COVENANTS OF THE PARTIES

**12.1 Insurance [Parties may negotiate custom terms]**

**12.2 Books And Records**

(a) For a period of 36 months from creation of the records, Owner shall maintain and make available for audit by CAISO complete operations records for each Unit. Such records shall include:

(i) information for each Daily Settlement Period on the Availability of the Units, delivered Energy, Ancillary Services, Voltage Support, Black Start, and other reliability services available under this Agreement,

(ii) outages,

(iii) Facility licenses and permits,

(iv) copies of operating and maintenance agreements for the Unit,

(v) a list of citations filed against the Unit by any environmental, air quality, health and safety, or other regulatory agency in the last 36 months,

(vi) a list of any resolved and unresolved WECC log items from the last 36 months pertaining to the Unit,

(vii) maintenance, overhauls and inspections performed, and

(viii) books, accounts and all documents required to support Owner's statements, invoices, charges and computations made pursuant to this Agreement.

CAISO may audit Owner's books, accounts and documents relating to invoices, statements, charges and computations no more frequently than once each Contract Year, and only one time following expiration or termination of this Agreement.

(b) For a period of 36 months from the creation of the records, CAISO shall maintain and make available for audit by Owner all operations records required to permit

Owner to verify that CAISO has complied with its obligations to Owner under this Agreement.

(c) In addition to the audit rights under Section 12.2 (a), if Owner's rates are determined pursuant to the formula contained in Schedule F, representatives of CAISO shall have the right to audit the records, accounts and supporting documents of Owner to verify (i) the accuracy of any arithmetic calculation and (ii) application of the formula.

(d) If Owner's rates are determined pursuant to the formula contained in Schedule F, the CPUC shall have the right to audit the records, accounts and supporting documents of Owner or CAISO to verify the accuracy of any arithmetic calculation and application of the formula, including the accuracy of allocation to accounts under the FERC Uniform System of Accounts, 18 C.F.R. Part 101.

(e) Any entity exercising its right to audit under this Section 12.2 shall give the audited entity not less than 30 days prior written notice of the audit. Books or records requested in any audit shall be available for inspection by the auditing entity at the offices of the entity being audited between 9:00 A.M. and 5:00 P.M. on Business Days. Any audit under this Section 12.2 shall be completed not more than 36 months after the records were created. Any audit right herein shall be limited to the books and accounts of Owner or CAISO and shall not extend to the books and accounts of the parent or any other affiliate of Owner or CAISO. The expense of any audit shall be borne solely by the auditing Party or entity.

(f) No adjustments to payments shall be required as a result of an audit unless, and then only to the extent that, CAISO, Owner, or another entity making such an audit under this Section 12.2 takes written exception to the books and accounts and makes a claim upon Owner or CAISO for any discrepancies disclosed by such audit within 60 days following issuance of the final audit report.

(g) All information provided during the course of an audit shall be treated as Confidential Information in accordance with Section 12.5.

(h) Nothing in this Agreement shall override any obligation Owner or CAISO may have under applicable law to maintain books and records for periods longer than 36 months nor shall this Agreement override any obligation Owner or CAISO may have to make books and records available for audit by FERC or any other entity. Nothing in this Agreement is intended to limit in any manner (i) the authority of FERC to audit the books and records of Owner or CAISO or the manner in which such audit is noticed or conducted or (ii) CAISO's right to audit market participants (including Owner) under the CAISO Tariff.

**12.3 Representations And Warranties**

(a) CAISO represents and warrants to Owner as follows:

(i) CAISO is a validly existing corporation with full authority to enter into this Agreement.

(ii) CAISO has taken all necessary measures to have the execution and

delivery of this Agreement authorized, and upon the execution and delivery of this Agreement shall be a legally binding obligation of CAISO.

(b) Owner represents and warrants to CAISO as follows:

(i) Owner is a validly existing [limited liability company][corporation] [municipal corporation] with full authority to enter into this Agreement.

(ii) Owner has taken all necessary measures to have the execution and delivery of this Agreement authorized, and upon the execution and delivery this Agreement shall be a legally binding obligation of Owner.

**12.4 Responsibilities**

Each Party shall be responsible for protecting its facilities from possible damage by reason of electrical disturbances or faults caused by the operation, faulty operation, or non-operation of the other Party's facilities. The other Party shall not be liable for any damages so caused.

**12.5 Confidentiality**

(a) Except as may otherwise be required by applicable law, all information and data provided by the Parties to one another pursuant to this Agreement and marked "Confidential" or otherwise identified with specificity in writing as confidential at the time of disclosure ("Confidential Information") shall be treated as confidential and proprietary material of the providing Party and will be kept confidential by the receiving Party and used solely for purposes of this Agreement. Confidential Information will not include information that is or becomes available to the public through no breach of this Agreement, information that was previously known by the receiving Party without any obligation to hold it in confidence, information that the receiving Party receives from a third party who may disclose that information without breach of law or agreement, information that the receiving Party develops independently without using the Confidential Information, and information that the disclosing Party approves for release in writing. The receiving Party shall keep such information confidential and shall limit the disclosure of any such Confidential Information to only those personnel within its organization with responsibility for using such information in connection with this Agreement. The receiving Party shall assure that personnel within its organization read and comply with the provisions of this Section 12.5 and any Confidentiality Agreement implementing this Section 12.5. The Parties shall use all reasonable efforts to maintain the confidentiality of the Confidential Information in any litigation, shall promptly notify the providing Party of any attempt by a third party to obtain the Confidential Information through legal process or otherwise. A Party or third party beneficiary under Article 9 which has received Confidential Information may use that information in litigation or regulatory proceedings related to this Agreement but only after notice to the other Party and affording the other Party an opportunity to obtain a protective order or other relief to prevent or limit disclosure of the Confidential Information.

(b) The Parties may provide any Confidential Information (i) to any entity with audit rights under Section 12.2 or review rights specified in other provisions of this Agreement, (ii) on a need-to-know basis, to Owner's Scheduling Coordinator, financial institutions, agents, lessors of the Unit and potential purchasers of interests in a Unit; and, (iii) as required for settlement and billing, to Scheduling Coordinators responsible for paying for services provided under this Agreement. As a condition to receiving any Confidential Information under this Section 12.5,

the recipient shall execute a Confidentiality Agreement in the applicable form contained in Schedule N and thereby agree to be subject to the non-disclosure and other obligations contained in this Section 12.5.

(c) The obligation to provide confidential treatment to Confidential Information shall not be affected by the inadvertent disclosure of Confidential Information by either Party.

**12.6 Indemnity**

Subject to the limitations in Section 11.2 (b), each Party shall indemnify, defend and hold harmless the other Party and its officers, directors, employees, agents, contractors and sub-contractors, from and against all third party claims, judgments, losses, liabilities, costs, expenses (including reasonable attorneys' fees) and damages for personal injury, death or property damage, caused by the negligence or willful misconduct related to this Agreement or breach of this Agreement of the indemnifying Party, its officers, directors, agents, employees, contractors or sub-contractors, provided that this indemnification shall be only to the extent such personal injury, death or property damage is not attributable to the negligence or willful misconduct related to this Agreement or breach of this Agreement of the Party seeking indemnification, its officers, directors, agents, employees, contractors or sub-contractors. This indemnification shall not include or cover any claim covered by any workers' compensation law. This indemnification shall be for an amount not exceeding the deductible of the indemnifying Party's commercial general liability insurance in the case of Owner and errors and omission insurance in the case of CAISO, if applicable. The indemnified Party shall give the other Party prompt notice of any such claim. The indemnifying Party shall have the right to choose competent counsel, control the conduct of any litigation or other proceeding, and settle any claim. The indemnified Party shall provide all documents and assistance reasonably requested by the indemnifying Party. Section 14 of the CAISO Tariff shall not apply to this Agreement.

**12.7 Owner Financial Requirements**

(a) Through the term of the Agreement, Owner shall maintain an investment grade rating by Moody's or Standard and Poor's or provide documentation from a financial institution or corporate owner acceptable to the CAISO that there is an equity position described below. The CAISO shall not unreasonably withhold acceptance of the documentation.

(i) An equity to debt ratio of at least 30%, or

(ii) An equity to total asset ratio of at least 30% or

(iii) Demonstrate to the CAISO's reasonable satisfaction that other factors, including, without limitations, commercial financing arrangements, and working capital positions, mitigate the risk of Owner failing to meet the performance requirements under this Agreement.

(b) If the Owner does not possess and maintain an investment grade rating, an equity position or make other arrangements as described in Section 12.7 (a), then it must provide one of the following:

(i) Proof of insurance to cover the financial exposure to the CAISO for one year of Capital Items, Repairs, fuel and any other operating expenses; or

(ii) Security to cover the financial exposure to the CAISO for one year of Capital Items, Repairs, fuel and any other operating expenses in one of the following forms:

(A) standby letter of credit;

(B) corporate guarantee;

(C) cash deposit;

(D) security bond; or

(E) other form of assurance reasonably acceptable to CAISO.

## ARTICLE 13

## ASSIGNMENT

### 13.1 Assignment Rights and Procedures

Neither Party shall assign its rights or delegate its duties under this Agreement without the prior written consent of the other Party, which shall not be unreasonably withheld. CAISO shall be entitled to deny consent to a proposed assignment by Owner only if the assignee does not meet the financial criteria set out in Section 13.2 (a) or the technical criteria set out in Section 13.2 (b). Notwithstanding the foregoing, if FERC approves an assignment, then the non-assigning Party shall be deemed to have consented to the assignment, subject to the non-assigning Party's right to seek judicial review of a FERC decision. Each Party shall give the other Party prompt notice of any proposed assignment or delegation, together with such information as the other Party may reasonably request with respect to the proposed assignment or assignee. Each Party shall be deemed to consent to the assignment or delegation unless it submits a written objection to the assignment or delegation within 14 days of receiving the notice and all financial and technical information as required in Sections 13.2(a) and 13.2(b). In the event of an assignment of this Agreement pursuant to a Financing Agreement, CAISO will execute for the benefit of the bank, financial institution or other entity with an interest in the Financing Agreement, a consent to such assignment reasonably acceptable to CAISO and Owner. An assignment of this Agreement by Owner in connection with the sale of a Unit shall terminate Owner's rights and obligations under this Agreement prospectively from the effective date of the assignment.

### 13.2 Limitation on Right to Withhold Consent

(a) CAISO shall not withhold consent to assignment of this Agreement on financial grounds if the assignee meets the financial requirements in Section 12.7(a) or provides financial security pursuant to Section 12.7(b).

(b) CAISO shall not withhold consent to an assignment on grounds that the assignee is not technically qualified if the assignee was previously an Owner of a Reliability Must-Run Unit or the assignee submits appropriate documentation to the CAISO to establish that it has sufficient resources and expertise to be able to:

(i) Secure the necessary fuel and transportation for the fuel for the Facility;

(ii) Secure all necessary support services, including water supply, communications, waste disposal, etc. for the Facility;

(iii) Provide service from the Facility in compliance with the terms of this Agreement;

(iv) Provide the engineering and other technical services required to support operation and maintenance of the Facility;

(v) Obtain as necessary, and comply with all permits or licenses required to operate or maintain the Facility; and

(vi) Provide environmental services required for the operation and maintenance of the Facility.

(c) The proposed assignee shall provide the last two years' annual audited financial statements and quarterly financial statements (unaudited) prior to the proposed date of purchase. If the proposed assignee is a new company and there are no historical financial statements, then a financial institution or corporate owner must provide pro forma financial statements in a form acceptable to the CAISO.

**13.3 Intentionally left blank.**

## ARTICLE 14

## MISCELLANEOUS PROVISIONS

### 14.1 Notices

Except as otherwise expressly provided in this Agreement or required by law, all notices, consents, requests, demands, approvals, authorizations and other communications provided for in this Agreement shall be in writing and shall be sent by electronic mail with receipt confirmed, personal delivery, certified mail, return receipt requested, facsimile transmission or by recognized overnight courier service, to the intended Party at such Party's address set forth in Schedule J. Any notices which may be given orally and are given orally shall be confirmed in writing. All such notices shall be deemed to have been duly given and to have become effective: (a) upon receipt if delivered in person or by facsimile; (b) two days after having been delivered to an air courier for overnight delivery; (c) seven days after having been deposited in the United States mail as certified or registered mail, return receipt requested, all fees pre-paid; or if by electronic mail, upon receipt confirmation, addressed to the applicable address(es) set forth in Schedule J.

### 14.2 Effect of Invalidation

Each covenant, condition, restriction and other term of this Agreement is intended to be, and shall be construed as, independent and severable from each other covenant, condition, restriction and other term. If any covenant, condition, restriction or other term of this Agreement is held to be invalid by any court or regulatory body having jurisdiction, the invalidity of such covenant, condition, restriction or other term shall not affect the validity of the remaining covenants, conditions, restrictions or other terms hereof unless the invalidity has a material impact upon the rights and obligations of the Parties. If an invalidity has a material impact on the rights and obligations of the Parties, the Parties shall make a good faith effort to renegotiate and restore the benefits and burdens of this Agreement as they existed prior to the determination of an invalidity.

### 14.3 Amendments

(a) Any amendments or modifications of this Agreement shall be made only in

writing and, except for changes authorized by the FERC under Sections 205 or 206 of the Federal Power Act, shall be duly executed by both Parties. To the extent that any amendments or modifications are subject to FERC approval, such amendments or modifications shall become effective when permitted to be effective by FERC.

(b) Where Owner's rates are not subject to FERC jurisdiction, either CAISO or Owner may, not later than 90 days prior to the end of each Contract Year, serve a notice on the other Party stating that it requires a review of the terms of this Agreement, including any rates, prices and charges contained therein ("Review Notice").

(i) The Review Notice shall, as a minimum requirement, set forth the following:

(A) the precise nature of the proposed revisions (indicating, where possible, the relevant Article, Section and Schedule); and

(B) justification for each proposed revision.

(ii) The Party in receipt of the Review Notice shall respond to such notice within 30 days of its receipt by issuing a notice in response ("Response Notice"). The Response Notice shall, as a minimum requirement, set forth the following:

(A) those revisions set forth in the Review Notice that are accepted as proposed;

(B) those revisions set out in the Review Notice that are not accepted;

(C) alternative proposals (if any) to the proposed revisions set out in the Review Notice;

(D) any revisions required by the responding party not covered by (A) through (C) above; and

(E) its justification for any of the matters raised under Sections 14.3 (b) (ii) (B) (C) or (D).

(iii) Any Party failing to respond to a Review Notice shall be deemed to have accepted the revisions set out in the Review Notice.

(iv) Following receipt of the Response Notice the duly authorized representatives of the Parties shall meet to negotiate in good faith any revisions to this Agreement.

(v) In the event that the Parties are unable to reach agreement on the revisions to be made to this Agreement within 60 days of the date of the Review Notice, either Party may refer the matter for resolution through ADR. The arbitrator shall determine the revisions, if any, to the Agreement on the basis that:

(A) the purpose of the Agreement is to maintain the reliability of CAISO Controlled Grid; and

(B) costs and charges payable by CAISO should reflect the costs of providing services to the CAISO.

(vi) In the event that the Parties agree to the revisions, or such matters are determined through ADR, or a Party fails to respond to a Review Notice, the agreed, determined or deemed accepted revisions shall take effect and the rights and obligations of the Parties shall be amended as from the beginning of the ensuing Contract Year or from such other date and time agreed between the Parties or determined through ADR, and following such time the Parties shall act in accordance with the terms and conditions of this Agreement as amended.

**14.4 Filings Under Sections 205 or 206 of the Federal Power Act**

Nothing contained in this Agreement shall be construed as affecting the right of Owner unilaterally to make application to FERC for a change in rates, terms and conditions under Section 205 of the Federal Power Act and pursuant to FERC rules and regulations promulgated thereunder. CAISO may challenge such application or may submit complaints concerning Owner's rates, terms and conditions under Section 206 of the Federal Power Act and pursuant to FERC rules and regulations promulgated thereunder.

**14.5 Construction**

The language in all parts of this Agreement shall in all cases be construed as a whole and in accordance with its fair meaning, and shall not be construed strictly for or against either of the Parties.

**14.6 Governing Law**

This Agreement shall be interpreted and construed under and pursuant to the laws of the State of California, without regard to conflicts of laws principles.

**14.7 Parties' Representatives**

Both Parties shall ensure that throughout the term of this Agreement, a duly appointed Representative is available for communications between the Parties. The Representatives shall have full authority to deal with all day-to-day matters arising under this Agreement. If a Party's Representative becomes unavailable, the Party shall promptly appoint another Representative. Acts and omissions of Representatives shall be deemed to be acts and omissions of the Party. Owner and CAISO shall be entitled to assume that the Representative of the other Party is at all times acting within the limits of the authority given by the Representative's Party. Owner's Representatives and CAISO's Representatives shall be identified on Schedule J.

**14.8 Merger**

This Agreement constitutes the sole and entire agreement of the Parties with respect to the subject matter hereto and supersedes all prior and contemporaneous understanding and agreements, both written and oral, with respect to such subject matter.

**14.9 Independent Contractors**

Nothing contained in this Agreement shall create any joint venture, partnership or principal/agent relationship between the Parties. Neither Party shall have any right, power or authority to enter into any agreement or commitment, act on behalf of, or

otherwise bind the other Party in any way.

### 14.10 Conflict with CAISO Tariff

The CAISO Tariff shall govern matters relating to the subject matter of this Agreement which are not set forth in this Agreement. In all other circumstances, this Agreement shall govern. In the event of a conflict between the terms and conditions of this Agreement and any terms and conditions set forth in the CAISO Tariff the terms and conditions of this Agreement shall prevail.

### 14.11 Waiver

The failure to exercise any remedy or to enforce any right provided in this Agreement shall not constitute a waiver of such remedy or right or of any other remedy or right provided herein. A Party shall be considered to have waived any remedies or rights hereunder only if such waiver is in writing.

### 14.12 Assistance

During the term of this Agreement, each Party shall provide such reasonable assistance and cooperation as the other Party may require in connection with performance of the duties and obligations of each Party under this Agreement, including, but not limited to, assistance in securing any necessary regulatory approvals and in facilitating necessary financing.

### 14.13 Headings

Article and section headings used in this Agreement are inserted for convenience only and are not intended to be a part hereof or in any way to define, limit, describe or to otherwise be used in interpreting the scope and intent of the particular provisions to which they refer.

IN WITNESS WHEREOF, this Agreement has been executed as of the date first above written.

[OWNER]

By: _____

Name:

Title:

The California Independent System Operator Corporation

By: _____

Name:

Title:

**FERC**

**RELIABILITY MUST-RUN SCHEDULES**

| | |
|---|---|
| Schedule A | Unit Characteristics and Limitations |
| Schedule B | Daily RMR Capacity Payment |
| Schedule C | Invoicing for Costs Payable under this Agreement but not Recoverable in CAISO Market Revenues (RMR Invoices) |
| Schedule D | Not Used |
| Schedule E | Not Used |
| Schedule F | Determination of Annual Revenue Requirements of Must-Run Generating Units |
| Schedule G | Not Used |
| Schedule H | Not Used |
| Schedule I | Insurance Requirements |
| Schedule J | Notices |
| Schedule K | Dispute Resolution |
| Schedule L-1 | Request for Approval of Capital Items or Repairs |
| Schedule L-2 | Capital Item and Repair Progress Reports |
| Schedule M | Not Used |
| Schedule N-1 | Not Used |
| Schedule N-2 | Non-Disclosure and Confidentiality Agreement for Entities Other than Responsible Utilities |
| Schedule O | Not Used |
| Schedule P | Not Used |

**Schedule A**

**Unit Characteristics and Limitations**

**1. Description of Facility**

Provide the following information for all units at the Facility, regardless of their RMR designation status. Information regarding units not designated as Reliability Must-Run Units is required only if and to the extent that the information is used to allocate Facility costs between Reliability Must-Run Units and other units.

| Unit | RMR (Y/N) | RMR Contract Capacity | Fuel Type |
|---|---|---|---|
| | | | |

For this Facility, the Owner will use _____ [insert either MW, MWhs, or service hours] in Schedule B to allocate Annual Fixed Revenue Requirements to and among Units. This election shall be applicable to all Facilities containing Reliability Must Run Units subject to any "RMR contract" as defined in the CAISO Tariff executed by Owner or any of its affiliates as defined in 18 CFR § 161.2.

Ambient temperature derates and rerates shall be managed by Owner in accordance with Section 9 of the CAISO Tariff and through CAISO's outage management system.

**2. Description of RMR Units**

Provide the address(es) of the Units at the Facility and the following tabular information:

| | Unit |
|---|---|
| Type (fossil, combustion turbine, etc.) | |
| Synchronous Condenser Capability (Y/N) | |
| Power Factor Range (lead to lag) | |
| Maximum Reactive Power Leading, MVar | |
| Maximum Reactive Power Lagging, MVar | |
| Load at Maximum MVar Lagging, MW | |
| Load at Maximum MVar Leading, MW | |
| Black Start Capable (Y/N) | |
| Automatic Start or Ramp (Y/N)* | |
| Upgrade Capacity Paid by CAISO, MW | |

* If "Y", describe the conditions under which the Unit will start or ramp automatically.

**3. Operational and Regulatory Limitations of Units:**

Air Emissions Limitations

List applicable $NO_x$, CO, $SO_2$, particulate, and other appropriate emissions limits; note the name and address of the lead agency; the agency's applicable rule number(s); and note those pollutants for which an emissions cap applies. For Units that are use-limited, Owner shall follow the use-limit process as described in Section 6.1(b) of this Agreement.

**4. Delivery Point**

| Unit | Transmission Node (Station Name) | Delivery Point * | Voltage |
|---|---|---|---|
| | | | |

* Delivery Point should be the Point of Delivery (POS) of the Unit as provided in the Master File.

**5. Metering and Related Arrangements**

| Unit | Meter Location | Meter (Manufacturer & Model No.) | Meter ID * |
|---|---|---|---|
| | | | |

* As reflected in the Meter Services Agreement.

**6. Unit Performance Characteristics**

All performance characteristics of the Unit will be reflected in CAISO systems including the Master File. Any changes to the Unit proposed by Owner shall be reviewed and approved by CAISO to ensure service under this Agreement is maintained.

**9. Owner's Repair Cost Obligation**

Owner's Repair Cost Obligation for the current Contract Year is ${ }.

**Schedule B**

**Daily RMR Capacity Payment**

The formulas and values used to compute the Monthly Option Payment in accordance with Section 8.1 and Section 8.2 for each Unit for each Month are set forth in Equation B-1 below:

**Equation B-1**

Daily RMR Capacity Payment = Daily Availability Payment + Daily Surcharge Payment

The Daily RMR Capacity Payment can never be less than zero.

**Equation B-2**

Daily Availability Payment ($/MW-day) = *(AFRR ($))/(RMR Contract Capacity (MW)* days in Contract Year)*

RMR Contract Capacity is shown in Section 1 of Schedule A.

The Daily Surcharge payment is calculated in accordance with Equation B-3 below:

**Equation B-3**

Daily Surcharge Payment ($/MW-day) = *Sum or ((Annual Capital Item Cost ($))/(RMR Contract Capacity (MW) * days in Contract Year))*

- Annual Capital Item Cost is the amount recoverable by Owner under this Agreement in a Contract Year for each Capital Item approved pursuant to Section 7.4 or Section 7.6.
- The Surcharge Payment Factor is 1.

**Table B-1**

| Unit | Capital Item Project No. | Annual Capital Item Cost | Surcharge Payment Factor |
|---|---|---|---|
| | | | |

Annual Fixed Revenue Requirement (AFRR)

The Annual Fixed Revenue Requirement for each Unit is set forth in Table B-6 below. For any Contract Year, the Annual Fixed Revenue Requirement shall be determined by the Formula Rate set forth in Schedule F, unless Owner files a superseding rate schedule under Section 205 of the Federal Power Act.

**Table B-2**

| Unit | Annual Fixed Revenue Requirement |
|---|---|
| | |

Limited Section 205 Filing for an Extension of Contract Term

If CAISO has extended the term of this Agreement pursuant to Section 2.1(b), then not later than October 31 of the expiring Contract Year, Owner shall make a filing with FERC under Section 205 of the Federal Power Act containing the values in Tables B-1 through B-2 for the ensuing Contract Year.

**Schedule C**

**Invoicing for Costs under this Agreement but not Recoverable in CAISO Market Revenues (RMR Invoice)**

**Variable Cost Payment**

No more frequently than once a month, Owner may invoice CAISO for variable costs or other costs, Termination Fee, and CAISO's Repair Share (RMR Invoice), that CAISO is obligated to pay and not otherwise recoverable through the CAISO Tariff. For payment of Termination Fee the RMR Invoice shall be called the Termination Fee Invoice.

The payment of the RMR Invoice shall be subject to review and approval of CAISO in accordance with the CAISO Tariff and applicable CAISO Business Practice Manuals.

| Cost Category | Cost unit | Frequency of invoice |
|---|---|---|
| | | |

**RMR Invoice Costs**

**Voltage Support and Black Start Services**

Voltage Support (including synchronous condenser operation)

Black Start

If the Unit is otherwise generating, the Owner shall be required to operate the Unit within the Power Factor range of the Unit specified in Schedule A to provide Ancillary Services or Voltage Support without additional compensation.

Certain Units (hydroelectric and synchronous condensers) can provide Ancillary Services without generating Energy. Under this Condition, Owner will be compensated for Motoring Charges if the Unit is providing Ancillary Services or Voltage Support while synchronized without generating Energy.

**Motoring Charge**

When Units are operated as synchronous condensers (i.e., motored using electric power) to provide Ancillary Services, or Voltage Support, if applicable, the payment for that service is given by the following formula:

Motoring Charge = (Power consumption rate (MWh/hr)) X (hours operated) X (Energy Price)

Where the Power consumption rate is given by the following table:

| Unit | Power consumption rate (MWh/hour) |
|---|---|

The Energy Price shall be equal to the total power costs charged to the Facility by its supplier of

end-use Energy under the Applicable UDC Tariff for the billing cycle in which the Motoring Charge was incurred divided by the total power consumed at the Facility under such tariff during such billing cycle.

**Applicable UDC Tariff**

## Black Start Services

For those Units with Black Start capability, the cost of maintaining such capability is included in this Agreement and no additional costs shall be charged to the CAISO for maintaining such capability. The CAISO will pay for Black Start service, including for a Black Start Test Dispatch Notice, at the rates and prices in this Agreement for Start-Ups and Delivery of Energy in connection with the Black Start service. Owner shall maintain the Black Start capability of the Unit and the Facility and provide Black Starts in accordance with the CAISO Ancillary Services Requirements Protocol and the CAISO Dispatch Protocol, which shall be deemed incorporated by reference into this Agreement.

When the CAISO first gives written notice to the Owner that it has obtained adequate Black Start service through an auction or a separate agreement with Owner or other Generators and Black Start service under this Agreement is no longer required, the CAISO shall not be entitled to call upon this Unit to provide Black Start service. Once the CAISO has given this notice, the Owner may remove Black Start service from this Agreement by filing unilaterally a change in rate schedule with FERC. Such filing shall not be required to include any reduction in rate or revenue solely because Black Start service is removed. The CAISO shall not oppose the absence of any rate or revenue reduction that results solely from removing such service.

**Appendix D**

**Not Used**

**Schedule E**

**Not Used**

**Schedule F**

**Annual Revenue Requirements of Must-Run Units**

**Determination of Annual Revenue Requirements**

**of Must-Run Generating Units**

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## Article I. Purpose and General Procedures

### Part A. Determination of Rates and Charges

This Schedule F establishes the procedures and methodology for determining the Annual Fixed Revenue Requirements (in dollars) and Variable O&M Rates (in $/MWh) for facilities designated for must-run service for purposes of calculating certain charges for such service under the RMR Contract.

The Annual Fixed Revenue Requirements and the Variable O&M Rate for each designated must-run generating facility shall be determined annually. The Annual Fixed Revenue Requirements and the Variable O&M Rate for each such facility that shall be used for calculating charges to the CAISO during each calendar year shall be determined by application of the Formula set forth in Article II hereof to the Owner's costs incurred during the twelve-month period ended on June 30 of the prior calendar year. Each twelve-month period ending on June 30 of each year is hereinafter referred to as the "Cost Year" relating to the rates and charges that are effective during the succeeding calendar year.

### Part B. Informational Filings

In connection with the determination of rates and charges for each calendar year, reflecting costs incurred during the June 30 Cost Year as described in the foregoing Part A of this Article I, the Owner shall provide to the CAISO an Information Package detailing and supporting all calculations involved in such determination. A single Information Package may contain all such informational materials pertaining to all of the Owner's designated must-run facilities. On or before October 1, 2001, the Owner shall provide to the CAISO the Information Package relating to the rates and charges to become effective on January 1, 2002. Thereafter, on November 1 of each year, the Owner shall provide to the CAISO the Information Package relating to the rates and charges to be effective during the calendar year beginning on the following January 1.

Each such Information Package shall be in a clear and readable format and shall contain:

1. detailed workpapers showing the derivation of costs under the Formula for the relevant Cost Year along with supporting schedules showing the data used in applying the formula, presented in a format consistent with the presentation of information in the FERC Form No. 1;

2. a clear identification of the depreciation rates reflected in claimed costs for the Cost Year and the rate of return and every other stated item (i.e., any item which appears as a numerical value in the Formula and which only may be changed by

a filing with the FERC);

3. a comparison of the major components of the resulting revenue requirements for the relevant Cost Year with the corresponding components of the revenue requirements that result from the application of the Formula using costs from the Owner's FERC Form No. 1 relating to the preceding calendar year;

4. such additional documentation as to specific items of costs required by the Formula.

The Owner shall provide each Information Package to the CAISO in printed form and a suitable electronic format. The CAISO shall post the Information Package on its website. A suitable electronic format shall be any format that the FERC permits for electronic filings.

Coincident with providing each such Information Package to the CAISO, the Owner shall also submit the Information Package to the FERC in an informational filing so as to allow for review of the related rates and charges by the FERC staff and affected parties. As to the informational filing relating to rates and charges to be effective during calendar year 2002, (i) discovery requests by the FERC staff and affected parties shall be made within 45 days of the filing, with responses by the Owner due within 60 days of the filing, and (ii) protests, if any, by affected parties shall be filed with the FERC within 75 days of the filing. As to each subsequent informational filing, (i) discovery requests by the FERC staff and affected parties shall be made within 20 days of the filing, with responses by the Owner due within 35 days of the filing, and (ii) protests, if any, by affected parties shall be filed with the FERC within 45 days of the filing. In the event that the need arises during the discovery process for the nondisclosure or confidentiality of information, the Owner and affected parties, other than FERC Staff and state regulatory agencies, shall utilize the procedures contained in Schedules N-1 and N-2 of the RMR Contract. If the Owner seeks the confidentiality or nondisclosure of information provided to FERC or state regulatory agencies, it shall follow the applicable rules, regulations and statutory provisions of those agencies.

Protests to the Information Package challenging arithmetic calculations or conformity to the Rate Formula, not resolved by summary disposition of the FERC, shall be resolved by the use of the Alternative Dispute Resolution procedures in Schedule K of the RMR Contract. In such a proceeding, the Owner will bear the burden of proof as in a proceeding under Section 205 of the Federal Power Act (FPA). If it is found that an erroneous calculation or non-conforming formula element has been used, refunds shall be ordered. The amount of refunds shall restore the parties to the positions they would have occupied had the erroneous calculations or non-conforming formula elements not been used, with interest calculated pursuant to Section 35.19a of the Commission's regulations, 18 C.F.R. Section 35.19a.

If a matter is set for hearing, additional discovery shall be permitted in accordance with the Commission's Rules of Practice and Procedure. Under hearings established pursuant to this provision, refund rights will be as in a proceeding under Section 205 of the FPA. Any refunds due as the result of a final Commission order will be credited or paid to the CAISO with interest in accordance with 18 C.F.R. 35.19a.

In addition to the discovery provided above, affected parties shall have the ability to audit the Owner's books and records as provided in Section 12.2 of the RMR Contract. To the extent that an audit discloses that the formula was not correctly applied for a particular year, the affected prior billings shall be corrected, and appropriate refunds or credits shall be provided to the CAISO, with interest determined in accordance with 18 C.F.R. 35.19a.

Notwithstanding the above procedures, all parties retain full rights to make filings at any time under Sections 205 and 206 of the FPA, as appropriate.

## Article II. Formula for Determination of Annual Revenue Requirements

### Part A. Purpose and Overview

The purpose of this Formula For Determination of Annual Revenue Requirements ("Formula") is to specify the method for determining the Annual Revenue Requirements, and certain components thereof, of particular must-run generating units for each Cost Year.

Part B of this Formula contains the specifications for the components of costs that may be included in the Annual Revenue Requirements of individual designated must-run generating units (*i.e.*, for each "Subject Resource").

Part C of this Formula sets forth (i) general instructions for the use and application of the Formula, and (ii) certain general definitions of terms used herein.

### Part B. Determination of Annual Revenue Requirements

#### Section 1. Annual Fixed Revenue Requirements and Variable O&M Rate

**(A) Annual Fixed Revenue Requirements**

The "Annual Fixed Revenue Requirements" for the Subject Resource is the amount determined as the following difference:

1. Total Annual Revenue Requirements, as defined below; less

2. Total Annual Variable Costs, as defined below.

**(B) Variable O&M Rate**

The "Variable O&M Rate" for the Subject Resource is the rate (in $/MWh) determined as the follows:

*Variable O&M Rate = [Annual Variable O&M Expenses]/[Annual Net Generation]*

where “Annual Variable O&M Expenses” is defined hereinbelow, and “Annual Net Generation” is the net generation (in MWh) of the Subject Resource during the Cost Year.

Notwithstanding the foregoing, whenever the Annual Net Generation of the Subject Resource is zero or negative, the Variable O&M Rate shall be deemed to be zero.

**(C) Total Annual Revenue Requirements**

The "Total Annual Revenue Requirements" for the Subject Resource is the amount that is the sum of the following amounts:

1. Operating Expenses, determined pursuant to Section 2 below; and

2. Return and Income Tax Allowance, determined pursuant to Section 3 below.

**Section 2. Operating Expenses**

**"Operating Expenses"** for the Subject Resource is the quantity that is the sum of the following amounts:

1. Total O&M Expenses, as defined below;

2. Depreciation Expenses, as defined below;

3. Taxes Other Than Income Taxes, as defined below; and

4. Revenue Credits, as defined below.

**(A) Total O&M Expenses**

"Total O&M Expenses" is the amount of expenses arising from the operation and maintenance of the Subject Resource, including Production O&M Expenses, Transmission O&M Expenses, Distribution O&M Expenses, and Administrative & General Expenses, all as defined below.

**(1)** **Production O&M Expenses:** Expenses incurred directly in operating and maintaining the Subject Resource:

**(a)** **Steam Production O&M:** For steam units only, amounts properly recorded in Accounts 500-515.

**(b)** **Hydro Production O&M:** For hydro units only, amounts properly recorded in Accounts 535-545.

**(c)** **Other Power Generation O&M:** For other types of units, amounts properly recorded in Accounts 546-554.

**(d)** **Other Power Supply Expenses:** Amounts properly recorded in Accounts 555-557, if any, that are reasonably assignable or allocable to the Subject Resource.

**(2)** **Transmission O&M Expenses:** Expenses incurred directly in operating and maintaining the transmission facilities associated with the Subject Resource, as properly recorded in Accounts 560-573 and reasonably assignable or allocable to the Subject Resource.

**(3)** **Distribution O&M Expenses:** Expenses incurred directly in operating and maintaining the distribution facilities associated with the Subject Resource, as properly recorded in Accounts 580-598 and reasonably assignable or allocable to the Subject Resource.

**(4)** **Administrative and General (A&G) Expenses:** Those portions, if any, of administrative and general expenses, as properly recorded in Accounts 920-935, that are reasonably related to the operation of the Subject Resource, determined from appropriate direct assignment or reasonable allocation. Such expenses shall exclude (i) franchise fees related solely to the Owner's retail sales, (ii) retail regulatory expenses, (iii) assessments under 18 CFR Section 382.201 of the FERC Regulations, (iv) association dues, and (v) general advertising expenses.

**(B) Depreciation Expenses**

"Depreciation Expenses" are provisions for depreciation and amortization for the Subject Resource, as properly recorded in Accounts 403, 404, 405, 406, and 407, including only:

**(1)** **Production Plant Depreciation:** Depreciation and amortization, if any, of investment in the Subject Resource;

**(2)** **Transmission Plant Depreciation:** Depreciation and amortization, if any, of investment in the transmission facilities associated with the Subject Resource, as reasonably assignable or allocable to the Subject Resource;

**(3)** **Distribution Plant Depreciation:** Depreciation and amortization, if any, of investment in the distribution facilities associated with the Subject Resource, as reasonably assignable or allocable to the Subject Resource;

**(4)** **General and Intangible Plant Depreciation:** Depreciation and amortization, if any, of general and intangible plant investments that are reasonably assignable or allocable to the Subject Resource.

Notwithstanding the foregoing, costs recorded in Accounts 405, 406 and 407 shall be included hereunder only if, and to the extent that, FERC shall have permitted the inclusion of such costs for ratemaking purposes for the Owner under the RMR Contract.

**(C) Taxes Other Than Income Taxes**

**"Taxes Other Than Income Taxes"** are taxes other than income and revenue taxes, as properly recorded in Account 408.1, that are reasonably assignable and allocable to the Subject Resource, including for example:

1. Property and Property-Related Taxes;

2. Payroll and Labor-Related Taxes;

3. Other Taxes, if any, identifiable as reasonably assignable or allocable to the Subject Resource.

Taxes Other Than Income Taxes assignable and allocable to the Subject Resource shall not include any taxes related solely to, or arising solely from, the Owner's retail sales.

**(D) Revenue Credits**

**"Revenue Credits"** are those revenues, if any, that are (i) properly recorded in Account 451 (Miscellaneous Service Revenues), Account 453 (Sales of Water and Water Power), Account 454 (Rent From Electric Property), Account 455 (Interdepartmental Sales), and Account 456 (Other Electric Revenues), and (ii) directly related to, or reasonably allocable to, the Subject Resource. Such Revenue Credits shall be treated as negative values hereunder.

**(E) Treatment of Capital Leases**

The foregoing components of Operating Expenses may include expenses associated with capital leases as approved by the Commission, as set forth more fully under Article II, Part B, Section 4(A) of this Formula.

**Section 3. Return and Income Tax Allowance**

**"Return and Income Tax Allowance"** is the quantity that is the sum of:

1. the product of:

   a. Allowable Pre-Tax Rate of Return, and

   b. Net Investment,

   as both such quantities are hereinafter defined; and

2. the quantity equal to:

   *[ITC Amortization]/(1-t)*

where:

a. "t" is the effective, combined state and federal income tax rate.

b. "ITC Amortization," is amortization, if any, of investment tax credits, as properly recorded in Account 411.4, that are reasonably assignable or allocable to the Subject Resource and to those portions of general and intangible plant investments that are reasonably assignable or allocable to the Subject Resource. Notwithstanding the foregoing, this term shall include only those amounts of amortization of investment tax credits which the Owner shall have elected to receive under Section 46(f)(1) of the Internal Revenue Code. ITC Amortization amounts that reduce net income shall be treated as negative values hereunder, while ITC Amortization amounts, if any, that increase net income shall be treated as positive values hereunder.

**Section 4. Net Investment**

**"Net Investment"** is the quantity that is determined as follows:

Net Investment = Gross Plant Investment - Depreciation Reserve
+ CWIP + PHFU - ADIT + Working Capital

where the quantities appearing in the foregoing equation are defined hereinafter below.

In determining Net Investment hereunder, each component thereof, other than Cash Allowance, shall be determined as the end-of-year balances in the Accounts specified for the relevant Cost Year.

**(A) Gross Plant Investment**

**"Gross Plant Investment"** is gross original cost plant investment as properly recorded in Accounts 101, 102, 106, and 114, including only the following

amounts:

**(1)** **Production Plant Investment:** investment in the generating unit itself and in common facilities associated with the unit, as recorded in Accounts 310-316, 330-336, or 340-346, 106 and 114;

**(2)** **Transmission Plant Investment:** investment in transmission facilities associated with the Subject Resource, as properly recorded in Accounts 350-359, 106, and 114, and reasonably assignable or allocable to the Subject Resource;

**(3)** **Distribution Plant Investment:** investment in distribution facilities associated with the Subject Resource, as properly recorded in Accounts 360-373, 106, and 114, and reasonably assignable or allocable to the Subject Resource; and

**(4)** **General and Intangible Plant Investment:** reasonably assignable and allocable portions, if any, of general and intangible plant investment, recorded in Accounts 389-399 and 301-303, 106 and 114.

Subject to the limitations detailed in this paragraph, when the Owner has a capital lease in lieu of gross plant investment, it may include Account 101.1 hereunder. A lease may be capitalized and the costs included for ratemaking purposes if the Owner demonstrates that the lease qualifies as a capital lease under 18 C.F.R. Part 101, General Instruction No. 19 (1998), and the Owner has obtained, prior to the informational filing, approval to include such costs for ratemaking purposes from the FERC under the FPA. Capital leases shall be accounted for in accordance with 18 C.F.R. Part 101, General Instruction No. 20 (1998).

**(B) Depreciation Reserve**

**"Depreciation Reserve"** is accumulated provision for depreciation and amortization, as properly recorded in Accounts 108, 111, and 115, related to the Subject Resource, including the following amounts:

**(1)** **Production Plant Depreciation Reserve:** amounts of Depreciation Reserve for the investment in the unit itself and in common facilities associated with the unit;

**(2)** **Transmission Plant Depreciation Reserve:** amounts of Depreciation Reserve for the investment in transmission facilities associated with the Subject Resource, as reasonably assignable or allocable to the Subject Resource;

**(3)** **Distribution Plant Depreciation Reserve:** amounts of Depreciation Reserve for the investment in distribution facilities associated with the Subject Resource, as reasonably assignable or allocable to the Subject Resource;

**(4)** **General and Intangible Plant Reserve:** amounts of Depreciation Reserve for the portions, if any, of general and intangible plant investments reasonably assignable and allocable to the Subject Resource.

Credit balances in the aforementioned accounts shall be treated as positive values hereunder, and debit balances in such accounts shall be treated as negative values.

**(C) CWIP**

**"CWIP"** is the amount of construction work in progress, as properly recorded in Account 107 for construction projects associated with the Subject Resource related solely and directly to pollution control for the Subject Resource.

**(D) PHFU**

**"PHFU"** is the cost of plant held for future use, as properly recorded in Account 105 that is reasonably assignable or allocable to the Subject Resource.

**(E) ADIT**

**"ADIT"** is accumulated provision for deferred income taxes, as properly recorded in Accounts 190, 281, 282, 283, and 255, that are reasonably assignable or allocable to the investment in, or operation of, the Subject Resource, including the following amounts:

**(1)** **Production Plant ADIT:** amounts of ADIT arising directly from the investment in, or operation of, the Subject Resource itself and common facilities associated with the Subject Resource;

**(2)** **Transmission Plant ADIT:** amounts of ADIT arising directly from the investment in, or operation of, the transmission facilities, if any, associated with the Subject Resource;

**(3)** **Distribution Plant ADIT:** amounts of ADIT arising directly from the investment in, or operation of, distribution facilities, if any, associated with the Subject Resource; and

**(4)** **General and Intangible Plant ADIT:** amounts of ADIT arising from the portions, if any, of general and intangible plant investments reasonably assignable and allocable to the Subject Resource.

For purposes of this Formula, ADIT means accumulated provision for deferred income taxes, as properly recorded in the aforementioned Accounts, *including* amounts previously recorded in such accounts and reclassified as a result of the adoption of SFAS No. 109, but *excluding* amounts recorded in such accounts as a result of the adoption of SFAS No. 109, such that the required adoption of SFAS No. 109 will have no effect on the costs determined hereunder.

Notwithstanding the foregoing, as to Account 255, ADIT hereunder shall include only those amounts, if any, related to investment tax credits which the Owner shall have elected to receive under Section 46(f)(2) of the Internal Revenue Code.

ADIT balances that are credit balances shall be treated as positive values hereunder, while ADIT balances that are debit balances shall be treated as negative values hereunder.

Owner shall support all amounts of ADIT included and not included hereunder in

the manner described in sections 35.13(h)(6) and (7) of the Commission's regulations (Statements AF and AG, respectively), except that the time period for the relevant data for the informational package will be consistent with the requirements of this formula, rather than the "Periods" referenced in those regulations.

**(F) Working Capital**

**"Working Capital"** is the sum of the portions, if any, of the following items that are reasonably assignable or allocable to the Subject Resource:

**(1)** **Fuel Stocks,** which is the amount of fossil fuel stock, if any, maintained for the Subject Resource, as properly recorded in Account 151;

**(2)** **Plant Materials and Supplies,** consisting of the value of plant materials and supplies reasonably assignable or allocable to the Subject Resource, as properly recorded in Accounts 154 and 163;

**(3)** **Prepayments,** consisting of the amount, if any, of prepayments reasonably assignable or allocable to the Subject Resource, as properly recorded in Account 165;

**(4)** **Working Cash Allowance,** which is one-eighth of O&M Expenses (as defined herein), less (a) Total Annual Fuel Costs (as defined herein below), and (b) all amounts or portions, if any, of Account 555 (Purchased Power) that may be included in such O&M Expenses; and

**Unamortized Deferred Costs,** which shall be that portion, if any, of Account 186 directly related to, or reasonably allocable to, the Subject Resource.

**Section 5. Allowable Pre-Tax Rate of Return**

The Allowable Pre-Tax Rate of Return shall be:

**Section 6. Additional Quantities**

**(A) Annual Variable O&M Expenses**

**"Annual Variable O&M Expenses"** is the sum of the following quantities:

**(1)** **Variable Production O&M Expenses:** those portions of Production O&M Expenses, as defined above, other than fuel expenses, that are reasonably determined to be variable expenses, in the sense that they are incurred as a result of, or otherwise are reasonably associated with, the production of energy by the Subject Resource.

**(2)** **Variable A&G Expenses:** that portion of A&G Expenses that is related or allocable to the foregoing Variable Production O&M Expenses.

Notwithstanding the foregoing, starting with the first information filing hereunder and continuing until the Owner elects to use a different method to determine its Annual Variable O&M Expenses, the Owner may compute Annual Variable O&M Expenses as the amount equal to the product of (a) the Initial Variable O&M

Rate, in $/MWh, for the Subject Resource, as set forth in Exhibit A hereto (Exhibit A can be found in Appendix B to the Stipulation and Agreement), times (b) the Net Generation of the Subject Resource (as defined hereinabove). Whenever the Owner does not compute Annual Variable O&M Expenses based on the Initial Variable O&M Rate in the foregoing manner, the Owner shall include in each of Informational Package a detailed explanation of the method or methods used to classify O&M expenses as between fixed (*i.e.*, capacity-related) expenses and variable (*i.e.*, energy-related) expenses and the reason(s) such method results in just and reasonable rates.

**(B) Annual Fixed O&M Expenses**

**"Annual Fixed O&M Expenses"** is the quantity that is equal to the following:

**(1)** Total O&M Expenses, as defined hereinabove, less

**(2)** the sum of:

a. Annual Variable O&M Expenses, as defined hereinabove, and

b. Annual Variable Fuel Costs, as defined herein below,

c. Annual Emissions Costs, as defined herein below, and

d. Annual Non-Fuel Start-Up Costs, as defined herein below.

**(C) Fuel Expenses**

**(1) Total Annual Fuel Costs**

**"Total Annual Fuel Costs"** is the total fuel expense for the Subject Resource for the Cost Year properly recorded in Account 501 or Account 547, as appropriate depending on the nature of the Subject Resource.

**(2) Annual Fixed Fuel Costs**

**"Annual Fixed Fuel Costs"** is that portion, if any, of Total Annual Fuel Costs related to fuel handling and administration of fuel planning, procurement and transportation which do not vary with the amount of fuel purchased.

**(3) Annual Variable Fuel Costs**

**"Annual Variable Fuel Costs"** is the quantity that is the following difference:

1. Total Annual Fuel Costs, less

2. Annual Fixed Fuel Costs.

**(D) Annual Emissions Costs**

**"Annual Emissions Costs"** is the total emissions costs that are related to the operation of the Subject Resource during the Cost Year.

**(E) Annual Non-Fuel Start-Up Costs**

**"Annual Non-Fuel Start-Up Costs"** is the aggregate sum of costs, other than fuel costs, attributable to start-ups of the Subject Resource during the Cost Year, consisting of start-up power costs, shut-down power costs, and other non-fuel start-up costs, all as determined pursuant to the applicable sections of Schedule D of the RMR Contract, as applied to all start-ups of the Subject Resource during the Cost Year.

**(F) Total Annual Variable Costs**

"Total Annual Variable Costs" is the sum of:

1. Annual Variable O&M Expenses,

2. Annual Variable Fuel Costs, and

3. Annual Emissions Costs.

## Part C. General Instructions and Explanatory Notes

### Section 1. General Instructions

In applying this Formula to a Subject Resource, the following instructions and explanations shall be followed:

**(A) No Duplicative Charges**

The costs determined and referenced by this Formula shall exclude costs that are recoverable, or that are actually recovered, elsewhere under the applicable contract or agreement between the Owner and the CAISO. There shall be no double counting of costs hereunder.

**(B) Determination of Depreciation Expenses**

Depreciation Expenses, Depreciation Reserve, and Deferred Income Taxes reflected in the revenue requirements determined pursuant to this Formula shall be computed using either fixed depreciation rates or depreciation rates determined annually from fixed mortality characteristics (i.e., service lives, net salvage ratios, etc.). Such depreciation rates and/or mortality characteristics, which may differ for particular assets or groups of assets comprising, or related to, the Subject Resource, are set forth on Exhibit B, which is attached hereto and made a part hereof. Such depreciation rates and/or mortality characteristics may not be changed except pursuant to Section 205 or Section 206 of the FPA. Nothing herein shall be construed as affecting any requirements of the FERC regarding the use by the Owner of depreciation rates for financial reporting purposes.

**(C) Costs in Excess of Original Cost**

The components of rate base and the costs reflected under the Formula shall not include an acquisition adjustment or costs associated with an acquisition adjustment unless the Owner shall have obtained approval from the FERC to include under the Formula such an adjustment or such costs for ratemaking purposes under the FPA. The effective date for the inclusion of such costs shall

be as set forth in the FERC order.

**(D) Use of FERC Accounting**

The costs determined and referenced by this Formula shall reflect only FERC-basis accounting, and shall not reflect any accounting for costs approved by any state regulatory commission or other body if not approved or accepted by the FERC for use in connection with the RMR Contract. Except as otherwise provided herein, the accounting for costs for purposes of applying this Formula shall be consistent with the requirements of the Uniform System of Accounts.

**(E) Accounting Methods**

The costs determined and referenced by this Formula shall reflect only such accounting methods prescribed by such authorities as AICPA and FASB that shall have been approved or accepted by the FERC for use in connection with the RMR Contract. The Owner shall be required to seek and gain such approval or acceptance from the FERC prior to reflecting any changed accounting methods in the determination of costs in connection with this Formula.

The Owner shall carry the burden of demonstrating that its accounting methods and entries reflected in the costs determined and referenced by this Formula produce just, reasonable, and nondiscriminatory rates for its customers.

**(F) Out-of-Period Adjustments**

The costs determined and referenced by this Formula shall not reflect any accounting entries the purpose of which is to adjust or correct for accounting entries in years other than the Cost Year if such adjusting or correcting entries would have an unjust, unreasonable, or discriminatory effect on the CAISO.

**(G) Extraordinary Costs**

Extraordinary costs included in the costs determined and referenced by this Formula shall be subject to amortization over a reasonable period of time. In determining how costs should be amortized, the parties shall also determine how the costs being amortized should be recovered in the event that the plant closes and does not reopen.

As used herein, “extraordinary costs” mean costs arising from events and transactions that are of an unusual nature and infrequent occurrence, the effects of which are abnormal and significantly different from the ordinary and typical activities of the Owner, and would not reasonably be expected to recur in the foreseeable future. In determining significance, items should be considered individually and not in the aggregate. However, the effects of a series of related transactions arising from a single specific and identifiable event or plan of action should be considered in the aggregate. An item can be extraordinary even if it is less than five (5) percent of income computed before the extraordinary item. In its annual Information Package, the Owner shall identify and provide explanations for all extraordinary costs which it seeks to include in the rates and charges determined pursuant to this Formula, and the Owner shall bear the burden of proof, as in a proceeding under Section 205 of the FPA, that its proposed treatment of extraordinary costs is just and reasonable.

**(H) Imprudently Incurred Costs**

The costs determined and referenced by this Formula shall not include any costs which have been determined by the FERC in a proceeding under Section 206 of the FPA to have been imprudently incurred by the Owner.

**(I) Transmission Cost Assignments and Allocations**

Costs of transmission facilities assigned and/or allocated to the Subject Resource hereunder are intended to include only those costs, if any, related to the step-up substation facilities and other transmission facilities directly connected to the Subject Resource and used to deliver the output of the Subject Resource to the transmission grid. In each annual Informational Package, the Owner shall clearly identify and fully describe all transmission facilities which it claims satisfy the foregoing criteria.

**(J) Distribution Cost Assignments and Allocations**

Costs of distribution facilities assigned and/or allocated to the Subject Resource hereunder are intended to include only those costs, if any, related to the step-up substation facilities and other distribution facilities directly connected to the Subject Resource and used to deliver the output of the Subject Resource to the transmission or distribution system. In each annual Informational Package, the Owner shall clearly identify and fully describe all distribution facilities which it claims satisfy the foregoing criteria.

**(K) Inclusion of Certain Costs**

The Owner shall include in its annual Informational Package detailed workpapers and explanations supporting the reasonableness of including in the revenue requirements determined pursuant to this formula any amounts recorded in Accounts 501, 547, 555, 561, 927, 105, and 186. The Owner shall bear the burden of proof, as in a proceeding under Section 205 of the FPA, to affirmatively demonstrate that all such included amounts are directly related to the provisions of service under the RMR Contract and are reasonably assignable or allocable to the Subject Resource. As to Account 105, the requirement for a definitive plan required by the description of Account 105 in the Uniform System of Accounts, and the affirmative demonstration required by this paragraph, shall be deemed to be met upon a showing that the CAISO has approved, in accordance with the provisions of Section 7.4 of the RMR Contract, a plan for the future use of the property.

**(L) Direct Assignments and Allocations**

Where Part B of this Formula provides for the identification and/or assignment of costs incurred directly in connection with a particular facility or facilities (including a Subject Resource), or directly related to such a facility or facilities, the Owner shall bear the burden of demonstrating the reasonableness of each such identification and/or assignment, and each failure to make such an identification and/or assignment. Notwithstanding the foregoing, where this Formula provides for such a direct identification or assignment of costs, the Owner may use an allocation method to apportion such costs among particular facilities; provided, however, that (i) the Owner shall in its Informational Package clearly identify and describe such allocation method and the basis for it, and (ii) the Owner shall bear the burden of demonstrating the reasonableness of the method. It is recognized

that such allocation methods may, for example, be appropriate for apportioning certain types of costs between individual generating units at a multi-unit generating station. Such allocations of costs between individual generating units at a plant site shall be consistent with the requirements for such allocations, if any, provided in the RMR Contract.

**(M) No Adverse Distinction**

In applying this Formula and in maintaining its books and records insofar as they affect the results of applying this Formula, the Owner shall not make an adverse distinction between the Subject Resource and any other facility or facilities owned or operated by the Owner; *e.g.*, the Owner shall assign certain costs directly to the Subject Resource only if, and to the extent that, the Owner directly assigns such costs to other, similar facilities.

**Section 2. General Definitions**

Except as may be expressly stated otherwise, the following terms have the followings meanings as used herein:

**(A) Account**

**"Account"** refers to a particular account for "major" utilities as prescribed by the Uniform System of Accounts.

**(B) FERC**

**"FERC"** means the Federal Energy Regulatory Commission or its successor.

**(C) Uniform System of Accounts**

**"Uniform System of Accounts"** means the FERC's "Uniform System of Accounts Prescribed For Public Utilities and Licensees Subject to the Provisions of the Federal Power Act," as such uniform system of accounts was in effect as of the first effective date of the RMR Contract.

**(D) RMR Contract**

**"RMR Contract"** means the contract to which this Formula is attached and made a part thereof.

**(E) Subject Resource**

**"Subject Resource"** means any particular generating unit to which this Formula is applied for purposes of determining the annual costs thereof.

**(F) Cost Year**

**"Cost Year"** means the twelve-month period ended June 30 to which this Formula is applied to determine the Annual Fixed Revenue Requirements and Variable O&M Rate for a Subject Resource to be applicable during the next succeeding calendar year.

**(G) Owner**

**"Owner"** means the entity, other than the CAISO, that is a party to the RMR Contract.

**(H) CAISO**

The **"CAISO"** means the California Independent System Operator Corporation.

**Exhibit A - Initial Variable O&M Rates**[1]

[Footnote 1: Exhibit A for each owner is filed in Appendix to the Stipulation and Agreement.]

| Line | RMR Facility | Unit | Initial Variable O&M Rate ($/MWh) |
|---|---|---|---|
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**Exhibit B - Depreciation Rate and Mortality Characteristics**[2] [3]

[Footnote 2: Exhibit B for each owner is filed in Appendix B to the Stipulation and Agreement.]

[Footnote 3: Effective as of the effective date of the Settlement.]

| Line | RMR Facility | Unit | Plant Account | Depreciation Rate (%) | Mortality Characteristics | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Retire-ment Date | Average Service Life | Salvage Value or Rate | Interim Retire-ments Rate |
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**Schedule G**

**Not Used**

**Schedule H**

**Not Used**

**Schedule I**
**Insurance Requirements**

**Owner - Obtained Insurance [subject to negotiation]**

**CAISO – Obtained Insurance [subject to negotiation]**

**Schedule J**

**Notices**

Notice to Owner

Name:
Title:
Address:
Telephone:
Facsimile:
E-mail:

With a copy to: Owner's Representative:

Notice to CAISO:

Name:
Title:
Address:
Telephone:
Facsimile:
E-mail:

With a copies to:

Name:
Title:
Address:
Telephone:
Facsimile:
E-mail:

**Schedule K**

**Dispute Resolution**

# DISPUTE RESOLUTION

## Applicability

### 1.1 General Applicability.

Except as limited below or otherwise as limited by law (including the rights of any party to file a complaint with FERC under the relevant provisions of the Federal Power Act (FPA)), these ADR Procedures shall apply to all disputes between parties which arise under this Agreement. The foregoing shall not impair the applicability of the CAISO Tariff ADR procedures to other disputes between the parties that do not arise under this Agreement. All alternative dispute resolution proceedings hereunder shall be administered by the American Arbitration Association ("AAA"). The Owner and CAISO shall enter into such arrangements with the AAA as are necessary to provide for AAA administration of this Schedule K.

1.1.1 This Schedule K shall not apply to disputes as to whether rates and charges under the Agreement are just and reasonable under the Federal Power Act except as provided in Schedule F. Nothing herein shall limit the right of the FERC to initiate or adjudicate complaints or other proceedings in accordance with applicable statutes or regulations or to compel FERC to exceed its statutory authority as defined by any applicable federal statutes, regulations or orders lawfully promulgated thereunder.

### 1.2 Disputes Involving Government Agencies.

If a party to a dispute is a government agency the procedures herein which provide for the resolution of claims and arbitration of disputes are subject to any limitations imposed on the agency by law, including but not limited to the authority of the agency to effect a remedy. If the governmental agency is a federal entity, the procedures herein shall not apply to disputes involving issues arising under the United States Constitution.

### 1.3 Injunctive and Declaratory Relief.

Where the court having jurisdiction so determines, use of the ADR Procedures shall not be a condition precedent to a court action for injunctive relief nor shall the provisions of California Code of Civil Procedure sections 1281 *et seq.* apply to such court actions.

### 1.4 Negotiation and Mediation.

#### 1.4.1 Negotiation.

CAISO and Owner ("Parties") shall make good-faith efforts to negotiate and resolve any dispute between them arising under this Agreement prior to invoking the ADR Procedures herein. Each Party shall designate an individual with authority to negotiate the matter in dispute to participate in such negotiations.

#### 1.4.2 Statement of Claim.

In the event a dispute is not resolved through such good-faith negotiations, any party may submit a statement of claim, in writing, to each other disputing party,

which submission shall commence the ADR Procedures. The statement of claim shall set forth in reasonable detail (i) each claim, (ii) the relief sought, including the proposed award, if applicable, (iii) a summary of the grounds for such relief and the basis for each claim, (iv) the parties to the dispute, and (v) the individuals having knowledge of each claim. The other parties to the dispute shall similarly submit their respective statements of claim within 14 days of the date of the initial statement of claim or such longer period as the AAA may permit following an application by the responding party. If any responding party wishes to submit a counterclaim in response to the statement of claim, it shall be included in such party's responsive statement of claim. No party shall be considered as having received notice of a claim decided or relief granted by a decision made under these procedures unless the statement of claim includes such claim or relief.

**1.4.3 Selection of Mediator.**

After submission of the statements of claim, the parties may request mediation, if the disputing parties so agree. If the parties agree to mediate, the AAA shall distribute to the parties by facsimile or other electronic means a list containing the names of at least seven prospective mediators with mediation experience, or with technical or business experience in the electric power industry, or both, as he or she shall deem appropriate to the dispute. The parties shall either agree upon a mediator from the list provided or from any alternative source, or alternate in striking names from the list with the last name on the list becoming the mediator. The first party to strike off a name from the list shall be determined by lot. The parties shall have seven days from the date of receipt of the AAA's list of prospective mediators to complete the mediator selection process and appoint the mediator, unless the time is extended by mutual agreement. The mediator shall comply with the requirements of Section 1.5.2.

**1.4.4 Mediation.**

The mediator and representatives of the disputing parties, with authority to settle the dispute, shall within 14 days after the mediator's date of appointment schedule a date to mediate the dispute. Matters discussed during the mediation shall be confidential and shall not be referred to in any subsequent proceeding. With the consent of all disputing parties, a resolution may include referring the dispute directly to a technical body (such as a WECC technical advisory panel) for resolution or an advisory opinion, or referring the dispute directly to FERC.

**1.4.5 Demand for Arbitration.**

If the disputing parties have not succeeded in negotiating a resolution of the dispute within 30 days of the initial statement of claim or, if within that period the parties agreed to mediate, within 30 days of the parties' first meeting with the mediator, such parties shall be deemed to be at impasse and any such disputing party may then commence the arbitration process, unless the parties by mutual agreement agree to extend the time. A party seeking arbitration shall provide notice of its demand for arbitration to the other disputing parties.

**1.5 Arbitration.**

**1.5.1 Selection of Arbitrator.**

**1.5.1.1 Disputes Under $1,000,000.** Where the total amount of claims and counterclaims in controversy is less than $1,000,000 (exclusive of costs and

interest), the disputing parties shall select an arbitrator from a list containing the names of at least 10 qualified individuals supplied by AAA, within 14 days following submission of the demand for arbitration. If the disputing parties cannot agree upon an arbitrator within the stated time, they shall take turns striking names from the list of proposed arbitrators. The first party to strike off a name shall be determined by lot. This process shall be repeated until one name remains on the list, and that individual shall be the designated arbitrator.

**1.5.1.2 Disputes of $1,000,000 or Over.** Where the total amount of claims and counterclaims in controversy is $1,000,000 or more (exclusive of interest and costs), the disputing parties may agree on any person to serve as a single arbitrator, or shall endeavor in good faith to agree on a single arbitrator from a list of ten qualified individuals provided by the AAA, 14 days following submission of the demand for arbitration. If the disputing parties are unable to agree on a single arbitrator within the stated time, the party or parties demanding arbitration, and the party or parties responding to the demand for arbitration, shall each designate an arbitrator. Each designation shall be from the AAA list of arbitrators, as applicable, no later than the tenth day thereafter. The two arbitrators so chosen shall then choose a third arbitrator.

**1.5.2 Disclosures Required of Arbitrators.**

The designated arbitrator(s) shall be required to disclose to the parties any circumstances that might preclude him or her from rendering an objective and impartial determination. Each designated arbitrator shall disclose:

**1.5.2.1** Any direct financial or personal interest in the outcome of the arbitration;

**1.5.2.2** Any information required to be disclosed by California Code of Civil Procedure Section 1281.9.; and

**1.5.2.3** Any existing or past financial, business, professional, or personal interest that are likely to affect impartiality or might reasonably create an appearance of partiality or bias. The designated arbitrator shall disclose any such relationships that he or she personally has with any party or its counsel, or with any individual whom they have been told will be a witness. They should also disclose any such relationship involving members of their families or their current employers, partners, or business associates. All designated arbitrators shall make a reasonable effort to inform themselves of any interests or relationships described above. The obligation to disclose interests, relationships, or circumstances that might preclude an arbitrator from rendering an objective and impartial determination is a continuing duty that requires the arbitrator to disclose, at any stage of the arbitration, any such interests, relationships, or circumstances that arise, or are recalled or discovered.

**1.5.2.4** If, as a result of the continuing disclosure duty, an arbitrator makes a disclosure which is likely to affect his or her partiality, or might reasonably create an appearance of partiality or bias or if a party independently discovers the existence of such circumstances, a party wishing to object to the continuing use of the arbitrator must provide written notice of its objection to the other parties within ten days of receipt of the arbitrator's disclosure or the date of a party's discovery of the circumstances giving rise to that party's objection. Failure to provide such notice shall be deemed a waiver of such objection. If a party timely provides a notice of objection to the continuing use of the arbitrator the parties shall attempt to agree whether the arbitrator should be dismissed and replaced in the manner described in Section 1.5.1. If within ten days of a party's objection

notice the parties have not agreed how to proceed the matter shall be referred to the AAA for resolution.

**1.5.3 Arbitration Procedures.**

The AAA shall compile and make available to the arbitrator and the parties standard procedures for the arbitration of disputes, which procedures (i) shall conform to the requirements specified herein~~,~~ and (ii) may be modified or adopted for use in a particular proceeding as the arbitrator deems appropriate, in accordance with Section 1.5.4 The procedures shall be based on the latest edition of the American Arbitration Association Commercial Arbitration Rules, to the extent such rules are not inconsistent with this Schedule K. Except as provided herein, all parties shall be bound by such procedures.

**1.5.4 Modification of Arbitration Procedures.**

In determining whether to modify the standard procedures for use in the pending matter, the arbitrator shall consider (i) the complexity of the dispute, (ii) the extent to which facts are disputed, (iii) the extent to which the credibility of witnesses is relevant to a resolution, (iv) the amount in controversy, and (v) any representations made by the parties. Alternatively, the parties may, by mutual agreement, modify the standard procedures. In the event of a disagreement between the arbitrator and the agreement of the parties regarding arbitration procedures to be utilized, the parties' agreement shall prevail.

**1.5.5 Remedies.**

**1.5.5.1 Arbitrator's Discretion.** The arbitrator shall have the discretion to grant the relief sought by a party~~,~~ or determine such other remedy as is appropriate, unless the parties agree to conduct the arbitration "baseball" style. Unless otherwise expressly limited herein, the arbitrator shall have the authority to award any remedy or relief available from FERC, or any court of competent jurisdiction. Where this Agreement leaves any matter to be agreed between the parties at some future time and provides that in default of agreement the matter shall be referred to the ADR, the arbitrator shall have authority to decide upon the terms of the agreement which, in the arbitrator's opinion, it is reasonable that the parties should reach, having regard to the other terms this Agreement concerned and the arbitrator's opinion as to what is fair and reasonable in all the circumstances.

**1.5.5.2 "Baseball" Arbitration.** If the parties agree to conduct the arbitration "baseball" style, the parties shall submit to the arbitrator and exchange with each other their last best offers in the form of the award they consider the arbitrator should make, not less than seven days in advance of the date fixed for the hearing, or such later date as the arbitrator may decide. If a party fails to submit its last best offer in accordance with this Section, that party shall be deemed to have accepted the offer proposed by the other party. The arbitrator shall be limited to awarding only one of the proposed offers, and may not determine an alternative or compromise remedy.

**1.5.6 Summary Disposition.**

The procedures for arbitration of a dispute shall provide a means for summary disposition of a demand for arbitration, or a response to a demand for arbitration, that in the reasoned opinion of the arbitrator does not have a good faith basis in

either law or fact. If the arbitrator determines that a demand for arbitration or response to a demand for arbitration does not have a good faith basis in either law or fact, the arbitrator shall have discretion to award the costs of the time, expenses, and other charges of the arbitrator to the prevailing party. A determination made under this Section is subject to appeal pursuant to Section 1.6.

**1.5.7 Discovery Procedures.**

The procedures for the arbitration of a dispute shall include adequate provision for the discovery of relevant facts, including the taking of testimony under oath, production of documents and other things, the presentation of evidence, the taking of samples, conducting of tests, and inspection of land and tangible items. The nature and extent of such discovery shall be determined as provided herein and shall take into account (i) the complexity of the dispute, (ii) the extent to which facts are disputed, (iii) the extent to which the credibility of witnesses is relevant to a resolution, and (iv) the amount in controversy. The forms and methods for taking such discovery shall be as described in the Federal Rules of Civil Procedure, except as modified pursuant to Section 1.5.4.

**1.5.8 Evidentiary Hearing.**

The arbitration procedures shall provide for an evidentiary hearing, with provision for the cross-examination of witnesses, unless all parties consent to the resolution of the matter on the basis of a written record. The forms and methods for taking evidence shall be determined by the arbitrator(s) and modified pursuant to Section 1.5.4. The arbitrator may require such written or other submissions from the parties as he or she may deem appropriate, including submission of direct and rebuttal testimony of witnesses in written form. The arbitrator may exclude any evidence that is irrelevant, immaterial, unduly repetitious or prejudicial, or privileged. The arbitrator shall compile a complete evidentiary record of the arbitration that shall be available to the parties on its completion upon request.

**1.5.9 Confidentiality.**

Subject to the other provisions of this Agreement, any party may claim that information contained in a document otherwise subject to discovery is "Confidential" if such information would be so characterized under the Federal Rules of Evidence or the provisions of the Agreement. The party making such claim shall provide to the arbitrator in writing the basis for its assertion. If the claim of confidentiality is confirmed by the arbitrator, he or she shall establish requirements for the protection of such documents or other information designated as "Confidential" as may be reasonable and necessary to protect the confidentiality and commercial value of such information. Any party disclosing information in violation of these provisions or requirements established by the arbitrator, unless such disclosure is required by federal or state law or by a court order, shall thereby waive any right to introduce or otherwise use such information in any judicial, regulatory, or other legal or dispute resolution proceeding, including the proceeding in which the information was obtained.

**1.5.10 Timetable.**

Promptly after the appointment of the arbitrator, the arbitrator shall set a date for the issuance of the arbitration decision, which shall be no later than six months (or such earlier date as the parties and the arbitrator may agree) from the date of

the appointment of the arbitrator, with other dates, including the dates for an evidentiary hearing or other final submissions of evidence, set in light of this date. The date for the evidentiary hearing or other final submission of evidence shall not be changed, absent extraordinary circumstances. The arbitrator shall have the power to impose sanctions, including dismissal of the proceeding, for dilatory tactics or undue delay in completing the arbitration proceedings.

**1.5.11 Decision.**

**1.5.11.1** Except as provided below with respect to "baseball" style arbitration, the arbitrator shall issue a written decision granting the relief requested by one of the parties, or such other remedy as is appropriate, if any, and shall include findings of fact and law. The arbitration decision shall be based on (i) the evidence in the record, (ii) the terms of this Agreement and to the extent relevant, the CAISO Tariff and Protocols, (iii) applicable United States federal law, including the Federal Power Act and any applicable FERC regulations and decisions, and international treaties or agreements as applicable, and (iv) applicable state law. Additionally, the arbitrator may consider relevant decisions in previous arbitration proceedings involving this Agreement. To the extent it may do so without violating confidentiality requirements, a summary of the disputed matter and the arbitrator's decision may be published in a CAISO newsletter on CAISO Website.

**1.5.11.2** In arbitration conducted "baseball" style, the arbitrator shall issue a written decision adopting one of the awards proposed by the parties, and shall include findings of fact and law. The arbitration decision shall be based on (i) the evidence in the record, (ii) the terms of this Agreement and to the extent relevant, the CAISO Tariff and Protocols, (iii) applicable United States federal law, including the Federal Power Act and any applicable FERC regulations and decisions, and international treaties or agreements as applicable, and (iv) applicable state law. If the arbitrator concludes that no proposed award is consistent with the factors enumerated in (i) through (iv) above, or addresses all of the issues in dispute, the arbitrator shall specify how each proposed award is deficient and direct that the parties submit new proposed awards that cure the identified deficiencies. To the extent it may do so without violating confidentiality requirements, a summary of the disputed matter and the arbitrator's decision may be published in a CAISO newsletter on CAISO Website.

**1.5.11.3** Where a panel of arbitrators is appointed pursuant to Section 1.5.1.2, a majority of the arbitrators must agree on the decision. An award shall not be deemed to be precedent except in so far as a future dispute between the parties involves the same issue.

**1.5.12 Compliance**.

Unless the arbitrator's decision is appealed under Section 1.6, the disputing parties shall, upon receipt of the decision, immediately take whatever action is required to comply with the award to the extent the award does not require regulatory action. An award that is not appealed shall be deemed to have the same force and effect as an order entered by FERC or any court of competent jurisdiction.

**1.5.13 Enforcement.**

Following the expiration of the time for appeal of an award pursuant to Section 1.6.3, any party may apply to FERC or any court of competent jurisdiction for

entry and enforcement of judgment based on the award.

**1.5.14 Costs.**

The costs of the time, expenses, and other charges of the arbitrator shall be borne by the parties to the dispute, with each side on an arbitrated issue bearing its pro-rata share of such costs, and each party to an arbitration proceeding bearing its own costs and fees. If the arbitrator determines that a demand for arbitration or response to a demand for arbitration was made in bad faith, the arbitrator shall have discretion to award the costs of the time, expenses, and other charges of the arbitrator to the prevailing party.

**1.6 Appeal of Award.**

**1.6.1 Basis for Appeal.**

A party may apply to the FERC or any court of competent jurisdiction to hear an appeal of an arbitration decision only upon the grounds that the decision is contrary to or beyond the scope of this Agreement and to the extent relevant, the CAISO Tariff and Protocols, United States federal law, including, without limitation, the Federal Power Act, and any applicable FERC regulations and decisions, or state law. Appeals shall, unless otherwise ordered by FERC or the court of competent jurisdiction, conform to the procedural limitations set forth in this Section 1.6.

**1.6.2 Appellate Record.**

The parties intend that FERC or a court of competent jurisdiction should afford substantial deference to the factual findings of the arbitrator. No party shall seek to expand the record before FERC or a court of competent jurisdiction beyond that assembled by the arbitrator, except (i) by making reference to legal authority which did not exist at the time of the arbitrator's decision, or (ii) if such party contends the decision was based upon or affected by fraud, collusion, corruption, misconduct or misrepresentation.

**1.6.3 Procedures for Appeals.**

**1.6.3.1** If a party to an arbitration desires to appeal a decision, it shall provide a notice of appeal to all parties and the arbitrator(s) within 14 days following the date of the decision. Within ten days of the filing of the notice of appeal, the appealing party must file an appropriate application, petition or motion with FERC for review under the Federal Power Act or with a court of competent jurisdiction. Such filing shall state that the subject matter has been the subject of an arbitration pursuant to this Agreement and, to the extent relevant, the CAISO Tariff and protocols.

**1.6.3.2** Within 30 days of filing the notice of appeal (or such period as FERC or the court of competent jurisdiction may specify) the appellant shall file the complete evidentiary record of the arbitration and a copy of the decision with FERC or with the court. The appellant shall serve on all parties to the arbitration copies of a description of all materials included in the submitted evidentiary record.

### 1.6.4 Award Implementation.

Implementation of the decision shall be deemed stayed pending an appeal unless and until, at the request of a party, FERC or the court of competent jurisdiction with which an appeal has been filed, issues an order dissolving, shortening, or extending such stay.

A summary of each appeal shall be published in a CAISO newsletter on the CAISO Website.

### 1.6.5 Judicial Review of FERC Orders.

FERC orders resulting from appeals shall be subject to judicial review pursuant to the Federal Power Act.

**Schedule L-1**

**Request for Approval of Capital Items or Repairs**

**REQUEST FOR APPROVAL OF CAPITAL ITEMS OR REPAIRS**

This form should be used to request CAISO approval of Planned Capital Items, Unplanned Repairs or Unplanned Capital Items pursuant to Sections 7.4, 7.5 or 7.6 of the Agreement.

CALIFORNIA INDEPENDENT SYSTEM OPERATOR
RELIABILITY MUST-RUN UNIT
CAPITAL ITEM AND REPAIR PROJECT REQUEST

| | |
|---|---|
| **Date:** | **CAISO Project Number:** |
| **Facility:** | **Unit:** |
| **Owner:** | **Location:** |

**This request covers:**

( ) Capital Items for the next Contract Year (preliminary)

( ) Capital Items for the next Contract Year (final)

( ) Remaining Start-ups, Run-hours and MWhs prior to the need to invest in the next Capital Item

( ) Unplanned Repairs

( ) Unplanned Capital Items

**If this request covers Capital Items for the next Contract Year, provide:**

**Small Project Estimate (reliability)**

**Small Project Estimate (other)**

Identify separately each Capital Item included in a small project estimate projected to cost more than $50,000.

**If this request covers Unplanned Repairs, or Capital Items projected to cost more than $500,000, provide the information in the remainder of this form for each project.**

**Project Description:** (describe the project and its major scope items – materials, new systems, modifications to existing systems, etc.)

**If the project is required because of loss or damage to a Unit, describe the cause and nature of the loss or damage and all repairs performed or required for all Units during the year:**

**Project Budget:**

| Year | Labor | Material | Contract | Int Svc | Other | Material | Overhead AEGE | Total Cost | AD VAL TAX | Total Expenditures | Total Financial Costs |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | |

**Describe any work or repairs performed relating to this project in the last five years:**

**As applicable, state the proposed depreciation life, Annual Capital Item Cost, Surcharge Payment Factor or Repair Payment Factor (percentage owed by CAISO) of the Capital Item or Repair:**

**Describe why this project is required (justification):**

**Is this project required to comply with any laws, regulations or permits? If so, please list them and explain requirement.**

**Provide a cost/benefit analysis summary for this project:**

Include all assumptions including changes to unit performance [efficiency, aux. power loads, etc.], impact on RMR Contract Capacity, grid interconnection/metering impacts, etc.

**Describe the impacts on the Unit's ability to perform its obligations under this Agreement if this project is not approved:**

**Describe alternatives to this project that were evaluated and the projected costs of those alternatives:**

Describe alternatives along with their major scope items. Also, compare the projected cost of these alternatives with the selected alternative, and compare the unit performance impacts (efficiency, auxiliary power demands, RMR Contract Capacity effects, etc.) of these alternatives against the chosen alternative.

**List any proceeds received or expected to be received by Owner from insurers or other third parties pursuant to applicable insurance, warranties and other contracts in**

**connection with the project.**

**Provide the schedule for implementing this project:**

| Event | Begin | Complete |
|---|---|---|
| | | |

**Describe any outages required to implement this project:**

**Other comments:**

**Remaining Start-ups, Run hours, MWhs prior to Need for Capital Item:**

For any Capital Item required to extend operational capability of the RMR Unit, the Owner must provide the CAISO with the remaining Unit start-ups, run hours, MWhs and any other factor that may trigger or affect the timing or the need for such Capital Items. The Owner and CAISO will utilize this information to consider whether the Unit can be safely and reliably operated in the current Contract Year, prior to the need for such Capital Item. If so, these limits will be considered as eligible limits for development of appropriate opportunity costs in accordance with Article 6.1 of this Agreement.

| Unit | Capital Item description | Remaining Start-ups | Remaining Run hours | Remaining MWhs | Other Factor Relevant as to Timing of Capital Items |
|---|---|---|---|---|---|
| | | | | | |

* Update more columns0 for description as needed.

**Schedule L-2**

**Capital Item and Repair Progress Report**

**CAPITAL ITEM AND REPAIR PROGRESS REPORT**

CALIFORNIA INDEPENDENT SYSTEM OPERATOR
RELIABILITY MUST-RUN UNIT
CAPITAL ITEM AND REPAIR PROGRESS REPORT

| | |
|---|---|
| **Date:** | **CAISO Project Number:** |
| **Facility:** | **Unit:** |
| **Owner:** | **Location:** |
| **Capital Item or Repair:** | |
| **Original In-Service Date:** | **Current In-Service Date:** |

**If Current In-Service Date has changed, describe the reason why:**

**Describe any additional costs or savings resulting from the change in the Current In-Service Date:**

Describe what portion of any additional costs Owner is requesting CAISO to pay, and why Owner believes that CAISO should be obligated to pay those additional costs:

**Schedule M**

**Not Used**

**Schedule N-1**

**Not Used**

**NON-DISCLOSURE and CONFIDENTIALITY AGREEMENT**
**FOR PERSONS OTHER THAN THE RESPONSIBLE UTILITY**

**[Name of]** (the "Receiving Party") acknowledges (a) that **[Name of Owner]** ("Owner") has agreed to provide Confidential Information to the Receiving Party pursuant to certain provisions of the Must-Run Service Agreement ("MRSA") between Owner and the California Independent System Operator Corporation ("CAISO"), in connection with discussing the possible execution of such an MRSA, and (b) that Owner and CAISO (jointly, the "Providing Parties" and severally, the "Providing Party") may provide Confidential Information on a need-to-know basis to Owner's Scheduling Coordinator, financial institutions, agents and potential purchasers of interests in a Unit; and, as required for settlement and billing, to Scheduling Coordinators responsible for paying for services provided under the MRSA between Owner and CAISO. In order to permit the Receiving Party to receive such Confidential Information from Owner or CAISO, the Receiving Party and the Providing Parties hereby agree as follows:

(1) For purposes of this Non-Disclosure and Confidentiality Agreement, the term "Confidential Information" shall have the same meaning it has in Section 12.5 of the *pro forma* MRSA, except that the definition in Section 12.5 of the MRSA shall be deemed also cover comparably designated information provided in connection with discussions concerning the possible execution of an MRSA;

(2) The Providing Parties shall provide such Confidential Information pursuant to the terms of this Non-Disclosure and Confidentiality Agreement;

(3) The Receiving Party shall keep such Confidential Information confidential, shall use it only for the purposes related to the MRSA under discussion, and shall limit the disclosure of any such Confidential Information to only those personnel within its organization with responsibility for using such information in connection with the MRSA upon their execution of this Non-Disclosure and Confidentiality Agreement. Such personnel may not include any person whose duties include (i) the marketing or sale of electric power or natural gas or gas transportation capacity at wholesale or retail, (ii) the purchase of electric power or natural gas or gas transportation capacity at wholesale or retail, (iii) the direct supervision of any employee with such responsibilities, or (iv) the provision of electricity or natural gas marketing consulting services to any employee with such responsibilities;

(4) The Receiving Party shall assure that personnel within its organization authorized to receive Confidential Information read and comply with the provisions of this Non-Disclosure and Confidentiality Agreement;

(5) The Receiving Party shall use all reasonable efforts to maintain the confidentiality of the Confidential Information in any litigation, and shall promptly notify the providing Party of any attempt by a third party to obtain the Confidential Information through legal process or otherwise;

(6) Retention; Destruction. All Confidential Information (including all copies) shall, at a Providing Party' request and direction, either be promptly returned to the Providing Party or destroyed at the conclusion of the term of the MRSA, except to the extent prohibited by law. Notwithstanding the foregoing, electronic copies of materials or summaries containing or reflecting Confidential Information that are generated through data backup and/or archiving systems and which are not readily accessible by the Receiving Party or

its personnel, shall not be deemed to violate this Non-Disclosure and Confidentiality Agreement, provided that such Confidential Information is not disclosed in violation of the other terms of this Non-Disclosure and Confidentiality Agreement.

The Receiving Party agrees to be bound by the terms of Section 12.5 of the *pro forma* MRSA in the same manner and to the same extent as the Providing Parties. The person signing on behalf of the Receiving Party represents that he/she is authorized to bind the Receiving Party to the terms of this Non-Disclosure and Confidentiality Agreement.

Signature:_____

Name: _____

Company:_____

Title: _____

Receiving Party:_____

Address:_____

_____

_____

Telephone:_____

Signature:_____

Name:_____

Owner:_____

Title: _____

Address:_____

_____

_____

Telephone:_____

Signature:_____

Name:_____

California Independent System Operator Corporation

Title: _____

Address: _____

_____

_____

Telephone: _____

**Schedule O**

**Not Used**

**Schedule P**

**Not Used**

**Appendix H**

**LEGACY RELIABILITY MUST-RUN CONTRACT CAISO TARIFF PROVISIONS**

Notwithstanding any other provisions of the CAISO Tariff, the following provisions apply to Legacy Reliability Must-Run Contracts entered into by Reliability Must-Run Units prior to September 1, 2018.

## 11.13 Settlements and Billing of RMR Charges and Payments

### 11.13.1 Objectives

The objective of this Section 11.13 is to inform RMR Owners which are responsible for preparation of Invoices, and Responsible Utilities, which are responsible for payment of Reliability Must-Run Charges pursuant to Section 41.7, of the manner in which the RMR Charges referred to in Section 41.6 shall be verified and settled and of the procedures regarding the billing, invoicing and payment of these RMR Charges.

### 11.13.2 Accounts

#### 11.13.2.1 Facility Trust Account

The CAISO shall establish a Facility Trust Account for each RMR Contract. Each Facility Trust Account shall consist of two segregated commercial bank accounts: (1) an RMR Owner Facility Trust Account, which will be held in trust for the RMR Owner, and (2) a Responsible Utility Facility Trust Account, which will be held in trust for the Responsible Utility. RMR Charges paid by the Responsible Utility to the CAISO in connection with the RMR Contract will be deposited into the RMR Owner Facility Trust Account and RMR Payments from the CAISO to the RMR Owner will be withdrawn from such account, all in accordance with this Section 11.13, Section 41.6, and the RMR Contract. RMR Refunds received by the CAISO from the RMR Owner in accordance with the RMR Contract will be deposited into the Responsible Utility Facility Trust Account and such RMR Refunds will be withdrawn from such account and paid to the Responsible Utility in accordance with this Section 11.13, Section 41.6, and the RMR Contract. The RMR Owner Facility Trust Account and the Responsible Utility Facility Trust Account shall have no other funds commingled in them at any time.

#### 11.13.2.2 RMR Owner's Settlement Accounts

Each RMR Owner shall establish and maintain at all times a Settlement Account at a commercial bank located in the United States and reasonably acceptable to the CAISO which can effect money transfers via Fedwire, and, at its option, may also establish and maintain a Settlement Account for transfers via ACH, where payments to and from the Facility Trust Accounts shall be made in accordance with this Section 11.13. Each RMR Owner shall notify the CAISO of its Settlement Account details upon entering into its RMR Contract with the CAISO and may notify the CAISO from time to time of any changes by giving at least fifteen (15) days notice before the new account becomes operational.

### 11.13.3 RMR Payments Calendar

The CAISO shall issue an RMR Payments Calendar for the purposes of this Section 11.13 which shall contain those dates set forth in Section 9.1 (b) of the RMR Contract and the following information:

(a) the date on which RMR Owners are required to issue to the CAISO, with a copy to the Responsible Utility, their Estimated RMR Invoice pursuant to their RMR Contract;

(b) the date on which the CAISO is required to initiate proposed adjustments to the Estimated RMR Invoice to the Responsible Utility and to the RMR Owner;

(c) the date by which the RMR Owners are required to issue their Revised Estimated RMR Invoice reflecting appropriate revisions to the original Estimated RMR Invoice agreed upon by the Responsible Utility and the RMR Owner (In the event no revisions are required, the RMR Owner shall submit an e-mail to the CAISO and Responsible Utility stating there are no revisions and the Estimated RMR Invoice should be deemed as the Revised Estimated RMR Invoice.);

(d) the date on which the CAISO is required to issue to the Responsible Utility or RMR Owner the CAISO Invoice based on the Revised Estimated RMR Invoice;

(e) the date on which RMR Owners are required to issue to the CAISO, with a copy to the Responsible Utility, their Adjusted RMR Invoice pursuant to their RMR Contract;

(f) the date on which the CAISO is required to initiate proposed adjustments to the Adjusted RMR Invoice to the Responsible Utility and the RMR Owner;

(g) the date by which the RMR Owners are required to issue their Revised Adjusted RMR

Invoice reflecting appropriate revisions to the original Adjusted RMR Invoice agreed upon by the Responsible Utility and the RMR Owner. (In the event no revisions are required, the RMR Owner shall submit an e-mail to the CAISO and Responsible Utility stating there are no revisions and the Adjusted RMR Invoice should be deemed as the Revised Adjusted RMR Invoice.);

(h) the date on which the CAISO is required to issue to the Responsible Utility or the RMR Owner the CAISO Invoice based on the Revised Adjusted RMR Invoice;

(i) the dates by which the Responsible Utility and RMR Owner must have notified the CAISO of any dispute in relation to the CAISO Invoice, Estimated RMR Invoice or Adjusted RMR Invoice (including the Revised Estimated RMR Invoice and Revised Adjusted RMR Invoice) or the CAISO's proposed adjustments;

(j) the date and time by which Responsible Utilities or RMR Owners are required to have made payments into the RMR Owner Facility Trust Account or Responsible Utility Facility Trust Account in payment of the CAISO Invoices relating to each Revised Estimated RMR Invoice and each Revised Adjusted RMR Invoice; and

(k) the date and time by which the CAISO is required to have made payments into the RMR Owners' Facility Trust Accounts or Responsible Utilities' Facility Trust Accounts in payment of the Revised Estimated RMR Invoice and the Revised Adjusted RMR Invoice pursuant to their RMR Contract.

If the day on which any CAISO Invoice, any RMR Invoice, or any payment is due is not a Business Day, such statement or invoice shall be issued or payment shall be due on the next succeeding Business Day. Information relating to charges for Energy or Ancillary Services which are payable by the CAISO pursuant to Sections 8 and 11 to the Scheduling Coordinators representing the RMR Owners will be contained in the RMR Payments Calendar.

**11.13.4 Information Provided by RMR Owners to the CAISO**

Each RMR Invoice and any Prior Period Change Worksheet shall include, or be accompanied by, information about RMR Payments and RMR Refunds in sufficient detail to enable the CAISO to verify all RMR Charges and all RMR Refunds, and such information shall be copied to the Responsible Utility.

Each RMR Invoice shall separately show the amounts due for services from each Reliability Must-Run Unit.

This information shall be provided in an electronic form in accordance with the RMR Invoice template developed jointly and agreed to by the CAISO, Responsible Utilities and RMR Owners in accordance with the RMR Contracts and the principles in Schedule O to those RMR Contracts, and maintained on the CAISO Website.

**11.13.5 Validation of RMR Charges and RMR Refunds**

The CAISO shall validate, based on information provided by each RMR Owner pursuant to paragraph 4, the amount due from the relevant Responsible Utility for RMR Charges and the amount due to the relevant Responsible Utility for RMR Refunds applicable to the Reliability Must-Run Generation and Ancillary Services of that RMR Owner, but shall not represent or warrant the accuracy or completeness of the information provided by the RMR Owner. The CAISO shall provide copies of its exception report and information to the relevant Responsible Utility and RMR Owner.

The CAISO shall not be obligated to pay the Responsible Utility any RMR Refunds unless and until the CAISO has received corresponding RMR Refunds into the Responsible Utility Facility Trust Account from the RMR Owner.

**11.13.6 Description of the Billing Process**

**11.13.6.1 Issuance of RMR Invoices by the RMR Owner**

Each RMR Owner shall provide any RMR Invoice to the CAISO in the electronic form, mutually agreed by the parties, which may be updated by agreement with the CAISO, Responsible Utilities and RMR Owners from time to time in accordance with the requirements of Schedule O of the RMR Contract, on each of the days specified in the RMR Payments Calendar, and shall send to the relevant Responsible Utility a copy of that invoice on the day of issue.

**11.13.6.2 Review of the RMR Invoice by the CAISO**

The CAISO shall review each RMR Invoice within the period specified in the RMR Payments Calendar and is required to initiate proposed adjustments to that invoice to the RMR Owner and the relevant Responsible Utility. Once the CAISO initiates proposed adjustments, the RMR Owner shall issue a Revised Estimated RMR Invoice or Revised Adjusted RMR Invoice.

**11.13.6.3 Issuance of CAISO Invoices by the CAISO**

The CAISO shall provide to the Responsible Utility and the RMR Owner on the dates specified in the RMR Payments Calendar CAISO Invoices showing:

(a) the amounts which, on the basis of the Revised Estimated RMR Invoice or the Revised Adjusted RMR Invoice, as the case may be, and pursuant to Section 11.13, are to be paid by or to the relevant Responsible Utility and RMR Owner;

(b) the Payment Date, being the date on which such amounts are to be paid and the time for such payment;

(c) details (including the account number, bank name and Fedwire transfer instructions or, if applicable, ACH transfer instructions) of the RMR Owner Facility Trust Account to which any amounts owed by the Responsible Utility are to be paid, or of the RMR Responsible Utility Facility Trust Account to which any amounts owed by the RMR Owner are to be paid.

**11.13.6.4 Resolving Disputes Relating to Invoices**

**11.13.6.4.1 Review of the Invoices by the Responsible Utility**

Each Responsible Utility shall have the review period specified in the RMR Payments Calendar to review RMR Invoices and CAISO Invoices, validate and propose adjustments to such invoices, and notify the CAISO of any dispute. Notwithstanding the above, each Responsible Utility shall have the review time specified in Section 41.6 to dispute such invoice.

**11.13.6.4.2 Dispute Notice**

If a Responsible Utility disputes any item or calculation relating to any revised RMR Invoice, or any CAISO Invoice, it shall provide the CAISO, with a copy to the RMR Owner, via email or such other communication mode as the parties may mutually agree upon, a notice of dispute at any time from the receipt of the copy of such invoice from the RMR Owner or the CAISO to the expiration of the period for review set out in Section 11.13. The CAISO shall initiate a corresponding dispute with the RMR Owner under the RMR Contract.

**11.13.6.4.3 Contents of Dispute Notice**

The notice of dispute shall state clearly the Revised Estimated RMR Invoice, Revised Adjusted RMR

Invoice, or CAISO Invoice in dispute, the item disputed (identifying specific Reliability Must-Run Units and time periods), the reasons for the dispute, and the proposed amendment (if appropriate) and shall be accompanied by all available evidence reasonably required to support the claim.

**11.13.6.4.4 Prior Period Change Agreed to by the RMR Owner**

Subject to Sections 11.13.6.4.5 or 11.13.6.4.6, if the RMR Owner agrees with the proposed change, the change shall be shown in a Prior Period Change Worksheet and included in the next appropriate May or December Estimated RMR Invoice as specified in Article 9.1 of the RMR Contract.

**11.13.6.4.5 Dispute Involving the RMR Owner**

If the dispute relates to an item originating in any RMR Invoice, the applicable provisions of the RMR Contract and Section 41.6.1 shall apply.

**11.13.6.4.6 Dispute Involving an Alleged Error or Breach or Default of the CAISO's Obligations Under Section 41.6**

If the dispute relates to an alleged error or breach or default of the CAISO's obligations under Section 41.6, the applicable provisions of the RMR Contract and Section 41.6.1 shall apply.

**11.13.6.4.7 Payment Pending Dispute**

Subject to Section 41.6, if there is any dispute relating to an item originating in an RMR Invoice that is not resolved prior to the Payment Date, the Responsible Utility shall be obligated to pay any amounts shown in the relevant CAISO Invoice on the Payment Date irrespective of whether any such dispute has been resolved or is still pending. The Responsible Utility may notify the CAISO that the payment is made under protest, in which case the CAISO shall notify the RMR Owner that payment is made under protest. In accordance with Section 9.6 of the RMR Contract, if such dispute is subsequently resolved in favor of the Responsible Utility that made the payment under protest, then any amount agreed or determined to be owed by the RMR Owner to the CAISO shall be repaid by the RMR Owner to the CAISO, with interest at the interest rate specified in the RMR Contract from the date of payment by the CAISO to the RMR Owner of the disputed amount to the date of repayment by the RMR Owner, as specified in Section 11.13.6.4.4. If an RMR Owner does not agree to make the change pursuant to Section 11.13.6.4.4, then such repayment shall be made by CAISO's deduction of such amount from the next CAISO Invoices until extinguished, or if the RMR Contract has terminated, by paying a RMR Refund in such amount to the

Responsible Utility Facility Trust Account, subject to the limitation of Section 41.6.2.

**11.13.7 Payment Procedures**

**11.13.7.1 Payment Date**

The Payment Date for RMR Payments to and RMR Refunds from RMR Owners shall be the due date specified in the RMR Contract and in the RMR Payments Calendar and the same shall be the Payment Date for the CAISO and Responsible Utilities in relation to RMR Charges, provided that the RMR Owner has furnished the Responsible Utility and the CAISO with the Revised Estimated RMR Invoice or the Revised Adjusted RMR Invoice no less than nine (9) calendar days before the due date. The Payment Date shall be stated on the CAISO Invoice.

**11.13.7.2 Payment Method**

All payments and refunds by the CAISO to RMR Owners and Responsible Utilities shall be made via Fedwire or, if chosen by the RMR Owner or Responsible Utility, via ACH. However, if the RMR Owner is also the Responsible Utility, at the discretion of the RMR Owner, payments and refunds may be made by memorandum account instead of by Fedwire transfer or ACH.

**11.13.7.3 Payment by RMR Owners and Responsible Utilities.**

Each RMR Owner shall ensure that the amount shown on the relevant CAISO Invoice as payable by the RMR Owner shall be received into the Responsible Utility Facility Trust Account not later than 10:00 am on the Payment Date.

Subject to Section 41.6, each Responsible Utility shall ensure that the amount shown on the relevant CAISO Invoice as payable by the Responsible Utility shall be received into the RMR Owner Facility Trust Account not later than 10:00 am on the Payment Date.

**11.13.7.4 Payment by the CAISO**

The CAISO shall verify the amounts available for distribution to Responsible Utilities and/or RMR Owners on the Payment Date and shall give instructions to the CAISO Bank to remit from the relevant Facility Trust Account to the relevant settlement account maintained by each Responsible Utility or RMR Owner the amounts determined by the CAISO to be available for payment to each Responsible Utility or RMR Owner.

#### 11.13.7.5 Payment Default by RMR Owner or Responsible Utility

If by 10:00 am on a Payment Date the CAISO, in its reasonable opinion, believes the RMR Default Amount has not been received, the CAISO shall immediately notify the RMR Owner and the Responsible Utility. Where the RMR Default Amount was due from the Responsible Utility, the CAISO and RMR Owner shall proceed as set forth in Section 41.6 and the applicable provision of the RMR Contract. Where the RMR Default Amount was due from the RMR Owner, the CAISO and the Responsible Utility shall proceed as set forth in the applicable provision of the RMR Contract.

##### 11.13.7.5.1 Default Relating to Market Payments

For the avoidance of doubt, non payment to RMR Owners, or their respective Scheduling Coordinators, of charges for Energy or Ancillary Services which are payable by the CAISO to Scheduling Coordinators representing such RMR Owners shall be dealt with pursuant to Sections 11.3 to 11.30 (inclusive).

#### 11.13.7.6 Set-off

##### 11.13.7.6.1 Set-off in the Case of a Defaulting Responsible Utility

The CAISO is authorized to apply any amount to which any defaulting Responsible Utility is or will be entitled from the Responsible Utility Facility Trust Account in or towards the satisfaction of any amount owed by that Responsible Utility to the RMR Owner Facility Trust Account arising under the settlement and billing process set out in this Section 11.13.

For the avoidance of doubt, neither the CAISO nor any Responsible Utility will be authorized to set off any amounts owed by that Responsible Utility in respect of one Facility Trust Account against amounts owed to that Responsible Utility in respect of another Facility Trust Account or any amounts owed by that Responsible Utility under this Section 11.13 against amounts owed to that Responsible Utility except as provided by Section 41.6.

##### 11.13.7.6.2 Set-off in the Case of a Defaulting RMR Owner

The CAISO is authorized to apply any amount to which any defaulting RMR Owner is or will be entitled from the RMR Owner Facility Trust Account in or towards the satisfaction of any amount owed by that RMR Owner to the Responsible Utility Facility Trust Account in accordance with Article 9 of the RMR Contract and Sections 41.6 and 11.10.2.

For the avoidance of doubt, neither the CAISO nor any RMR Owner will be authorized to set off any

amounts owed by that RMR Owner in respect of one Facility Trust Account against amounts owed to that RMR Owner in respect of another Facility Trust Account or any amounts owed by that RMR Owner under this Section 11.13 against amounts owed to that RMR Owner under the RMR Contract.

**11.13.7.7 Default Interest**

Responsible Utilities shall pay interest on RMR Default Amounts to the CAISO at the interest rate specified in the RMR Contract for the period from the relevant Payment Date to the date on which the payment is received by the CAISO.

RMR Owners shall pay interest to the CAISO on RMR Default Amounts at the interest rate specified in the RMR Contract for the period from the date on which payment was due to the date on which the payment is received by the CAISO.

The CAISO shall pay interest to RMR Owners at the interest rate specified in the RMR Contract for the period from the date on which payment is due under the RMR Contract to the date on which the payment is received by the RMR Owner.

The CAISO shall pay interest to Responsible Utilities at the interest rate specified in the relevant RMR Contract for the period from the date following the date it received an RMR Refund from the relevant RMR Owner to the date in which the payment is received by the relevant Responsible Utility.

Where payment of an RMR Default Amount is made by exercise of a right of set-off or deduction, payments shall be deemed received when payment of the sum which takes that set-off or deduction into account is made.

**11.13.8 Overpayments**

The provisions of Sections 11.29.19.3 and 11.29.19.4 shall apply to RMR Owners and Responsible Utilities which have been overpaid by the CAISO and references to CAISO Creditors in these sections and in the relevant Sections of the CAISO Tariff shall be read, for the purposes of this Section 11.13, to mean RMR Owners and Responsible Utilities as applicable. Disputed amounts shall not be considered to be overpayments until and unless the dispute is resolved.

**11.13.9 Communications**

**11.13.9.1 Method of Communication**

CAISO Invoices will be issued by the CAISO via the CAISO's secure communication system. RMR

Invoices and Prior Period Change Worksheets will be issued by the RMR Owner in an electronic form mutually agreed by the parties and maintained on the CAISO Website. The CAISO shall also post Prior Period Change examples and Prior Period Change guidelines as specified in Article 9.1 of the RMR Contract.

**11.13.9.2 Emergency Procedures**

**11.13.9.2.1 Emergency Affecting the CAISO**

In the event of an emergency or a failure of any of the CAISO software or business systems, the CAISO may deem any Estimated RMR Invoice or any Adjusted RMR Invoice to be correct without thorough verification and may implement any temporary variation of the timing requirements relating to the settlement and billing process contained in this Section 11.13.

**11.13.9.2.2 Emergency Affecting the RMR Owner**

In the event of an emergency or a failure of any of the RMR Owner's systems, the RMR Owner may use Estimated RMR Invoices as provided in the applicable section of the RMR Contract or may implement any temporary variation of the timing requirements relating to the settlement and billing process contained in this Section 11.13 and its RMR Contract. Details of the variation will be published on the CAISO Website. Communications of an emergency nature on a due date or a Payment Date relating to payments shall be made by the fastest practical means including by telephone.

**11.13.10 Confidentiality**

The provisions of Sections 11.29.10.5 and 20.5 shall apply to this Section 11.13 between and among the RMR Owners, the CAISO and Responsible Utilities. Except as may otherwise be required by applicable law, all confidential information and data provided by RMR Owner or the CAISO to the Responsible Utility pursuant to the RMR Contract, Section 41.6 or this Section 11.13 shall be treated as confidential and proprietary to the providing party to the extent required by Section 12.5 and Schedule N of the RMR Contract and will be used by the receiving party only as permitted by such Section 12.5 and Schedule N.

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**41. Procurement of RMR Generation**

### 41.1 Procurement of Reliability Must-Run Generation by the CAISO

A Reliability Must-Run Contract is a contract entered into by the CAISO with a Generator which operates a Generating Unit giving the CAISO the right to call on the Generator to generate Energy and, only as provided in this Section 41.1, or as needed for Black Start or Voltage Support required to meet local reliability needs, or to procure Ancillary Services from Potrero power plant to meet operating criteria associated with the San Francisco local reliability area, to provide Ancillary Services from the Generating Units as and when this is required to ensure that the reliability of the CAISO Controlled Grid is maintained.

### 41.2 Designation of Generating Unit as Reliability Must-Run Unit

The CAISO will, subject to any existing power purchase contracts of a Generating Unit, have the right at any time based upon CAISO Controlled Grid technical analyses and studies to designate a Generating Unit as a Reliability Must-Run Unit. A Generating Unit so designated shall then be obligated to provide the CAISO with its proposed rates for Reliability Must-Run Generation for negotiation with the CAISO. Such rates shall be authorized by FERC or the Local Regulatory Authority, whichever authority is applicable.

### 41.3 Reliability Studies and Determination of RMR Units Status

In addition to the Local Capacity Technical Study under 40.3.1, the CAISO may perform additional technical studies, as necessary, to ensure compliance with Reliability Criteria. The CAISO will then determine which Generating Units it requires to continue to be Reliability Must-Run Units, which Generating Units it no longer requires to be Reliability Must-Run Units and which Generating Units it requires to become the subject of a Reliability Must-Run Contract which had not previously been so contracted to the CAISO. None of the Generating Units owned by Local Publicly Owned Electric Utilities are planned to be designated as Reliability Must-Run Units by the CAISO as of the CAISO Operations Date but are expected to be operated in such a way as to maintain the safe and reliable operation of the interconnected transmission system comprising the CAISO Balancing Authority Area. However, in the future, Local Publicly Owned Electric Utilities may contract with the CAISO to provide Reliability Must-Run Generation.

### 41.4 Reliability Must-Run Contracts

A pro forma of the Reliability Must-Run Contract is attached as Appendix G. From the CAISO Operations Date all Reliability Must-Run Units will be placed under the "As Called" conditions, but the parties may, pursuant only to the terms of the Reliability Must-Run Contract, transfer any such unit to one of the alternative forms of conditions under specific circumstances. The CAISO will review the terms of the applicable forms of agreement applying to each Reliability Must-Run Unit to ensure that the CAISO will procure Reliability Must-Run Generation from the cheapest available sources and to maintain System Reliability. The CAISO shall give notice to terminate Reliability Must-Run Contracts that are no longer necessary or can be replaced by less expensive and/or more competitive sources for maintaining the reliability of the CAISO Controlled Grid.

### 41.5 RMR Dispatch

#### 41.5.1 Day-Ahead and RTM RMR Dispatch

RMR Dispatches will be determined in accordance with the RMR Contract, the MPM process addressed in Sections 31 and 33 and through manual RMR Dispatch Notices to meet Applicable Reliability Criteria. The CAISO will notify Scheduling Coordinators for RMR Units of the amount and time of Energy requirements from specific RMR Units in the Trading Day prior to or at the same time as the Day-Ahead Schedules and AS and RUC Awards are published, to the extent that the CAISO is aware of such requirements, through an RMR Dispatch Notice or flagged RMR Dispatch in the IFM Day-Ahead Schedule. The CAISO may also issue RMR Dispatch Notices after Market Close of the DAM and through Dispatch Instructions flagged as RMR Dispatches in the Real-Time Market.

The Energy to be delivered for each Trading Hour pursuant to the RMR Dispatch Notice an RMR Dispatch in the IFM or Real-Time shall be referred to as the RMR Energy. Scheduling Coordinators may submit Bids in the DAM or the RTM for RMR Units operating under Condition 1 of the RMR Contract in accordance with the bidding rules applicable to non-RMR Units. A Bid submitted in the DAM or the RTM for a Condition 1 RMR Unit shall be deemed to be a notice of intent to substitute a market transaction for the amount of MWh specified in each Bid for each Trading Hour pursuant to Section 5.2 of the RMR Contract. In the event the CAISO issues an RMR Dispatch Notice or an RMR Dispatch in the IFM or Real-Time Market for any Trading Hour, any MWh quantities cleared through the MPM shall be considered as a market transaction in accordance with the RMR Contract. RMR Units operating as Condition 2 RMR

Units may not submit Bids until and unless the CAISO issues an RMR Dispatch Notice or issues an RMR Dispatch in the IFM, in which case a Condition 2 RMR Unit shall submit Bids in accordance with the RMR Contract in the next available market for the Trading Hours specified in the RMR Dispatch Notice or Day-Ahead Schedule.

**41.5.2 RMR Payments**

RMR Units operating as Condition 1 RMR Units or Condition 2 RMR Units that receive an RMR Dispatch Notice will be paid in accordance with the RMR Contract.

**41.5.3 RMR Units and Ancillary Services Requirements**

The CAISO may call upon RMR Units in any amounts that the CAISO has determined is necessary at any time after the issuance of Day-Ahead Schedules for the Trading Day if: (i) the CAISO determines that it requires more of an Ancillary Service than it has been able to procure, except that the CAISO shall not be required to accept Ancillary Services Bids that exceed the price caps specified in Section 39 or any other FERC-imposed price caps; and (ii) the CAISO has notified Scheduling Coordinators of the circumstances existing in this Section 41.5.3, and after such notice, the CAISO determines that a bid insufficiency condition in accordance with the RMR Contract exists in the RTM and the CAISO requires more of an Ancillary Service. The CAISO must provide the notice specified in sub paragraph (ii) of this Section 41.5.3 as soon as possible after the CAISO determines that additional Ancillary Services are needed for which Bids are not available. The CAISO may only determine that a Bid insufficiency exists after the Market Close of the RTM, unless an earlier determination is required in order to accommodate the RMR Unit's operating constraints. For the purposes of this Section 41.5.3, a Bid insufficiency exists in RTM if, and only if: (i) Bids in the RTM for the particular Ancillary Service that can be used to satisfy that particular Ancillary Services requirement that remain after first procuring the megawatts of the Ancillary Service that the CAISO had notified Scheduling Coordinators it would procure in the HASP ("remaining Ancillary Services requirement") represent, in the aggregate, less than two times such remaining Ancillary Services requirement; or (ii) there are less than two unaffiliated bidders to provide such remaining Ancillary Services requirement. If the CAISO determines that a Bid insufficiency condition exists as described in this Section 41.5.3, the CAISO may nonetheless accept available Bids if it determines in its sole discretion that the prices specified in the Bids and the Energy Bid Curves created by the Bids indicate that

the Scheduling Coordinators were not attempting to exercise market power.

### 41.6 Reliability Must-Run Charge

The CAISO shall prepare and send to each Responsible Utility in accordance with Section 11.13, a CAISO Invoice as provided in the RMR Contract in respect of those costs incurred under each Reliability Must-Run Contract that are payable to the CAISO by such Responsible Utility or payable by the CAISO to such Responsible Utility pursuant to Section 41.7. The CAISO Invoices as provided in the RMR Contract shall reflect all reductions or credits required or allowed under or arising from the Reliability Must-Run Contract or under this Section 41.6. The CAISO Invoice as provided in the RMR Contract shall separately show the amounts due for services from each RMR Owner. Each Responsible Utility shall pay the amount due under each CAISO Invoice as provided in the RMR Contract by the due date specified in the CAISO Invoice as provided in the RMR Contract, in default of which interest shall become payable at the interest rate provided in the Reliability Must-Run Contract from the due date until the date on which the amount is paid in full. For each Reliability Must-Run Contract, the CAISO shall establish two segregated commercial bank accounts under the Facility Trust Account referred to in Section 11.13.2.1 and Article 9 of the Reliability Must-Run Contract. One commercial bank account, the RMR Owner Facility Trust Account, shall be held in trust by the CAISO for the RMR Owner. The other commercial bank account, the Responsible Utility Facility Trust Account, shall be held in trust by the CAISO for the Responsible Utility. Payments received by the CAISO from the Responsible Utility in connection with the Reliability Must-Run Contract, including payments following termination of the Reliability Must-Run Contract, will be deposited into the RMR Owner Facility Trust Account and payments from the CAISO to the RMR Owner will be withdrawn from such account, in accordance with this Section 41.6, Article 9 of the Reliability Must-Run Contract and Section 11.13. Any payments received by the CAISO from the RMR Owner in connection with the Reliability Must-Run Contract will be deposited into the Responsible Utility Facility Trust Account. Any payments due to the Responsible Utility of funds received from the RMR Owner in connection with the Reliability Must-Run Contract will be withdrawn from the Responsible Utility Facility Trust Account, in accordance with this Section 41.6, Section 11.13, and Article 9 of the Reliability Must-Run Contract. Neither the RMR Owner Facility Trust Account nor the Responsible Utility Facility Trust Account shall have other funds commingled in it at any time. The CAISO shall not modify this Section or Section 11.13

as it applies to procedures for the billing, invoicing and payment of charges under Reliability Must-Run Contracts without the Responsible Utility's consent, provided, however, that no such consent shall be required with respect to any change in the method by which costs incurred by the CAISO under RMR Contracts are allocated to or among Responsible Utilities.

**41.6.1 No Offsets to Responsible Utility's CAISO Invoice Payments**

Except where the Responsible Utility is also the RMR Owner, the Responsible Utility's payment of the CAISO Invoice as provided in the RMR Contract shall be made without offset, recoupment or deduction of any kind whatsoever. Notwithstanding the foregoing, if the CAISO fails to deduct an amount required to be deducted under Section 41.6.2, the Responsible Utility may deduct such amount from payment otherwise due under such CAISO Invoice as provided in the RMR Contract.

**41.6.2 Refunds of Disputed Amounts on RMR Invoices**

If the Responsible Utility disputes a CAISO Invoice as provided in the RMR Contract, Revised Estimated RMR Invoice, or Revised Adjusted RMR Invoice, or Final Invoice, it shall pay the CAISO Invoice as provided in the RMR Contract but may pay under protest and reserve its right to seek a refund, with interest, from the CAISO. If resolution of the dispute results in an amount paid by the Responsible Utility under protest being due from the CAISO to the Responsible Utility and from the RMR Owner to the CAISO, and such amount was paid to the RMR Owner by the CAISO, then such amount, with interest at the interest rate specified in the applicable Reliability Must-Run Contract from the date of payment until the date on which the amount is repaid in full, shall be refunded by the RMR Owner to the CAISO and from the CAISO to the Responsible Utility, pursuant to Article 9 of the Reliability Must-Run Contract and Section 11.13, by the RMR Owner's inclusion of such refund amount in the appropriate invoice. If the RMR Owner does not include such refund amount (including interest) in the appropriate invoice, then such refund amount shall be deducted by the CAISO from the next succeeding amounts otherwise due from the Responsible Utility to the CAISO and from the next succeeding amounts otherwise due from the CAISO to the RMR Owner with respect to the applicable Reliability Must-Run Contract or, if such RMR Contract has terminated, such amount shall be refunded by the CAISO to the Responsible Utility; provided, however, that if and to the extent that such resolution is based on an error or breach or default of the RMR Owner's obligations to the CAISO under the Reliability Must-Run Contract, then such refund

obligation shall extend only to amounts actually collected by the CAISO from the RMR Owner as a result of such resolution. If resolution of the dispute requires the CAISO, but not the RMR Owner, to pay the Responsible Utility, then such award shall be recovered from any applicable insurance proceeds, provided that to the extent sufficient funds are not recoverable through insurance, the amount of the award (whether determined through settlement, or the CAISO ADR Procedures or otherwise) shall be collected by the CAISO pursuant to Section 13.5, and in any event, the award shall be paid by the CAISO to the Responsible Utility pursuant to Section 13.5.

**41.6.3 Time-Frame for Responsible Utility to Dispute RMR Invoices**

If the Responsible Utility disputes a CAISO Invoice as provided in the RMR Contract, a Revised Estimated RMR Invoice, a Revised Adjusted RMR Invoice, or a Final Invoice, or part thereof, based in whole or in part on an alleged error by the RMR Owner or breach or default of the RMR Owner's obligations to the CAISO under the Reliability Must-Run Contract, the Responsible Utility shall notify the CAISO of such dispute within twelve (12) months of its receipt of the applicable Revised Adjusted RMR Invoice or Final Invoice from the CAISO, except that the Responsible Utility may also dispute a Revised Estimated RMR Invoice, Revised Adjusted RMR Invoice, or Final Invoice for the reasons set forth above in this Section 41.6.3, within sixty (60) days from the issuance of a final report with respect to an audit of the RMR Owner's books and accounts allowed by a Reliability Must-Run Contract.

**41.6.4 Disputes After Operational Compliance Review**

If the Responsible Utility disputes a CAISO Invoice as provided in the RMR Contract, a Revised Estimated RMR Invoice, a Revised Adjusted RMR Invoice, or a Final Invoice, based in whole or in part on an alleged error by the CAISO or breach or default of the CAISO's obligations to the Responsible Utility, the Responsible Utility shall notify the CAISO of such dispute prior to the later to occur of: (i) the date twelve (12) months following the date on which the CAISO submitted such invoice to the Responsible Utility for payment or (ii) the date sixty (60) days following the date on which a final report is issued in connection with an operational compliance review, pursuant to Section 22.1.2.2, of the CAISO's performance of its obligations to Responsible Utilities under this Section 41.6.4 conducted by an independent third party selected by the CAISO Governing Board and covering the period to which such alleged dispute relates. The CAISO or any Responsible Utility shall have the right to request, but not to

require, that the CAISO Governing Board arrange for such an operational compliance review at any time.

### 41.6.5 Invoice Disputes Subject to RMR Contract Resolution Process

Notwithstanding Section 13, any Responsible Utility dispute relating to a CAISO Invoice as provided in the RMR Contract, a Revised Estimated RMR Invoice, a Revised Adjusted RMR Invoice, a Final Invoice, or a RMR Charge, RMR Payment or RMR Refund shall be resolved through the dispute resolution process specified in the relevant RMR Contract. If the Responsible Utility fails to notify the CAISO of any dispute as provided above, it shall be deemed to have validated the invoice and waived its right to dispute such invoice.

### 41.6.6 RMR Owner’s Rights as a Third Party Beneficiary

The RMR Owner shall, to the extent set forth herein, be a third party beneficiary of, and have all rights that the CAISO has under the CAISO Tariff, at law, in equity or otherwise, to enforce the Responsible Utility's obligation to pay all sums invoiced to it in the CAISO Invoices as provided in the RMR Contract but not paid by the Responsible Utility, to the extent that, as a result of the Responsible Utility's failure to pay, the CAISO does not pay the RMR Owner on a timely basis amounts due under the Reliability Must-Run Contract. The RMR Owner's rights as a third party beneficiary shall be no greater than the CAISO's rights and shall be subject to the dispute resolution process specified in the relevant RMR Contract. Either the CAISO or the RMR Owner (but not both) will be entitled to enforce any claim arising from an unpaid CAISO Invoice as provided in the RMR Contract, and only one party will be a "disputing party" under the dispute resolution process specified in the relevant RMR Contract with respect to such claim so that the Responsible Utility will not be subject to duplicative claims or recoveries. The RMR Owner shall have the right to control the disposition of claims against the Responsible Utility for non-payments that result in payment defaults by the CAISO under a Reliability Must-Run Contract. To that end, in the event of non-payment by the Responsible Utility of amounts due under the CAISO Invoice as provided in the RMR Contract, the CAISO will not take any action to enforce its rights against the Responsible Utility unless the CAISO is requested to do so by the RMR Owner. The CAISO shall cooperate with the RMR Owner in a timely manner as necessary or appropriate to most fully effectuate the RMR Owner's rights related to such enforcement, including using its best efforts to enforce the Responsible Utility's payment obligations if, as, to the extent, and within the time frame, requested by the RMR Owner. The CAISO shall

intervene and participate where procedurally necessary to the assertion of a claim by the RMR Owner.

### 41.7 Responsibility for Reliability Must-Run Charge

Except as otherwise provided in Section 41.8 , the costs incurred by the CAISO under each Reliability Must-Run Contract shall be payable to the CAISO by the Responsible Utility in whose PTO Service Territory the Reliability Must-Run Units covered by such Reliability Must-Run Contract are located or, where a Reliability Must-Run Unit is located outside the PTO Service Territory of any Responsible Utility, by the Responsible Utility or Responsible Utilities whose PTO Service Territories are contiguous to the Service Area in which the Generating Unit is located, in proportion to the benefits that each such Responsible Utility receives, as determined by the CAISO. Where costs incurred by the CAISO under a Reliability Must-Run Contract are allocated among two or more Responsible Utilities pursuant to this section, the CAISO will file the allocation under Section 205 of the Federal Power Act.

### 41.8 Responsibility for RMR Charges Associated with SONGS

If the CAISO procures Reliability Must-Run Generation from the San Onofre Nuclear Generation Station Units 2 or 3, it shall determine prior to the operation of such facilities as Reliability Must-Run Generation the appropriate allocation of associated charges, if any, among Responsible Utilities. The allocation of such charges shall be based on the reliability benefits that the CAISO reasonably identifies through studies and analysis as accruing to the respective Service Areas of the Responsible Utilities.

### 41.9 Exceptional Dispatch of Condition 2 RMR Units

The CAISO may Dispatch an RMR Unit that has currently selected Condition 2 of its RMR Contract to provide Energy through an Exceptional Dispatch under this CAISO Tariff for reasons other than as prescribed in the RMR Contract under the following conditions:

(1) The CAISO projects that it will require Energy from the Condition 2 RMR Unit to (a) meet forecast Demand and operating reserve requirements or (b) manage Congestion and no other Generating Unit that is available is capable of meeting the identified requirement;

#### 41.9.1 Notification Required Before Condition 2 RMR Unit Dispatch

Before dispatching a Condition 2 RMR Unit in accordance with this Section, the CAISO must notify Market Participants of (a) the situation for which the CAISO is contemplating dispatching a Condition 2 RMR Unit in accordance with this Section, and (b) the date and time the CAISO requires the Condition 2

RMR Unit so dispatched to be operating. The CAISO shall provide such notice as far in advance as practical and prior to directing the Condition 2 RMR Unit to Start-Up

Notwithstanding anything to the contrary in the applicable RMR Contract, all MWh, Start-Ups and service hours provided by a Generating Unit that has currently selected Condition 2 of its RMR Contract pursuant to this Section 41.9.1 through an Exceptional Dispatch outside of the RMR Contract shall not be used to determine future "Annual Service Limits" as defined in the RMR Contract. Payment for Dispatches pursuant to this Section 41.9.1 is governed by Section 11.

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**Appendix A**

**Master Definition Supplement**

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**- Adjusted RMR Invoice**

The monthly invoice issued by the RMR Owner to the CAISO for adjustments made to the Revised Estimated RMR Invoice pursuant to the RMR Contract reflecting actual data for the billing month.*** * * * * ***

**- CAISO Invoice**

The invoices issued by the CAISO to the Responsible Utilities or RMR Owners based on the Revised Estimated RMR Invoice and the Revised Adjusted RMR Invoice.

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**- Condition 1 RMR Unit**

A resource operating pursuant to Condition 1 of its RMR Contract.

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**- Condition 2 RMR Unit**

A resource operating pursuant to Condition 2 of its RMR Contract.

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**- Estimated RMR Invoice**

The monthly invoice issued by the RMR Owner to the CAISO for estimated RMR Payments or RMR

Refunds pursuant to the RMR Contract.

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**- Facility Trust Account**

For each RMR Contract, the account established and operated by the CAISO to and from which all payments under Section 11.13 shall be made. Each Facility Trust Account will have two segregated commercial bank accounts, an RMR Owner Facility Trust Account and a Responsible Utility Facility Trust Account.

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**- Final Invoice**

The invoice due from a RMR Owner to the CAISO at termination of the RMR Contract.

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**- Maximum Net Dependable Capacity (MNDC)]**

A term defined in and used in association with an RMR Contract.

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**- MNDC**

Maximum Net Dependable Capacity.

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**- Prior Period Change**

Any correction, surcharge, credit, refund or other adjustment pertaining to a billing month pursuant to an RMR Contract which is discovered after the Revised Adjusted RMR Invoice for such billing month has been issued.

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**- Prior Period Change Worksheet**

A worksheet prepared by the RMR Owner and submitted to the CAISO following discovery of a necessary change to an RMR Invoice after the Revised Adjusted RMR Invoice for the billing month has been issued.

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**- RMR Dispatch**

The quantity of Energy or Ancillary Services that is mandated by the CAISO to be delivered in a given

market for a resource by an RMR Unit under an RMR Contract.

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**- Manual RMR Dispatch**

An RMR Dispatch Notice issued by the CAISO other than as a result of the MPM process.

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**- Reliability Must-Run Charge (RMR Charge)**

The sum payable by a Responsible Utility to the CAISO pursuant to Section 41 for the costs, net of all applicable credits, incurred under the Reliability Must-Run Contract.

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**- Reliability Must-Run Contract (RMR Contract)**

A Must-Run Service Agreement between the owner of a Reliability Must-Run Unit and the CAISO.

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**- Reliability Must-Run Unit (RMR Unit**

A Generating Unit of a Participating Generator which is the subject of a Reliability Must-Run Contract.

* * * * * *

**- Responsible Utility**

The utility which is a party to the Transmission Control Agreement in whose PTO Service Territory the Reliability Must-Run Unit is located or whose PTO Service Territory is contiguous to the PTO Service Territory in which a Reliability Must-Run Unit owned by an entity outside of the CAISO Controlled Grid is located.

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**- Responsible Utility Facility Trust Account**

A segregated commercial bank account under the Facility Trust Account containing funds held in trust for the Responsible Utility under an RMR Contract.

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**Revised Adjusted RMR Invoice**

The monthly invoice issued by the Reliability Must-Run Owner to the CAISO pursuant to the Reliability

Must-Run Contract reflecting any appropriate revisions to the Adjusted Reliability Must-Run Invoice based on the CAISO's validation and actual data for the billing month.

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**- Revised Estimated RMR Invoice**

The monthly invoice issued by the Reliability Must-Run Owner to the CAISO pursuant to the Reliability Must-Run Contract reflecting appropriate revisions to the Estimated Reliability Must-Run Invoice based on the CAISO's validation of the Estimated Reliability Must-Run Invoice.

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**- RMR Default Amount**

Any amount due to be received into the relevant Facility Trust Account from the RMR Owner or the Responsible Utility in accordance with an RMR Contract.

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**- RMR Energy**

Total Expected Energy under RMR Dispatch. RMR Energy is calculated independent of other Expected Energy types and it may overlap with any other Expected Energy type. It is used for RMR Contract based settlement as provided in Section 11.13.

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**- RMR Invoice**

Any Estimated RMR Invoice, Revised Estimated RMR Invoice, Adjusted RMR Invoice, or Revised Adjusted RMR Invoice under an RMR Contract.

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**- RMR Owner**

The provider of services under a Reliability Must-Run Contract.

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**- RMR Owner Facility Trust Account**

The commercial bank account held in trust by the CAISO for the benefit of the owner of an RMR Unit subject to an RMR Contract as required and specified in Section 9.2 of the pro forma RMR Contract.

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**- RMR Payment**

Any amounts which the CAISO is obligated to pay to RMR Owners under the RMR Contracts, net of any applicable credits under the RMR Contracts.

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**- RMR Security**

The form of security provided by a Responsible Utility to cover its liability under Section 11.13.

# Appendix I Station Power Protocol

## 1 General Conditions

### 1.1 Procurement

Station Power may be voluntarily self-supplied through On-Site Self-Supply or Remote Self-Supply. Third Party Supply may serve Station Power only to the extent permissible under the rules and regulations of the applicable Local Regulatory Authority.

### 1.2 Eligibility

**1.2.1** Only Station Power Loads associated with Generating Units in the CAISO Balancing Authority Area that are part of an approved Station Power Portfolio may be self-supplied in accordance with this SPP. Each Generating Unit must be subject to a PGA, Net Scheduled PGA, or MSS Agreement. Any generating facility outside the CAISO Balancing Authority Area owned by the same entity is eligible to provide Remote Self-Supply to Station Power Loads, subject to the terms of this SPP. Generating Units wishing to self-supply Station Power, by means other than netting permitted under Section 10.1.3 of the CAISO Tariff, shall complete the application process specified in Section 2 of this SPP.

**1.2.2** Station Power may be self-supplied by a single corporate entity, government agency, or joint powers agency or other legal entity organized under the laws of the State of California. A Station Power Portfolio may not include any facilities that are owned by the owner's corporate Affiliates. In the case of a joint powers agency, a Station Power Portfolio may not include facilities independently owned by one or more members or other legally distinct entities. If an entity owns a portion of a jointly owned Generating Unit, such ownership share may be included in a Station Power Portfolio up to the amount of the associated entitlement to Energy from the jointly-owned Generating Unit provided that: (i) the entity has the right to call upon that Energy for its own use; and (ii) the Energy entitlement is not characterized as a sale from the jointly owned Generating Unit to any of its joint owners.

**1.2.3** Net Output from generating facilities outside the CAISO Balancing Authority Area may be included in a Station Power Portfolio and used as a source of Remote Self-Supply to serve Station Power of Generating Units in the CAISO Balancing Authority Area and part of the Station Power Portfolio, so long as the following conditions are fulfilled:

(a) Imports of Net Output must be submitted in Self-Schedules using a Resource ID specified by the CAISO;

(b) FMM Schedules using such Resource ID do not exceed the available Net Output of such generating facilities in any hour;

(c) Firm transmission service to a Scheduling Point that assures delivery into the CAISO Balancing Authority Area is secured; and

(d) Meter Data for generating facilities located outside the CAISO Balancing Authority Area shall be subject to CAISO audit to verify performance in accordance with these requirements.

### 1.3 Limitations

**1.3.1** Station Power supplied by contemporaneous on-site Generation is treated as permitted netting under Section 10.1.3 of this CAISO Tariff. This SPP neither expands opportunities for nor imposes additional conditions on permitted netting. In accordance with this CAISO Tariff, such contemporaneous self-supplied Station Power need not be submitted in Self-Schedules with the

CAISO.

**1.3.2** Self-supply of Station Power shall be strictly voluntary. Nothing in this SPP is intended to: 1) preclude a Generating Unit from purchasing Station Power pursuant to an applicable retail rate or tariff; or 2) supersede otherwise applicable jurisdiction of a Local Regulatory Authority, except in the event of a conflict between federal and state tariff provisions, in which case the federal tariff provisions will control.

## 2 Station Power Requirements and Review

### 2.1 Applications to Self-Supply Station Power

**2.1.1** An application to establish a Station Power Portfolio or to modify the configuration of Station Power meters or the generating facilities included in a Station Power Portfolio must be submitted according to the process specified by the CAISO and posted on the CAISO Website, and shall include the following information:

(a) One-line diagrams clearly showing the location and ownership of all Generating Units and Station Power meters, their connection to the CAISO Controlled Grid or distribution system, and the status of breakers and switchgear for normal system operation.

(b) Identification of any generating facilities outside the CAISO Balancing Authority Area, to be used to provide Remote Self-Supply of Station Power within the proposed Station Power Portfolio. No loads associated with generating facilities outside the CAISO Balancing Authority Area may be supplied under this SPP.

(c) Certification that the applicant is the sole owner of all generating facilities proposed to be included in the Station Power Portfolio, and that the applicant has the right to call on Energy for its own use from its ownership share of any jointly owned facilities that are proposed to be used to self-supply Station Power.

(d) Demonstration that each Station Power meter is certified in accordance with the CAISO Tariff.

(e) Verification that each Station Power meter is subject to a Meter Service Agreement for CAISO Metered Entities, and that each Generating Unit is bound to the CAISO Tariff by a PGA, Net Scheduled PGA, or MSS Agreement.

(f) Verification that the applicant has arranged for terms of service with the responsible UDC or MSS Operator for the use of any distribution facilities required to self-supply Station Power.

**2.1.2** On the CAISO's written request, the applicant will provide additional information that the CAISO reasonably determines is necessary to verify the planned operation of the Station Power Portfolio and meet the requirements of Section 2.1.1 of this SPP.

### 2.2 CAISO Monitoring and Review

**2.2.1** The CAISO will take the following actions with respect to each application to establish a Station Power Portfolio:

(a) The CAISO shall post on the CAISO Website a listing of the specific Station Power meters and Generating Units located in the CAISO Balancing Authority Area (which may include a Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area, provided that firm transmission service has been reserved across the transmission path

from the CAISO Intertie to the Pseudo-Tie Generating Unit and the Station Power service is provided by a UDC or MSS Operator within the CAISO Balancing Authority Area), and any generating facilities outside the CAISO Balancing Authority Area, that compose each Station Power Portfolio, and which are eligible to participate in the self-supply of Station Power in accordance with this SPP.

(b) The CAISO will provide the appropriate UDC or MSS Operator and the Local Regulatory Authority with one-line diagrams and other information regarding each application.

(c) The CAISO will make a determination in consultation with the UDC or MSS Operator and the Local Regulatory Authority on the factual question of whether distribution facilities are involved in the requested self-supply of Station Power. Any disputes regarding such determinations shall be subject to the dispute resolution procedures of this CAISO Tariff.

(d) The CAISO will verify metering schemes and assign unique Load identifiers consistent with the CAISO data templates and validation rules that the Scheduling Coordinator responsible for each meter will be required to use for scheduling and Settlement.

**2.2.2** The CAISO shall promptly review each application to establish or modify a Station Power Portfolio. Within ten (10) Business Days after the submittal of the application, the CAISO shall notify the applicant in writing that the application is complete, or shall list any specific deficiencies or additional information that the CAISO reasonably requires to complete the application. The CAISO shall use all reasonable efforts to make the changes necessary for the new or modified configurations to take effect and the Station Power Portfolio to begin self-supplying Station Power within twenty (20) Business Days after a complete application is submitted. In no event shall a Station Power Portfolio begin self-supplying Station Power until any and all required changes to the configuration of metering or other equipment are completed as required under Section 6 of this SPP. The CAISO will have an ongoing right to request additional information reasonably necessary to verify that conditions on the self-supply of Station Power as specified in this SPP are met.

## 3 Self-Supply Verification and CAISO Charges

### 3.1 Self-Supply Verification

At the end of each Netting Period, the CAISO will calculate the Net Output for each Generating Unit in the Station Power Portfolio. If the Net Output is positive, then all Station Power associated with that Generating Unit will have been served by On-Site Self-Supply. Any positive Net Output from facilities in the Station Power Portfolio will be available to provide Remote Self-Supply to any Generating Unit with negative Net Output. If the available Remote Self-Supply is less than the aggregate negative Net Output in the Station Power Portfolio, then such shortfall will be deemed to have been served by Third Party Supply. The CAISO will incorporate these determinations in its accounting and billing for the Netting Period by reassigning Station Power to unique Load identifiers for Remote Self-Supply and Third Party Supply, as required.

### 3.2 Charges on Metered Demand

Station Power that is not eligible for permitted netting in accordance with Section 10.1.3 of this CAISO Tariff must be submitted in Self-Schedules in accordance with the CAISO Tariff, and will be assessed all charges applicable to metered Demand under the CAISO Tariff, except as provided in Section 4.1 of this SPP.

### 3.3 Administrative Charge

Scheduling Coordinators of Generating Units that have Station Power meters shall be assessed an administrative charge in accordance with Schedule 5 of Appendix F.

## 4 Transmission Service

**4.1** Station Power Load that is directly connected to the transmission facilities or directly connected to the Distribution System of a UDC or MSS Operator located in a PTO Service Territory and that is determined to have been served by On-Site Self-Supply shall be deemed not to have used the CAISO Controlled Grid and shall not be included in the Gross Load of the applicable UDC or MSS Operator. Station Power that is served by Wheeling service and that is determined to have been served by On-Site Self-Supply shall be deemed not to have used the CAISO Controlled Grid and shall not be included in the hourly Self-Schedules (in kWh) of the applicable Scheduling Coordinator that are subject to the Wheeling Access Charge.

**4.2** Station Power Load that is directly connected to the transmission facilities or directly connected to the Distribution System of a UDC or MSS Operator located in a PTO Service Territory and that is determined to have been served by Remote Self-Supply or Third Party Supply shall be included in the Gross Load of the applicable UDC or MSS Operator. Station Power that is served by Wheeling service and that is determined to have been served by Remote Self-Supply or Third Party Supply shall be included in the hourly Self-Schedules (in kWh) of the applicable Scheduling Coordinator that are subject to the Wheeling Access Charge.

**4.3** If the Generating Unit requires the use of distribution facilities or other facilities that are not part of the CAISO Controlled Grid, then the Generating Unit will be subject to the appropriate charges of the applicable UDC, MSS Operator or owner of such non-CAISO Controlled Grid facilities.

## 5 Energy Pricing

All deviations between metered Generation or Station Power and that submitted in Self-Schedules will be settled at the resource-specific LMP at the applicable Custom LAP for the Station Power Load. The determination of Net Output and attribution of On-Site Self-Supply, Remote Self-Supply and Third Party Supply to serving Station Power under this SPP shall apply only to determine whether Station Power was self-supplied during the Netting Period and will have no effect on the price of Energy sold or consumed by any facility in the Station Power Portfolio.

## 6 Metering

**6.1** In order to self-supply Station Power under this SPP by means other than netting permitted under Section 10.1.3 of this CAISO Tariff, a Generating Unit must be subject to a Meter Service Agreement for CAISO Metered Entities pursuant to CAISO Tariff Section 10.3.1. A meter certified in accordance with the CAISO Tariff is required for Station Power Load taken under the SPP. Separate metering is required for any on-site Load that does not meet the definition of Station Power. Under no circumstances may ineligible Loads be included in the Meter Data collected by the CAISO from a Station Power meter.

**6.2** Any costs associated with owning or operating metering or related facilities necessary to self-supply Station Power according to the terms of this SPP are the responsibility of the owner-applicant.

**6.3** A single Scheduling Coordinator must represent the unique Load identifiers assigned by the CAISO for On-Site Self-Supply and Remote Self-Supply associated with each Station Power meter.

## 7 Provision of Data to UDC or MSS Operator

The CAISO will provide the applicable UDC or MSS Operator with the amount of On-Site Self-Supply, Remote Self-Supply, and Third Party Supply serving Station Power at the granularity required to allow the UDC or MSS Operator to assess charges, if any, under the applicable retail tariff(s).

**Appendix J**

**LEGACY STANDARD CAPACITY PRODUCT AND RA SUBSTITUTE CAPACITY PROVISIONS**

**Part 1 – Legacy Standard Capacity Product Provisions**

Notwithstanding any other provisions of the CAISO Tariff, the following provisions shall apply pursuant to Section 40.9.2.1(a)(1).

**40.9.2 Exemptions**

The following exemptions apply to the CAISO's Availability Standards program of this Section 40.9:

(1) Capacity under a resource specific power supply contract that existed prior to June 28, 2009 and Resource Adequacy Capacity that was procured under a contract that was either executed or submitted to the applicable Local Regulatory Authority for approval prior to June 28, 2009, and is associated with specific Generating Units or System Resources, will not be subject to Non-Availability Charges or Availability Incentive Payments. Such contracted Resource Adequacy Capacity, except for non-Resource-Specific System Resources, will be included in the development of Availability Standards and will be subject to any Outage reporting requirements necessary for this purpose. The exemption will apply only for the initial term of the contract and to the MW capacity quantity and Resource Adequacy Resources specified in the contract prior to June 28, 2009. The exemption shall terminate upon the conclusion of the initial contract term. Exempt contracts may be re-assigned or undergo novation on or after June 28, 2009, but the exemption shall not apply for any extended contract term, increased capacity quantity or additional resource(s) beyond those specified in the contract prior to June 28, 2009, except as provided in Section 40.9.2(7) or 40.9.2(8). Scheduling Coordinators for Resource Adequacy Resources subject to these contracts will be required to certify the start date of the contract, the expiration date, the Resource ID(s), and the amount of Resource Adequacy Capacity associated with each Resource ID included in the contract. For Resource Adequacy Resources whose Qualifying Capacity value is determined by historical output, the capacity under a resource specific power supply contract or Resource Adequacy Capacity that was procured under a contract that was either

executed or submitted to the applicable Local Regulatory Authority for approval that meets the requirements in this subsection (2) will not be subject to Non-Availability Charges or Availability Incentive Payments, except that the deadline date for either type of contract shall be August 22, 2010 instead of June 28, 2009.

(2) For a contract entered into prior to June 28, 2009 that provides for the amount of Resource Adequacy Capacity to increase during the original term of the contract, based on a ratio of the Resource Adequacy Resource's output or due to an addition of capacity, the exemption provided in subsection (2) of this Section 40.9.2 will apply to the additional capacity allowed under the contract; provided that the capacity increase (i) is expressly contained in the provisions of the contract, (ii) occurs during the primary term of the contract; and (iii) does not result from contract extensions or other amendments to the original terms and conditions of the contract, except as provided in Section 40.9.2(7) or 40.9.2(8). Scheduling Coordinators for Resource Adequacy Resources subject to contracts that provide for such capacity increases or additions must include in their certification, in addition to the requirements of subsection (2) of this Section 40.9.2, (i) the citation to any contract provisions that might entitle them to increased exempt Resource Adequacy Capacity from the contracted resources during the primary term of the contract; (ii) the amount of additional capacity to which they might be entitled; and (iii) the actual effective date of the capacity increase. If the actual amount of capacity and/or the actual effective date of the capacity increase is not known at the time of the initial certification, the Scheduling Coordinator shall provide a supplemental certification(s) when this information becomes known. For Resource Adequacy Resources whose Qualifying Capacity value is determined by historical output the exemption provided in subsection (2) of this Section 40.9.2 will apply to an increase in the capacity under a resource specific power supply contract or Resource Adequacy Capacity that was procured under a contract that was either executed or submitted to the applicable Local Regulatory Authority for approval that meets the requirements in this subsection (3), except that the deadline date for either type of contract to be exempt shall be August 22,

2010 instead of June 28, 2009.

**Part 2 – Legacy RA Substitute Capacity Provisions**

Notwithstanding any other provisions of the CAISO Tariff, the following provisions apply to Outages on RA Resources taken in June 2021. In all other respects, the CAISO Tariff, including the provisions of Sections 9 and 40 not covered in this Appendix J, apply to Outages on RA Resources taken in June 2021.

**9.3.1.3 Coordinating Outages of RA Resources**

In performing outage coordination management under Section 9, and this Section 9.3.1.3, the CAISO may take into consideration the status of a Generating Unit as a Resource Adequacy Resource, including whether it is Listed Local RA Capacity. The CAISO may deny, reschedule or cancel an Approved Maintenance Outage for facilities that comprise the CAISO Controlled Grid or Generating Units of Participating Generators if it determines that the outage is likely to have a detrimental effect on the availability of Resource Adequacy Capacity or the efficient use and reliable operation of the CAISO Controlled Grid or the facilities of a Connected Entity.

**9.3.1.3.1 [Not Used]**

**9.3.1.3.2 [Not Used]**

**9.3.1.3.3 Substitution Opportunity for RA Resources**

To the extent that a resource is committed to provide Resource Adequacy Capacity during a month, the Scheduling Coordinator for the resource may request an RA Maintenance Outage With Substitution, RA Maintenance Outage Without Substitution, Off Peak Opportunity RA Maintenance Outage, or Short-Notice Opportunity RA Outage, or may request to reschedule an Approved Maintenance Outage, for that Resource Adequacy Capacity in accordance with the provisions of this Section. The timelines set forth in this Section for submitting an Outage request and classifying the outage as a Maintenance Outage or a Forced Outage exclude the day that the request is submitted and the day that the outage is scheduled to commence.

**9.3.1.3.3.1 RA Maintenance Outage With Substitution**

(a) **Substitution Option.** The Scheduling Coordinator of a Resource Adequacy Resource

designated as Resource Adequacy Capacity during the resource adequacy month may request that a planned Maintenance Outage be scheduled, or an Approved Maintenance Outage be rescheduled, as an RA Maintenance Outage With Substitution during that month.

(b) **Request.** A request for an RA Maintenance Outage With Substitution must: (i) be submitted to the CAISO no less than eight (8) days prior to the start of the outage; (ii) provide RA Substitution Capacity in an amount no less than the amount of Resource Adequacy Capacity that would be on scheduled outage; and (iii) otherwise comply with the requirements set forth in Section 9.

(c) **Approval.**

(1) The CAISO will consider requests for an RA Maintenance Outage With Substitution in the order that the requests are received.

(2) The CAISO may approve the request for an RA Maintenance Outage With Substitution if it determines that: (i) the request meets the requirements in Section 9.3.1.3.3.1(b); and (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid.

(3) If the request was submitted no less than eight (8) days prior to the start date for the outage, and it meets the requirements in Section 9.3.1.3.3.1(c)(2) the CAISO may approve the request as an RA Maintenance Outage With Substitution.

(4) If the CAISO denies the request for failing to meet the requirements in Section 9.3.1.3.3.1(c)(2), the Scheduling Coordinator for the Resource Adequacy Resource may request a different schedule for the RA Maintenance Outage With Substitution or may request that the CAISO accommodate the outage without RA Substitute Capacity at another time.

(d) **Resource Adequacy Obligation.** The RA Substitute Capacity for an RA Maintenance Outage With Substitution approved under Section 9.3.1.3.3.1(c)(3) shall be subject to all of the availability, dispatch, testing, reporting, verification and any other applicable

requirements imposed on Resource Adequacy Resources by the CAISO Tariff, including the must-offer obligations in Section 40.6 and the RAAIM provisions in Section 40.9, for the MW amount and duration of the outage substitution period, which includes the full day of the start date and the full day of the end date of the outage.

**9.3.1.3.3.2 RA Maintenance Outage Without Substitution**

(a) **Option for No Substitution.** The Scheduling Coordinator for a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may request that a Maintenance Outage be scheduled, or an Approved Maintenance Outage be rescheduled, as an RA Maintenance Outage Without Substitution, without a requirement to provide RA Substitute Capacity for the unavailable capacity for the duration of the outage to be excluded from the RAAIM calculation under Section 40.9.

(b) **Request.** A request for an RA Maintenance Outage Without Substitution must: (i) be submitted to the CAISO no less than eight (8) days prior to the start date of the outage; and (ii) otherwise comply with the requirements of Section 9.

(c) **Approval.**

(1) The CAISO will consider requests received for an RA Maintenance Outage Without Substitution in the order the requests were received.

(2) The CAISO may approve a request for an RA Maintenance Outage Without Substitution if it determines that: (i) the request meets the requirements in Section 9.3.1.3.3.2(b); (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid; and (iii) the outage will not result in insufficient available Resource Adequacy Capacity during the outage period. The analysis of system conditions and the overall outage schedule will include Approved Maintenance Outage requests that were received before and after the request for an RA Maintenance Outage Without Substitution.

(3) The CAISO will not approve a request for an RA Maintenance Outage Without Substitution earlier than seven days before the first day of the resource adequacy month, and may hold the request as pending until system conditions are sufficiently known for the CAISO to determine whether the outage meets the requirements in Section 9.3.1.3.3.2(c)(2).

(4) If the CAISO denies a request for an RA Maintenance Outage Without Substitution for failing to meet the requirements in Section 9.3.1.3.3.2(c)(2), the Scheduling Coordinator for the Resource Adequacy Resource may request an RA Maintenance Outage With Substitution or may request that the CAISO accommodate the outage at another time.

**9.3.1.3.3.3 Off-Peak Opportunity RA Maintenance Outage**

(a) **Option for Off-Peak Outage.** The Scheduling Coordinator for a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may submit a request for an Off-Peak Opportunity RA Maintenance Outage without a requirement to provide RA Substitute Capacity for the unavailable capacity for the duration of the outage to be excluded from the RAAIM calculation under Section 40.9.

(b) **Request.** A request for an Off-Peak Opportunity RA Maintenance Outage must: (i) be submitted to the CAISO no less than eight (8) days prior to the start date for the outage; (ii) schedule the outage to begin during off-peak hours (as specified in the Business Practice Manuals) on a weekday, and to be completed prior to on-peak hours (as specified in the Business Practice Manuals) the following weekday, or to begin during off-peak hours (as specified in the Business Practice Manuals) on Friday, or on Saturday, Sunday, or a holiday, and to be completed prior to on-peak hours (as specified in the Business Practice Manual) on the next weekday; and (iii) otherwise comply with the requirements set forth in Section 9.

(c) **Approval.**

(1) The CAISO will consider requests for an Off-Peak Opportunity RA Maintenance Outage in the order the requests were received.

(2) If the request was submitted no less than eight (8) days prior to the start date for the outage, the CAISO may approve the request as an Off-Peak Opportunity RA Maintenance Outage if it determines that: (i) the request meets the requirements set forth in Section 9.3.1.3.3.3(b); and (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid.

(3) If the CAISO denies a request for an Off-Peak Opportunity RA Maintenance Outage for failing to meet the requirements in Section 9.3.1.3.3.3(c)(2), the Scheduling Coordinator for the Resource Adequacy Resource may request an RA Maintenance Outage With Substitution or may request that the CAISO accommodate the outage at another time.

(4) To the extent that an approved Off-Peak Opportunity RA Maintenance Outage is not completed during off-peak hours as scheduled, and extends into on-peak hours, the Scheduling Coordinator for the resource shall submit the portion of the outage that extends into on-peak hours as a new Forced Outage, which shall be subject to the RAAIM provisions in Section 40.9.

**9.3.1.3.3.4 Short-Notice Opportunity RA Outage**

(a) **Option for Short-Notice Outage.** The Scheduling Coordinator for a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may submit a request for a Short-Notice Opportunity RA Outage without a requirement to provide RA Substitute Capacity for the Resource Adequacy Capacity that will be on the Forced Outage to be excluded from the RAAIM calculation under Section 40.9.

(b) A Short-Notice Opportunity RA Outage shall not exceed five days in length. The request for a Short-Notice Opportunity RA Outage must: (i) be submitted no more than seven (7) days prior to the requested start date for the outage; (ii) provide the CAISO adequate time to analyze the request before the outage begins; (iii) be submitted before the outage

has commenced as a Forced Outage; and (iv) otherwise comply with the requirements of Section 9.

(c) **Approval.**

(1) The CAISO will consider Short-Notice Opportunity RA Outages in the order the requests are received.

(2) If the request was submitted no more than seven days and no less than four days prior to the start date of the outage, the CAISO may approve the request as a Short Notice Opportunity RA Outage if it determines that: (i) the outage and the request meet the requirements set forth in Section 9.3.1.3.3.4(b); (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid; and (iii) the outage will not result in insufficient available Resource Adequacy Capacity during the outage period. The approved outage will be a Forced Outage and will not be subject to the RAAIM provisions in Section 40.9.

(3) If the request was submitted three days or less prior to the start date of the outage, the CAISO may approve the request as a Forced Outage if it determines that: (i) the outage and request meet the requirements set forth in Section 9.3.1.3.3.4(b); (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid; (iii) the outage will not result in insufficient available Resource Adequacy Capacity during the outage period; and (iv) the repairs are necessary to maintain system or resource reliability and require immediate attention to prevent equipment damage or failure. A Short-Notice Opportunity RA Outage approved under this Section will be a Forced Outage and will not be subject to the RAAIM provisions in Section 40.9.

(4) To the extent that an approved Short-Notice Opportunity RA Outage is not

completed during the originally approved outage schedule, the Scheduling Coordinator for the resource must submit the portion of the outage that continues from the approved completion time until the time the outage is actually completed as a new Forced Outage, which will be subject to the RAAIM provisions in Section 40.9.

**9.3.1.3.4 Outage Reporting for Resource Adequacy Resources between 1 MW and 10 MW**

Scheduling Coordinators or Resource Adequacy Resources with a PMax of at least one (1) MW but less than 10 MWs that do not meet the requirement to provide information on Forced Outages in accordance with Section 9.3.10 shall report Outages in accordance with the process set forth in the Business Practice Manual.

**40.9.3.4 Treatment of Outages**

(a) **RA Substitute Capacity Not Required.** The RAAIM Availability Assessment for a Resource Adequacy Resource excludes the capacity, duration, and must-offer requirements for Resource Adequacy Capacity on an Outage during the Resource Adequacy month that does not require RA Substitution Capacity under Section 9.3.1.3.3.

(b) **RA Substitute Capacity Required and Provided.** For each Outage that requires RA Substitute Capacity under Section 40.9.3.6 to avoid imposition of RAAIM charges –

(1) the RAAIM Availability Assessment for the resource excludes the capacity, duration, and must-offer requirement for Resource Adequacy Capacity on outage to the extent the resource provides RA Substitute Capacity for that outage as required under Section 40.9.3.6; and

(2) the RAAIM Availability Assessment for the substitute resource includes the capacity, duration, and must-offer requirement for the RA Substitute Capacity commitment. For each day the substitute resource is committed to provide Flexible RA Capacity and/or RA Substitute Capacity in more than one Flexible Capacity Category, the RAAIM Availability Assessment applies the must-offer obligation for the highest quality Flexible Capacity Category to the total MWs of the flexible capacity requirement. For the purposes of this Section 40.9, base

ramping resources (as defined in section 40.10.3.2) are considered to be a higher quality of Flexible Capacity Category than either peak ramping resources (as defined in section 40.10.3.3) or super-peak ramping resources (as defined in section 40.10.3.4). Additionally, peak ramping resources (as defined in section 40.10.3.3) are considered to be a higher quality of Flexible Capacity Category than super-peak ramping resources (as defined in section 40.10.3.4).

(c) **RA Substitute Capacity Required not Provided.** For each Outage that requires RA Substitute Capacity under Section 40.9.3.6 to avoid imposition of RAAIM charges, the RAAIM Availability Assessment for the resource includes the capacity, duration, and must-offer requirement for Resource Adequacy Capacity on an outage to the extent the resource does not provide RA Substitute Capacity for the outage as required under Section 40.9.3.6.

(d) **Exclusions from RAAIM for certain Outage types.** The RAAIM Availability Assessment excludes the capacity, duration, and must-offer requirement for local and/or system Resource Adequacy Capacity or Flexible RA Capacity on an Outage in a nature of work category specified in the Business Practice Manual that relates to: (i) an administrative action by the resource owner; (ii) a cause outside of the control of the resource owner, (iii) or a short-term use limitation; or (iv) a non-Run-of-River Resource hydroelectric Generating Unit's management of water-related operational or regulatory limitations. Through the December 31, 2020, Trading Day, item (iv) of this Section 40.9.3.4(d) applies only to a hydroelectric Generating Unit that has limited the capacity it has shown on the monthly Supply Plan corresponding to the day of the Outage to reflect historical hydrological conditions or actual hydrological conditions in 2020. The limitations based on hydrological conditions must be mutually agreed upon with the unit's Scheduling Coordinator and the CAISO. Starting with the January 1, 2021, Trading Day, item (iv) of this Section 40.9.3.4(d) applies only to a hydroelectric Generating Unit whose Qualifying Capacity was established pursuant to a CPUC or Local Regulatory Authority methodology under which the Qualifying Capacity is calculated to reflect historical

hydrological conditions.

(e) **Derates on Generating Units Providing system RA Capacity and Listed Local RA Capacity.** If a Generating Unit providing both system RA Capacity and Listed Local RA Capacity is on Forced Outage, then for purposes of RAAIM and RA Substitute Capacity the quantity of the Forced Outage will be apportioned first to the system RA Capacity provided from that Generating Unit. If the quantity of the Forced Outage exceeds the quantity of system RA Capacity provided by the Generating Unit, then the remainder of the Forced Outage shall be apportioned to the Listed Local RA Capacity provided by the Generating Unit.

**40.9.3.5 [Not Used]**

**40.9.3.6 Substitute Capacity**

**40.9.3.6.1 CAISO Evaluation by T-22 of Need for Substitute Capacity for Outages Submitted by T-25**

No later than 22 days before the start of each month, the CAISO will determine for each day in that month whether it will have sufficient operationally available RA Capacity from a combination of Local Capacity Area Resources and system capacity resources to meet or exceed the CAISO system RA Reliability Margin for each day. The CAISO will base this assessment on Maintenance Outages planned to be taken during the month that were submitted at least 25 days before the start of the month and any RA Substitute Capacity already provided to the CAISO for that month.

If the CAISO determines that it will have sufficient operationally available RA Capacity to meet or exceed the CAISO system RA Reliability Margin for a particular day, then no supplier with an outage submitted at least 25 days before the start of the month would be required to provide RA Substitute Capacity to be excluded from the RAAIM calculation as part of the analysis conducted no later than 22 days before the start of each month.

If the CAISO determines that it will not have sufficient operationally available RA capacity to meet the CAISO system RA Reliability Margin for a particular day, then it will determine which resources must provide RA Substitute Capacity to be excluded from the RAAIM calculation based on the reverse order of the dates on which the resources submitted the outage requests to the CAISO. The CAISO will first

request the resource providing RA Capacity with the most-recently-requested outage for that day to provide RA Substitute Capacity and then will continue to assign substitution opportunities until the CAISO has sufficient operationally available RA Capacity to meet the CAISO system RA Reliability Margin for that particular day, assuming that all resources that are assigned a RA Substitute Capacity obligation actually provide RA Substitute Capacity for that day.

For purposes of this section 40.9.3.6.1, the CAISO will treat any request to extend the scheduled duration of an outage or increase the MW amount of capacity on outage as a new outage request and will assign a new priority date based on when the request to change the outage or derate was submitted to the CAISO. For the purposes of this section 40.9.3.6.1, the CAISO will not assign a new priority date where the Scheduling Coordinator requests to reduce the scheduled duration of an outage or decrease the MW amount of capacity on outage.

A resource designated to provide RA Substitute Capacity as part of the analysis conducted no later than 22 days before the start of each month must designate RA Substitute Capacity by the deadline specified in the relevant Business Practice Manual. Failure to designate the RA Substitute Capacity by the specified deadline will subject the resource to RAAIM unless the outage is cancelled or rescheduled.

**40.9.3.6.2 CAISO Rolling Evaluation of Need for Substitute Capacity for Outages Submitted after T-25**

Starting at twenty-four days before the start of a month, the CAISO will consider submitted Maintenance Outages for a substitution requirement on a rolling basis, based on time of submission. Upon submission of the outage request, the CAISO will determine for each day of the outage whether the CAISO will have sufficient operationally available RA Capacity from a combination of Local Capacity Area Resources and system capacity resources to meet or exceed the CAISO system RA Reliability Margin for each day. The CAISO will base this assessment on Maintenance Outages planned to be taken for that day and any RA Substitute Capacity already provided to the CAISO for that day.

If the CAISO determines that it will have sufficient operationally available RA Capacity to meet or exceed the CAISO system RA Reliability Margin for a particular day, then the supplier will not be required to provide RA Substitute Capacity for that day to avoid imposition of RAAIM.

If the CAISO determines that it will not have sufficient operationally available RA capacity to meet the

CAISO system RA Reliability Margin for a particular day, then it will request substitution for the resource for that day. Failure to designate RA Substitute Capacity by the deadline specified in the relevant Business Practice Manual will subject the resource to RAAIM unless the outage is cancelled or rescheduled.

The CAISO will not conduct an assessment to determine the need to provide RA Substitute Capacity for Forced Outages. Any such outage, irrespective of whether the resource is providing RA Capacity or Flexible RA Capacity, will be subject to applicable RAAIM unless the Scheduling Coordinator for the resource provides Substitute Capacity by the deadline specified in the relevant Business Practice Manual, the outage is exempt from RAAIM as set forth in Section 9 or Section 40, the outage is cancelled, or the outage is rescheduled.

For purposes of this section 40.9.3.6.2, the CAISO will treat any request to extend the scheduled duration of an outage or increase the MW amount of capacity on outage as a new outage request and will assign a new priority date based on when the request to change the outage or derate was submitted to the CAISO.

For purposes of this section 40.9.3.6.2, the CAISO will reevaluate the need for a Scheduling Coordinator to provide RA Substitute Capacity where the Scheduling Coordinator requests to reduce the scheduled duration of an outage or decrease the MW amount of capacity on outage but will not assign a new priority date.

**40.9.3.6.3 General Provisions on Substitute Capacity**

(a) **Substitution**

(1) The Scheduling Coordinator for a Resource Adequacy Resource may provide RA Substitute Capacity for its local and/or system Resource Adequacy Capacity or Flexible RA Capacity on Outage. Certain types of Outages, as defined elsewhere in Section 9 or Section 40, will not subject the Scheduling Coordinator for a Resource Adequacy Resource to RAAIM if it declines to provide RA Substitute Capacity.

(2) If the Resource Adequacy Resource on Outage and the substituting resource do

not have the same Scheduling Coordinator, the Scheduling Coordinator for the substituting resource must confirm and approve the proposed substitution in accordance with the process set forth in the Business Practice Manual.

(b) **Availability**

(1) RA Substitute Capacity must be operationally available to the CAISO:

(2) Capacity on, or scheduled to be on, a Forced Outage, Approved Maintenance Outage, or de-rate, is not operationally available and shall not qualify to be RA Substitute Capacity for the duration of the period that it is unavailable.

(3) RMR Capacity, including Legacy RMR Capacity, CPM Capacity, and capacity committed to be Resource Adequacy Capacity in a monthly Supply Plan shall not qualify to be RA Substitute Capacity for the duration of that commitment.

(4) RA Substitute Capacity shall not qualify to be RMR Capacity, including Legacy RMR Capacity, CPM Capacity, or Resource Adequacy Capacity in a monthly Supply Plan, for the duration of the substitution.

(5) If a resource provides RA Substitute Capacity for multiple Resource Adequacy Resources under Section 40.9.3.6.6, the same capacity committed as RA Substitute Capacity for one Resource Adequacy Resource shall not qualify as RA Substitute Capacity for a different Resource Adequacy Resource during the same substitution period.

(6) RA Substitute Capacity will be treated as Resource Adequacy Capacity during the period of substitution for purposes of a Forced Outage or de-rate allocation.

(c) **Timing of Substitution Request**

(1) **Day-Ahead Market.** Requests for substitution for Forced Outages in the Day-Ahead Market must be submitted in accordance with the timeline specified in the Business Practice Manual and be approved by the CAISO to be included in the Day-Ahead Market for the next Trading Day. Requests for substitution for Forced Outages in the Day-Ahead Market submitted at or after the timeline specified in the Business Practice Manual and that are approved by the CAISO

will be included in the Day-Ahead Market for the second Trading Day.

(2) **Real-Time Market.** Requests for substitution for Forced Outages in the Real-Time Market must be submitted in accordance with the timeline in the Business Practice Manual.

**40.9.3.6.4 RA Substitute Capacity from a Single Source**

(a) **Option.** The Scheduling Coordinator for a Resource Adequacy Resource that is on Outage may provide RA Substitute Capacity for that capacity from a single resource.

(b) **Local Capacity Area Resource Substitution**

(1) **Pre-Qualified Substitution.**

(A) **Annual Process.** The CAISO annually will conduct a process to assess the eligibility of resources to pre-qualify as RA Substitute Capacity for Local Capacity Resource Adequacy Resources that potentially could be Listed Local RA Capacity in the time period covered by the process. The CAISO will publish a list of the pre-qualified resources in accordance with the timeline in the Business Practice Manual.

(B) **Pre-Qualification Requirement.** The CAISO will pre-qualify a resource to provide RA Substitute Capacity that is located at the same bus as, or a compatible bus to, that of the Local Capacity Area Resource Adequacy Resource for which it could substitute.

(C) **Request.** To use a pre-qualified resource in the Day-Ahead Market or Real-Time Market as RA Substitute Capacity, the Scheduling Coordinator for the Local Capacity Area Resource Adequacy Resource on Outage must submit a timely substitution request in accordance with Section 40.9.3.6.3(c).

(D) **Approval.** The CAISO will grant a request that meets the requirements in Sections 40.9.3.6.4(b)(1)(C) and 40.9.3.6.3(b).

(2) **Non-Pre-Qualified Substitution.**

(A) **Day-Ahead Market.** The Scheduling Coordinator for Listed Local RA

Capacity on Outage may submit a request to substitute a non-pre-qualified resource only in the Day-Ahead Market.

(B) **Request.** To use a non-pre-qualified resource as RA Substitute Capacity, the Scheduling Coordinator for the Listed Local RA Capacity must submit a timely substitution request in accordance with Section 40.9.3.6.3(c), and the alternate resource must be located in the same Local Capacity Area.

(C) **Approval.** The CAISO will grant a request that meets the requirements in Sections 40.9.3.6.4(b)(2)(A) and (B), and 40.9.3.6.3(b).

(c) **Non-Local Capacity Area Resource Substitution**

(1) **Request.** To use a resource as RA Substitute Capacity, the Scheduling Coordinator for RA Capacity other than Listed Local RA Capacity that has an Outage must submit a timely substitution request in the Day-Ahead Market or Real-Time Market in accordance with Section 40.9.3.6.3(c).

(2) **Approval.** The CAISO will grant the request if the alternate resource has adequate deliverable capacity to provide the RA Substitute Capacity and meets the requirements in Sections 40.9.3.6.4(c)(1) and 40.9.3.6.3(b).

(d) **External Resources**

(1) **Request.** To use a Dynamic System Resource, Non-Dynamic System Resource, NRS-RA Resource, or Pseudo-Tie as RA Substitute Capacity, the Scheduling Coordinator for a Resource Adequacy Resource that has an Outage must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6.3(c).

(2) **Approval.** The CAISO will grant the request if the alternate resource is external to the CAISO Balancing Authority Area (including Pseudo-Ties), the Scheduling Coordinator for the resource has an adequate available import allocation at the resource's Scheduling Point to provide the RA Substitute Capacity, and meets the requirements in Sections 40.9.3.6.4(d)(1) and 40.9.3.6.3(b).

(e) **Flexible RA Capacity**

(1) **Request.** To use a resource as RA Substitute Capacity, the Scheduling Coordinator for the Flexible RA Resource that has a Forced Outage must submit a timely substitution request in the Day-Ahead Market or Real-Time Market in accordance with Section 40.9.3.6.3(c) and specify the MW of RA Substitute Capacity to be provided, which may not exceed the MWs of the outage.

(2) **Approval.** The CAISO will grant the request if the alternate resource has adequate deliverable capacity to provide the RA Substitute Capacity, meets the applicable requirements in Sections 40.9.3.6.4(e) and 40.9.3.6.3(b), and is capable of meeting the must-offer obligation in Section 40.10.6 applicable to the highest quality Flexible Capacity Category for the MWs of the Flexible RA Capacity commitments of the resource on outage and the alternate resource.

**40.9.3.6.5 RA Substitute Capacity from Multiple Resources**

(a) **Option.** The Scheduling Coordinator for a Resource Adequacy Resource on Outage may submit a request to substitute that capacity with RA Substitute Capacity from multiple alternate resources, including a resource already providing RA Substitute Capacity for one or more Resource Adequacy Resources.

(b) **Local Capacity Area Resource Substitution**

(1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for Listed Local RA Capacity on Outage must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6.3(c) if any of the alternate resources are not pre-qualified to substitute for the resource on the outage; however, if all of the alternate resources are pre-qualified to provide RA Substitute Capacity for that resource, the request may be submitted in the Day-Ahead Market or Real-Time Market.

(2) **Approval.** The CAISO will grant the request if it meets the requirements in Sections 40.9.3.6.5(b)(1) and 40.9.3.6.3(c) and the alternate resources are either pre-qualified, or are not pre-qualified but are located in the same Local Capacity

Area as the Resource Adequacy Resource.

(c) **Non-Local Capacity Area Resources**

(1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for RA Capacity other than Listed Local RA Capacity on Outage must submit a timely substitution request in the Day-Ahead Market or the Real-Time Market in accordance with Section 40.9.3.6.3(c).

(2) **Approval.** The CAISO will grant the request if all of the alternate resources meet the requirements in Sections 40.9.3.6.5(c)(1) and 40.9.3.6.3(c).

(d) **External Resources**

(1) **Request.** To use multiple Dynamic System Resources, Non-Dynamic System Resources, NRS-RA Resources, or Pseudo-Ties as RA Substitute Capacity, the Scheduling Coordinator for a Resource Adequacy Resource that has an Outage must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6.3(c).

(2) **Approval.** The CAISO will grant the request if the alternate resources are external to the CAISO Balancing Authority Area (including Pseudo-Ties), and the Scheduling Coordinator of each alternate resource has an adequate available import allocation at the resource's Scheduling Point to provide the RA Substitute Capacity, and meet the requirements in Sections 40.9.3.6.5(d)(1) and 40.9.3.6.3(b).

(e) **Flexible RA Capacity**

(1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for a resource providing Flexible RA Capacity on a Forced Outage must submit a timely substitution request in the Day-Ahead Market or the Real-Time Market and the alternate resources must be located in the CAISO Balancing Authority Area, which does not include a Pseudo-Tie of a Generating Unit or a Resource-Specific System Resource.

(2) **Approval.** The CAISO will grant the request if the alternate resources meet the

requirements in Sections 40.9.3.6.5(e)(1) and 40.9.3.6.3(c).

**40.9.3.6.6 Multiple Substitution by One Resource.** The Scheduling Coordinator for a resource already providing RA Substitute Capacity may provide RA Substitute Capacity for one or more additional Resource Adequacy Resources on Outage, subject to approval by the CAISO pursuant to Section 40.9.3.6.4 or 40.9.3.6.5.

**40.9.3.6.7 Resource Adequacy Obligation**

To the extent a resource provides RA Substitute Capacity, the resource must meet and comply with all requirements in Section 40 applicable to RA Substitute Capacity for the duration of the substitution; except that RA Substitute Capacity shall be released from this obligation and the substitution requirements in Section 40.9 –

(a) at the end of the approved substitution period; or

(b) upon request by either the Scheduling Coordinator for the resource on Outage or the Scheduling Coordinator for the substitute resource, and approval by the other Scheduling Coordinator, in accordance with the process set forth in the Business Practice Manual.

**40.9.3.6.8 Treatment of Unbid Capacity**

If the Scheduling Coordinator for RA Substitute Capacity does not submit Bids or Self-Schedules for all or a portion of that capacity in accordance with Section 40.6 or 40.10.6, the CAISO –

(1) will treat the unbid capacity as unavailable for purposes of Section 40.9; and

(2) will reflect that unavailability in the RAAIM availability calculation for the Resource Adequacy Resource providing the RA Substitute Capacity.

**40.9.3.6.9 Substitution Opportunity Information**

In order to make information available to Market Participants pertinent to the provisions of this Section 40.9.3.6, the CAISO will:

(a) Annually post on the CAISO Website the due dates for each month of the following Resource Adequacy compliance year the various submissions the CAISO requires under the Resource Adequacy program; and

(b) Provide the opportunity for Market Participants to post and view information on an electronic bulletin board about non-Resource Adequacy Capacity that may be needed or

available as RA Substitute Capacity in the bilateral market. Use of the bulletin board is voluntary and is for informational purposes only.

**40.9.4 Additional Rules on Calculating Monthly and Daily Average Availability**

(a) The CAISO shall determine a resource's monthly average availability on a percentage basis, based on:

(1) the availability assessment of the resource's minimum daily availability of local and/or system Resource Adequacy Capacity under Section 40.9.3.1, Flexible RA Capacity under Section 40.9.3.2, and overlapping Resource Adequacy commitments under Section 40.9.3.3, in the Day-Ahead Market and Real-Time Market;

(2) separately-calculated availability assessments for local and/or system Resource Adequacy Capacity in one category and Flexible RA Capacity in a second category, with availability in an hour with overlapping commitments under Section 40.9.3.3 accounted for in the Flexible RA Capacity category availability assessment;

(3) The relative daily proportion of capacity as provided as local and/or system Resource Adequacy Capacity and Flexible RA Capacity, including both overlapping and non-overlapping commitments based on the Availability Assessment of Hours;

(4) the capacity, duration, and must-offer requirement for local and/or system Resource Adequacy Capacity or Flexible RA Capacity on an Outage, except to the extent the resource provides RA Substitute Capacity for the outage in accordance with Section 40.9.3.6, the Outage is approved by the CAISO without requiring RA Substitute Capacity under other authority of Section 9 or Section 40, or the Forced Outage is excluded from RAAIM under Section 40.9.3.4; and

(5) the capacity, duration, and must-offer requirement for any RA Substitute Capacity or CPM Capacity the resource is committed to provide.

(b) If the resource's minimum daily availability is the same in the Day-Ahead Market and the

Real-Time Market, the CAISO will use the availability in the Real-Time Market in the calculation of the monthly average availability.

(c) If the resource is committed to provide local and/or system RA capacity and Flexible RA Capacity in a month, but is not committed to provide both for the full month, the CAISO prorates the number of days that local and/or system Resource Adequacy Capacity and Flexible RA Capacity was provided against the total number of days in the month.

**- RA Maintenance Outage With Substitution**

A Maintenance Outage, or change to an Approved Maintenance Outage, at a Resource Adequacy Resource that the CAISO receives no less than eight (8) days prior to the start of the outage and that includes RA Substitute Capacity for the Resource Adequacy Capacity on Outage.

**- RA Maintenance Outage Without Substitution**

A Maintenance Outage, or change to an Approved Maintenance Outage at a Resource Adequacy Resource that the CAISO receives no less than eight (8) days prior to the start of the outage without RA Substitute Capacity for the Resource Adequacy Capacity on Outage.

## Appendix K Ancillary Service Requirements Protocol (ASRP)

### PART A – CERTIFICATION FOR REGULATION

The requirements set forth in this Attachment K may be satisfied by the Ancillary Service Requirements Provider, an applicant to become an Ancillary Service Requirements Provider, or the applicable Scheduling Coordinator by following the process and procedures set forth in the Business Practice Manual.

**A 1** An Ancillary Service Provider wishing to provide Regulation as an Ancillary Service from a resource whether pursuant to a CAISO award or as part of a self-provision arrangement must meet the following operating characteristics and technical requirements in order to be, and remain, certified by the CAISO to provide Regulation service unless granted a temporary exemption by the CAISO in accordance with criteria which the CAISO shall publish on the CAISO Website;

#### A 1.1 Operating Characteristics

**A 1.1.1** the rated capacity of the resource must be 500 KW or greater (i.e. the resource must be capable of providing at least 500 KW of Regulation) unless the resource is participating in an aggregation arrangement approved by the CAISO, or is a storage resource or Distributed Energy Resource Aggregation 100 KW or greater;

**A 1.1.2** the maximum amount of Regulation to be offered must be reached within a period of ten (10) minutes;

**A 1.1.3** the resource must be able to increase or decrease real power levels immediately in response to signals from the CAISO's EMS control;

**A 1.1.4** Regulation capacity offered by a resource must be dispatchable on a continuous basis for at least sixty (60) minutes in the Day Ahead Market and at least thirty (30) minutes in the Real Time Market after issuance of the Dispatch Instruction, including (if necessary) attaining this capability using Regulation Energy Management. The CAISO will measure continuous Energy from the time a resource reaches its award capacity. Scheduling Coordinators for Non-Generator Resources located within the CAISO Balancing Authority Area that require Energy from the Real-Time Market to offer their full capacity as Regulation Energy Management may request the use of Regulation Energy Management as described in Section 8.4.1.2. The Scheduling Coordinators for a resource using Regulation Energy Management may submit a Regulation Bid for capacity (MW) of up to four (4) times the maximum Energy (MWh) the resource can generate or curtail for fifteen (15) minutes after issuance of the Dispatch Instruction.

**A 1.1.5** the resource's measured accuracy in responding to the CAISO's EMS signal must meet or exceed twenty-five (25) percent.

#### A 1.2 Technical Requirements

#### A 1.2.1 Control

**A 1.2.1.1** a direct, digital, unfiltered control signal generated from the CAISO EMS through a standard CAISO direct communication and direct control system, must meet the minimum performance standards for communications and control which will be developed and posted by the CAISO on the CAISO Website;

**A 1.2.1.2** the resource response (in MW) to a control signal must meet the minimum performance standards for control and response which will be developed and posted by the CAISO on

the CAISO Website. As indicated by the resource response (in MW), the resource must respond immediately, without manual operator intervention, to control signals and must sustain its specified Ramp Rate, within specified Regulation Limits, for each minute of control response (MW/minute);

**A 1.2.1.3** Ancillary Service Providers for Non-Generator Resources may define a Ramp Rate for operating as Generation and a Ramp Rate for operating as Load, respectively.

**A 1.2.2 Monitoring:**

the resource must have a standard CAISO direct communication and direct control system to send signals to the CAISO EMS to dynamically monitor, at a minimum the following:

**A 1.2.2.1** actual real power level (MW);

**A 1.2.2.2** high limit, low limit and rate limit values as selected by the resource operator; and

**A 1.2.2.3** in-service status indication confirming availability of Regulation service.

**A 1.2.2.4** Ancillary Service Providers for Non-Generator Resources (whether or not the resource uses Regulation Energy Management) and Hybrid Resources shall provide CAISO the following additional telemetry data:

- Resource Ramp Rate when operating as Generation (MW/min);
- Resource Ramp Rate when operating as Load (MW/min);
- The maximum instantaneous ability to produce or consume Energy in MW; and
- The maximum capability to provide Energy as expressed in MWh over a fifteen (15) minute interval where the Scheduling Coordinator has elected to provide MWh constraints pursuant to Section 27.9 of the CAISO Tariff.

**A 1.2.2.5** Ancillary Service Providers for an Eligible Intermittent Resource or a Hybrid Resource with a variable component must provide the CAISO High Sustainable Limit for their resource.

**A 1.2.3 Voice Communications:**

CAISO approved communication must be in place between the CAISO Control Center and the operator controlling the resource.

**A 2** An Ancillary Service Provider wishing to be considered for certification for Regulation service by the CAISO must make a written request to the CAISO, giving details of the technical capability of the resource concerned and identifying the Scheduling Coordinator through whom the Ancillary Service Provider intends to offer Regulation service.

**A 3** No later than one week after receipt of the Ancillary Service Provider's request, the CAISO shall provide the Ancillary Service Provider with a listing of required interface equipment for Regulation, including a standard CAISO direct communication and direct control system.

**A 4** The Ancillary Service Provider may propose alternatives that it believes may provide an equivalent level of communication and control for consideration by the CAISO. Such proposals shall be in writing and contain sufficient detail for the CAISO to make a determination of suitability. The CAISO may request additional information, if required, to assist in its evaluation of the proposal.

**A 5** The CAISO shall respond by accepting the alternative proposal, rejecting the alternative proposal, or suggesting modifications to the alternative proposal. Such acceptance, rejection, or suggested revision must be provided not later than six (6) weeks after the proposal is received by the CAISO. The Ancillary Service Provider and the CAISO shall keep the Scheduling Coordinator informed of this process.

**A 6** Upon agreement as to any alternative method of communication and control to be used by the Ancillary Service Provider, the CAISO shall provisionally approve the proposal in writing. If agreed by the CAISO, the Ancillary Service Provider may then proceed to procure and install the equipment and make arrangements for the required communication and control.

**A 7** Design, acquisition, and installation of the CAISO-approved communication and control equipment shall be under the control of the CAISO. The CAISO shall bear no cost responsibility or functional responsibility for such equipment, except that the CAISO shall arrange for and monitor the maintenance of the communication and control system at the Ancillary Service Provider's expense, unless otherwise agreed by the CAISO and the Ancillary Service Provider. The CAISO shall be responsible for the design, acquisition and installation of any necessary modifications to the CAISO EMS at its own cost.

**A 8** The CAISO, in cooperation with the Ancillary Service Provider shall perform testing of the communication and control equipment to ensure that the communication and control system performs to meet the CAISO requirements.

**A 9** When the CAISO is satisfied that the communication and control systems meet the CAISO's requirements, the Ancillary Service Provider shall request in writing that the CAISO conduct a certification test with a suggested primary date and time and at least two (2) alternative dates and times. The CAISO shall, within two (2) Business Days of receipt of the Ancillary Service Provider's request, accept a proposed time if possible or suggest at least three (3) alternatives to the Ancillary Service Provider. If the CAISO responds by suggesting alternatives, the Ancillary Service Provider shall, within two (2) Business Days of receipt of the CAISO's response, respond in turn by accepting a proposed alternative if possible or suggesting at least three (3) alternatives, and this procedure shall continue until agreement is reached on the date and time of the test. The Ancillary Service Provider shall inform its Scheduling Coordinator of the agreed date and time of the test.

**A 10** Testing shall be performed by the CAISO, with the cooperation of the Ancillary Service Provider. Such tests shall include, but not be limited to, the following:

(a) confirmation of control communication path performance;

(b) confirmation of voice circuit for receipt of Dispatch Instructions;

(c) confirmation of the resource's control performance; and

(d) confirmation of the CAISO EMS control to include changing the resource operating level over the range of Regulation proposed at different set points, from minimum to maximum, and at different rates of change from the minimum to the maximum permitted by the design of the resource.

**A 10.1** Testing for Non-Generator Resources requesting the use of Regulation Energy Management shall include a market simulation as described in the CAISO's Operating Procedures.

**A 11** Upon successful completion of the test, the CAISO shall certify the resource as being permitted to provide Regulation as an Ancillary Service Provider. The Scheduling Coordinator shall request the CAISO to update its database to reflect the ability of the resource to provide Regulation.

**A 12** The Scheduling Coordinator may submit Bids for Regulation service from the certified resource into the CAISO Markets starting with the Day-Ahead Market for the hour ending 0100 on the second Trading Day after the CAISO's database reflects the resource's certificate.

**A 13** The certification to provide Regulation shall remain in force, subject to suspension, until:

(a) withdrawn by the Scheduling Coordinator or the Ancillary Service Provider by written notice to the CAISO to take effect at the time notified in the notice, which must be the end of a Trading Day; or

(b) if the resource obtained CAISO certification on the basis of a prior communication and control technology, until revoked by the CAISO for failure to comply with the requirement set forth in A 13.1 that the resource install a CAISO-specified standard CAISO direct communication and direct control system (unless exempted by the CAISO).

**A 13.1** Unless exempted by the CAISO, if the resource obtained CAISO certification on the basis of a prior communication and control technology, the CAISO shall provide written notice to the Ancillary Service Provider of the Ancillary Service Provider's obligation to install a CAISO-specified standard direct communication and direct control system along with a required date for said work to be completed as mutually agreed upon by the CAISO and the Ancillary Service Provider. Failure to meet the completion date shall be grounds for the revocation of certification, provided that the CAISO must provide the Ancillary Service Provider with at least ninety (90) days advance notice of the proposed revocation.

**A 14** The certification may be revoked by the CAISO only under provisions of the CAISO Tariff.

**PART B – CERTIFICATION FOR SPINNING RESERVE**

**B 1** An Ancillary Service Provider wishing to provide Spinning Reserve as an Ancillary Service from a resource whether pursuant to a CAISO award or as part of a self-provision arrangement must meet the following requirements in order to be, and remain, certified by the CAISO to provide Spinning Reserve service:

**B 1.1** the rated capacity of the resource must be 500 KW or greater (i.e. the resource must be capable of providing at least 500 KW of Spinning Reserve) unless the resource is participating in an aggregation arrangement approved by the CAISO, or is a storage resource or Distributed Energy Resource Aggregation 100 KW or greater;

**B 1.2** For a resource with a governor, the resource must respond immediately and automatically in proportion to frequency deviations to help restore frequency to the scheduled value in accordance with the following requirements:

**Minimum Governor Performance:**

a. 5 percent droop (4 percent droop in the case of combustion turbines);

b. +/- 0.036 Hz deadband;

c. Power output changes in one second for any frequency deviation outside of the deadband

d. Participating Generators will not inhibit the real power response of their Generating Units with governor controls by any means that would override the governor response except as necessary to address physical operational constraints for reasons that include ambient temperature limitations, outages of mechanical equipment or regulatory considerations;

and

e. For each Generating Unit with governor controls, Participating Generators shall coordinate all plant control systems, locally or remotely controlled, so that they include frequency bias to ensure that each Generating Unit can respond immediately and automatically in proportion to frequency deviations to help restore frequency to the scheduled value.

For a resource without a governor but with a frequency responsive control system, the resource must respond immediately and automatically in proportion to frequency deviations to help restore frequency to the scheduled value in accordance with the following requirements:

**Minimum Frequency Responsive Device Performance:**

a. If frequency is less than or equal to 59.92 Hz, the resource must reach ten (10) percent of its awarded spinning capacity within eight (8) seconds; and

b. The resources must change the power it delivers or consumes in one (1) second if system frequency is less than or equal to 59.92 Hz

**B 1.3** the operator of the resource must have a means of receiving Dispatch Instructions to initiate an increase or decrease in real power (MW) within one (1) minute of the CAISO Control Center determination that Energy from Spinning Reserve capacity must be dispatched;

**B 1.4** the resource must be able to increase or decrease its real power (MW) by the maximum amount of Spinning Reserve to be offered within ten (10) minutes and be capable of maintaining its real power for thirty (30) minutes from the time the resource reaches its award capacity;

**B 1.5** CAISO approved voice communications services must be in place to provide both primary and alternate voice communication between the CAISO Control Center and the operator controlling the resource; and

**B 1.6** The communication system and the resource must pass a qualification test to demonstrate the overall ability to meet the performance requirements of the ASRP for Spinning Reserve.

**B 1.7** Ancillary Service Providers for an Eligible Intermittent Resource or a Hybrid Resource with a variable component must provide the CAISO with the High Sustainable Limit for their resource.

**B 2** An Ancillary Service Provider wishing to be considered for certification for Spinning Reserve service by the CAISO must make a written request to the CAISO, giving details of the technical capability of the resource concerned and identifying the Scheduling Coordinator through whom the Ancillary Service Provider intends to offer Spinning Reserve service.

**B 3** No later than one week after receipt of the request, the CAISO shall provide the Ancillary Service Provider with a listing of acceptable communication options and interface equipment options for Spinning Reserve.

**B 4** The Ancillary Service Provider may elect to implement any of the approved options defined by the CAISO, and, if it wishes to proceed with its request for certification, shall give written notice to the CAISO of its selected communication option.

**B 5** When it receives the Ancillary Service Provider notice, the CAISO shall notify the Ancillary Service Provider in writing no later than two weeks after receipt of the notice confirming receipt of the notice and issuing provisional approval of the selected options. Upon receipt of the CAISO acknowledgment, the Ancillary Service Provider may proceed as indicated below to secure the

necessary facilities and capabilities required.

**B 6** The Ancillary Service Provider may also propose alternatives that it believes may provide an equivalent level of control for consideration by the CAISO. Such proposals shall be in writing and contain sufficient detail for the CAISO to make a determination of suitability. The CAISO may request additional information, if required, to assist in its evaluation of the proposal.

**B 7** The CAISO shall respond by accepting the alternative proposal, rejecting the alternative proposal, or suggesting modifications to the alternative proposal. Such acceptance, rejection, or suggested revision must be provided not later than six weeks after the proposal is received by the CAISO. The Ancillary Service Provider and the CAISO shall keep the Scheduling Coordinator informed of this process.

**B 8** Upon agreement as to the method of communication and control to be used by the resource, the CAISO shall provisionally approve the Ancillary Service Provider's proposal in writing. The Ancillary Service Provider may then proceed to procure and install the equipment and make arrangements for the required communication.

**B 9** Design, acquisition, and installation of the resource's equipment shall be under the control of the respective Ancillary Service Provider. The CAISO shall bear no cost responsibility or functional responsibility for such equipment. The CAISO shall be responsible for the design, acquisition and installation of any necessary modifications to its own equipment at its own cost.

**B 10** The Ancillary Service Provider shall perform its own testing of its equipment to ensure that the control system performs to meet the CAISO requirements.

**B 11** When it is satisfied that its plant, equipment and communication systems meet the CAISO's requirements, the Ancillary Service Provider shall request in writing that the CAISO conduct a certification test with a suggested primary date and time and at least two alternative dates and times. The CAISO shall, within two Business Days of receipt of the request, accept a proposed time if possible or suggest at least three alternatives to the Ancillary Service Provider. If the CAISO responds by suggesting alternatives, the Ancillary Service Provider shall, within two Business Days of receipt of the CAISO's response, respond in turn by accepting a proposed alternative if possible or suggesting at least three alternatives, and this procedure shall continue until agreement is reached on the date and time of the test. The Ancillary Service Provider shall inform its Scheduling Coordinator of the agreed date and time of the test.

**B 12** Testing shall be performed under the direction of the CAISO. Such tests shall include, but not be limited to, the following:

B 12.1 confirmation of control communication path performance for Dispatch Instruction;

B 12.2 confirmation of primary and secondary voice circuits for receipt of Dispatch Instructions;

B 12.3 confirmation of the resource performance to include changing the resource's real power over the range of Spinning Reserve proposed from minimum to maximum, and at different rates of change from the minimum to the maximum permitted by the design of the resource; and

**B 12.4** testing the resource's governor or other control system performance characteristics by simulating frequency excursions outside the allowed deadband and measuring the response of the resource.

**B 13** Upon successful completion of the test the CAISO shall certify the resource as being permitted to provide Spinning Reserve as an Ancillary Service Provider. The Scheduling Coordinator shall request the CAISO to update its database to reflect the ability of the resource to provide Spinning Reserve.

**B 14** The Scheduling Coordinator may bid Spinning Reserve from the certified resource into the CAISO Markets starting with the Day-Ahead Market for the hour ending 0100 on the Second Trading Day after the CAISO's database reflects the resource's certificate.

**B 15** The certification to provide Spinning Reserve shall remain in force, subject to suspension, until withdrawn by the Scheduling Coordinator or the Ancillary Service Provider by written notice to the CAISO to take effect at the time notified in the notice, which must be the end of a Trading Day.

**B 16** The certification may be revoked by the CAISO only under provisions of the CAISO Tariff.

**PART C – CERTIFICATION FOR NON-SPINNING RESERVE**

**C 1** An Ancillary Service Provider wishing to provide Non-Spinning Reserve as an Ancillary Service from a resource whether pursuant to the CAISO's auction or as part of a self-provision arrangement must meet the following requirements in order to be, and remain, certified by the CAISO to provide Non-Spinning Reserve service:

**C 1.1** the rated capacity of the resource must be 500 KW or greater (i.e. the resource must be capable of providing at least 500 KW of Non-Spinning Reserve) unless the resource is participating in an aggregation arrangement approved by the CAISO, or is a storage resource or Distributed Energy Resource Aggregation 100 KW or greater;

**C 1.2** the resource must be able to increase or decrease its real power (MW) as soon as possible to the value indicated in a Dispatch Instruction, reaching the indicated value within ten (10) minutes after issue of the instruction and be capable of maintaining output for thirty (30) minutes from the time the resource reaches its award capacity.

**C 2** An Ancillary Service Provider wishing to provide Non-Spinning Reserve as an Ancillary Service, whether pursuant to a CAISO award or as part of a self-provision arrangement, must also meet the following requirements in order to be certified by the CAISO to provide Non-Spinning Reserve service:

**C 2.1** the operator of the resource must have a means of receiving a Dispatch Instruction to initiate an increase or decrease in its real power (MW) within one (1) minute of the CAISO Control Center's determination that Non-Spinning Reserve capacity must be dispatched; and

**C 2.2** the communication system and the resource must pass a qualification test to demonstrate the overall ability to meet the performance requirements for Non-Spinning Reserve.

**C 2.3** Ancillary Service Providers for an Eligible Intermittent Resource or a Hybrid Resources with a variable component must provide the CAISO with the High Sustainable Limit for their resource.

**C 3** An Ancillary Service Provider wishing to be considered for certification for Non-Spinning Reserve service must make a written request to the CAISO, giving details of the technical capability of the resource concerned and identifying the Scheduling Coordinator through whom the Ancillary Service Provider intends to offer Non-Spinning Reserve.

**C 4** No later than one week after receipt of the Ancillary Service Provider's request, the CAISO shall provide the Ancillary Service Provider with a listing of acceptable communication options and interface equipment options for Non-Spinning Reserve.

**C 5** The Ancillary Service Provider may elect to implement any of the acceptable communication options and interface equipment options. The Ancillary Service Provider shall give written notice

to the CAISO of its selected communication option and interface equipment option.

**C 6** When it receives the Ancillary Service Provider's notice, the CAISO shall notify the Ancillary Service Provider in writing no later than two weeks after receipt of the notice confirming receipt of the notice and issuing provisional approval of the selected options. Upon receipt of the CAISO acknowledgment the Ancillary Service Provider may proceed as indicated below to secure the necessary facilities and capabilities required.

**C 7** The Ancillary Service Provider may also propose alternatives that it believes may provide an equivalent level of control for consideration by the CAISO. Such proposals shall be in writing and contain sufficient detail for the CAISO to make a determination of suitability. The CAISO may request additional information, if required, to assist in its evaluation of the proposal.

**C 8** The CAISO shall respond by accepting the alternative proposal, rejecting the alternative proposal, or suggesting modifications to the alternative proposal. Such acceptance, rejection, or suggested revision must be provided not later than six weeks after the proposal is received by the CAISO. The Ancillary Service Provider and the CAISO shall keep the Scheduling Coordinator informed of this process.

**C 9** Upon agreement as to the method of communication and control to be used by the Ancillary Service Provider, the CAISO shall provisionally approve the proposal in writing. The Ancillary Service Provider may then proceed to procure and install the equipment and make arrangements for the required communication.

**C 10** Design, acquisition, and installation of the Ancillary Service Provider's equipment shall be under the control of the Ancillary Service Provider. The CAISO shall bear no cost responsibility or functional responsibility for such equipment. The CAISO shall be responsible for the design, acquisition and installation of any necessary modifications to the CAISO's equipment at its own cost.

**C 11** The Ancillary Service Provider shall perform its own testing of its equipment to ensure that the control system performs to meet the CAISO requirements.

**C 12** When it is satisfied that its plant, equipment and communication systems meet the CAISO's requirements, the Ancillary Service Provider shall request in writing that the CAISO conduct a certification test with a suggested primary date and time and at least two alternative dates and times. The CAISO shall, within two Business Days of receipt of the Ancillary Service Provider's request, accept a proposed time if possible or suggest at least three alternatives. If the CAISO responds by suggesting alternatives, the Ancillary Service Provider shall, within two Business Days of receipt of the CAISO's response, respond in turn by accepting a proposed alternative if possible or suggesting at least three alternatives, and this procedure shall continue until agreement is reached on the date and time of the test. The Ancillary Service Provider shall inform its Scheduling Coordinator of the agreed date and time of the test.

**C 13** Testing shall be performed under the direction of the CAISO. Such tests shall include, but not be limited to, the following:

**C 13.1** confirmation of control communication path performance;

**C 13.2** confirmation of primary and secondary voice circuits for receipt of Dispatch Instructions;

**C 13.3** confirmation of the resource control performance; and

**C 13.4** confirmation of the range of resource control to include changing the real power (MW) over the range of Non-Spinning Reserve proposed.

**C 14** Upon successful completion of the test, the CAISO shall certify the resource as being permitted to provide Non-Spinning Reserve as an Ancillary Service. The Scheduling Coordinator shall request the CAISO to update its database to reflect the permission for the resource to provide Non-Spinning Reserve.

**C 15** The Scheduling Coordinator may bid Non-Spinning Reserve service from the certified resource into the CAISO Markets starting with the Day-Ahead Market for the hour ending 0100 on the second Trading Day after the CAISO database reflects the resource's certificate.

**C 16** The certification to provide Non-Spinning Reserve shall remain in force, subject to suspension, until withdrawn by the Scheduling Coordinator or the Ancillary Service Provider by written notice to the CAISO to take effect at the time notified in the notice, which must be the end of a Trading Day.

**C 17** The certification may be revoked by the CAISO only under provisions of the CAISO Tariff.

**PART D – [NOT USED]**

**PART E – [NOT USED]**

**Appendix L**

**[Not Used]**

# Appendix L-1

The provisions of this Appendix L-1 apply to the calculation of ATC to establish Wheeling Through Priorities that will be effective beginning June 1, 2024 and thereafter.

## Appendix L-1 Method to Assess Available Transfer Capability

### L.1 Description of Terms

The following descriptions augment existing definitions found in Appendix A "Master Definitions Supplement."

**L.1.1 Available Transfer Capability (ATC)** is a measure of the transfer capability in the physical transmission network resulting from system conditions and that remains available for further commercial activity over and above already committed uses.

For purposes of determining ATC in the market optimization, ATC is defined as the Total Transfer Capability (TTC) less the Transmission Reliability Margin (TRM), less the sum of any unused existing transmission commitments (ETComm), less the Capacity Benefit Margin (CBM) (which value is set at zero), less the Scheduled Net Energy from Imports/Exports, less Ancillary Service capacity from Imports.

**L.1.2 Total Transfer Capability (TTC)** is defined as the amount of electric power that can be moved or transferred reliably from one area to another area of the interconnected transmission system by way of all transmission lines (or paths) between those areas, under specified system conditions. In collaboration with owners of rated paths, the CAISO utilizes rated system path methodology to establish the TTC of CAISO Transmission Interfaces.

**L.1.3 Existing Transmission Commitments (ETComm)** include (1) transmission capacity for Existing Contracts (ETC) and Transmission Ownership Rights (TOR), (2) transmission capacity for Wheeling Through Priorities, and (3) Native Load needs determined in accordance with this Appendix L-1, including Native Load growth in the applicable horizon and ATC Load Serving Entities acquire in the daily request window.

**L.1.3.1 Transmission Capacity for ETC and TOR** – The CAISO uses the ETC Reservations Calculator (see Section L.1.3.1.1) to reserve transmission capacity for each ETC and TOR based on TRTC Instructions the responsible Participating Transmission Owner or Non-Participating Transmission Owner submits to the CAISO as to the amount of firm transmission capacity that should be reserved on each Transmission Interface for each hour of the Trading Day in accordance with Sections 16 and 17 of the CAISO Tariff. The types of TRTC Instructions the CAISO receives generally fall into three basic categories:

- The ETC or TOR reservation is a fixed percentage of the TTC on a line, which decreases as the TTC is derated (ex. TTC = 300 MW, ETC fixed percentage = 2%, ETC = 6 MWs, TTC derated to 200 MWs, ETC = 4 MWs);
- The ETC or TOR reservation is a fixed amount of capacity, which decreases if the line's TTC is derated below the reservation level (ex. ETC = 80 MWs, TTC declines to 60 MW, ETC = TTC or 60 MWs; or
- The ETC or TOR reservation is determined by an algorithm that changes at various

levels of TTC for the line (ex. Intertie TTC = 3,000 MWs, when line is operating greater than 2,000 MWs to full capacity ETC = 400 MWs, when capacity is below 2000 MWs ETC = TTC/2000* ETC).

Existing Contract capacity reservations remain reserved during the Day-Ahead Market and HASP. To the extent the reservations are unused after the HASP, then the capacity reservations are released for the remaining Real-Time Market processes conducted for the given Trading Hour.

Transmissions Ownership Rights capacity reservations remain reserved during the Day-Ahead Market and Real-Time Market. This capacity is under the control of the Non-Participating Transmission Owner and is not released to the CAISO for use in the markets

**L.1.3.1.1 ETC Reservations Calculator (ETCC).** The ETCC calculates the amount of firm transmission capacity reserved (in MW) for each ETC or TOR on each Transmission Interface for each hour of the Trading Day.

- **CAISO Updates to ETCC Reservations Table.** The CAISO updates the ETC and TOR reservations table (if required) prior to Market Close of the DAM and prior to Market Close of the RTM. The amount of transmission capacity reservation for ETC and TOR rights is determined based on the TTC of each Transmission Interface and in accordance with the curtailment procedures stipulated in the existing agreements and provided to the CAISO by the responsible Participating Transmission Owner or Non-Participating Transmission Owner.

- **Market Notification.** ETC and TOR allocation (MW) information is published for all Scheduling Coordinators which have ETC or TOR scheduling responsibility in advance of the Day-Ahead Market and the Real-Time Market. This information is posted on the Open Access Same-Time Information System (OASIS).

- For further information, see CAISO Operating Procedure M-423, Scheduling of Existing Transmission Contract and Transmission Ownership Rights, which is publicly available on the CAISO Website.

**L.1.3.2 Wheeling Through Priorities** – ETComm include transmission capacity for Wheeling Through Priorities pursuant to Sections 23.4, 23.5, and 23.6 of the CAISO Tariff.

The ATC for Wheeling Through Priorities is calculated based on the following formula which distinguishes it from ATC in the market optimization:

ATC = TTC – ETComm - TRM

**L.1.3.3 Native Load Needs** – ETComm include transmission capacity at the Interties that is set aside to meet Native Load needs. The amount of such transmission capacity (apart from the amount of transmission capacity to serve expected Native Load growth as described below) at each Intertie for each calendar month equals the highest MW quantity of total Resource Adequacy and non-Resource Adequacy import supply under contract to Load Serving Entities (LSEs) dedicated to serving their load as demonstrated by Resource Adequacy showings, and non-Resource Adequacy contract showings under Section 23.3 at the Intertie for that same calendar month during the previous two (2) years, as may be adjusted under Sections L.1.3.3.2 and L.1.3.3.3.

**L.1.3.3.1 Native Load Growth** – Transmission capacity at the Interties that is set aside in ETComm to meet Native Load needs also includes transmission capacity to serve expected

Native Load growth in the rolling thirteen (13)-month horizon. The amount of such transmission capacity at each Intertie set aside in ETComm to meet Native Load growth will be calculated by comparing the CEC load forecast for the applicable future period to the forecasts used to set CAISO Resource Adequacy requirements applicable to that period for the previous two (2) years to determine an overall Native Load growth amount and then assigning a portion of this expected Native Load growth amount to each Intertie using the highest ratio of Resource Adequacy imports shown for that calendar month to total Resource Adequacy capacity shown for that calendar month during the previous two (2) years.

**L.1.3.3.2 Adjustments to Native Load Needs Based on New Contract Information** – The CAISO will use applicable contract information provided in accordance with, and meeting the requirements of, Section 23.3 of the CAISO Tariff to update the historical RA import supply or non-RA import supply data described in this Section L.1.3.3 to improve the accuracy of the calculation of Native Load needs calculated thirteen (13) months before the applicable calendar month.

**L.1.3.3.3 Monthly Update of Native Load Needs** – Following the RA and non-RA import contract showings at the end of the Resource Adequacy cure period under Section 40 of the CAISO Tariff, the CAISO will update or "true up" the amount of transmission capacity set aside in ETComm to meet Native Load needs at each Intertie to include the sum of the most recent actual showings of (i) Resource Adequacy import supply contained in monthly Resource Adequacy Plans and (ii) non-RA import supply to be delivered at the Intertie reported to the CAISO for that same calendar month. The CAISO will also use the updated ATC values for native load following the month-ahead Resource Adequacy and non-Resource Adequacy contract showings to calculate daily ATC for Native Load during the applicable month, while also accounting for any applicable CPM designations that utilize ATC. Any contract that is not shown to the CAISO by the end of the Resource Adequacy cure period under Section 40 cannot count for purposes of setting aside Native Load capacity for the applicable month.

If the amount of transmission capacity set aside at an Intertie to meet Native Load needs for a calendar month based on RA and non-RA import showings for that month under Sections L.1.1.1 and L.1.3.3.2 (and including transmission capacity to serve expected Native Load growth under Section L.1.3.3.1) is greater than the most recent actual showings of Resource Adequacy import supply contained in monthly Resource Adequacy Plans and non-Resource Adequacy import supply to be delivered at the Intertie for that same month, the resulting excess transmission capacity will be released as ATC and will be available for awarding as monthly Priority Wheeling Throughs pursuant to the monthly request window process in Section 23.4 of the CAISO Tariff. If the amount of transmission capacity set aside at an Intertie to meet Native Load needs for a calendar month based on Resource Adequacy and non-Resource Adequacy import showings for that month under Sections L.1.1.1 and L.1.3.3.2 (and including transmission capacity to serve expected Native Load growth under Section L.1.3.3.1) plus the amount of TRM set aside to account for uncertainty associated with actual monthly Resource Adequacy and non-Resource Adequacy showings, is less than the most recent actual showings of Resource Adequacy import supply contained in monthly Resource Adequacy Plans and non-Resource Adequacy import supply to be delivered at the Intertie for that same month, the ATC at the Intertie that has not been awarded in a prior monthly request window, will be reduced to account for the additional Resource Adequacy and non-Resource Adequacy import showings at the Intertie that are unrelated to any change in the planning reserve margin. If no ATC remains at an Intertie because it has been awarded in prior months' request windows pursuant to Section 23.4 of the CAISO Tariff, and the TRM cannot accommodate all native load needs, then the amount of transmission capacity set aside at the Intertie to meet Native Load needs for a calendar month, including transmission capacity to serve expected Native Load growth, will remain as originally calculated by the CAISO even if the actual Resource Adequacy and non-Resource Adequacy

import contract showings for the month exceed the amount of ATC the CAISO has set aside for Native Load in accordance with Sections L.1.3.3, L.1.3.3.1, and L.1.3.3.2. Under these circumstances, the CAISO will continue to honor the scheduling priority of the Wheeling Through transactions for which ATC has been awarded. The examples below in this Section L.1.3.3.3 illustrate the aforementioned processes.

For example, if the Native Load set-aside value under Sections L.1.3.3, L.1.3.3.1, and L.1.3.3.2 for a particular Intertie for the month of May is 1,000 MW, and only 900 MW of Resource Adequacy and non-Resource Adequacy import capacity is actually shown on that Intertie in the monthly showing process for the month of May, the CAISO will release an additional 100 MW of ATC on that Intertie that can be awarded a monthly Wheeling Through Priority for May through the request window that closed at the same time as the monthly Resource Adequacy and non-Resource Adequacy import showing deadline for May.

Also, for example, assume the following: the Native Load set-aside value under Sections L.1.3.3, L.1.3.3.1, and L.1.3.3.2 for the month of May is 1,000 MW; the amount set aside for Native Load based on historical showings is 10 MW at the Intertie; at the start of the monthly request window for May, there is 100 MW of ATC for the month of May that has not been awarded to Wheeling Throughs in prior months' request windows; and 1,100 MW of Resource Adequacy and non-Resource Adequacy import capacity is actually shown on the Intertie in the monthly showing process for the month of May. Under these circumstances, the CAISO will reduce the ATC on the Intertie by 100 MW assuming the 100 MW are not associated with an increase in the planning reserve margin for which an amount has been set aside in the load forecast uncertainty component of the TRM. If the 100 MW were associated with an increase in the planning reserve margin and not simply a difference between historic values and the monthly Resource Adequacy and non-Resource Adequacy contract values and assuming the CAISO had set aside 90 MW in the TRM load forecast uncertainty component to account for changes in the planning reserve margin, then ten (10) MW of the excess monthly showings will be supported by the TRM component, and 10 MW of ATC will be available for awarding as monthly Priority Wheeling Throughs for May.

Finally, assume the circumstances in the prior example except there is zero MW of ATC available prior to the Resource Adequacy and non-Resource Adequacy showing deadline and the start of the request window for ATC for the month of May. The CAISO will continue to honor all of the ATC that has been previously awarded to Priority Wheeling Throughs in prior monthly request windows, and no additional ATC will be available for the actual Resource Adequacy and non-Resource Adequacy showings above the historic values used to set ATC. If the excess Resource Adequacy and non-Resource Adequacy showings were associated with an increase in the planning reserve margin, 90 MW of the excess monthly showings will be supported by the TRM component that accounts for such load forecast uncertainty.

**L.1.4 [Not Used]**

**L.1.5 Transmission Reliability Margin (TRM)** is an amount of transmission transfer capability reserved at a CAISO Intertie point that is necessary to provide reasonable assurance that the interconnected transmission network will be secure. TRM accounts for the inherent uncertainty in system conditions and the need for operating flexibility to ensure reliable system operation as system conditions change.

The CAISO uses TRM at Intertie points to account for NERC-approved components of uncertainty as described in the Transmission Reliability Margin Implementation Document (TRM Document), including:

- Forecast uncertainty in transmission system topology, including forced or unplanned outages or maintenance outages.

- Allowances for parallel path (loop flow) impacts, including unscheduled loop flow.
- Allowances for simultaneous path interactions.
- Aggregate load forecast uncertainty.
- Variations in generation dispatch (including, but not limited to, forced or unplanned Outages, maintenance Outages, and future resource conditions).

The CAISO will establish TRM in all applicable horizons, including monthly and daily, and may change (increase or decrease) TRM values across all such horizons, including prior to Market Close of the DAM and RTM. To the extent TRM values are decreased in a given horizon, additional ATC would become available in that horizon.

The methodology the CAISO uses to establish each component of uncertainty is as follows:

The CAISO uses the transmission system topology component of uncertainty to address a potential ATC path limit reduction at an Intertie resulting from an emerging event, such as an approaching wildfire, that is expected to cause a derate of one or more transmission facilities comprising the ATC path. When the CAISO, based on existing circumstances, forecasts that such a derate is expected to occur, the CAISO may establish a TRM value for the affected ATC path in an amount up to, but no greater than, the amount of the expected derate. The CAISO will set the transmission system topology component of uncertainty as a percentage of TTC pursuant to the CAISO TRM Implementation Document, throughout the rolling thirteen (13)-month horizon set forth in Section L.3, on Interties where the CAISO has historically relied upon import supply to serve load. The CAISO can change the TRM for any applicable horizon as circumstances change.

The CAISO uses the parallel path component of uncertainty to address the impact of unscheduled flow (USF) over an ATC path that is expected, in the absence of the TRM, to result in curtailment of Intertie Schedules in Real Time as a result of the requirements established in WECC's applicable USF mitigation policies and procedures (WECC USF Policy). When the CAISO forecasts, based on currently observed USF conditions and projected scheduled flow for an upcoming Operating Hour(s), that in the absence of a TRM, scheduled flow will need to be curtailed in Real Time under the applicable WECC USF Policy, the CAISO may establish a TRM for the ATC path for the applicable hour(s) in an amount up to, but no greater than, the forecasted amount that is expected to be curtailed in Real Time pursuant to the WECC USF Policy.

The CAISO uses the simultaneous path interactions component of uncertainty to address the impact that transmission flows on an ATC path located outside the CAISO's Balancing Authority Area may have on the transmission transfer capability of an ATC path located at an Intertie. In the event of such path interactions, the CAISO uses a TRM value to prevent the risk of a system operating limit violation in Real Time for the CAISO ATC path. The amount of the TRM value may be set at a level up to, but not greater than, the forecasted impact on the CAISO ATC path's capacity imposed by expected flow on the non-CAISO ATC path.

The CAISO uses the aggregate load forecast component of uncertainty to address load forecast uncertainty at selected Interties. The CAISO will set this component of uncertainty as a percentage of TTC pursuant to the CAISO TRM Implementation Document, across the rolling thirteen (13)-month horizon and the rolling seven (7)-day horizon, on Interties where the CAISO has historically relied upon import supply to serve load. The load forecast component of the TRM may include sub-components to account for (1) changes ordered by Local Regulatory Authorities in planning reserve margins or resource procurement requirements for Load Serving Entities, and (2) load forecast changes.

The CAISO uses the variations in generation dispatch component of uncertainty to address variations in generation dispatch driven by resource outages or other conditions to recognize that, in some circumstances, supply may have to be replaced or additional supply may have to be brought into the system to meet the changing needs. For example, the TRM may account for the unavailability of solar energy during the net-peak load period, the unavailability of hydroelectric capacity during drought conditions, or wind capacity not performing at its Net Qualifying Capacity. The CAISO will set this component of uncertainty as a percentage of TTC pursuant to the CAISO TRM Implementation Document, across the rolling thirteen (13)-month horizon and the rolling seven (7)-day horizon, on Interties where the CAISO has historically relied upon import supply to serve load.

The CAISO uses the following databases or information systems, or their successors, in connection with establishing TRM values: the CAISO's outage management system pursuant to Section 9, Existing Transmission Contract Calculator (ETCC), PI, EMS, and CAS.

**L.1.6** **Capacity Benefit Margin (CBM)** is that amount of transmission transfer capability reserved for LSEs to ensure access to Generation from interconnected systems to meet generation reliability requirements. In the Day-Ahead Market, CBM may be used to provide reliable delivery of Energy to CAISO Balancing Authority Area Loads and to meet CAISO responsibility for resource reliability requirements in Real-Time. The purpose of this DAM implementation is to avoid Real-Time Schedule curtailments and firm Load interruptions that would otherwise be necessary. CBM may be used to reestablish Operating Reserves. CBM is not available for non-firm transmission in the CAISO Balancing Authority Area. CBM may be used only after:

- all non-firm sales have been terminated,
- direct-control Load management has been implemented,
- customer interruptible Demands have been interrupted,
- if the LSE calling for its use is experiencing a Generation deficiency and its transmission service provider is also experiencing Transmission Constraints relative to imports of Energy on its transmission system.

The level of CBM for each Transmission Interface is determined by the amount of estimated capacity needed to serve firm Load and provide Operating Reserves based on historical, scheduled, and/or forecast data using the following equation to set the maximum CBM:

CBM = (Demand + Reserves) - Resources

Where:

- Demand = forecasted area Demand
- Reserves = reserve requirements
- Resources = internal area resources plus resources available on other Transmission Interfaces

The CAISO does not use CBMs. The CBM value is set at zero.

## L.2 ATC Algorithm for Market Optimization

The ATC algorithm in the market is a calculation used to determine the transfer capability remaining in the physical transmission network and available for further commercial activity and optimization over and above already committed uses. The CAISO posts the ATC values in megawatts (MW) to OASIS in conjunction with the Market Close for the Day-Ahead Market and Real-Time Market process.

The following OASIS ATC algorithms are used to implement the CAISO ATC calculation for the ATC rated path (Transmission Interface):

ATC Calculation For Imports:

ATC = TTC - CBM - TRM - AS from Imports- Net Energy Flow - Hourly Unused TR Capacity.

ATC Calculation For Exports:

ATC = TTC - CBM - TRM - Net Energy Flow - Hourly Unused TR Capacity.

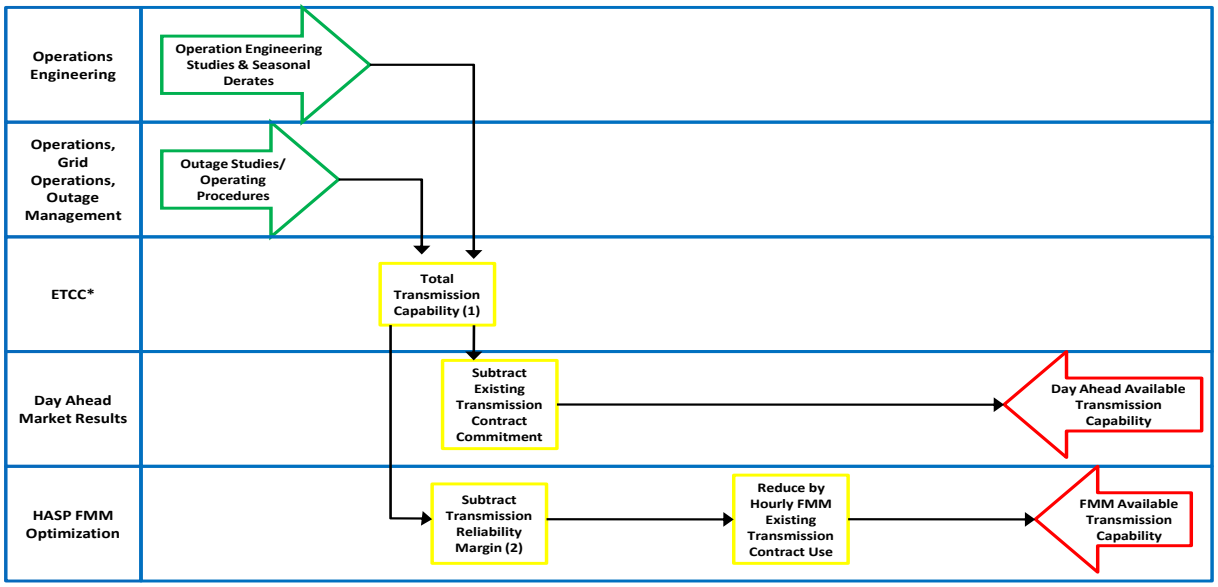
The specific data points used in the ATC calculation are each described in the following table.

| | | |
|---|---|---|
| ATC | ATC MW | Available Transfer Capability, in MW, per Transmission Interface and path direction. |
| Hourly Unused TR Capacity | USAGE_MW | The sum of any unscheduled existing transmission commitments (scheduled transmission rights capacity for ETC or TOR), in MW, per path direction. |
| Scheduled Net Energy from Imports/Exports<br><br>(Net Energy Flow) | ENE IMPORT MW | Total hourly net Energy flow for a specified Transmission Interface. |
| AS from Imports | AS IMPORT MW | Ancillary Services scheduled, in MW, as imports over a specified Transmission Interface. |
| TTC | TTC MW | Hourly Total Transfer Capability of a specified Transmission Interface, per path direction, with consideration given to known Transmission Constraints and operating limitations. |
| CBM | CBM MW | Hourly Capacity Benefit Margin, in MW, for a specified Transmission Interface, per Path Direction. |
| TRM | TRM MW | Hourly Transmission Reliability Margin, in MW, for a specified Transmission Interface, per path direction. |

Actual ATC mathematical algorithms and other ATC calculation information are located in the CAISO's ATC Implementation Document (ATCID) posted to the CAISO Website.

**L.3 ATC Process Flowchart and Calculation Periods**

**Available Transmission Capability**




*ETCC – Existing Transmission Contract Calculator
(1) – WECC rated path methodology
(2) - See TRMID posted on OASIS

The CAISO will calculate ATC on the Interties each calendar month across a rolling thirteen (13)-month horizon. The CAISO will also calculate ATC on the Interties each day prior to the close of the Day-Ahead Market across a rolling seven (7)-day horizon, and will publish the resulting ATC values daily on OASIS.

## L.4 TTC Determination

All transfer capabilities are developed to ensure that power flows are within their respective operating limits, both pre-Contingency and post-Contingency. Operating limits are developed based on thermal, voltage and stability concerns according to industry reliability criteria (WECC/NERC) for transmission paths. The process for developing TTC also requires the inclusion or exclusion of operating Transmission Constraints based on system conditions being studied.

**L.4.1** Transfer capabilities for studied configurations may be used as a maximum transfer capability for similar conditions without conducting additional studies. Increased transfer capability for similar conditions must be supported by conducting appropriate studies.

**L.4.1.2** At the CAISO, studies for all major inter-area paths' (mostly 500 kV) TTC are governed by the California Operating Studies Subcommittee (OSS), which provides detailed criteria and methodology. For transmission system elements below 500 kV the methodology for calculating these flow limits is detailed in Section L.4.3 and is applicable to the operating horizon.

**L.4.2** Transfer capability may be limited by the physical and electrical characteristics of the systems including any one or more of the following:

- **Thermal Limits** - Thermal limits establish the maximum amount of electric current that a transmission line or electrical facility can conduct over a specified time-period as

established by the Transmission Owner.

- **Voltage Limits** - System voltages and changes in voltages must be maintained within the range of acceptable minimum and maximum limits to avoid a widespread collapse of system voltage.

- **Stability Limits** - The transmission network must be capable of surviving disturbances through the transient and dynamic time-periods (from milliseconds to several minutes, respectively) following the disturbance so as to avoid generator instability or uncontrolled, widespread interruption of electric supply to customers.

**L.4.3** **Determination of transfer capability** is based on computer simulations of the operation of the interconnected transmission network under a specific set of assumed operating conditions. Each simulation represents a single "snapshot" of the operation of the interconnected network based on the projections of many factors. As such, they are viewed as reasonable indicators of network performance and may ultimately be used to determine Available Transfer Capability. The study is meant to capture the worst operating scenario based on experience and good engineering judgment.

**L.4.3.1 System Limits –** The transfer capability of the transmission network may be limited by the physical and electrical characteristics of the systems including thermal, voltage, and stability consideration. Once the critical Contingencies are identified, their impact on the network must be evaluated to determine the most restrictive of those limitations. Therefore, the TTC becomes:

TTC = lesser of {Thermal Limit, Voltage Limit, Stability Limit} following contingencies consistent with requirements of the NERC Reliability Standards

**L.4.4** The CAISO may update the determination of TTC to be used in the calculation of daily ATC across a rolling seven (7)-day horizon to reflect current information on the anticipated transfer capability of the transmission network, including information on Outages affecting the transfer capability on Interties.

**L.5 Developing a Power Flow Base-Case**

**L.5.1** **Base-cases** will be selected to model reality to the greatest extent possible including attributes like area Generation, area Load, Intertie flows, etc. At other times (e.g., studying longer range horizons), it is prudent to stress a base-case by making one or more attributes (Load, Generation, line flows, path flows, etc.) of that base-case more extreme than would otherwise be expected.

**L.5.2 Update a Power Flow Base-Case**

The selected base-case will be updated to represent the current grid conditions during the applicable season. The following will be considered to update the base-cases:

- Recent transmission network changes and updates
- Overlapping scheduled and Forced Outages
- Area Load level
- Major path flows
- Generation level

- Voltage levels
- Operating requirements

### L.5.2.1 Outage Consideration

Unless detailed otherwise, the CAISO considers modeling Outages of:

- Transmission lines, 500 kV
- Transformers, 500/230 kV
- Large Generating Units
- Generating Units within the studied area
- Transmission elements within the studied area

At the judgment of the CAISO, only the necessary Outages will be modeled to avoid an unnecessarily burdensome and large number of base-cases.

### L.5.2.2 Area Load Level

Base-case Demand levels should be appropriate to the current studied system conditions and customer Demand levels under study and may be representative of peak, off-peak or shoulder, or light Demand conditions. The CAISO estimates the area Load levels to be utilized in the peak, partial-peak and/or off-peak base-cases. The CAISO will utilize the current CAISO Load forecasting program (e.g., ALFS), ProcessBook (PI) or other competent method to estimate Load level for the studied area. Once the appropriate Load levels are determined, the CAISO may scale the base-case Loads to the area studied, as appropriate.

### L.5.2.3 Modify Path Flows

The scheduled electric power transfers considered representative of the base system conditions under analysis and agreed upon by the parties involved will be used for modeling. As needed, the CAISO may estimate select path flows depending on the studied area. In the event that it is not possible to estimate path flows, the CAISO will make safe assumptions about the path flows. A safe assumption is more extreme or less extreme (as conservative to the situation) than would otherwise be expected. If path flow forecasting is necessary, if possible the CAISO will trend path flows on previous similar days.

### L.5.2.4 Generation Level

Utility and non-utility Generating Units will be updated to keep the swing Generating Unit at a reasonable level. The actual unit-by-unit Dispatch in the studied area is more vital than in the un-studied areas. The CAISO will examine past performance of select Generating Units to estimate the Generation levels, focusing on the Generating Units within the studied area. In the judgment of the CAISO, large Generating Units outside the studied area will also be considered.

### L.5.2.5 Voltage Levels

Studies will maintain appropriate voltage levels, based on operation procedures for critical buses for the studied base-cases. The CAISO will verify that bus voltage for critical busses in within tolerance. If a bus voltage is outside the tolerance band, the CAISO will model the use of voltage control devices (e.g., synchronous condensers, shunt capacitors, shunt reactors, series

capacitors, generators).

## L.6 Contingency Analysis

Contingency analysis studies are performed in an effort to determine the limiting conditions, especially for scheduled Outages, including pre- and post-Contingency power flow analysis modeling pre- and post-Contingency conditions and measuring the respective line flows, and bus voltages.

Other studies like reactive margin and stability may be performed as deemed appropriate.

### L.6.1 Operating Criteria and Study Standards

Using standards derived from NERC and WECC Reliability Standards and historical operating experience, the CAISO will perform Contingency analysis with the following operating criteria:

**Pre-Contingency**

- All pre-Contingency line flows shall be at or below their normal ratings.
- All pre-Contingency bus voltages shall be within a pre-determined operating range.

**Post-Contingency**

- All post-Contingency line flows shall be at or below their emergency ratings.
- All post-Contingency bus voltages shall be within a pre-determined operating range.

The CAISO simulates the appropriate Contingencies as required by applicable NERC and WECC Reliability Standards and criteria.

### L.6.2 Manual Contingency Analysis

If manual Contingency analysis is used, the CAISO will perform pre-Contingency steady-state power flow analysis and determines if pre-Contingency operating criteria is violated. If pre-Contingency operating criteria cannot be preserved, the CAISO records the lines and buses that are not adhering to the criteria. If manual post-Contingency analysis is used the CAISO obtains one or more Contingencies in each of the base cases. For each Contingency resulting in a violation or potential violation in the operating criteria above, the CAISO records the critical post-Contingency facility loadings and bus voltages.

### L.6.3 Contingency Analysis Utilizing a Contingency Processor

For a large area, the CAISO may utilize a Contingency processor.

### L.6.4 Determination of Crucial Limitations

After performing Contingency analysis studies, the CAISO analyzes the recorded information to determine limitations. The limitations are conditions where the pre-Contingency and/or post-Contingency operating criteria cannot be conserved and may include a manageable overload on the facilities, low post-Contingency bus voltage, etc. If no crucial limitations are determined, the CAISO determines if additional studies are necessary.

## L.7 Traditional Planning Methodology to Protect Against Violating Operating Limits

After performing Contingency analysis studies, the CAISO next develops the transfer capability and develops procedures, Nomograms, RMR Generation requirements, or other Transmission Constraints to ensure that transfer capabilities respect operating limits.

## L.8 Limits for Contingency Limitations

Transfer limits are developed when the post-Contingency loading on a transmission element may breach the element's emergency rating. The type of limit utilized is dependent on the application and includes one of the following limits:

- Simple Flow Limit - best utilized when the derived limit is repeatable or where parallel transmission elements feed radial Load.

- RAS - existing Remedial Action Schemes (RAS) may impact the derivation of simple flow limits. When developing the limit, the CAISO determines if the RAS will be in-service during the Outage and factors the interrelationship between the RAS and the derived flow limit. The CAISO will update the transfer limits in recognition of the changing status and/or availability of the RAS.

# Appendix M

# Dynamic Scheduling Protocol (DSP)

## 1. DYNAMIC SCHEDULES OF IMPORTS TO THE CAISO BALANCING AUTHORITY AREA

### 1.1 Consistency with NERC/WECC Policies and Requirements

**1.1.1** Scheduling and operation of Dynamic Schedule functionalities must comply with all applicable NERC and WECC reliability standards, policies, requirements, and guidelines regarding inter-Balancing Authority Area scheduling, in accordance with Section 4.5.4.3 of the CAISO Tariff.

### 1.2 Contractual Relationships

**1.2.1** The Host Balancing Authority must execute an operating agreement with the CAISO particular to the operation of the functionality supporting dynamic imports of Energy, and/or Energy associated with non-Regulation Ancillary Services to the CAISO Balancing Authority Area.

**1.2.2** The Scheduling Coordinator for the System Resource must execute a Dynamic Scheduling Agreement for Scheduling Coordinators with the CAISO governing the operation of the Dynamic Schedule functionality, which agreement will include a provision for its termination based on failure to comply with these standards.

**1.2.3** The Scheduling Coordinator for the System Resource must have the necessary operational and contractual arrangements in place with the Host Balancing Authority to implement Section 1.3 and other provisions of this Appendix M. Such arrangements must include the Host Balancing Authority's ability to receive telemetry from the System Resource and to issue a Dynamic Schedule signal pertinent to that System Resource to the CAISO. Proof of such arrangements must be provided to the CAISO.

### 1.3 Communications, Telemetry, and Other Technical Requirements

**1.3.1** The communication and telemetry requirements set forth in the CAISO's Standards for Imports of Regulation, or any successor CAISO standards regarding the technical arrangements for imports of Regulation posted on the CAISO Website, will apply to all Dynamic Schedules, except for (a) those dynamic functionalities established prior to the CAISO Operations Date, (b) the requirements that are specific solely to Regulation, and (c) the requirements set forth below.

**1.3.2** A dedicated primary communications link and a backup communications link between the CAISO's EMS and the Host Balancing Authority Area EMS are required.

**1.3.3** The primary circuit will be T1-class, or equivalent, utilizing the inter-control center communications protocol ("ICCP"). The backup communications link will be diversely routed between the Host Balancing Authority Area EMS and the CAISO Balancing Authority Area EMS on separate physical paths and devices, provided that the CAISO may approve an alternative means of providing backup communications if the circumstances warrant.

**1.3.4** A dedicated primary communications link and a backup communications link between the Host Balancing Authority Area EMS and any Intermediary Balancing Authority Area EMS are required, if requested by the Intermediary Balancing Authority Area.

**1.3.5** The Balancing Authority Area hosting a Dynamic System Resource must have a mechanism implemented to override the associated dynamic signal.

**1.3.6** The dynamic signal must be properly incorporated into all involved Balancing Authority Areas' ACE equations.

**1.3.7** The System Resource must have communications links with the Host Balancing Authority Area consistent with this Appendix M.

### 1.4 Limits on Dynamic Imports

**1.4.1** The CAISO reserves the right to establish limits applicable to the amount of any Ancillary Services and/or Energy imported into the CAISO Balancing Authority Area, whether delivered dynamically or statically. Such limits may be established based on any one, or a combination, of the following considerations: a percentage of, or a specific import limit applicable to, total CAISO Balancing Authority Area requirements; a percentage at, or a specific import limit applicable to, a particular Intertie or a Transmission Interface; a percentage of, or a specific import limit applicable to, total requirements in a specific Ancillary Service Region; or operating factors which may include, but are not limited to, operating Nomograms, Remedial Action Schemes, protection schemes, scheduling and curtailment procedures, or any potential single points of failure associated with the actual delivery process. The CAISO may implement a moratorium on the establishment of new Dynamic Schedules associated with a particular Intertie in the event it determines that the volume of dynamic transfers could have an adverse effect on System Reliability. In the event the CAISO implements such a moratorium, the CAISO shall undertake studies to determine an appropriate allocation of the capacity of the affected Intertie to dynamic transfers.

**1.4.2** The CAISO may, at its discretion, either limit or forego procuring Ancillary Services at particular Balancing Authority Area Interties to ensure that Operating Reserves are adequately dispersed throughout the CAISO Balancing Authority Area as required by NERC and WECC reliability standards and any requirements of the NRC.

**1.4.3** A Dynamic System Resource and its Dynamic Schedules must be permanently associated with a particular CAISO Intertie (the CAISO may, from time to time and at its discretion, allow for a change in such pre-established association of the Dynamic System Resource with a particular CAISO Intertie).

### 1.5 Operating and Scheduling Requirements

**1.5.1** For any Operating Hour for which Ancillary Services (and associated Energy) is scheduled dynamically to the CAISO from the System Resource, firm transmission service must be reserved across the entire Dynamic Schedule transmission path external to the CAISO Balancing Authority Area. For any Operating Hour for which only Energy is scheduled dynamically to the CAISO from the System Resource, transmission service must be reserved across the entire Dynamic Schedule transmission path external to the CAISO Balancing Authority Area, or must be available within the Operating Hour, sufficient to support the Schedule and Dispatch of the System Resource. In the event that the System Resource has not established a sufficient transmission reservation prior to the Operating Hour, and will not be able to use additional transmission within the Operating Hour, to support Dispatch up to its maximum available capacity, a derate must be reported in the CAISO's Outage management system to limit its Dispatch to its available transmission.

**1.5.2** All Dynamic Schedules associated with Dynamic System Resources must be electronically tagged (by use of an E-Tag).

**1.5.3** Formal inter-Balancing Authority Area Dynamic Schedules may be issued only by the Dynamic System Resource's Host Balancing Authority Area and must be routed through the EMSs of any Intermediary Balancing Authority Area, if requested by the Balancing Authority for the Intermediary Balancing Authority Area.

**1.5.4** The CAISO will procure (or allow for self-provision of) Operating Reserves and Regulation for Loads served by imports from Dynamic System Resources, unless otherwise agreed to or as reflected in the Dynamic Scheduling Host Balancing Authority Operating Agreement.

**1.5.5** All Energy Interchange Schedules associated with dynamically scheduled imports of Spinning Reserve and Non-Spinning Reserve will be afforded similar treatment (i.e., resource contingent firm).

**1.5.6** The dynamic signal must be integrated over time by the Host Balancing Authority Area for every Operating Hour.

**1.5.7** Notwithstanding any Dispatches of the System Resource in accordance with the CAISO Tariff, the CAISO shall have the right to issue Dispatch Instructions or Operating Instructions as defined in the CAISO Tariff to the System Resource either directly or through the Host Balancing Authority Area for emergency or contingency reasons, or to ensure the CAISO's compliance with operating requirements based on WECC or NERC requirements and policies (e.g., WECC's Unscheduled Flow Reduction Procedure). However, such Dispatch Instructions or Operating Instructions may be issued only within the range of the CAISO-accepted Energy and Ancillary Services, Bids for a given Operating Hour (or the applicable "sub-hour" interval).

**1.5.8** If there is no Dynamic Schedule in the CAISO's Day-Ahead Market or RTM, the dynamic signal must be at "zero" ("0") except when in response to CAISO's Dispatch Instructions associated with accepted Ancillary Services or Energy Bids.

**1.5.9** The Scheduling Coordinator for the Dynamic System Resource must have the ability to override the associated Dynamic Schedule in order to respond to the Dispatch Instructions or Operating Instructions of the CAISO or the Host Balancing Authority.

**1.5.10** Unless the Dynamic System Resource (1) is implemented as a directly-telemetered Load following functionality, (2) is base-loaded Regulatory Must-Take Generation, (3) responds to a CAISO intra-hour Dispatch Instruction, or (4) is an Eligible Intermittent Resource, the Dynamic Schedule representing such resource must follow WECC-approved practice of 20-minute ramps centered at the top of the hour. The CAISO does not provide any special Settlements treatment nor offer any CAISO Tariff exemptions for dynamic Load following functionalities.

**1.5.11** In Real-Time the Dynamic Schedule may not exceed the CAISO's Dispatch Operating Point. The Dispatch Operating Point represents not only the estimated Dynamic System Resource's Energy but also, in combination with any Ancillary Service Award that has not been dispatched as Energy, the transmission reservation on the associated CAISO Intertie.

**1.5.12** Only one Dynamic System Resource may be associated with any one physical generating resource, unless the CAISO approves an implementation plan to establish multiple Dynamic System Resources for that generating resource.

**1.5.13** If the Scheduling Coordinator for the Dynamic System Resource desires to participate in CAISO's Regulation market, all provisions of the CAISO's Standards for Imports of Regulation, or any successor CAISO standards regarding the technical arrangements for imports of Regulation posted on the CAISO Website, shall apply.

## 1.6 Certification, Testing, and Performance Monitoring of Dynamic Imports of Ancillary Services

Scheduling Coordinators must be certified separately for each Ancillary Service. Scheduling Coordinators that wish to be certified for imports of Regulation shall be subject to certification under the Standards for Imports of Regulation, or any successor CAISO standards regarding the technical arrangements for imports of Regulation posted on the CAISO Website, subject to verification of consistency with the requirements of this Appendix M.

**1.6.1** The Scheduling Coordinator must request the certification of a System Resource to provide Ancillary Services for the CAISO Balancing Authority Area and cooperate, along with the Host Balancing Authority, in the testing of such System Resource in accordance with the CAISO Tariff and applicable CAISO Operating Procedures.

**1.6.2** Only CAISO tested and certified System Resources will be allowed to bid and/or self-provide Ancillary Services into the CAISO Balancing Authority Area.

**1.6.3** Dynamic Ancillary Services imports will be certified through testing, in accordance with the applicable CAISO Operating Procedures. All requests for certification of dynamic Ancillary Services imports will be reviewed and approved by the CAISO with respect to any technical limitations imposed by existing operational considerations, such as Remedial Action Schemes, operating Nomograms, and scheduling procedures. These reviews may impose certain Ancillary Services import limits in addition to those outlined in Section 1.4.1 of this Appendix M. Therefore, interested parties are advised and encouraged to contact the CAISO before they begin the process of the necessary systems design, preparation, and implementation for import of Ancillary Services to the CAISO Balancing Authority Area.

**1.6.4** The CAISO will measure the performance of the Dynamic Schedule of Energy associated with an accepted Ancillary Services Bid against (1) the awarded range of Ancillary Service capacity; (2) the certified limits; and (3) the bid Ramp Rate, which shall be validated by the CAISO against the certified Ramp Rate.

**1.6.5** The Scheduling Coordinator for the System Resource must notify the CAISO should any changes, modifications, or upgrades affecting control and/or performance of the System Resource be made. Upon such notification, the CAISO, at its discretion, may require that the System Resource be re-certified to import Ancillary Services into the CAISO Balancing Authority Area.

## 1.7 Compliance, Losses, and Financial Settlements

**1.7.1** Energy delivered in association with Dynamic System Resources will be subject to all provisions of the CAISO's imbalance energy markets (just as is the case with CAISO intra-Balancing Authority Area Generating Units of Participating Generators).

**1.7.2** Dynamically scheduled and delivered Ancillary Services will be subject to the CAISO's compliance monitoring and remedies, just as any CAISO intra-Balancing Authority Area Generating Units of Participating Generators.

**1.7.3** All Day-Ahead Market and RTM submitted Dynamic Schedules shall be subject to CAISO Congestion Management and as such may not exceed their transmission reservations in Real-Time (with the exception of intra-hour Dispatch Instructions of the Energy associated with accepted Ancillary Services Bids or Dispatch Instructions for imbalance energy).

**1.7.4** All Dynamic Schedules and delivered Energy shall be subject to the standard CAISO Transmission Loss calculation as described in Section 27.5.1.1 and Appendix C of the CAISO Tariff.

**1.7.5** Any transmission losses attributed to the Dynamic Schedule on transmission system(s) external to the CAISO Balancing Authority Area will be the responsibility of the owner(s)/operator(s) of the Dynamic System Resource.

**1.7.6** Responsible Scheduling Coordinators will be able to report de-rates affecting the Dynamic System Resource through the CAISO's outage management system.

**1.7.7** Should there be any need or requirement, whether operational or procedural, for the CAISO to make Real-Time adjustments to the CAISO's inter-Balancing Authority Area Interchange Schedules (to include curtailments), Dynamic Schedules shall be treated in the same manner as similarly situated and/or effective static CAISO Interchange Schedules.

## 2. DYNAMIC SCHEDULES OF EXPORTS OF ENERGY FROM GENERATING UNITS IN THE CAISO BALANCING AUTHORITY AREA

### 2.1 Consistency with NERC/WECC Policies and Requirements

**2.1.1** Scheduling and operation of Dynamic Schedule functionalities must comply with all applicable NERC and WECC reliability standards, policies, requirements, and guidelines regarding inter-Balancing Authority Area scheduling, in accordance with Section 4.5.4.3 of the CAISO Tariff.

### 2.2 Contractual Relationships

**2.2.1** A Balancing Authority receiving a Dynamic Schedule of an export of Energy from a Generating Unit in the CAISO Balancing Authority Area must execute an operating agreement with the CAISO particular to the operation of the functionality supporting dynamic exports of Energy from the CAISO Balancing Authority Area.

**2.2.2** The Scheduling Coordinator for a Dynamic Schedule of an export of Energy from a Generating Unit must execute a Dynamic Scheduling Agreement for Scheduling Coordinators with the CAISO governing the operation of the Dynamic Schedule functionality, which agreement will include a provision for its termination based on failure to comply with these standards.

**2.2.3** The Scheduling Coordinator for a Dynamic Schedule of an export of Energy from a Generating Unit must have the necessary operational and contractual arrangements in place with the Balancing Authority receiving the export Dynamic Schedule to implement Section 2.3 and other provisions of this Appendix M. Such arrangements must include the Balancing Authority's ability to receive telemetry from the Generating Unit and to receive a Dynamic Schedule signal pertinent to that Generating Unit from the CAISO. Proof of such arrangements must be provided to the CAISO.

### 2.3 Communications, Telemetry, and Other Technical Requirements

**2.3.1** The communication and telemetry requirements set forth in the applicable CAISO Business Practice Manual will apply to a Generating Unit that is the source of the Energy for a Dynamic Schedule of exports of Energy, in addition to the requirements set forth in this Appendix M applicable to Dynamic Schedules of exports of Energy.

**2.3.2** A dedicated primary communications link and a backup communications link between the CAISO's EMS and the EMS of the Balancing Authority Area receiving the Dynamic Schedule are required.

**2.3.3** The primary circuit will be T1-class, or equivalent, utilizing the inter-control center communications protocol ("ICCP"). The backup communications link will be diversely routed between the EMS of the Balancing Authority Area receiving the Dynamic Schedule and the CAISO Balancing Authority Area EMS on separate physical paths and devices, provided that the CAISO may approve an alternative means of providing backup communications if the circumstances warrant.

**2.3.4** A primary dedicated communications link and a backup communications link between the EMS of the Balancing Authority Area receiving the Dynamic Schedule and any Intermediary Balancing Authority Area EMS are required, if requested by the Intermediary Balancing Authority Area.

**2.3.5** The CAISO shall have a mechanism implemented to override the associated dynamic signal for a Dynamic Schedule of an export of Energy from a Generating Unit.

**2.3.6** The dynamic signal must be properly incorporated into all involved Balancing Authority Areas' ACE equations.

**2.3.7** The Generating Unit must have communications links with the Balancing Authority Area receiving a Dynamic Schedule consistent with this Appendix M.

**2.3.8** The dynamic signal must be properly incorporated into the CAISO's market systems.

### 2.4 Limits on Dynamic Exports

**2.4.1** The CAISO reserves the right to establish limits applicable to the amount of any Energy exported from the CAISO Balancing Authority Area, whether delivered dynamically or statically. Such limits may be established based on any one, or a combination, of the following considerations: a percentage of, or a specific export limit applicable to, total CAISO Balancing Authority Area requirements; a percentage at, or a specific export limit applicable to, a particular Intertie or a Transmission Interface; a percentage of, or a specific export limit applicable to, total requirements in a specific Ancillary Service Region; or operating factors which may include, but are not limited to, operating Nomograms, Remedial Action Schemes, protection schemes, scheduling and curtailment procedures, or any potential single points of failure associated with the actual delivery process. The CAISO may implement a moratorium on the establishment of new Dynamic Schedules associated with a particular Intertie in the event it determines that the volume of dynamic transfers could have an adverse effect on System Reliability. In the event the CAISO implements such a moratorium, the CAISO shall undertake studies to determine an appropriate allocation of the capacity of the affected Intertie to dynamic transfers.

**2.4.2** A Dynamic Schedule of an export of Energy from a Generating Unit in the CAISO Balancing Authority Area must be permanently associated with a particular CAISO Intertie (the CAISO may, from time to time and at its discretion, allow for a change in such pre-established association of the Generating Unit with a particular CAISO Intertie).

### 2.5 Operating and Scheduling Requirements

**2.5.1** All Dynamic Schedules associated with exports of Energy from a Generating Unit must be electronically tagged (by use of an E-Tag).

**2.5.2** Formal inter-Balancing Authority Area Dynamic Schedules of the export of Energy from a Generating Unit may be issued only by the CAISO as the Host Balancing Authority Area and must be routed through the EMSs of any Intermediary Balancing Authority Area, if requested by the Intermediary Balancing Authority Area.

**2.5.3** The Balancing Authority receiving the Dynamic Schedule of the export of Energy from the CAISO Balancing Authority Area is responsible for Operating Reserves and Regulation for Loads served by such exports of Energy, unless the receiving Balancing Authority and the CAISO otherwise agree as reflected in the Dynamic Scheduling Host Balancing Authority Operating Agreement.

**2.5.4** The dynamic signal must be integrated over time by the CAISO for every Operating Hour.

**2.5.5** Notwithstanding any Dispatches of the Generating Unit in accordance with the CAISO Tariff, the CAISO shall have the right to issue Dispatch Instructions or Operating Instructions as defined in the CAISO Tariff to the Generating Unit either directly or through the receiving Balancing Authority Area for emergency or contingency reasons, or to ensure the CAISO's compliance with operating requirements based on WECC or NERC requirements and policies (e.g., WECC's Unscheduled Flow Reduction Procedure). However, such Dispatch Instructions or Operating Instructions may be issued only within the range of the CAISO-accepted Energy Bids for a given Operating Hour (or the applicable "sub-hour" interval).

**2.5.6** If there is no Dynamic Schedule in the CAISO's Day-Ahead Market or RTM, the dynamic signal must be at "zero" ("0").

**2.5.7** The Scheduling Coordinator for a Dynamic Schedule of an export of Energy from a Generating Unit must have the ability to override the associated Dynamic Schedule in order to respond to the Dispatch Instructions or Operating Instructions of the CAISO or the Host Balancing Authority.

**2.5.8** Unless the Dynamic Schedule of an export of Energy from a Generating Unit (1) is implemented as a directly-telemetered load following functionality, (2) is base-loaded Regulatory Must-Take Generation, (3) responds to an intra-hour dispatch instruction from the receiving Balancing Authority, or (4) is an Eligible Intermittent Resource, the Dynamic Schedule representing such resource must follow WECC-approved practice of 20-minute ramps centered at the top of the hour. The CAISO does not provide any special Settlements treatment nor offer any CAISO Tariff exemptions for dynamic load following functionalities.

**2.5.9** In Real-Time the Dynamic Schedule may not exceed the CAISO's Dispatch Operating Point, which reflects the dynamic signal received by the CAISO from the Balancing Authority receiving the dynamically-scheduled Energy. The CAISO's Dispatch Operating Point represents not only the estimated Energy from the Generating Unit for export but also the transmission reservation on the associated CAISO Intertie.

**2.5.10** Only one Dynamic Schedule may be associated with any one physical Generating Unit, unless the CAISO approves an implementation plan to establish multiple Dynamic Schedules for that Generating Unit.

### 2.6 Compliance, Losses, and Financial Settlements

**2.6.1** Energy delivered in association with a Dynamic Schedule of an export of Energy from a Generating Unit will be subject to all provisions of the CAISO's imbalance energy markets (just as is the case with CAISO intra-Balancing Authority Area Generating Units of Participating Generators).

**2.6.2** All Day-Ahead Market and RTM submitted Dynamic Schedules shall be subject to CAISO Congestion Management and as such may not exceed their transmission reservations in Real-Time (with the exception of intra-hour Dispatch Instructions for imbalance energy issued by the CAISO and responses to the dynamic signal from the Balancing Authority receiving the Dynamic Schedule of the export of Energy).

**2.6.3** All Dynamic Schedules and delivered Energy shall be subject to the standard CAISO Transmission Loss calculation as described in Section 27.5.1.1 and Appendix C of the CAISO Tariff.

**2.6.4** Any transmission losses attributed to the Dynamic Schedule on transmission system(s) external to the CAISO Balancing Authority Area will be the responsibility of the owner(s)/operator(s) of the Generating Unit associated with a Dynamic Schedule of an export of Energy.

**2.6.5** Should there be any need or requirement, whether operational or procedural, for the CAISO to make Real-Time adjustments to the CAISO's inter-Balancing Authority Area Interchange Schedules (to include curtailments), Dynamic Schedules shall be treated in the same manner as similarly situated and/or effective static CAISO Interchange Schedules.

# Appendix N

# Pseudo-Tie Protocols

## 1. Pseudo-Ties of Generating Units to the CAISO Balancing Authority Area

### 1.1 Consistency with NERC/WECC Requirements

**1.1.1** Operation of Pseudo-Tie functionalities must comply with all applicable NERC, WECC, and North American Energy Standards Board (NAESB) reliability standards, policies, requirements, and guidelines regarding inter-Balancing Authority Area scheduling. A Pseudo-Tie must be registered as a "Point Of Delivery" (POD) with the NAESB Electric Industry Registry (EIR). All (off-system) static scheduling associated with Pseudo-Tie functionality must be consistent with NERC Reliability Standards for interchange scheduling and coordination.

### 1.2 CAISO Operating, Technical, and Business Requirements

#### 1.2.1 Operating Requirements

**1.2.1.1** The CAISO shall establish and specify the location of any Pseudo-Tie between the CAISO Balancing Authority Area and the Native Balancing Authority Area. All Dynamic Schedules and delivered Energy from a Pseudo-Tie Generating Unit shall be subject to the standard CAISO Transmission Loss calculation as described in Section 27.5.1.1 and Appendix C of the CAISO Tariff.

**1.2.1.2** A Pseudo-Tie Generating Unit must transfer dynamically its entire output of its Real-Time Generation production into the CAISO Balancing Authority Area at the associated pre-determined CAISO Intertie, regardless of whether the Pseudo-Tie Generating Unit represents the entire Generating Unit that is Pseudo-Tied into the CAISO Balancing Authority Area in accordance with Section 1 of this Appendix N or only a share of a Generating Unit that is Pseudo-Tied into the CAISO Balancing Authority Area in accordance with Section 3 of this Appendix N. A Pseudo-Tie Generating Unit must be permanently associated with a particular pre-determined CAISO Intertie. Any dynamic transfers of Energy, and/or Energy associated with Ancillary Services will be subject to Congestion mitigation at the associated pre-determined CAISO Intertie. The CAISO may, from time to time and at its discretion, allow for a change in such pre-established association of the Pseudo-Tie Generating Unit with a particular CAISO Intertie. Any change to the designated path is subject to approval by all applicable transmission providers.

**1.2.1.3** A Pseudo-Tie Generating Unit shall operate under the terms of the CAISO Tariff applicable to the Generating Units of Participating Generators in the CAISO Balancing Authority Area except as expressly provided, including requirements to promptly follow CAISO Dispatch Instructions, Exceptional Dispatch Instructions, Operating Instructions as defined in the CAISO Tariff, and other instructions, without limitation, pursuant to Sections 7.6 and 7.7 of the CAISO Tariff and any CAISO Operating Procedure established specifically for the Pseudo-Tie, including in the event of an overload condition at the associated pre-determined CAISO Intertie.

**1.2.1.4** A Participating Generator with a Pseudo-Tie Generating Unit shall demonstrate the ability to deliver the Pseudo-Tie Generating Unit's maximum output to the associated pre-determined CAISO Intertie by providing the CAISO with a copy of its interconnection agreement with the Balancing Authority for its Native Balancing Authority Area.

**1.2.1.5** Firm transmission for the Operating Hour in a form agreed to by the CAISO must be reserved for the Pseudo-Tie Generating Unit output transfers into the CAISO Balancing Authority Area across the entire transmission path external to the CAISO Balancing Authority Area sufficient to permit delivery of an amount equal to at least the self-scheduled Generation of a Pseudo-Tie Generating Unit. In the event that a sufficient transmission reservation has not been established prior to the

Operating Hour to support Dispatch up to the Pseudo-Tie Generating Unit's maximum available capacity, and additional transmission will not be available within the Operating Hour, a derate must be reported in the CAISO's Outage management system to limit its Dispatch to its available transmission.

**1.2.1.6** All Energy transfers associated with a Pseudo-Tie Generating Unit must be electronically tagged (E-Tagged).

**1.2.1.7** The CAISO will treat all dynamically transferred Pseudo-Tie Generating Unit Energy as internal CAISO Balancing Authority Area Generation (except that it will be subject to Congestion determined by the scheduling capacity of the associated pre-determined CAISO Intertie) and will procure, or ensure self-provision of, required Operating Reserves for the CAISO Balancing Authority Area Loads served by a Pseudo-Tie Generating Unit.

**1.2.1.8** All dynamic Energy transfers associated with CAISO procurement of Spinning Reserve and Non-Spinning Reserve from a Pseudo-Tie Generating Unit will be afforded similar treatment (i.e., treatment as internal CAISO Balancing Authority Area Generation, except that it will be subject to Congestion determined by the scheduling capacity of the associated pre-determined CAISO Intertie).

**1.2.1.9** Off-system sales pursuant to a Pseudo-Tie Participating Generator Agreement shall only be delivered from the Pseudo-Tie Generating Unit. The maximum allowable off-system sales of Energy from a Pseudo-Tie Generating Unit may not exceed the Pseudo-Tie Generating Unit's scheduled output. Off-system sales shall be treated as a firm fixed static export from the CAISO Balancing Authority Area.

**1.2.1.10** In Real-Time, the total output of a Pseudo-Tie Generating Unit shall be telemetered to the CAISO. If the Pseudo-Tie Generating Unit is an Eligible Intermittent Resource, telemetered data to the CAISO shall include appropriate operational data, meteorological data, and other data reasonably necessary to forecast Energy as specified in Appendix Q (Eligible Intermittent Resources Protocol) of the CAISO Tariff and applicable Business Practice Manuals.

**1.2.1.11** The Real-Time dynamic transfer from a Pseudo-Tie Generating Unit may not exceed the CAISO's Dispatch Operating Point. The Dispatch Operating Point represents not only the estimated Dynamic System Resource's Energy but also, in combination with any Ancillary Service Award that has not been dispatched as Energy, the transmission reservation on the associated CAISO Intertie. In the event that a Pseudo-Tie Generating Unit's output creates an imminent reliability issue on the associated pre-determined CAISO Intertie, the Pseudo-Tie Generating Unit will be subject to immediate curtailment by the CAISO. A Pseudo-Tie Generating Unit may also be curtailed whenever its Generation output, less any off-system sales, is greater than the associated transmission reservation pursuant to Section 1.2.1.5 of this Appendix N.

**1.2.1.12** The CAISO may, at its discretion, either limit or forego procuring any or all Ancillary Services at the particular pre-determined CAISO Intertie associated with a Pseudo-Tie Generating Unit to ensure that Operating Reserves are adequately dispersed throughout the CAISO Balancing Authority Area and its Interties as required by the WECC.

**1.2.1.13** Unless a particular service is procured by the Participating Generator from some other source, the CAISO shall provide to a Pseudo-Tie Generating Unit all Balancing Authority services available to other Generating Units in the CAISO Balancing Authority Area, which may include the auxiliary load equipment needs of the Pseudo-Tie Generating Unit, provided firm transmission service is reserved across the transmission path from the CAISO Intertie to the Pseudo-Tie Generating Unit.

**1.2.1.14** The CAISO and the Native Balancing Authority Area will develop a coordinated operating

procedure to facilitate the continued delivery of Energy and Ancillary Services from a Pseudo-Tie Generating Unit to the desired delivery points in the event the primary contract path is unavailable or curtailed.

**1.2.1.15** The CAISO may implement a moratorium on the establishment of new Pseudo-Ties associated with a particular Intertie in the event it determines that the volume of dynamic transfers could have an adverse effect on System Reliability. In the event the CAISO implements such a moratorium, the CAISO shall undertake studies to determine an appropriate allocation of the capacity of the affected Intertie to dynamic transfers.

### 1.2.2 Technical Requirements

**1.2.2.1** All applicable communication and telemetry requirements of the WECC, the CAISO, and a Pseudo-Tie Generating Unit's Native Balancing Authority Area regarding generating units and inter-Balancing Authority Area Interties must be satisfied. These requirements include the requirements of Appendix M applicable to Dynamic Schedules of imports and the requirements of the CAISO Tariff applicable to Generating Units in the CAISO Balancing Authority Area.

**1.2.2.2** Proper incorporation of the dynamic signal into all involved Balancing Authority Areas' ACE equations will be required.

**1.2.2.3** If there is no Scheduled Generation in the DAM or Real-Time markets, a Pseudo-Tie Generating Unit shall not generate except when issued an Exceptional Dispatch or Operating Instruction as defined in the CAISO Tariff.

**1.2.2.4** If a Participating Generator with a Pseudo-Tie Generating Unit desires to participate in the CAISO's Regulation market, all provisions of the CAISO's Standards for Imports of Regulation, or any successor CAISO standards regarding the technical arrangements for imports of Regulation posted on the CAISO Website, shall apply.

**1.2.2.5** Only one dynamic transfer signal may be associated with any Pseudo-Tie Generating Unit.

### 1.2.3 Business Requirements

**1.2.3.1** For Settlements, the Energy transferred dynamically from a Pseudo-Tie Generating Unit during an Operating Hour will be settled based on the Generating Unit revenue meter value, and any static off-system sales represented as an export quantity will be deemed delivered at a Pseudo-Tie for that Operating Hour consistent with Section 1.2.1.9 of this Appendix N.

**1.2.3.2** Any transmission losses and other transmission related costs attributable to a Pseudo-Tie Generating Unit on a non-CAISO transmission system will remain the responsibility of the Participating Generator.

**1.2.3.3** Should there be any need or requirement, whether operational or procedural, for the CAISO to make real time adjustments to the CAISO's inter-Balancing Authority Area Interchange Schedules at the pre-determined CAISO Intertie associated with a Pseudo-Tie Generating Unit (including curtailments), the dynamic transfer from the Pseudo-Tie Generating Unit shall be treated in the same manner as any CAISO Interchange Schedule at that pre-determined CAISO Intertie.

**1.2.3.4** A Pseudo-Tie Generating Unit will be eligible to set the Market Clearing Price in accordance with the CAISO Tariff in all applicable CAISO Markets.

**1.2.3.5** The CAISO shall assess charges to the Scheduling Coordinator for a Participating Generator with a Pseudo-Tie Generating Unit on the same basis as they apply to any other CAISO intra-Balancing Authority Area Generating Unit, subject to the provisions of this Section 1.2.3.5.

**1.2.3.5.1** Any transfers from a Pseudo-Tie Generating Unit scheduled into the CAISO Balancing Authority Area shall be subject to CAISO charges associated with the DAM and Real-Time Market, except that (1) Energy associated with the Pseudo-Tie Generating Unit will be subject to Intertie Congestion charges that are incorporated into the LMP, (2) Ancillary Services provided by the Pseudo-Tie Generating Unit will be assessed applicable Intertie Congestion charges pursuant to Section 11.10.1 of the CAISO Tariff, and (3) the transfers will be subject to any applicable transmission loss obligation charges in cases where the CAISO and another Balancing Authority have agreed on an assessment to the CAISO of supplemental losses incurred outside of the CAISO Balancing Authority Area.

**1.2.3.5.2** Any off-system sales of Energy shall be subject to all export charges except the Wheeling Access Charge. A special export market Resource ID is required for this purpose for which the Participating Generator shall provide ninety (90) days advance notice prior to implementation.

### 1.3 Operating Agreements

**1.3.1** A Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area shall be conditional on the facilitation by the Native Balancing Authority Area of the Pseudo-Tie functionality in accordance with an operating agreement between the Balancing Authority for the Native Balancing Authority Area and the CAISO specific to Pseudo-Tie functionality. The CAISO will request that any such operating agreement limit the ability of the Balancing Authority for the Native Balancing Authority Area to terminate the operating agreement or otherwise withdraw from the Pseudo-Tie functionality established pursuant to the operating agreement.

**1.3.2** A Participating Generator with a Pseudo-Tie Generating Unit shall comply with its contractual obligations to the owners of the facilities to which the Pseudo-Tie Generating Unit is interconnected and/or the Native Balancing Authority Area that affect in any way the ability of the Participating Generator to perform its obligations under its Pseudo-Tie Participating Generator Agreement.

## 2. Pseudo-Ties of Generating Units out of the CAISO Balancing Authority Area

### 2.1 Consistency with NERC/WECC Requirements

**2.1.1** Operation of Pseudo-Tie functionalities must comply with all applicable NERC, WECC, and NAESB reliability standards, policies, requirements, and guidelines regarding inter-Balancing Authority Area scheduling. A Pseudo-Tie must be registered as a “Point Of Delivery” (POD) with the NAESB Electric Industry Registry EIR. All interchange scheduling associated with Pseudo-Tie functionality must be consistent with NERC Reliability Standards for interchange scheduling and coordination.

### 2.2 Operating, Technical, and Business Requirements

#### 2.2.1 Operating Requirements

**2.2.1.1** The CAISO and the Balancing Authority for the Attaining Balancing Authority Area will establish the terms of any Pseudo-Tie between the CAISO Balancing Authority Area and the Attaining Balancing Authority Area for a Pseudo-Tie of a generating unit out of the CAISO Balancing Authority Area, will specify the location of that Pseudo-Tie point, and will register that location as a point of delivery to the Attaining Balancing Authority Area.

**2.2.1.2** The owner of a generating unit that will be a Pseudo-Tie out of the CAISO Balancing Authority Area must (a) transfer dynamically its entire output of its real time generation production and (b) submit Bids, including Self-Schedules, into the CAISO Markets to schedule the use of CAISO transmission associated with the export of the Pseudo-Tie generating unit Energy into the Attaining Balancing Authority Area at the associated pre-existing CAISO physical Intertie, as

provided in Section 2.2.2.3 of this Appendix N.

**2.2.1.3** There will be no static imports from a Pseudo-Tie generating unit directly into the CAISO Balancing Authority Area.

**2.2.1.4** All Energy transfers associated with a Pseudo-Tie generating unit must be electronically tagged (E-Tagged).

**2.2.1.5** The CAISO will treat all dynamically transferred Energy from a Pseudo-Tie of a generating unit out of the CAISO Balancing Authority Area as generation external to the CAISO Balancing Authority Area.

**2.2.1.6** In case a generating unit that is a Pseudo-Tie out of the CAISO Balancing Authority Area is curtailed or forced out of service in real-time, the associated Pseudo-Tie Bids submitted into the CAISO Markets must be adjusted by the next available CAISO Market scheduling timeframe.

**2.2.1.7** In real-time, the total output of a Pseudo-Tie generating unit shall be telemetered to the CAISO and to the Balancing Authority for the Attaining Balancing Authority Area.

**2.2.1.8** In real-time, the total Energy from a Pseudo-Tie generating unit shall not exceed the capacity of the Pseudo-Tie generating unit as specified in the agreement between the CAISO and the owner of the Pseudo-Tie generating unit.

**2.2.1.9** The CAISO, the Balancing Authority for the Attaining Balancing Authority Area, any affected Participating Transmission Owner, and the owner of the Pseudo-Tie generating unit will develop a coordinated operating procedure outlining the agreed upon framework among all parties for the operation of a Pseudo-Tie of the generating unit out of the CAISO Balancing Authority Area.

**2.2.1.10** The output of a Pseudo-Tie generating unit may be subject to real-time curtailments and Operating Instructions as defined in the CAISO Tariff as directed by the CAISO in accordance with Good Utility Practices.

**2.2.1.11** The CAISO may implement a moratorium on the establishment of new Pseudo-Ties associated with a particular Intertie in the event it determines that the volume of dynamic transfers could have an adverse effect on System Reliability. In the event the CAISO implements such a moratorium, the CAISO shall undertake studies to determine an appropriate allocation of the capacity of the affected Intertie to dynamic transfers.

### 2.2.2 Technical Requirements

**2.2.2.1** All applicable communication and telemetry requirements of the WECC, the CAISO, and the Balancing Authority for the Attaining Balancing Authority Area regarding generating units and inter-Balancing Authority Area interties must be satisfied, provided that the CAISO's communications and telemetry requirements for Generating Units in the CAISO Balancing Authority Area shall not be applicable, except that the owner of a generating unit that is a Pseudo-Tie out of the CAISO Balancing Authority Area shall provide meteorological data and forecast information from any wind or solar resource in accordance with the requirements for Eligible Intermittent Resources in Appendix Q (Eligible Intermittent Resources Protocol) of the CAISO Tariff and applicable Business Practice Manuals.

**2.2.2.2** Proper incorporation of the dynamic signal into all involved Balancing Authority Areas' ACE equations will be required.

**2.2.2.3** A Pseudo-Tie generating unit must be permanently associated with a particular pre-existing CAISO Intertie. If for any reason delivery cannot be made to the associated pre-existing CAISO Intertie, the CAISO may still treat the Energy from a Pseudo-Tie of a generating unit out of the CAISO Balancing Authority Area as deemed delivered to the owner of the Pseudo-Tie generating unit at an alternate designated Intertie with available capacity. The Balancing Authority for the Attaining Balancing Authority Area will immediately request emergency wheeling service from the CAISO under provisions of the inter-Balancing Authority agreement between the CAISO and that Balancing Authority to maintain the Pseudo-Tie generating unit schedule via the alternate designated Intertie. The owner of the Pseudo-Tie generating unit, or its designated Scheduling Coordinator, will reschedule the Pseudo-Tie generating unit Energy in the next available CAISO scheduling timeframe through the CAISO scheduling system, until the transmission path to the associated pre-existing CAISO Intertie is re-established. The owner of the Pseudo-Tie generating unit, or its designated Scheduling Coordinator, will be charged and will pay for the requested emergency use transmission and all associated CAISO charges, in accordance with the CAISO Tariff, for this emergency service.

**2.2.2.4** Only one dynamic transfer signal may be associated with a Pseudo-Tie generating unit.

**2.2.2.5** Should there be any need or requirement, whether operational or procedural, for the CAISO or the Balancing Authority for the Attaining Balancing Authority Area to make real-time adjustments to the CAISO's inter-Balancing Authority Area schedules at the pre-existing CAISO Intertie associated with the Pseudo-Tie generating unit (including curtailments), the dynamic transfer from the Pseudo-Tie generating unit shall be treated in the same manner as any CAISO Interchange Schedule at that pre-existing CAISO Intertie, and in accordance with any applicable operating instructions from any affected Participating Transmission Owner.

**2.2.2.6** Energy delivered from the Pseudo-Tie generating unit will be subject to all provisions of the Balancing Authority Area procedures of the Balancing Authority for the Attaining Balancing Authority Area.

### 2.2.3 Business Requirements

**2.2.3.1** For settlements, the Energy transferred dynamically from the Pseudo-Tie generating unit during an operating hour will be deemed delivered, for that operating hour.

**2.2.3.2** All Energy from a Pseudo-Tie generating unit interchange shall be subject to the CAISO Tariff Transmission Loss construct and billed accordingly to the owner of the Pseudo-Tie generating unit or the designated Scheduling Coordinator for the Pseudo-Tie generating unit, including any applicable transmission loss obligation charges in cases where the CAISO and another Balancing Authority have agreed on an assessment to the CAISO of supplemental losses incurred for the Energy outside of the CAISO Balancing Authority Area.

**2.2.3.3** The ISO shall assess the owner of a Pseudo-Tie generating unit or its designated Scheduling Coordinator all applicable market charges and Grid Management Charges in accordance with the CAISO Tariff.

**2.2.3.4** In the event of a line outage and a subsequent request by the Balancing Authority for the Attaining Balancing Authority Area for emergency Wheeling service from the CAISO to maintain deliveries of power to the Attaining Balancing Authority Area from the Pseudo-Tie generating unit, all CAISO Tariff market and GMC charges applicable to the resulting use of CAISO transmission service shall be applied for the duration of these events, inclusive of any related FMM Schedules.

**2.2.3.5** All Pseudo-Tie generating unit export schedules from the Attaining Balancing Authority Area shall be submitted by a certified Scheduling Coordinator into the CAISO Markets as coordinated import and export Wheeling Through Bids, at the designated pre-existing Intertie with the Attaining Balancing Authority Area associated with the Pseudo-Tie.

### 2.3 Operating Agreements

**2.3.1** A Pseudo-Tie of a generating unit out of the CAISO Balancing Authority Area shall be conditional on the facilitation by the Balancing Authority for the Attaining Balancing Authority Area of the Pseudo-Tie functionality in accordance with an operating agreement to be entered into between the Balancing Authority for the Attaining Balancing Authority Area and the CAISO specific to Pseudo-Tie functionality.

**2.3.2** The owner of a Pseudo-Tie generating unit shall comply with its contractual obligations with the owners of the facilities to which the Pseudo-Tie generating unit is interconnected and/or the Attaining Balancing Authority Area that affect in any way the ability of the owner of the Pseudo-Tie generating unit to perform its obligations under the CAISO Tariff and an agreement to be entered into between the owner of the Pseudo-Tie generating unit and the CAISO.

## 3. Pseudo-Ties of Shared Resources to the CAISO Balancing Authority Area

### 3.1 Eligibility

**3.1.1** An eligible Pseudo-Tie Generating Unit may qualify as a Pseudo-Tie of a shared Generating Unit if, in addition to all other applicable requirements, the shared Generating Unit also fulfills the requirements of this Section 3 of Appendix N. A shared Generating Unit that fulfills the additional requirements of this Section 3 of Appendix N may register as a Pseudo-Tie Generating Unit. Nothing in this Section 3 of Appendix N restricts a shared Generating Unit registered as a Pseudo-Tie Generating Unit from transitioning its participation in the CAISO Markets from a Pseudo-Tie Generating Unit to a System Resource, or vice versa, provided it has successfully registered as such with the CAISO and meets all the requirements of a System Resource.

**3.1.2** A Scheduling Coordinator must represent each Generating Unit share according to the rules applicable to the CAISO Market in which it will participate. A Scheduling Coordinator that represents a share of a Multi-Stage Generating Resource will not be required to register that share in accordance with Section 27.8, and the CAISO will not model any specific resource characteristic that it otherwise would model if the resource were registered as a Multi-Stage Generating Resource, or that represents a Forbidden Operating Region.

**3.1.3** A Scheduling Coordinator must separately register each Generating Unit share with the CAISO as an independent Generating Unit according to the rules applicable to the CAISO Market in which it will participate. If a resource share is located in a Native Balancing Authority Area that is an EIM Entity Balancing Authority Area and the share is not Pseudo-Tied to the CAISO Balancing Authority Area, the share must also register as an EIM Resource unless it is Pseudo-Tied to a Balancing Authority Area outside of the EIM Area or otherwise excluded from the EIM Entity Balancing Authority Area.

**3.1.4** The registration of the Pseudo-Tie Generating Unit must identify the allocation of key attributes in Schedule 1 of its Pseudo-Tie Participating Generator Agreement consistent with the allocation protocol methodology, including the allocation of telemetry, metered output, non-negative values for minimum output, Minimum Load Costs, Start-up Costs, and maximum output levels.

### 3.2 Allocation Protocol

**3.2.1** Each Scheduling Coordinator that represents a Generating Unit share participating in a CAISO Market as a Pseudo-Tie Generating Unit must operate in accordance with an allocation protocol. The resource owners must agree upon a shared resource allocation protocol that satisfies the CAISO allocation protocol requirements of this Section 3 of Appendix N, and they must appoint a Scheduling Coordinator as the protocol administrator. The Scheduling Coordinator appointed as

the protocol administrator will provide telemetry to CAISO, coordinate the shared logical metering procedure, and ensure that the combined operational characteristics of the shares do not exceed the associated physical capability of the resource. The obligations of the Scheduling Coordinator appointed as the protocol administrator are in addition to the obligations of a Scheduling Coordinator that represents any individual share.

**3.2.2** The CAISO will review the allocation protocol according to the timelines and implementation details established in the Business Practice Manuals, and will approve the allocation protocol prior to participation in a CAISO Market by the shared Generating Unit as a Pseudo-Tied Generating Unit if the allocation protocol meets the requirements of this Section 3 of Appendix N and the Business Practice Manuals. Any modifications proposed to the shared resource allocation protocol will only be effective following subsequent approval by the CAISO in accordance with the timelines and implementation details established in the Business Practice Manuals.

**3.2.3** The CAISO will have the right to require the Scheduling Coordinator appointed as the protocol administrator to submit documentation that demonstrates compliance with the allocation protocol. Each Scheduling Coordinator that represents a Generating Unit share that participates in a CAISO Market will remain individually responsible for compliance with the allocation protocol. The allocation protocol may also provide for an auditable self-monitoring compliance mechanism, such as regular reporting to CAISO to explain any matters of significance concerning administration of the allocation protocol.

**3.2.4** If the CAISO finds that the Pseudo-Tie Generating Unit materially deviates from its allocation protocol, the CAISO will notify the responsible Scheduling Coordinator and will suspend the Pseudo-Tie Generating Unit's participation in the CAISO Markets as a shared Generating Unit pursuant to this Section 3 of Appendix N pending a final determination of the CAISO's finding(s). Within five business days of the CAISO's notification, the Scheduling Coordinator must either: (1) object to the CAISO's determination and seek resolution of the disputed facts through the CAISO ADR Procedures; (2) or admit to the CAISO's findings. The suspension will remain in place until the dispute has been resolved. During the suspension period, the Pseudo-Tie Generating Unit may participate in the CAISO Markets as a System Resource, provided it has successfully registered as such with the CAISO and meets all the requirements of a System Resource. If the Scheduling Coordinator admits to the CAISO's findings or the CAISO ADR Procedures confirm the CAISO's findings, the CAISO will terminate the Pseudo-Tie Generating Unit from the Pseudo-Tie Participating Generator Agreement within two Business Days of the date on which either the Scheduling Coordinator admits to the CAISO's findings in writing, or CAISO ADR Procedures have reached a final determination supporting the CAISO's findings. Following termination, the Pseudo-Tie Generating Unit may participate in the CAISO Markets as a System Resource, provided it has successfully registered as such with the CAISO and meets all the requirements of a System Resource. If the final determination resulting from the CAISO ADR Procedures does not support the CAISO's findings, the CAISO will reinstate participation as a Pseudo-Tied Generating Unit consistent with the CAISO's procedures and requirements for participation in the CAISO Markets pursuant to this Section 3 of Appendix N.

**3.2.5** If the CAISO finds that the Pseudo-Tie Generating Unit's participation in the CAISO Markets, even if consistent with the allocation protocol, is exploiting or may exploit the Bid Cost Recovery mechanism to the benefit of the Scheduling Coordinator or is causing inequitable allocation of Bid Cost Recovery between the affected Balancing Authority Areas, the CAISO will notify the responsible Scheduling Coordinator and will suspend the Pseudo-Tie Generating Unit's participation in the CAISO Markets as a shared Generating Unit pursuant to this Section 3 of Appendix N pending a final determination of the CAISO's finding(s). During the suspension period, the Pseudo-Tie Generating Unit may participate in the CAISO Markets as a System Resource, provided it has successfully registered as such with the CAISO and meets all the requirements of a System Resource.

### 3.3 Telemetry

**3.3.1** The Scheduling Coordinator appointed as the protocol administrator must provide separate telemetry data for each Pseudo-Tie Generating Unit, EIM Resource or other resource share, in addition to telemetry data for the entire resource and any other telemetry data required for participation in the CAISO Markets, which will be tested and confirmed prior to participation in the CAISO Markets. Resource shares located in Balancing Authority Areas outside of the EIM Area that do not participate in a CAISO Market should also follow the telemetry process documented in the allocation protocol, in addition to any other telemetry requirements of the Native Balancing Authority Area.

### 3.4 Metering

**3.4.1** Generating Unit shares participating in a CAISO Market must establish a SQMD plan, which will be subject to approval by CAISO pursuant to the requirements for Scheduling Coordinator Metered Entities. The SQMD plan must:

(i) ensure that the sum of the calculated logical metered resource shares match the total output of the resource;
(ii) reflect that the logical metering for each share will follow the Dispatch Instruction to the extent feasible;
(iii) explain how a resource share deviation from a Dispatch Instruction will be managed, and confirm that Uninstructed Deviations assigned to a Generating Unit share delivered to the CAISO Balancing Authority Area will not exceed a pro-rata allocation proportional to the Instructed Imbalance Energy in each Settlement Interval; and
(iv) account for the allocation of Outages among the resource shares.

**3.4.2** The native EIM Entity will report its Meter Data for Settlement and E-Tags for Interchange accounting according to the general requirements applicable to EIM Entities. Meter Data for resource shares located in Balancing Authority Areas outside of the EIM Area that do not participate in a CAISO Market should follow the logical metering process documented in the SQMD plan submitted by the associated Pseudo-Tie Generating Unit, in addition to any other metering requirements of the Native Balancing Authority Area.

### 3.5 Outages

**3.5.1** If a Generating Unit participating in a CAISO Market experiences an Outage, each Scheduling Coordinator will be required to report the Outage for the Generating Unit share it represents according to the Outage reporting requirements of Section 9 or Section 29.9, as applicable. Allocation of an Outage among shares other than a proportional sharing of the Outage (*i.e.,* pro-rata based on the PMax of each share at the time of the Outage) must be supported by operational characteristics or pre-existing contractual obligations. The allocation protocol must identify the operational characteristics or pre-existing contractual obligations that may lead to disproportionate Outage allocation and describe the Outage allocation under such conditions and requirements, including the formula for calculating the Outage allocation among the shares.

### 3.6 Start-up Costs and Minimum Load Costs

**3.6.1** Start-Up Costs and Minimum Load Costs should be equitably allocated among the Generating Unit and the other shares based on the proportion of costs. The cost sharing proportions must be documented in the allocation protocol and include a description of how compliance will be monitored and verified in comparison to the overall costs. In general, the sum of the costs for each Generating Unit and the other shares must not exceed the total costs that would be represented if the shared resource were participating in a CAISO Market as a single resource.

# Appendix O

## CAISO Market Surveillance Committee

### 1. Introduction and Purpose

**1.1** There shall be established a Market Surveillance Committee (MSC) as a market advisor, whose role it shall be to provide independent external expertise on the CAISO market monitoring process and, in particular, provide independent expert advice and recommendations to the CAISO CEO and Governing Board.

### 2. Definitions

**2.1** This section intentionally left blank.

### 3. Independence and Oversight

**3.1** This section intentionally left blank.

### 4. Structure

**4.1** The MSC shall comprise a body of three or more independent and recognized experts whose combined professional expertise and experience shall encompass the following: (a) economics, with emphasis on antitrust, competition, and market power issues in the electricity industry; (b) experience in operational aspects of Generation and transmission in electricity markets; (c) experience in antitrust or competition law in regulated industries; and (d) financial expertise relevant to energy or other commodity trading.

**4.2** Members of the MSC shall be compensated on such basis as the CAISO Governing Board shall from time to time determine. Members of the MSC shall receive prompt reimbursement for all expenses reasonably incurred in the execution of their responsibilities under this Appendix O.

**4.3** Members of the MSC shall not be, and shall not be understood to be, employees or agents of the CAISO.

**4.4** For each position on the MSC, the CAISO CEO shall conduct a thorough search and requisite due diligence to develop a nomination to the CAISO Governing Board, which nomination shall be consistent with meeting the combined professional expertise and experience of the MSC set forth in Section 4.1 of this Appendix O and with the criteria for independence set forth in Section 9 of this Appendix O. The CAISO Governing Board shall expeditiously consider such nominations. If the nomination is approved, the CAISO CEO shall appoint the candidate so nominated to the MSC. If the nomination is rejected, the CAISO CEO shall expeditiously proceed to develop another nomination.

**4.5** No member of the MSC shall be liable to any Market Participant under any circumstances whatsoever for any matter, including but not limited to any financial loss or loss of economic advantage resulting from the performance or non-performance by the MSC of its functions under this CAISO Tariff.

### 5. Duties of the Market Surveillance Committee

**5.1** The MSC may, upon request of DMM, the CAISO management or the CAISO Governing Board, or on its own initiative, evaluate information and data described in Section 7.1 of this Appendix O, including as may be collected by DMM on the basis of the evaluation criteria developed by DMM or on such further articulated evaluation criteria developed by the MSC.

**5.2** The MSC may, upon request of DMM, the CAISO management or the CAISO Governing Board, or on its own initiative, recommend such changes as it believes are appropriate to the CAISO Tariff, any CAISO Business Practice Manual, any CAISO agreement or any Rules of Conduct applicable in accordance with Section 22.11 of this CAISO Tariff. The CAISO Governing Board shall consider and may adopt proposed CAISO Tariff changes in accordance with Section 22.11 of this CAISO Tariff.

**5.3** Upon request of the MSC, the CAISO shall publish reports and recommendations of the MSC or incorporate them, if consistent, into the CAISO's own reports or recommendations.

**5.4** The MSC may on its own initiative recommend that the CAISO impose Sanctions and penalties for violations of the CAISO Tariff and related protocols. Upon recommendation of the MSC, the CAISO may impose such Sanctions or penalties as it believes necessary and as are permitted under the CAISO Tariff and related protocols approved by FERC.

**5.5** The MSC may make such additional reports and recommendations as it sees fit relating to the monitoring program referred to in this CAISO Tariff, the analysis of information, the evaluation criteria or any corrective or enforcement actions proposed by DMM or proposed on its own initiative.

**5.6** The MSC may review in draft form, and provide pre-publication comment on, all quarterly and annual reports DMM produces pursuant to Section 5.2 of Appendix P.

**5.7** The MSC may review in draft form, and provide pre-submission comment on, all referrals to FERC pursuant to Sections 11 and 12 of Appendix P.

**5.8** The MSC may not participate in the administration of CAISO's tariff or conduct prospective market mitigation.

## 6. Duties of the CAISO.

**6.1** CAISO responsibilities not expressly assigned to the MSC, DMM, or any specific individual or entity in this Appendix O remain with the CAISO.

## 7. Data Access, Collection, and Retention

**7.1** The MSC shall review the initial catalogs of information and data and of evaluation criteria developed by DMM pursuant to Sections 7.4 and 7.5 of Appendix P and shall propose such changes, additions or deletions to such catalogs or items therein as it sees fit. In so doing, the MSC shall have full discretion to specify database items or evaluation criteria for inclusion in the pertinent catalog.

## 8. Information Sharing

**8.1** All evaluations carried out by the MSC pursuant to Section 5.1 of this Appendix O, and any recommendations emanating from such evaluations, shall be embodied by the MSC in written reports to the CAISO CEO and CAISO Governing Board, and DMM, and shall be made publicly available subject to due restrictions on dissemination of confidential or commercially sensitive information. The MSC may submit any MSC report to FERC, subject to due restrictions on dissemination of confidential or commercially sensitive information.

## 9. Ethics

**9.1** Members of the MSC shall have no professional or commercial affiliation with a Market Participant where such affiliation would tend to affect, or give the appearance of affecting, their judgment in the performance of their duties.

**9.2** Members of the MSC shall not serve as officers, employees, or partners of a Market Participant.

**9.3** Members of the MSC shall have no material financial interest in any Market Participant or affiliate, with the exception of mutual funds and non-directed investments.

**9.4** Members of the MSC shall not engage in any market transactions other than in the performance of their duties under the CAISO Tariff.

**9.5** Members of the MSC shall not be compensated, other than by CAISO, for any expert witness testimony or other commercial services in connection with any legal or regulatory proceeding or commercial transaction relating to the CAISO.

**9.6** Members of the MSC shall not accept from a Market Participant any item with a value in excess of $25.

**9.7** Members of the MSC shall advise the CAISO Governing Board in the event they seek employment with a Market Participant, and must disqualify themselves from participating in any matter that would have an effect on the financial interest of the Market Participant.

**9.7.1** For the purposes of this provision, the term "seeking employment" shall have the same meaning it does in 5 CFR § 2635.603, or its successor provision.

## 10. CAISO-Specific Provisions

**10.1** This section intentionally left blank.

## 11. Protocol on Referrals of Investigations to the Office of Enforcement

**11.1** This section intentionally left blank.

## 12. Protocol on Referrals of Perceived Market Design Flaws and Recommended Tariff Changes to the Office of Energy Market Regulation

**12.1** This section intentionally left blank.

# Appendix P

# CAISO Department of Market Monitoring

## 1 Introduction and Purpose

### 1.1 Establishment

There shall be established within the CAISO a Department of Market Monitoring (DMM).

### 1.2 Mission Statement

To provide independent oversight and analysis of the CAISO Markets for the protection of consumers and Market Participants by the identification and reporting of market design flaws, potential market rule violations, and market power abuses.

## 2 Definitions

**2.1** This section intentionally left blank.

## 3 Independence and Oversight

### 3.1 Department of Market Monitoring

DMM shall report to the CAISO Governing Board on all matters pertaining to the core monitoring duties specified under Section 5 of this Appendix P, and for administrative purposes, including matters relating to the internal administration of DMM. DMM shall have direct access to the individual CAISO Governing Board members at any time. DMM shall advise the CAISO Governing Board about DMM's independent analysis of the CAISO's markets and its independent identification of market design flaws and market power abuses, and DMM also shall inform CAISO management about such matters.

**3.2** The CAISO may not alter any reports generated by DMM or dictate the conclusions reached by DMM. The CAISO may, however, comment upon drafts of DMM reports where such right is otherwise conferred by this CAISO Tariff.

**3.3** The employment of the Director of DMM shall not be terminated without the approval of the CAISO Governing Board.

## 4 Structure

**4.1** DMM shall be adequately staffed by the CAISO with full-time CAISO staff with the experience and qualifications necessary to fulfill the functions referred to in this CAISO Tariff. Such qualifications may include professional training pertinent to and experience in the operation of markets analogous to CAISO Markets, in the electric power industry, and in the field of competition and antitrust law, economics and policy. Subject to the CAISO Governing Board's oversight responsibilities as defined in this CAISO Tariff, responsibility for overseeing the conduct and operations of DMM shall be conferred upon the Director of DMM.

**4.2** Neither DMM nor any DMM employee shall be liable to any Market Participant under any circumstances whatsoever for any matter, including but not limited to any financial loss or loss of economic advantage resulting from the performance or non-performance by DMM of its functions under this CAISO Tariff.

**4.3** CAISO shall provide DMM access to the resources, personnel, and consulting assistance (internal and external) sufficient to enable DMM to carry out its duties independently as defined under this Appendix P. The CAISO shall ensure DMM personnel meet the general employment requirements applicable to CAISO employees.

## 5 Duties of Market Monitor

### 5.1 Review of Market Rules

DMM shall review existing and proposed market rules, tariff provisions, and market design elements and recommend proposed rule and tariff changes to the CAISO, the CAISO Governing Board, FERC staff, the California Public Utilities Commission, Market Participants, and other interested entities.

**5.1.1** DMM's review shall include, but is not limited to, identification of flaws in the overall structure of the CAISO Markets that may reveal undue concentrations of market power or other structural flaws.

**5.1.2** DMM's responsibility to propose market design changes shall not extend to effectuating its proposed market design itself.

**5.1.3** DMM must limit distribution of its identifications and recommendations to CAISO, the CAISO Governing Board, and FERC staff in the event that DMM believes broader dissemination of its identifications and recommendations could lead to exploitation of the identified market rule or design flaw. Where DMM so limits the distribution, it shall explain to FERC staff why further dissemination should be avoided.

**5.1.4** Section 5.1 of this Appendix P shall not be understood to impose upon DMM the obligation to conduct an independent evaluation of every existing market rule, tariff provision, and market design element. DMM need only report on market rule, tariff, or market design elements it otherwise believes merit evaluation and scrutiny.

**5.1.5** Per a request from the CAISO, or on its own initiative, DMM may provide a draft version of any report DMM prepares under Section 5.1 of this Appendix P to the CAISO for comment. DMM may, but shall not be required to, amend its report in light of such comment.

**5.1.6** Any report DMM makes under Section 5.1 of this Appendix P is advisory in nature and does not obligate the CAISO to effectuate the recommended market rule, tariff, or market design change.

**5.1.7** Where the CAISO disagrees with DMM's recommendation pursuant to Section 5.1 of this Appendix P or DMM disagrees with a proposed market rule, tariff, or market design change, CAISO shall notify the FERC of such disagreement. Such notification shall be made in writing to FERC's Director of the Office of Energy Market Regulation.

### 5.2 Review of Market Trends and Performance

DMM shall review and report on market trends and the performance of the wholesale markets to the CAISO, the CAISO Governing Board, FERC staff, the California Public Utilities Commission, Market Participants, and other interested entities, on at least a quarterly basis and submit a more comprehensive annual state of the market report. Unless urgency requires otherwise, all annual and quarterly reports shall first be submitted to the MSC for review.

**5.2.1** In conjunction with the annual and quarterly reports issued under Section 5.2 of this Appendix P, DMM shall hold conference calls with FERC staff, staff of the California Public Utilities Commission, Market Participants, and other interested entities to discuss market trends and the

performance of the wholesale markets.

**5.3** With the exception of those CAISO Tariff provisions enumerated in Section 11.1.3 of this Appendix P, DMM shall identify and notify the FERC's Office of Enforcement staff of instances in which a Market Participant's behavior or the behavior of the CAISO itself is suspected to constitute a Market Violation.

**5.4** DMM shall consider any information or complaint a Market Participant may make concerning any matter that it believes may be relevant to DMM's monitoring responsibilities. Such submissions or complaints may be made on a confidential basis in which case DMM shall preserve the confidentiality thereof. DMM, at its discretion, may request further information from such entity and carry out any investigation that it considers appropriate as to the concern raised. DMM shall periodically make reports to the CAISO CEO and CAISO Governing Board on complaints received.

**5.5** Prohibition on Tariff Administration and Market Mitigation - DMM shall not participate in the administration of the CAISO Tariff or conduct prospective market mitigation.

**5.5.1** For the purposes of Section 5.5 of this Appendix P, the term "prospective market mitigation" shall have the same meaning as provided in FERC Order No. 719, P 375.

**5.5.2** DMM may conduct retrospective mitigation to the extent it is otherwise permitted to do so under this CAISO Tariff.

**5.5.3** DMM may provide the inputs required for CAISO to conduct any prospective mitigation that is otherwise permitted under this CAISO Tariff. Such inputs may include, but are not limited to, Default Energy Bids, identification of competitive Transmission Constraints, and cost calculations.

## 6 Duties of the CAISO

**6.1** CAISO responsibilities not expressly assigned to the MSC, DMM, or any specific individual or entity in this Appendix P remain with the CAISO.

## 7 Data Access, Collection, and Retention

**7.1** The CAISO shall provide DMM access to the CAISO's databases of market information and any other market data necessary to enable DMM to carry out its duties as defined under this Appendix P.

**7.2** Any data created by DMM, including, but not limited to, reconfiguring of the CAISO's data, will be kept within the exclusive control of DMM. This requires that the CAISO must ensure that DMM has control over which parties have access to the data, as well as control over the format and configuration of such data.

**7.3** DMM shall be responsible for developing an information system and criteria for evaluation that will permit it to effectively monitor the CAISO Markets to identify and investigate abuses of that market, whether caused by exercises of market power or by other actions or inactions.

**7.4** To develop the information system set forth in Section 7.3 of this Appendix P, DMM shall initially develop, and shall refine on the basis of experience, a detailed catalog of all the categories of data it will have the means of acquiring, and the procedures it will use (including procedures for protecting confidential data) to handle such data.

**7.5** DMM shall initially develop, and shall refine on the basis of experience, a catalog of the CAISO Market monitoring indices that it will use to evaluate the data so collected.

**7.6** DMM shall evaluate and reevaluate on an ongoing basis the data categories and market monitoring indices that it has developed under Sections 7.4 and 7.5 of this Appendix P, and the information it collects and receives from various other sources, including and in particular the CAISO's operation of the CAISO Markets. Such ongoing evaluations shall provide the basis for its reporting and publication responsibilities as set forth in this CAISO Tariff, for recommendations on proposed changes to this CAISO Tariff and CAISO Business Practice Manuals and other potential rules affecting the CAISO Markets, and for the development of criteria or standards for the initiation of proposed corrective or enforcement actions. In evaluating such information, the DMM may consult the MSC or such external bodies as may be appropriate.

## 8 Information Sharing

**8.1** Tailored Requests for Information from a State Commission to DMM - DMM shall consider requests from a State Commission for specifically identified information or data concerning general market trends and the performance of the wholesale markets. DMM may deny a request when it determines, in its sole discretion, that complying with a request would be unreasonably burdensome or if it would interfere with the core market monitoring functions of DMM as defined in Section 5 of this Appendix P. For the avoidance of doubt, this Section 8.1 of Appendix P shall not apply to otherwise enforceable subpoenas, court orders, or any other form of compulsory process issued by, or on behalf of, a State Commission.

**8.1.1** DMM may agree to provide information about general market trends or performance. If DMM determines, in its sole discretion, that this information either is market sensitive or identifies an individual Market Participant, then the information may be shared only if the State Commission with which the information will be shared agrees in writing with the CAISO that the information will not be disclosed unless the State Commission has been directed to do so by a court of competent jurisdiction. The written agreement also must specify that if a State Commission is so directed to disclose such information, the State Commission will notify the CAISO before such information is disclosed. Once the CAISO receives such notification, the CAISO must notify the affected Market Participant promptly.

**8.1.2** DMM may agree to release to a State Commission raw CAISO data, but only after the information is redacted to satisfy any concerns that DMM may have about the need to maintain confidentiality.

**8.1.2.1** If DMM agrees to provide a State Commission with raw data that pertains to a specific Market Participant, DMM shall notify the affected Market Participant and give it the opportunity to contest the accuracy of the data. The affected Market Participant may provide to DMM a written statement providing context to the data. So long as the process of providing such a written statement does not unduly delay release of the data to the State Commission, DMM shall provide an unedited copy of such written statement to the State Commission concurrently with DMM's submission of the data to the State Commission.

**8.1.2.2** If the affected Market Participant asserts that the data to be provided is commercially sensitive, DMM shall share such sensitive information or data only if the State Commission with which the information will be shared agrees in writing with the CAISO that the information shared will not be disclosed unless the State Commission has been directed to do so by a court of competent jurisdiction. The written agreement also must specify that if a State Commission is so directed to disclose such information, the State Commission will notify the CAISO before such information is disclosed. Once the CAISO receives such notification, the CAISO must notify the affected Market Participant promptly.

**8.1.3** DMM shall not provide any requested information or data that is designed to aid an enforcement action by an instrumentality or political subdivision of any state of the United States of America.

**8.1.4** DMM shall not provide any requested information or data that would impinge on FERC's confidentiality rules regarding referrals to FERC pursuant to Sections 11 or 12 of this Appendix P.

**8.2** When publicly available reports are made to one regulatory agency with competent jurisdiction, such as the FERC, DMM may simultaneously make such reports available to other regulatory agencies with legitimate interests in their contents, such as the California Public Utilities Commission, the California Energy Commission and/or the California Attorney General.

**8.3** The final results of DMM's ongoing evaluations under Section 7.6 of this Appendix P shall routinely and promptly be submitted to the MSC for comment.

**8.4** The catalogs of data and indices developed pursuant to Sections 7.4 and 7.5 of this Appendix P shall be duly published on the CAISO Website and disseminated to all Market Participants.

**8.5** Collection and Dissemination of Information Specific to a Market Participant

**8.5.1** DMM may request that Market Participants or other entities whose activities may affect the operation of the CAISO Markets submit any information or data determined by DMM to be potentially relevant. This data will be subject to due safeguards to protect confidential and commercially sensitive data. Failures by Market Participants to provide such data shall be treated under Section 37 of the CAISO Tariff. In the event of failures by other entities to provide such data, the CAISO may take whatever action is available to it and appropriate for it to take, including reporting the failure to the pertinent regulatory agency, after providing such entity the opportunity to respond in writing as to the reason for the alleged failure and may include possible exclusion from the CAISO Markets or termination of any relevant CAISO agreements or certifications. Before any such action is taken, the CAISO Market Participant shall be provided the opportunity to respond in writing as to the reason for the alleged failure.

**8.5.2** Any Market Participant may request that the CAISO provide data, including data that DMM has collected under Section 8.5.1 of this Appendix P, that the CAISO has collected concerning that Market Participant. Subject to constraints on the CAISO's resources, subject to Section 7.2 of this Appendix P, and at the CAISO's sole discretion, such data may be provided by the CAISO subject to due safeguards to protect confidential and commercially sensitive data. Where such activity imposes a significant burden or expense on the CAISO, the data may be provided on the condition that a reasonable contribution to the cost incurred by the CAISO is made to the CAISO by the requesting party.

**8.6** Information related to the Transmission Planning Process in accordance with Section 24 of the CAISO Tariff the release of which DMM determines may harm competitive markets shall be deemed confidential.

**9 Ethics.**

**9.1** DMM employees shall have no professional or commercial affiliation with a Market Participant where such affiliation would tend to affect, or give the appearance of affecting, their judgment in the performance of their duties.

**9.2** DMM employees shall not serve as officers, employees, or partners of a Market Participant.

**9.3** DMM employees shall have no material financial interest in any Market Participant or affiliate, with the exception of mutual funds and non-directed investments.

**9.4** DMM employees shall not engage in any market transactions other than in the performance of their duties under the CAISO Tariff.

**9.5** DMM employees shall not be compensated, other than by CAISO, for any expert witness testimony or other commercial services in connection with any legal or regulatory proceeding or commercial transaction relating to the CAISO.

**9.6** DMM employees shall not accept from a Market Participant any item with a value in excess of $25.

**9.7** DMM employees shall advise a supervisor (or in the case of the Director of DMM, the CAISO Governing Board) in the event they seek employment with a Market Participant, and must disqualify themselves from participating in any matter that would have an effect on the financial interest of the Market Participant.

**9.7.1** For the purposes of this provision, the term "seeking employment" shall have the same meaning it does in 5 CFR § 2635.603, or its successor provision.

**9.8** DMM employees shall comply with the CAISO Code of Conduct for employees, as amended from time to time.

## 10 CAISO-Specific Provisions.

**10.1** This section intentionally left blank.

## 11 Protocol on Referrals of Investigations to the Office of Enforcement.

**11.1** DMM shall make a non-public referral to FERC in all instances where DMM has reason to believe that a Market Violation has occurred. DMM's non-public referral shall provide sufficient credible information to warrant further investigation by FERC. Once DMM has obtained sufficient credible information to warrant referral to FERC, DMM shall immediately refer the matter to FERC and desist from independent action related to the alleged Market Violation. DMM may, however, continue to monitor for any repeated instances of the activity by the same or other entities, which would constitute new Market Violations. DMM shall respond to requests from FERC for any additional information in connection with the alleged Market Violation it has referred.

**11.1.1** The decision to make such a referral is committed to the sole discretion of DMM. In all such cases of direct referral, DMM shall promptly inform the CAISO Governing Board, the MSC and the CAISO CEO of the fact of and the content of the referral.

**11.1.2** For the avoidance of doubt, the CAISO itself is subject to referral by DMM.

**11.1.3** Section 11.1 of this Appendix P notwithstanding, DMM shall not refer to FERC a suspected violation of the following provisions of Section 37 of this CAISO Tariff: 37.4.1, 37.4.2, 37.5.2, 37.6.1, 37.6.2, 37.6.3, and 37.7. Where conduct also constitutes a Market Violation that DMM shall not refer to FERC and DMM has reason to believe that the same conduct represents a Market Violation other than a Market Violation that, per this Section 11.1.3, DMM shall not refer to FERC, then DMM shall make a non-public referral to FERC only of the Market Violation that it is not prohibited from referring to FERC.

**11.2** All referrals to FERC of alleged Market Violations are to be in writing, whether transmitted electronically or by fax, mail, or courier. DMM may alert FERC orally in advance of the written referral.

**11.3** The referral is to be addressed to FERC's Director of the Office of Enforcement, with a copy also directed to both the Director of the Office of Energy Market Regulation and the General Counsel.

**11.4** The referral is to include, but need not be limited to, the following information.

**11.4.1** The name[s] of and, if possible, the contact information for, the entity[ies] that allegedly took the action[s] that constituted the alleged Market Violation[s];

**11.4.2** The date[s] or time period during which the alleged Market Violation[s] occurred and whether the alleged wrongful conduct is ongoing;

**11.4.3** The specific rule or regulation, and/or tariff provision, that was allegedly violated, or the nature of any inappropriate dispatch that may have occurred;

**11.4.4** The specific act[s] or conduct that allegedly constituted the Market Violation;

**11.4.5** The consequences to the market resulting from the acts or conduct, including, if known, an estimate of economic impact on the market;

**11.4.6** If DMM believes that the act[s] or conduct constituted a violation of the anti-manipulation rule of Part 1c, a description of the alleged manipulative effect on market prices, market conditions, or market rules;

**11.4.7** Any other information DMM believes is relevant and may be helpful to FERC.

**11.5** Following a referral to FERC, DMM is to continue to notify and inform FERC of any information that DMM learns of that may be related to the referral but DMM shall not undertake any investigative steps regarding the referral except at the express direction of FERC or FERC Staff.

**12 Protocol on Referrals of Perceived Market Design Flaws and Recommended Tariff Changes to the Office of Energy Market Regulation.**

**12.1** DMM is to make a referral to FERC in all instances where it has reason to believe market design flaws exist that it believes could effectively be remedied by rule or tariff changes. DMM must limit distribution of its identifications and recommendations to CAISO, the CAISO Governing Board, and to FERC in the event it believes broader dissemination could lead to exploitation of the market design flaw, with an explanation of why further dissemination should be avoided at that time.

**12.2** All referrals to FERC relating to perceived market design flaws and recommended tariff changes are to be in writing, whether transmitted electronically or by fax, mail, or courier. DMM may alert FERC orally in advance of the written referral.

**12.3** The referral should be addressed to FERC's Director of the Office of Energy Market Regulation, with copies directed to both the Director of the Office of Enforcement and the General Counsel.

**12.4** The referral is to include, but need not be limited to, the following information.

**12.4.1** A detailed narrative describing the perceived market design flaw[s];

**12.4.2** The consequences of the perceived market design flaw[s], including, if known, an estimate of economic impact on the market;

**12.4.3** The rule or tariff change(s) that DMM believes could remedy the perceived market design flaw;

**12.4.4** Any other information DMM believes is relevant and may be helpful to FERC.

**12.5** Following a referral to FERC, DMM is to continue to notify and inform FERC of any additional information regarding the perceived market design flaw, its effects on the market, any additional or modified observations concerning the rule or tariff changes that could remedy the perceived design flaw, any recommendations made by DMM to CAISO, stakeholders, Market Participants or state commissions regarding the perceived design flaw, and any actions taken by CAISO regarding the perceived design flaw.

# Appendix Q

# Eligible Intermittent Resources Protocol (EIRP)

## 1 SCOPE

### 1.1 Scope of Application to Parties

This EIRP applies to the CAISO and to:

(a) Scheduling Coordinators (SCs);

(b) Eligible Intermittent Resources that are not certified as Participating Intermittent Resources;

(c) Participating Intermittent Resources; and

(d) Hybrid Resources with a wind generation or solar generation component.

### 1.2 Liability of the CAISO

Any liability of the CAISO arising out of or in relation to this EIRP shall be subject to Section 14 of the CAISO Tariff as if references to the CAISO Tariff were references to this EIRP.

## 2 REQUIREMENTS FOR ELIGIBLE INTERMITTENT RESOURCES, PARTICIPATING INTERMITTENT RESOURCES, AND HYBRID RESOURCES WITH VARIABLE COMPONENT

### 2.1 No Mandatory Participation

Eligible Intermittent Resources may elect to be scheduled and settled as the CAISO Tariff provides for Generating Units, and are not required to seek certification as Participating Intermittent Resources.

### 2.2 Minimum Certification Requirements

Eligible Intermittent Resources, Participating Intermittent Resources, and Hybrid Resources with a variable component must meet the following requirements, as applicable.

#### 2.2.1 Agreements

The following agreements must be executed by the owner or operator of any Eligible Intermittent Resource, unless that resource is not subject to any of these agreements pursuant to the CAISO Tariff, such as an Eligible Intermittent Resource of an MSS Operator:

(a) A Participating Generator Agreement, Net Scheduled PGA, Dynamic Scheduling Agreement for Scheduling Coordinators, or Pseudo-Tie Participating Generator Agreement that, among other things, binds the Eligible Intermittent Resource to comply with the CAISO Tariff; and

(b) A Meter Service Agreement for CAISO Metered Entities, for all Eligible Intermittent Resources other than Dynamic System Resources.

If an Eligible Intermittent Resource intends to become a Participating Intermittent Resource, it must also execute a letter of intent, which when executed and delivered to the CAISO shall initiate the process of certifying the Participating Intermittent Resource. The form of the letter of intent shall be specified by the CAISO in a Business Practice Manual or on the CAISO website.

Hybrid Resources with a variable component must execute all agreements that are otherwise required in this CAISO tariff.

### 2.2.2 Composition of a Participating Intermittent Resource

The CAISO shall develop criteria to determine whether one or more Eligible Intermittent Resources may be included within a Participating Intermittent Resource. Such criteria shall include:

(a) A Participating Intermittent Resource must be at least one-half (.5) MW rated capacity.

(b) A Participating Intermittent Resource may include one (1) or more Eligible Intermittent Resources that have similar response to weather conditions or other variables relevant to forecasting Energy, as determined by the CAISO.

(c) Each Participating Intermittent Resource shall be electrically connected at a single point on the CAISO Controlled Grid, except as otherwise permitted by the CAISO on a case-by-case basis as may be allowed under the CAISO Tariff. Interconnection to a portion of the CAISO Controlled Grid outside or not contiguous to the CAISO Balancing Authority Area does not make an Eligible Intermittent Resource that is a Dynamic System Resource or Pseudo-Tie Generating Unit eligible to be included within a Participating Intermittent Resource.

(d) The same Scheduling Coordinator must schedule all Eligible Intermittent Resources aggregated into a single Participating Intermittent Resource.

### 2.2.3 Equipment Installation

Eligible Intermittent Resources and Hybrid Resources with a variable component must install and maintain the communication equipment required pursuant to Section 3 of this EIRP, and the equipment supporting forecast data required pursuant to Section 4 of this EIRP.

### 2.2.4 Forecast Model Validation

The CAISO must determine that sufficient historic and real-time telemetered data are available to support an accurate and unbiased forecast of Energy generation by a Participating Intermittent Resource, according to the forecasting process validation criteria described in Section 4 of this EIRP.

### 2.2.5 [Not Used]

## 2.3 Notice of Certification of a Participating Intermittent Resource

When all requirements described in Section 2.2 of this EIRP applicable to Participating Intermittent Resources have been fulfilled, the CAISO shall notify the Scheduling Coordinator and the representatives of the Eligible Intermittent Resources comprising the Participating Intermittent Resource that the Participating Intermittent Resource has been certified, and is eligible for the settlement terms provided under Section 11.12 of the CAISO Tariff, as conditioned by the terms of this EIRP.

## 2.4 Additional Requirements

### 2.4.1 Forecast Fee

An Eligible Intermittent Resource must pay the Forecast Fee for all metered Energy generated by

the Eligible Intermittent Resource, as specified in CAISO Tariff Appendix F, Schedule 4. A Hybrid Resource with a variable component must pay the Forecast Fee for all metered Energy generated by variable component, as specified in CAISO Tariff Appendix F, Schedule 4, if it elects, per section 3.1 of this EIRP, to have the CAISO produce a forecast of the output of the Hybrid Resource's variable component.

### 2.4.2 Modification of Participating Intermittent Resource Composition

A Participating Intermittent Resource may seek to modify the composition of the Participating Intermittent Resource (e.g., by adding or eliminating an Eligible Intermittent Resource from the Participating Intermittent Resource). Such changes shall not be implemented without prior compliance with the written approval by the CAISO. The CAISO will apply consistent criteria and expeditiously review any proposed changes in the composition of a Participating Intermittent Resource.

### 2.4.3 Changes in Scheduling Coordinator

This EIRP does not impose any additional requirement for CAISO approval to change the Scheduling Coordinator for an approved Participating Intermittent Resource than would otherwise apply under the CAISO Tariff to changes in the Scheduling Coordinator representing a Generating Unit.

### 2.4.4 Continuing Obligation

Eligible Intermittent Resources (including Participating Intermittent Resources) and Hybrid Resources with a variable component have a continuing obligation to meet all applicable obligations established under the CAISO Tariff and this EIRP, and must fully cooperate in providing all data, other information, and authorizations the CAISO reasonably requests to fulfill its obligation to validate forecast models and explain deviations.

### 2.4.5 Failure to Perform

If the CAISO determines that a material deficiency has arisen in the Participating Intermittent Resource's fulfillment of its obligations under the CAISO Tariff and this EIRP, and such Participating Intermittent Resource fails to promptly correct such deficiencies when notified by the CAISO, then the eligibility of the Participating Intermittent Resource for the settlement accommodations provided in Section 11.12 of the CAISO Tariff shall be suspended until such time that the unavailable data is provided or other material deficiency is corrected to the CAISO's reasonable satisfaction. Such suspension shall not relieve the Scheduling Coordinator for the deficient Participating Intermittent Resource from paying the Forecast Fee over the duration of the period covered by the letter of intent described in Section 2.2.1(c) of this EIRP.

## 3 COMMUNICATIONS

### 3.1 Forecast Data - Wind

The CAISO may require various data relevant to forecasting Energy from an Eligible Intermittent Resource or Hybrid Resource with a variable component to be telemetered to the CAISO, including appropriate operational data, meteorological data or other data reasonably necessary to forecast Energy.

In order for the CAISO to forecast Energy, an Eligible Intermittent Resource or Hybrid Resource with a variable component must provide the CAISO with MW production data and meteorological data as outlined in this Eligible Intermittent Resources Protocol. This data must be collected for a minimum of thirty (30) consecutive days and be of sufficient quality as determined by a CAISO to produce a state of the art forecast.

A Hybrid Resource with a wind generation or solar generation component may elect to provide its own forecasted production in lieu of a CAISO forecast but such election does not relieve the resource of the obligation to provide production data and meteorological data as otherwise required in this Eligible Intermittent Resources Protocol.

### 3.1.1 Wind Generation Meteorological Station Requirements

Each wind Eligible Intermittent Resource or Hybrid Resource with a wind generation component must install and maintain equipment required by the CAISO to support accurate power generation forecasting and the communication of such forecast, meteorological, and other required data to the CAISO consistent with the timeframes specified in this Eligible Intermittent Resource Protocol.

**3.1.1.1** Each wind Eligible Intermittent Resource or Hybrid Resource with a wind generation component shall install a minimum of one meteorological station to measure barometric pressure, temperature, wind speed and direction. If such a resource has a rated capacity of five (5) MW or greater, then the resource shall install a minimum of two meteorological stations to measure barometric pressure, temperature, wind speed and direction. If an Eligible Intermittent Resource or Hybrid Resource with a wind generation component, as part of compliance with any other contractual or regulatory requirement outside of this Eligible Intermittent Resource Protocol, provides data from more than the two required meteorological stations to an entity other than the CAISO, then the resource must also submit data from any additional meteorological station to the CAISO.

**3.1.1.2** Each wind Eligible Intermittent Resource or Hybrid Resource with a wind generation component shall locate its meteorological station(s) on the windward side of the wind farm. Each such resource must install one meteorological station at the average hub height of the wind turbines. Hub height is the distance from the ground to the center of the turbine axis. If a second meteorological station is required, then it may be so co-located with the primary station. The approximate distance separating the primary station and the secondary station shall be an average of one (1) rotator blade length. Where placement of the meteorological station(s) in accordance with this Eligible Intermittent Resource Protocol would reduce production or violate a local, state, or federal statute, regulation or ordinance, the CAISO, in coordination with any applicable forecast service provider, will coordinate with the resource to identify an acceptable placement of the meteorological station.

**3.1.1.3** The use of SODAR[1] and/or LIDAR[2] equipment may be an acceptable substitute for wind direction and velocity only after obtaining prior agreement from the CAISO.

**3.1.1.4** Wind Eligible Intermittent Resources and Hybrid Resources with a wind generation component may not satisfy the meteorological station location requirements through a sharing agreement with another resource.

### 3.1.2 Wind Generation Meteorological Data Requirements

Table Q-1 details the units and accuracy of measurements for telemetry data points wind Eligible Intermittent Resources and Hybrid Resources with a wind generation component must send to the CAISO in real time (i.e., every 4 seconds).

Table Q-1 Wind Telemetry Data Points

[1] SODAR means Sonic Detection and Ranging- a meteorological instrument also known as a wind profiler which measures the scattering of sound waves by atmospheric turbulence.

[2] LIDAR means Light Detection and Ranging - a meteorological instrument which measures the properties of scattered light waves caused by atmospheric turbulence.

| Element | Device(s) Needed | Units | Accuracy |
|---|---|---|---|
| Wind Speed<br>(Meter / Second) | Anemometer, wind vane and wind mast | m/s | ± 2m/s |
| Air Temperature<br>(Degrees Celsius) | Temperature probe & shield for ambient temp | $^0$C | ± 1$^0$ |
| Barometric Pressure<br>(hecto Pascals) | Barometer | hPA | ± 60 hPa |
| Real Time Data | | MWs* | |
| High Sustainable Limit (for Hybrid Resources with a wind generation component and wind EIRs that are a Co-located Resource | | MWs** | |

* Hybrid Resources with a wind generation component must provide MW values through telemetry for both the wind generation component and the overall Hybrid Resource

** High Sustainable Limit may be updated every 12 seconds.

### 3.1.3 Designated Turbines

For any wind eligible Intermittent Resource or Hybrid Resource with a wind generation component, designated turbines are required to improve forecast accuracy within a wind park. The CAISO shall identify a designated turbine, from which the resource shall provide nacelle wind speed and wind direction every four seconds. Wind EIRs with a PGA or NS PGA that are operating or have final regulatory approvals to construct as of November 1, 2018, that have wind turbines without nacelle anemometers need not comply with the requirements of this section for Designation Turbines. However, when the wind EIR repowers or replaces a portion of its existing wind turbines, then the Wind EIR must become compliance with the requirements of this section for Designated Turbines.

### 3.1.4 Topographical Map

A wind Eligible Intermittent Resource or Hybrid Resource with a wind generation component must submit a topographical map that illustrates the location and height for each wind turbine within a wind park. The map must identify all meteorological stations and turbine location by latitude and longitude and should be in degrees/decimals using WGS84 geodetic datum only.

### 3.1.5 Site Information

A wind Eligible Intermittent Resource or Hybrid Resource with a wind generation component must provide the site information specified below in the manner and format as specified through the CAISO new resource implementation process. Latitude and Longitude should be in degrees/decimals using WGS84 geodetic datum only.

1. Park Potential (MW; numeric-float field [example: 100.5])
2. Resource Project Corner Coordinates in WGS84 format
3. Meteorological Station ID Numbers
4. Meteorological Station Coordinates in WGS84 format
5. Address
6. Resource ID
7. MW Generation Capacity
8. Plant Location (Latitude and Longitude in WGS84)
9. Lidar or Sodar (required)
10. Make (required; alphanumeric)
11. Model (required; alphanumeric)
12. Wind Speed (Anemometer) (required; alphanumeric)
13. Wind Direction (Anemometer) (required; alphanumeric)
14. Air Temperature (required; alphanumeric)
15. Barometric Pressure (required; alphanumeric)
16. Wind Turbine Group Numbers
17. Turbine Specifications:
18. Number of Turbines (numeric field)
19. Turbine Manufacturer (alphanumeric field)
20. Turbine Model (alphanumeric field)
21. Turbine Maximum Generation Capacity (numeric field)
22. Turbine Height Above Ground Level (numeric field)
23. Cut in Speed (numeric field; in m/s)
24. Cut Out Speed (numeric field; in m/s)
25. Cold Weather Package (Yes or No Dropdown)
26. Hot Weather Package (Yes or No Dropdown)
27. Low Temperature Cut Out (numeric field)
28. High Temperature Cut Out (numeric field)
29. Wind Turbine ID Numbers (alphanumeric field)
30. Elevation (numeric field; in meters)
31. Hub Height. (numeric field; in meters)
32. Turbine(s) Latitude(s) and Longitude(s) Coordinates (WGS84 Coordinate Field)
33. Turbine ID
34. Turbine Latitude and Longitude
35. Turbine Elevation
36. Turbine Hub Height
37. Turbine Group Number

### 3.1.6 Shape-File Submission

Each wind Eligible Intermittent Resource and Hybrid Resource with a wind generation component must submit a shape-file that illustrates, at a minimum, the location of the meteorological station(s), resource project corner, and all individual wind turbines comprising the resource. The shape-file must be submitted in .shp, .dbf, or other file format upon which the CAISO and resource mutually agree.

## 3.2 Forecast Data - Solar

### 3.2.1 Solar Generation Meteorological Station Requirements

Each solar Eligible Intermittent Resource and Hybrid Resource with a solar generation component must install and maintain equipment required by the CAISO to support accurate power generation forecasting and the communication of such forecast, meteorological, and other required data to the CAISO consistent with the timeframes specified in this Eligible Intermittent Resource Protocol.

**3.2.1.1** Each solar Eligible Intermittent Resource and Hybrid Resource with a solar generation component shall install a minimum of one meteorological station. If such a resource has a rated capacity of five (5) MW or greater, the resource shall install a minimum of two meteorological stations. If an Eligible Intermittent Resource or Hybrid Resource with a solar generation component, as part of compliance with any other contractual or regulatory requirement outside of this Eligible Intermittent Resource Protocol, provides data from more than the two required meteorological stations to an entity other than the CAISO, then the resource must also submit data from any additional meteorological station to the CAISO.

**3.2.1.2** Solar Eligible Intermittent Resources and Hybrid Resources with a solar generation component that require direct normal irradiance (DNI) and global horizontal irradiance (GHI) measurements may provide alternate radiometry meteorological station data. For example, one meteorological station may report DNI and another meteorological station may report GHI. All other meteorological data reporting requirements shall remain the same.

**3.2.1.3** Meteorological stations for solar Eligible Intermittent Resources shall cover at least 90 percent of the facility's footprint for each Resource ID. Meteorological stations for Hybrid Resources with a solar generation component must cover at least 90 percent of the solar generation component's footprint.

**3.2.1.4** Subject to the CAISO's prior approval, Solar Eligible Intermittent Resources and Hybrid Resources with a solar generation component may satisfy the meteorological station location requirements by entering a mutually agreeable sharing agreement(s) with another solar Eligible Intermittent Resource or Hybrid Resource with a solar generation component. The following conditions must apply for the CAISO to grant approval:

(a) One resource (the host plant) meets the meteorological station requirements; and

(b) The site of the other resource (the sharing plant) lies contiguous to or overlaps the site of the host plant, or

(c) Meteorological conditions on the sharing plant site are substantially similar to those on the Host Plant site.

Proof of the agreement between the host plant and sharing plant must be provided to the CAISO. Should the agreement terminate, the sharing plant must independently demonstrate it meets the meteorological tower requirements specified in this Eligible Intermittent Resource Protocol.

### 3.2.2 Solar Meteorological Data Requirements

Table Q-2 details the units and accuracy of measurements for telemetry data points solar Eligible Intermittent Resources and Hybrid Resources with a solar generation component must send to the CAISO in real time (i.e., every 4 seconds).

Table Q-2 Solar Eligible Intermittent Resources Telemetry Data Points

| Element | Device(s) Needed | Units | Accuracy |
|---|---|---|---|
| Wind Speed (Meter / Second) | Anemometer, wind vane and wind mast | m/s | ± 2m/s |
| Wind Direction (Degrees - Zero North 90CW) | Anemometer, wind vane and wind mast | Degrees | $\pm 5^0$ |
| Air Temperature (Degrees Celsius) | Temperature probe & shield for ambient temp | $^0$C | $\pm 1^0$ |
| Barometric Pressure (hecto Pascals) | Barometer | hPA | ± 60 hPa |
| Back Panel Temperature (Degree C) | Temperature probe for back panel temperature | $^0$C | $\pm 1^0$ |
| Plane of Array Irradiance Watts\Meter Sq. | Pyranometer or Equivalent | W/m² | ± 25 W/m² |
| Global Horizontal Irradiance Watts\Meter Sq. | Pyranometer or Equivalent | W/m² | ± 25 W/m² |
| Direct Irradiance Watts\Meter Sq. | Pyranometer or Equivalent | W/m² | ± 25 W/m² |
| Real Time Data | | MWs* | |
| High Sustainable Limit (for Hybrid Resources with a solar generation component and solar EIRs that are a Co-located Resource | | MWs** | |

* Hybrid Resources with a solar generation component must provide MW values through telemetry for both the solar generation component and the overall Hybrid Resource

** High Sustainable Limit may be updated every 12 seconds.

Table Q-3 details the minimum required (R) measurement of solar irradiance by each solar generating technology that solar Eligible Intermittent Resources and Hybrid Resources with a solar generation component must send to the CAISO consistent with the requirements of this Eligible Intermittent Resource Protocol.

Table Q-3 Irradiance and Back Plane Required Measurements

| | Direct Irradiance (DIRD) | Global Horizontal Irradiance (GHIRD) | Global Irradiance/ Plane of Array (PAIRD) | Back Panel Temperature (BPTEMP) |
|---|---|---|---|---|
| Flat-Plate PV (fixed / horizontal / flat roof) | | | R | R |
| Flat-Plate PV (fixed angle / azimuth tracking) | | | R | R |

| | Direct Irradiance (DIRD) | Global Horizontal Irradiance (GHIRD) | Global Irradiance/ Plane of Array (PAIRD) | Back Panel Temperature (BPTEMP) |
|---|---|---|---|---|
| Flat-Plate PV (DNI zenith & azimuth tracking) | R | | R | R |
| Flat-Panel Solar (thermal fixed angle mounted) | | | R | R |
| Flat-Panel Thermal Collector (azimuth tracking) | | | R | R |
| Low Concentrating PV (LCPV) | R | R | | |
| High Concentrating PV (HCPV) | R | R | | |
| Concentrated Solar Thermal (solar through zenith tracking) | R | R | | |
| Heliostat Power (tracking focusing mirrors) | R | R | | |
| Greenhouse Power Tower (hot air convection turbine) | | | R | |
| Stirling Engine (concentrated solar power generation) | R | R | | |

### 3.2.3 Site Information

A solar Eligible Intermittent Resource or Hybrid Resource with a solar generation component must provide the site information specified below in the manner and format as further specified in the CAISO new resource implementation process. Latitude and Longitude should be in degrees/decimals using WGS84 geodetic datum only.

General Resource Information

1. Park Potential (MW; numeric-float field [example: 100.5])
2. Resource Project Corner Coordinates in WGS84 format
3. Meteorological Station ID Numbers
4. Meteorological Station Coordinates in WGS84 format
5. Address
6. Resource ID
7. MW Generation Capacity
8. Plant Location (Latitude and Longitude in WGS84)
9. Lidar or Sodar (required)
10. Make (required; alphanumeric)
11. Model (required; alphanumeric)
12. Wind Speed (Anemometer) (required; alphanumeric)

13. Wind Direction (Anemometer) (required; alphanumeric)
14. Air Temperature (required; alphanumeric)
15. Barometric Pressure (required; alphanumeric)
16. Irradiance (required; alphanumeric)
17. Back Panel Irradiance (required; alphanumeric)
18. MW Generation DC
19. Meteorological Station Sharing (Y or N: If 'Yes', require the project ID of the resource that is being shared) (Validate that project key/code of host site exists)
20. Solar Panel Group Number

Solar Panel Specifications:

1. Panel Manufacturer (alphanumeric field)
2. Panel Model (alphanumeric field)
3. Number of Panels (numeric field)
4. Panel Power Rating (numeric field)
5. Number of Inverters (numeric field)
6. Inverter Ratings (alphanumeric field)
7. Tracking (Yes or No Dropdown)
8. Single or Dual Axis Tracking (Single, Dual, or None Dropdown)
9. Tracker Manufacturer (alphanumeric field)
10. Tracker Model (alphanumeric field)
11. Wind Protection (Speed in m/s)
12. Altitude Angle of Panels (alphanumeric field)
13. Azimuth Angle of Fixed Panels (alphanumeric field)
14. Height of Panels Above Ground Level
15. (alphanumeric field)
16. Concentrating PV (Yes or No Dropdown)
17. Solar Panel Coordinates (WGS84)

### 3.2.4 Shape-File

Each solar Eligible Intermittent Resource and Hybrid Resource with a solar generation component must submit a shape-file that illustrates, at a minimum, the location of the meteorological station(s) and resource project corner. The shape-file must be submitted in .shp, .dbf, or other file format upon which the CAISO and resource mutually agree.

## 3.3 Power Reliability Requirements

Each Eligible Intermittent Resource and Hybrid Resource with a wind generation or solar generation component shall provide a backup power source for the Remote Intelligent Gateway, meteorological station equipment, revenue meter, and essential communication equipment (including, but not limited to, the router, network switch, fiber optic transceiver, 120V plug-in power supplies). The backup power source shall be sized accordingly to carry that equipment load. A backup power supply may include, but is not limited to, an uninterruptable power source (UPS) or a battery bank with solar panel charger. Whichever backup power source the Eligible Intermittent Resource installs, it shall be sized and provide power until the primary power source is restored.

## 3.4 Standards

The standards for communications shall be the monitoring and communications requirements for Generating Units providing only Energy; as such standards may be amended from time to time, and published on the CAISO Website.

## 3.5 Cost Responsibility

An Eligible Intermittent Resource is responsible for expenses associated with engineering, installation, operation and maintenance of required communication equipment.

## 4 FORECASTING

The CAISO is responsible for overseeing the development of tools or services to forecast Energy for Participating Intermittent Resources. The CAISO will use its best efforts to develop accurate and unbiased forecasts, as limited by the availability of relevant explanatory data. Objective criteria and thresholds for unbiased, accurate forecasts shall be used to certify Participating Intermittent Resources.

### 4.1 [Not Used]

### 4.2 [Not Used]

### 4.3 Confidentiality

The CAISO shall maintain the confidentiality of proprietary data for each Participating Intermittent Resource in accordance with Section 20 of the CAISO Tariff.

## 5 SCHEDULING AND SETTLEMENT

### 5.1 Schedules

For all Generating Units that comprise the Participating Intermittent Resources shall comply with the Bidding and scheduling rules specified in Sections 4.8, 30, 31, and 34.

### 5.2 Settlement

After a Participating Intermittent Resource is certified, Settlement shall be determined for each Settlement Period based on consistency of Bids submitted on behalf of such Participating Intermittent Resource with the rules specified in the CAISO Tariff and this EIRP.

### 5.3 [Not Used]

## 6 DATA COLLECTION FACILITIES

An Eligible Intermittent Resource not otherwise exempt and Hybrid Resource with a variable component that elects to have a CAISO forecast must install and maintain equipment to collect, record and transmit data that the CAISO reasonably determines is necessary to develop and support a forecast model that meets the requirements of Section 4 of this EIRP.

### 6.1 Other Eligible Intermittent Resources

Eligible Intermittent Resources other than wind or solar projects will be required to provide data of comparable relevance to estimating Energy generation. Standards will be developed as such projects are identified and will be specified in this Eligible Intermittent Resources Protocol.

## 7 PROGRAM MONITORING

The CAISO shall monitor the operation of these rules, and will in particular seek to eliminate any gaming opportunities provided by the flexibility provided Participating Intermittent Resources to self-select participation on an hourly basis.

Participating Intermittent Resources are expected to bid, schedule, and otherwise perform in good faith, and not seek to act strategically in a manner that causes financial gain through systematic behavior, where such gain results solely from the settlement accommodations provided under CAISO Tariff Section 11.12.

If requirements specified in this EIRP are not met, then Participating Intermittent Resource certification may be revoked pursuant to Section 2.4.5 of this EIRP. Any patterns of strategic behavior by Participating Intermittent Resources will be tracked, and the statistical significance of such deviations will be used by the CAISO to evaluate whether changes in the rules defined in this EIRP are appropriate.

The CAISO will monitor the impact of rules for Participating Intermittent Resources on FMM or RTD imbalance energy and Regulation costs to the CAISO.

## 8 AMENDMENTS

If the CAISO determines a need for an amendment to this EIRP, the CAISO will follow the requirements as set forth in Section 15 of the CAISO Tariff.

**Appendix R**

**[Not Used]**

# Appendix S Small Generator Interconnection Procedures

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Attachment 1 – **[INTENTIONALLY LEFT BLANK]**
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Attachment 6 – Feasibility Study Agreement
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Attachment 8 – Facilities Study Agreement
Attachment 9 – Interconnection Procedures for a Wind Generating Plant

## Section 1. Objectives, Definitions, And Application

### 1.1 Objectives

The objective of this SGIP is to implement FERC's Order No. 2006 setting forth the requirements for Small Generating Facility interconnections to the CAISO Controlled Grid.

### 1.2 Definitions

1.2.1 Master Definitions Supplement

Unless the context otherwise requires, any word or expression defined in the Master Definitions Supplement to the CAISO Tariff shall have the same meaning where used in this SGIP. A reference to a Section or an Appendix is a reference to a Section or an Appendix of the CAISO Tariff. References to SGIP are to this Protocol or to the stated paragraph of this Protocol.

1.2.2 Special Definitions for this SGIP

In this SGIP, the following words and expressions shall have the meanings set opposite them:

"10 kW Inverter Process" shall mean the procedure for evaluating an Interconnection Request for a certified inverter-based Small Generating Facility no larger than 10 kW that uses the SGIP Section 2 screens. The application process uses an all-in-one document that includes a simplified Interconnection Request, simplified procedures, and a brief set of terms and conditions. See SGIP Attachment 5.

"Fast Track Process" shall mean the procedure for evaluating an Interconnection Request for a certified Small Generating Facility no larger than 2 MW that includes the SGIP Section 2 screens, customer options meeting, and optional supplemental review.

"Governmental Authority" shall mean any federal, state, local or other governmental, regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the Interconnection Customer, CAISO, or Participating TO, or any Affiliate thereof.

"Party" or "Parties" shall mean the CAISO, Participating TO(s), Interconnection Customer or the applicable combination of the above.

"Study Process" shall mean the procedure for evaluating an Interconnection Request that includes the Scoping Meeting, feasibility study, system impact study, and facilities study, as set forth in Section 3 of this SGIP.

## 1.3 Application

The applicability of this SGIP is set forth in Section 25 of the CAISO Tariff. As specified in more detail in Section 25 of the CAISO Tariff, these procedures are applicable to each new Generating Facility with a Generating Facility Capacity of 20 MW or less, or the expansion of an existing Generating Facility with a resultant Generating Facility Capacity of 20 MW or less, that seeks to interconnect to the CAISO Controlled Grid. Any proposed interconnection of a new Generating Facility to a Participating TO's Distribution System will be processed, as applicable, pursuant to the applicable Participating TO's Wholesale Distribution Access Tariff or CPUC Rule 21, or other Local Regulatory Authority requirements of the Participating TO. For any proposed interconnection of a new Generating Facility with a Generating Facility Capacity of 20 MW or less wherein the Interconnection Customer desires the CAISO to perform a Deliverability Assessment, the Interconnection Customer shall submit an Interconnection Request to the CAISO under the Large Generator Interconnection Procedures in lieu of these Small Generator Interconnection Procedures, as specified in Section 1.3.8 of this SGIP.

### 1.3.1 Applicability

1.3.1.1 A request to interconnect a certified Small Generating Facility (See Attachments 3 and 4 for description of certification criteria) no larger than 2 MW shall be evaluated under the SGIP Section 2 Fast Track Process. A request to interconnect a certified inverter-based Small Generating Facility no larger than 10 kW shall be evaluated under the Attachment 5 10 kW Inverter Process. A request to interconnect a Small Generating Facility larger than 2 MW but no larger than 20 MW or a Small Generating Facility that does not pass the Fast Track Process or the 10 kW Inverter Process shall be evaluated under the Study Process set forth in Section 3 of this SGIP.

1.3.1.2 Neither these procedures nor the requirements included hereunder apply to Small Generating Facilities interconnected or approved for interconnection prior to 60 Business Days after the effective date of these procedures.

1.3.1.3 Prior to submitting its Interconnection Request (Attachment 2), the Interconnection Customer may ask the CAISO's interconnection contact employee or office whether the proposed interconnection is subject to these procedures. The CAISO shall respond within 15 Business Days.

1.3.1.4 Infrastructure security of electric system equipment and operations and control hardware and software is essential to ensure day-to-day reliability and operational security. The Federal Energy Regulatory Commission expects all transmission providers, market participants, and Interconnection Customers interconnected with electric systems to comply with Applicable Reliability Criteria. All public utilities are expected to meet basic standards for electric system infrastructure and operational security, including physical, operational, and cyber-security practices.

1.3.1.5 References in these procedures to interconnection agreement are to the Small Generator Interconnection Agreement (SGIA).

### 1.3.2 Pre-Application

The CAISO shall designate an employee or office from which information on the application process and on an Affected System can be obtained through informal requests from the Interconnection Customer presenting a proposed project for a specific site. The name, telephone number, and e-mail address of such contact employee or office shall be made available on the CAISO Internet web site. The CAISO Controlled Grid information provided to the Interconnection Customer should include relevant system studies, interconnection studies, and other materials useful to an understanding of an interconnection at a particular point on the CAISO Controlled Grid, to the extent such provision does not violate confidentiality provisions of prior agreements or critical infrastructure requirements. The CAISO shall comply with reasonable requests for such information.

1.3.3 Interconnection Request

The Interconnection Customer shall submit its Interconnection Request to the CAISO, together with the processing fee or deposit specified in the Interconnection Request. The Interconnection Request shall be date- and time-stamped upon receipt. The original date and time stamp applied to the Interconnection Request at the time of its original submission shall be accepted as the qualifying date- and time-stamp for the purposes of any timetable in these procedures. The Interconnection Customer shall be notified of receipt by the CAISO within three (3) Business Days of receiving the Interconnection Request. The CAISO shall notify the Interconnection Customer within ten (10) Business Days of the receipt of the Interconnection Request as to whether the Interconnection Request is complete or incomplete. If the Interconnection Request is incomplete, the CAISO shall provide a notice that the Interconnection Request is incomplete, along with a written list detailing all information that must be provided to complete the Interconnection Request. The Interconnection Customer will have ten (10) Business Days after receipt of the notice to submit the listed information or to request an extension of time to provide such information. If the Interconnection Customer does not provide the listed information or a request for an extension of time within the deadline, the Interconnection Request will be deemed withdrawn. An Interconnection Request will be deemed complete upon submission of the listed information to the CAISO.

The expected In-Service Date of the new Small Generating Facility shall not exceed seven years from the date the Interconnection Request is received by the CAISO, unless the Interconnection Customer demonstrates that engineering, permitting and construction of the new Small Generating Facility or increase in capacity of the existing Generating Facility will take longer. The In-Service Date may exceed the date the Interconnection Request is received by the CAISO by a period up to ten years, or longer where the Interconnection Customer, the applicable Participating TO and the CAISO agree, such agreement not to be unreasonably withheld.

1.3.4 Modifications

The Interconnection Customer shall submit to the CAISO, in writing, modifications to any information provided in the Interconnection Request. The Interconnection Customer shall retain its Queue Position if the modifications are determined not to be Material Modifications pursuant to SGIP Section 1.3.4.1. Notwithstanding the above, during the course of the Interconnection Studies, the Interconnection Customer, the applicable Participating TO(s), or the CAISO may identify changes to the planned interconnection that may improve the costs and benefits (including reliability) of the interconnection, and the ability of the proposed change to accommodate the Interconnection Request. To the extent the identified changes are acceptable to the applicable Participating TO(s), the CAISO, and Interconnection Customer, such acceptance not to be unreasonably withheld, the CAISO shall modify the Point of Interconnection and/or configuration in accordance with such changes and the Interconnection Customer shall retain its Queue Position.

1.3.4.1 Prior to making any modification, the Interconnection Customer must first request that the CAISO evaluate whether such modification is a Material Modification. In response to the Interconnection Customer's request, the CAISO, in coordination with the affected Participating TO, shall evaluate the proposed modifications and the CAISO shall inform the Interconnection Customer in writing of whether the modifications would constitute a Material Modification. The CAISO may engage the services of the applicable Participating TO to assess the modification. Costs incurred by the Participating TO and CAISO (if any) shall be borne by the party making the request under Section 1.3.4, and such costs shall be included in any CAISO invoice for modification assessment activities. Any change to the Point of Interconnection, except those deemed acceptable under SGIP Section 1.3.4 or so allowed elsewhere, shall constitute a Material Modification. The Interconnection Customer may then withdraw the proposed modification or proceed with a new Interconnection Request for such modification.

1.3.4.2 The Interconnection Customer shall provide the CAISO a $10,000 deposit for the modification assessment at the time the request is submitted. Except as provided below, any modification assessment will be concluded, and a response provided to the Interconnection Customer in writing, within forty-five (45) calendar days from the date the CAISO receives all of the following: the Interconnection Customer's written notice to modify the project, technical data required to assess the request and payment of the $10,000 deposit. If the modification assessment cannot be completed within that time period, the CAISO shall notify the Interconnection Customer and provide an estimated completion date with an explanation of the reasons why additional time is required.

The Interconnection Customer will be responsible for the actual costs incurred by the CAISO and applicable Participating TO(s) in conducting the modification assessment. If the actual costs of the modification assessment are less than the deposit provided by the Interconnection Customer, the Interconnection Customer will be refunded the balance. If the actual costs of the modification assessment are greater than the deposit provided by the Interconnection Customer, the Interconnection Customer shall pay the balance within 30 days of being invoiced. The CAISO shall coordinate the modification request with the Participating TO(s). The Participating TO(s) shall invoice the CAISO for any assessment work within seventy-five (75) calendar days of completion of the assessment, and, within thirty (30) days thereafter, the CAISO shall issue an invoice or refund to the Interconnection Customer, as applicable, based upon such submitted Participating TO invoices and the CAISO's own costs for the assessment.

The CAISO will publish cost data regarding modification assessments in accordance with the terms set forth in a Business Practice Manual.

1.3.4.3 Notwithstanding any other provisions in this SGIP or the Interconnection Customer's GIA, the Interconnection Customer may not modify its fuel type, including through the addition or replacement of Generating Units, by more than the greater of five percent (5%) of its capacity or 10 MW (but by no more than twenty-five percent (25%) of its capacity), where:

(a) the Interconnection Customer has exceeded ten (10) years from the date the CAISO received its Interconnection Request without achieving its Commercial Operation Date;

(b) the Interconnection Customer's current Commercial Operation Date exceeds ten (10) years from the date the CAISO received its Interconnection Request; or

(c) the change in fuel type will require the Interconnection Customer's Commercial Operation Date to exceed ten (10) years from the date the CAISO received its Interconnection Request.

The CAISO will not consider the addition of energy storage; changes to the type, number, or manufacturer of inverters; or insubstantial changes to the Generating Facility as fuel-type modifications. Interconnection Customers may request such modifications pursuant to this SGIP.

1.3.5 Site Control

Documentation of site control must be submitted with the Interconnection Request. Site control may be demonstrated through:

1.3.5.1 Ownership of, a leasehold interest in, or a right to develop a site for the purpose of constructing the Small Generating Facility;

1.3.5.2 An option to purchase or acquire a leasehold site for such purpose; or

1.3.5.3 An exclusivity or other business relationship between the Interconnection Customer and the entity having the right to sell, lease, or grant the Interconnection Customer the right to possess or occupy a site for such purpose.

1.3.6 Queue Position

The CAISO shall assign a Queue Position based upon the date- and time- stamp of the Interconnection Request. The Queue Position of each Interconnection Request will be used to determine the cost responsibility for the Upgrades necessary to accommodate the interconnection. The CAISO shall maintain a single queue for the CAISO Balancing Authority Area. At the CAISO's option, in coordination with the applicable Participating TO, Interconnection Requests may be studied serially or in clusters for the purpose of the system impact study.

1.3.7 Interconnection Requests Submitted Prior to the Effective Date of the SGIP

Nothing in this SGIP affects an Interconnection Customer's Queue Position assigned before the effective date of this SGIP. The Parties agree to complete work on any interconnection study agreement executed prior the effective date of this SGIP in accordance with the terms and conditions of that interconnection study agreement. Any new studies or other additional work will be completed pursuant to this SGIP.

1.3.8 Request for Deliverability Assessment

An Interconnection Customer seeking to interconnect to the CAISO Controlled Grid that desires to have a Deliverability Assessment performed for the Small Generating Facility shall be required to have its Interconnection Request processed under the Large Generator Interconnection Procedures (LGIP) or CAISO Tariff Appendix W, as applicable.

### 1.4 Reductions in Generating Facility Capacity

1.4.1 De Minimis Capacity Reductions

If, at the time an Interconnection Customer achieves Commercial Operation, the actual MW capacity of its Generating Facility is reduced by no more than the greater of five percent (5%) of its MW capacity or 10 MW, but by no more than twenty-five percent (25%) of the MW capacity of the Generating Facility, such a reduction shall not constitute a breach of the Interconnection Customer's obligations under the CAISO Tariff or its Generator Interconnection Agreement. The MW capacity value of a Generating Facility for purposes of this section shall be established by reference to the capacity as set forth in the Interconnection Customer's currently applicable Generator Interconnection Agreement. No capacity reductions permitted under this section shall operate to diminish the Interconnection Customer's responsibility for any costs or other obligations set forth in its Generator Interconnection Agreement or the CAISO Tariff.

1.4.2 [Not Used]

## Section 2. Fast Track Process

### 2.1 Applicability

The Fast Track Process is available to an Interconnection Customer proposing to interconnect its Small Generating Facility with the CAISO Controlled Grid if the Small Generating Facility is no larger than 2 MW and if the Interconnection Customer's proposed Small Generating Facility meets the codes, standards, and certification requirements of Attachments 3 and 4 of these procedures, or the applicable Participating TO has reviewed the design or tested the proposed Small Generating Facility and is satisfied that it is safe to operate.

### 2.2 Initial Review

Within 15 Business Days after the CAISO notifies the Interconnection Customer it has received a complete Interconnection Request, the applicable Participating TO shall perform an initial review using the screens set forth below, shall notify the Interconnection Customer of the results, and include with the notification copies of the analysis and data underlying the Participating TO's determinations under the screens.

2.2.1 Screens

2.2.1.1 The proposed Small Generating Facility's Point of Interconnection must be on a portion of the Participating TO's Distribution System that is subject to the CAISO Tariff.

2.2.1.2 For interconnection of a proposed Small Generating Facility to a radial distribution circuit, the aggregated generation, including the proposed Small Generating Facility, on the circuit shall not exceed 15% of the line section annual peak load as most recently measured at the substation. A line section is that portion of a Participating TO's electric system connected to a customer bounded by automatic sectionalizing devices or the end of the distribution line.

2.2.1.3 For interconnection of a proposed Small Generating Facility to the load side of spot network protectors, the proposed Small Generating Facility

must utilize an inverter-based equipment package and, together with the aggregated other inverter-based generation, shall not exceed the smaller of 5% of a spot network's maximum load or 50 kW.[1]

2.2.1.4 The proposed Small Generating Facility, in aggregation with other generation on the distribution circuit, shall not contribute more than 10% to the distribution circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed point of change of ownership.

2.2.1.5 The proposed Small Generating Facility, in aggregate with other generation on the distribution circuit, shall not cause any distribution protective devices and equipment (including, but not limited to, substation breakers, fuse cutouts, and line reclosers), or Interconnection Customer equipment on the system to exceed 87.5% of the short circuit interrupting capability; nor shall the interconnection proposed for a circuit that already exceeds 87.5% of the short circuit interrupting capability.

2.2.1.6 Using the table below, determine the type of interconnection to a primary distribution line. This screen includes a review of the type of electrical service provided to the Interconnecting Customer, including line configuration and the transformer connection to limit the potential for creating over-voltages on the Participating TO's electric power system due to a loss of ground during the operating time of any anti-islanding function.

| Primary Distribution Line Type | Type of Interconnection to Primary Distribution Line | Result/Criteria |
|---|---|---|
| Three-phase, three wire | 3-phase or single phase, phase-to-phase | Pass screen |
| Three-phase, four wire | Effectively-grounded 3 phase or Single-phase, line-to-neutral | Pass screen |

2.2.1.7 If the proposed Small Generating Facility is to be interconnected on single-phase shared secondary, the aggregate generation capacity on the shared secondary, including the proposed Small Generating Facility, shall not exceed 20 kW.

2.2.1.8 If the proposed Small Generating Facility is single-phase and is to be interconnected on a center tap neutral of a 240 volt service, its addition shall not create an imbalance between the two sides of the 240 volt service of more than 20% of the nameplate rating of the service transformer.

2.2.1.9 The Small Generating Facility, in aggregate with other generation interconnected to the transmission side of a substation transformer feeding the circuit where the Small Generating Facility proposes to interconnect shall not exceed 10 MW in an area where there are known, or posted, transient stability limitations to generating units located in the

1 A spot Network is a type of distribution system found within modern commercial buildings to provide high reliability of service to a single customer. (Standard Handbook for Electrical Engineers, 11th edition, Donald Fink, McGraw Hill Book Company)

general electrical vicinity (e.g., three or four transmission busses from the point of interconnection).

2.2.1.10 No construction of facilities by the Participating TO on its own system shall be required to accommodate the Small Generating Facility.

2.2.2 If the proposed interconnection passes the screens, the Interconnection Request shall be approved and the Participating TO will provide the Interconnection Customer an executable interconnection agreement within five Business Days after the determination.

2.2.3 If the proposed interconnection fails the screens, but the Participating TO determines that the Small Generating Facility may nevertheless be interconnected consistent with safety, reliability, and power quality standards, the Participating TO shall provide the Interconnection Customer an executable interconnection agreement within five Business Days after the determination.

2.2.4 If the proposed interconnection fails the screens, but the Participating TO does not or cannot determine from the initial review that the Small Generating Facility may nevertheless be interconnected consistent with safety, reliability, and power quality standards unless the Interconnection Customer is willing to consider minor modifications or further study, the Participating TO shall provide the Interconnection Customer with the opportunity to attend a customer options meeting.

**2.3 Customer Options Meeting**

If the Participating TO determines the Interconnection Request cannot be approved without minor modifications at minimal cost; or a supplemental study or other additional studies or actions; or at significant cost to address safety, reliability, or power quality problems, within the five Business Day period after the determination, the Participating TO shall notify the Interconnection Customer and provide copies of all data and analyses underlying its conclusion. Within ten Business Days of the Participating TO's determination, the Participating TO shall offer to convene a customer options meeting with the Participating TO to review possible Interconnection Customer facility modifications or the screen analysis and related results, to determine what further steps are needed to permit the Small Generating Facility to be connected safely and reliably. At the time of notification of the Participating TO's determination, or at the customer options meeting, the Participating TO shall:

2.3.1 Offer to perform facility modifications or minor modifications to the Participating TO's electric system (e.g., changing meters, fuses, relay settings) and provide a non-binding good faith estimate of the limited cost to make such modifications to the Participating TO's electric system; or

2.3.2 If the Company does not schedule an inspection of the Small Generating Facility within ten business days after receiving the Certificate of Completion, the witness test is deemed waived (unless the Parties agree otherwise); or

2.3.3 Obtain the Interconnection Customer's agreement to continue evaluating the Interconnection Request under the SGIP Section 3 Study Process.

**2.4 Supplemental Review**

If the Interconnection Customer agrees to a supplemental review, the Interconnection Customer shall agree in writing within 15 Business Days of the offer, and submit a deposit for the estimated costs. The Interconnection Customer shall be responsible for the Participating TO's actual costs

for conducting the supplemental review. The Interconnection Customer must pay any review costs that exceed the deposit within 20 Business Days of receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced costs, the Participating TO will return such excess within 20 Business Days of the invoice without interest.

2.4.1 Within ten Business Days following receipt of the deposit for a supplemental review, the Participating TO will determine if the Small Generating Facility can be interconnected safely and reliably.

2.4.1.1 If so, the Participating TO shall forward an executable an interconnection agreement to the Interconnection Customer within five Business Days.

2.4.1.2 If so, and Interconnection Customer facility modifications are required to allow the Small Generating Facility to be interconnected consistent with safety, reliability, and power quality standards under these procedures, the Participating TO shall forward an executable interconnection agreement to the Interconnection Customer within five Business Days after confirmation that the Interconnection Customer has agreed to make the necessary changes at the Interconnection Customer's cost.

2.4.1.3 If so, and minor modifications to the Participating TO's electric system are required to allow the Small Generating Facility to be interconnected consistent with safety, reliability, and power quality standards under the Fast Track Process, the Participating TO shall forward an executable interconnection agreement to the Interconnection Customer within ten Business Days that requires the Interconnection Customer to pay the costs of such system modifications prior to interconnection.

2.4.1.4 If not, the Interconnection Request will continue to be evaluated under the SGIP Section 3 Study Process.

## Section 3. Study Process

### 3.1 Applicability

The Study Process shall be used by an Interconnection Customer proposing to interconnect its Small Generating Facility to the CAISO Controlled Grid if the Small Generating Facility (1) is larger than 2 MW but no larger than 20 MW, (2) is not certified, or (3) is certified but did not pass the Fast Track Process or the 10 kW Inverter Process.

3.1.1 Centralized Study Process

3.1.1.1 The CAISO will be the single point of contact for Interconnection Customer.

3.1.1.2 The CAISO will be the central point of coordination to involve any Affected Systems.

3.1.1.3 The CAISO will collect and disburse monies received from Interconnection Customers.

3.1.1.4 The CAISO will execute interconnection study agreements. Each Interconnection Request will be subject to the direction and oversight of the CAISO. The CAISO will conduct or cause to be performed the required small generator interconnection studies and any additional studies the CAISO determines to be reasonably necessary and will direct the applicable Participating TO to perform portions of studies where the Participating TO has specific and non-transferable expertise or data and can conduct the studies more efficiently and cost effectively than the CAISO. The study results and final study report must be approved by the CAISO.

**3.2 Scoping Meeting**

3.2.1 A Scoping Meeting will be held within ten (10) Business Days after the Interconnection Request is deemed complete, or as otherwise mutually agreed to by the Parties. The CAISO, applicable Participating TO, and the Interconnection Customer will bring to the meeting personnel, including system engineers and other resources as may be reasonably required to accomplish the purpose of the meeting.

3.2.2 The purpose of the Scoping Meeting is to discuss the Interconnection Request and review existing studies relevant to the Interconnection Request. The Parties shall further discuss whether the CAISO should conduct, or caused to be performed, a feasibility study or proceed directly to a system impact study, or a facilities study, or an interconnection agreement. If the Parties agree that a feasibility study should be performed, the CAISO shall provide the Interconnection Customer, as soon as possible, but not later than five (5) Business Days after the Scoping Meeting, a feasibility study agreement (Attachment 6) including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study.

3.2.3 The Scoping Meeting may be omitted by mutual agreement. In order to remain in consideration for interconnection, an Interconnection Customer who has requested a feasibility study must return the executed feasibility study agreement within fifteen (15) Business Days. If the Parties agree not to perform a feasibility study, the CAISO shall provide the Interconnection Customer, no later than five (5) Business Days after the Scoping Meeting, a system impact study agreement (Attachment 7) including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study.

**3.3 Feasibility Study**

3.3.1 The feasibility study shall identify any potential adverse system impacts or financial impacts, if any, on Local Furnishing Bonds that would result from the interconnection of the Small Generating Facility.

3.3.2 A deposit of the lesser of 50 percent of the good faith estimated feasibility study costs or earnest money of $1,000 will be required from the Interconnection Customer.

3.3.3 The scope of, and cost responsibilities for, the feasibility study are described in the attached feasibility study agreement.

3.3.4 If the feasibility study shows no potential for adverse system impacts and financial impacts on Local Furnishing Bonds, the CAISO shall send the Interconnection Customer

a facilities study agreement, including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study. If no additional facilities are required, the Participating TO shall send the Interconnection Customer an executable interconnection agreement within five (5) Business Days.

3.3.5 If the feasibility study shows the potential for adverse system impacts or financial impacts on Local Furnishing Bonds, the review process shall proceed to the appropriate system impact study(s).

**3.4 System Impact Study**

3.4.1 A system impact study shall identify and detail the electric system impacts, including Local Furnishing Bond impacts, that would result if the proposed Small Generating Facility were interconnected without project modifications or electric system modifications, focusing on the adverse system impacts identified in the feasibility study, or to study potential impacts, including but not limited to those identified in the Scoping Meeting. A system impact study shall evaluate the impact of the proposed interconnection on the reliability of the electric system.

3.4.2 If no CAISO Controlled Grid system impact study is required, but potential electric power Distribution System adverse system impacts or Local Furnishing Bond impacts are identified in the Scoping Meeting or shown in the feasibility study, a Distribution System impact study must be performed by the applicable Participating TO. The applicable Participating TO shall send the Interconnection Customer a Distribution System impact study agreement within fifteen (15) Business Days of transmittal of the feasibility study report, including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study, or following the Scoping Meeting if no feasibility study is to be performed.

3.4.3 In instances where the feasibility study or the Distribution System impact study shows potential for CAISO Controlled Grid adverse system impacts or Local Furnishing Bond adverse impacts, within five (5) Business Days following transmittal of the feasibility study report, the CAISO shall send the Interconnection Customer a system impact study agreement, including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study, if such a study is required.

3.4.4 If a CAISO Controlled Grid system impact study is not required, but electric power Distribution System adverse system impacts are shown by the feasibility study to be possible and no Distribution System impact study has been conducted, the applicable Participating TO shall send the Interconnection Customer a Distribution System impact study agreement.

3.4.5 If the feasibility study shows no potential for CAISO Controlled Grid, Local Furnishing Bond, or Distribution System adverse system impacts, the CAISO shall send the Interconnection Customer either a facilities study agreement (Attachment 8), including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the study, or the applicable Participating TO shall send an executable interconnection agreement, as applicable.

3.4.6 In order to remain under consideration for interconnection, the Interconnection Customer must return executed system impact study agreements, if applicable, within thirty (30) Business Days.

3.4.7 A deposit of the good faith estimated costs for each system impact study will be required from the Interconnection Customer.

3.4.8 The scope of, and cost responsibilities for, a system impact study are described in the attached system impact study agreement.

3.4.9 Where transmission systems and Distribution Systems have separate owners, such as is the case with transmission-dependent utilities ("TDUs") – whether investor-owned or not – the Interconnection Customer may apply to the nearest transmission provider (transmission owner, Regional Transmission Operator, or independent system operator) providing transmission service to the TDU to request project coordination. Affected Systems shall participate in the study and provide all information necessary to prepare the study.

**3.5 Facilities Study**

3.5.1 Once the required system impact study(s) is completed, a system impact study report shall be prepared and transmitted to the Interconnection Customer along with a facilities study agreement within five (5) Business Days, including an outline of the scope of the study and a non-binding good faith estimate of the cost to perform the facilities study. In the case where one or both impact studies are determined to be unnecessary, a notice of the fact shall be transmitted to the Interconnection Customer within the same timeframe.

3.5.2 In order to remain under consideration for interconnection, or, as appropriate, in the CAISO's interconnection queue, the Interconnection Customer must return the executed facilities study agreement or a request for an extension of time within thirty (30) Business Days.

3.5.3 The facilities study shall specify and estimate the cost of the equipment, engineering, procurement and construction work (including overheads) needed to implement the conclusions of the system impact study(s).

3.5.4 [**INTENTIONALLY LEFT BLANK]**

3.5.5 A deposit of the good faith estimated costs for the facilities study will be required from the Interconnection Customer.

3.5.6 The scope of, and cost responsibilities for, the facilities study are described in the attached facilities study agreement.

3.5.7 Within 30 Business Days after completion of the facilities study, the Interconnection Customer shall take one of the following actions: (i) agree to pay for Interconnection Facilities and Upgrades identified in the facilities study and request that the Participating TO tender an executable interconnection agreement, (ii) withdraw its Interconnection Request, or (iii) request that the Participating TO tender an executable interconnection agreement despite its disagreement with the costs therein. If requested, the Participating TO shall provide the Interconnection Customer an executable interconnection agreement within five (5) Business Days. Upon option (iii) herein, the Interconnection Customer may request that the interconnection agreement be filed unilaterally at FERC.

3.5.8 **[INTENTIONALLY LEFT BLANK]**

3.5.9 Engineering and Procurement Agreement

Prior to executing an SGIA, an Interconnection Customer may, in order to advance the implementation of its interconnection, request and the applicable Participating TO(s) shall offer the Interconnection Customer, an E&P Agreement that authorizes the applicable Participating TO(s) to begin engineering and procurement of long lead-time items necessary for the establishment of the interconnection. However, the applicable Participating TO(s) shall not be obligated to offer an E&P Agreement if the Interconnection Customer is in Dispute Resolution as a result of an allegation that the Interconnection Customer has failed to meet any milestones or comply with any prerequisites specified in other parts of the SGIP. The E&P Agreement is an optional procedure and it will not alter the Interconnection Customer's Queue Position or In-Service Date. The E&P Agreement shall provide for the Interconnection Customer to pay the cost of all activities authorized by the Interconnection Customer and to make advance payments or provide other satisfactory security for such costs.

The Interconnection Customer shall pay the cost of such authorized activities and any cancellation costs for equipment that is already ordered for its interconnection, which cannot be mitigated as hereafter described, whether or not such items or equipment later become unnecessary. If the Interconnection Customer withdraws its application for interconnection or either Party terminates the E&P Agreement, to the extent the equipment ordered can be canceled under reasonable terms, the Interconnection Customer shall be obligated to pay the associated cancellation costs. To the extent that the equipment cannot be reasonably canceled, the applicable Participating TO(s) may elect: (i) to take title to the equipment, in which event the applicable Participating TO(s) shall refund the Interconnection Customer any amounts paid by Interconnection Customer for such equipment and shall pay the cost of delivery of such equipment, or (ii) to transfer title to and deliver such equipment to the Interconnection Customer, in which event the Interconnection Customer shall pay any unpaid balance and cost of delivery of such equipment.

## Section 4. Provisions That Apply To All Interconnection Requests

### 4.1 Reasonable Efforts

The CAISO shall make reasonable efforts to meet all time frames provided in these procedures unless the CAISO and the Interconnection Customer agree to a different schedule. If the CAISO cannot meet a deadline provided herein, it shall notify the Interconnection Customer, explain the reason for the failure to meet the deadline, and provide an estimated time by which it will complete the applicable interconnection procedure in the process.

### 4.2 Disputes

4.2.1 The Parties agree to attempt to resolve all disputes arising out of the interconnection process according to the provisions of this section.

4.2.2 In the event of a dispute, either Party shall provide the other Party with a written Notice of Dispute. Such Notice shall describe in detail the nature of the dispute.

4.2.3 If the dispute has not been resolved within two (2) Business Days after receipt of the Notice, either Party may contact FERC's Dispute Resolution Service (DRS) for assistance in resolving the dispute.

4.2.4 The DRS will assist the Parties in either resolving their dispute or in selecting an appropriate dispute resolution venue (e.g., mediation, settlement judge, early neutral

evaluation, or technical expert) to assist the Parties in resolving their dispute. DRS can be reached at 1-877-337-2237 or via the internet at http://www.ferc.gov/legal/adr.asp.

4.2.5 Each Party agrees to conduct all negotiations in good faith and will be responsible for one-half of any costs paid to neutral third-parties.

4.2.6 If neither Party elects to seek assistance from the DRS, or if the attempted dispute resolution fails, then either Party may exercise whatever rights and remedies it may have in equity or law consistent with the terms of this SGIP.

**4.3 Interconnection Metering**

Any metering necessitated by the use of the Small Generating Facility shall be installed at the Interconnection Customer's expense in accordance with Federal Energy Regulatory Commission, state, or local regulatory requirements or the CAISO's specifications.

**4.4 Commissioning**

Commissioning tests of the Interconnection Customer's installed equipment shall be performed pursuant to applicable codes and standards. The CAISO and applicable Participating TO must be given at least five (5) Business Days written notice, or as otherwise mutually agreed to by the Parties, of the tests and may be present to witness the commissioning tests.

**4.5. Confidentiality**

4.5.1 Confidential Information shall mean any confidential and/or proprietary information provided by one Party to another Party that is clearly marked or otherwise designated "Confidential." For purposes of this SGIP, all design, operating specifications, and metering data provided by the Interconnection Customer shall be deemed Confidential Information regardless of whether it is clearly marked or otherwise designated as such.

4.5.2 Confidential Information does not include information previously in the public domain, required to be publicly submitted or divulged by Governmental Authorities (after notice to the other Parties and after exhausting any opportunity to oppose such publication or release), or necessary to be divulged in an action to enforce this SGIP. Each Party receiving Confidential Information shall hold such information in confidence and shall not disclose it to any third party nor to the public without the prior written authorization from the Party providing that information, except to fulfill obligations under this SGIP, or to fulfill legal or regulatory requirements.

4.5.2.1 Each Party shall employ at least the same standard of care to protect Confidential Information obtained from the other Parties as it employs to protect its own Confidential Information.

4.5.2.2 Each Party is entitled to equitable relief, by injunction or otherwise, to enforce its rights under this provision to prevent the release of Confidential Information without bond or proof of damages, and may seek other remedies available at law or in equity for breach of this provision.

4.5.3 Notwithstanding anything in this section to the contrary, and pursuant to 18 CFR § 1b.20, if FERC, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to

this SGIP, the Party shall provide the requested information to FERC, within the time provided for in the request for information. In providing the information to FERC, the Party may, consistent with 18 CFR § 388.112, request that the information be treated as confidential and non-public by FERC and that the information be withheld from public disclosure. Parties are prohibited from notifying the other Parties prior to the release of the Confidential Information to FERC. The Party shall notify the other Parties when it is notified by FERC that a request to release Confidential Information has been received by FERC, at which time any of the Parties may respond before such information would be made public, pursuant to 18 CFR § 388.112. Requests from a state regulatory body conducting a confidential investigation shall be treated in a similar manner if consistent with the applicable state rules and regulations.

### 4.6 Comparability

The CAISO shall receive, process and analyze all Interconnection Requests in a timely manner as set forth in this SGIP. The CAISO shall use the same reasonable efforts in processing and analyzing Interconnection Requests from all Interconnection Customers, whether the Small Generating Facility is owned or operated by the applicable Participating TO, its subsidiaries or Affiliates, or others.

### 4.7 Record Retention

The CAISO shall maintain for three (3) years records, subject to audit, of all Interconnection Requests received under these procedures, the times required to complete Interconnection Request approvals and disapprovals, and justification for the actions taken on the Interconnection Requests.

### 4.8 Interconnection Agreement

The Participating TO, with the CAISO's review and concurrence, shall issue a SGIA to the Interconnection Customer. After receiving an interconnection agreement from the Participating TO, the Interconnection Customer shall have thirty (30) Business Days or another mutually agreeable timeframe to sign and return the interconnection agreement, or request that the CAISO and Participating TO file an unexecuted interconnection agreement with the Federal Energy Regulatory Commission. If the Interconnection Customer does not sign the interconnection agreement, or ask that it be filed unexecuted by the CAISO and Participating TO within thirty (30) Business Days, the Interconnection Request shall be deemed withdrawn. After the interconnection agreement is signed by the Parties, the interconnection of the Small Generating Facility shall proceed under the provisions of the interconnection agreement.

### 4.9 Coordination With Affected Systems

The CAISO shall coordinate the conduct of any studies required to determine the impact of the Interconnection Request on Affected Systems with Affected System operators and, if possible, include those results (if available) in its applicable interconnection study within the time frame specified in these procedures. The CAISO will include such Affected System operators in all meetings held with the Interconnection Customer as required by these procedures. The Interconnection Customer will cooperate with the CAISO in all matters related to the conduct of studies and the determination of modifications to Affected Systems. A transmission provider, which may be an Affected System, shall cooperate with the CAISO in all matters related to the conduct of studies and the determination of modifications to Affected Systems.

### 4.10 Capacity Of The Small Generating Facility

4.10.1 If the Interconnection Request is for an increase in capacity for an existing Small Generating Facility, the Interconnection Request shall be evaluated on the basis of the new total capacity of the Small Generating Facility.

4.10.2 If the Interconnection Request is for a Small Generating Facility that includes multiple energy production devices at a site for which the Interconnection Customer seeks a single Point of Interconnection, the Interconnection Request shall be evaluated on the basis of the aggregate capacity of the multiple devices.

4.10.3 The Interconnection Request shall be evaluated using the maximum rated capacity of the Small Generating Facility.

### 4.11 Interconnection Handbook Requirements

Interconnection Customer is required to meet the requirements of the applicable Participating TO's Interconnection Handbook. The Interconnection Customer's Interconnection Facilities shall be designed, constructed, operated and maintained in accordance with the Participating TO's Interconnection Handbook. In the event of a conflict between the terms of the SGIP and the terms of the Participating TO's Interconnection Handbook, the terms in the SGIP shall govern.

**Attachment 1**

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**Attachment 2**

**SMALL GENERATOR INTERCONNECTION REQUEST**
**(Application Form)**

**California Independent System Operator**

Designated Contact Person: _____

Address: _____

Telephone Number: _____

Fax: _____

E-Mail Address: _____

An Interconnection Request is considered complete when it provides all applicable and correct information required below. Per SGIP Section 1.3.5, documentation of Site Control must be submitted with the Interconnection Request

**Preamble and Instructions**

Request for Deliverability Assessment – Yes ___ No ___

An Interconnection Customer seeking to interconnect to the CAISO Controlled Grid that desires to have a Deliverability Assessment performed for the Small Generating Facility is required to have its Interconnection Request processed under the Large Generator Interconnection Procedures (LGIP) or CAISO Tariff Appendix W, as applicable.

An Interconnection Customer who requests a Federal Energy Regulatory Commission jurisdictional interconnection must submit this Interconnection Request by hand delivery, mail, e-mail, or fax to the CAISO.

**Processing Fee or Deposit:**

If the Interconnection Request is submitted under the Fast Track Process, the non-refundable processing fee is $500.

If the Interconnection Request is submitted under the Study Process, whether a new submission or an Interconnection Request that did not pass the Fast Track Process, the Interconnection Customer shall submit to the CAISO a deposit not to exceed $1,000 towards the cost of the feasibility study.

**Interconnection Customer Information**

Legal Name of the Interconnection Customer (or, if an individual, individual's name)

Name:

Contact Person:

Mailing Address:

City: State: Zip:

Facility Location (if different from above):

Telephone (Day): _____ Telephone (Evening): _____

Fax: _____ E-Mail Address: _____

Alternative Contact Information (if different from the Interconnection Customer)

Contact Name: _____

Title: _____ _____

Address: _____

_____

Telephone (Day): _____ Telephone (Evening): _____

Fax: _____ E-Mail Address: _____

Application is for:
_____New Small Generating Facility
_____Capacity addition to Existing Small Generating Facility

If capacity addition to existing facility, please describe:

Will the Small Generating Facility be used for any of the following?

Net Metering? Yes ___ No ___
To Supply Power to the Interconnection Customer? Yes ___No ___
To Supply Power to Others? Yes ____ No ____

For installations at locations with existing electric service to which the proposed Small Generating Facility will interconnect, provide:

(Local Electric Service Provider*) (Existing Account Number*)

[*To be provided by the Interconnection Customer if the local electric service provider is different from the Participating TO]

Contact Name: _____

Title: _____

Address: _____

_____

Telephone (Day): _____ Telephone (Evening): _____

Fax: _____ E-Mail Address: _____

Requested Point of Interconnection: _____

Interconnection Customer's Requested In-Service Date:

**Small Generating Facility Information**
Data apply only to the Small Generating Facility, not the Interconnection Facilities.

Energy Source: ___ Solar ___ Wind ___ Hydro ___ Hydro Type (e.g. Run-of-River):_____
Diesel ___ Natural Gas ___ Fuel Oil ___ Other (state type) _____

Prime Mover: Fuel Cell Recip Engine Gas Turb Steam Turb
Microturbine PV Other

Type of Generator: ____Synchronous ____Induction ____ Inverter

Generator Nameplate Rating: _____kW (Typical) Generator Nameplate kVAR: _____

Interconnection Customer or Customer-Site Load: _____kW (if none, so state)

Typical Reactive Load (if known): _____

Maximum Physical Export Capability Requested: _____ kW

List components of the Small Generating Facility equipment package that are currently certified:

| | Equipment Type | Certifying Entity |
|---|---|---|
| 1. | | |
| 2. | | |
| 3. | | |
| 4. | | |
| 5. | | |

Is the prime mover compatible with the certified protective relay package? ____Yes ____No

Generator (or solar collector)
Manufacturer, Model Name & Number:
Version Number:

Nameplate Output Power Rating in kW: (Summer) _____ (Winter) _____
Nameplate Output Power Rating in kVA: (Summer) _____ (Winter) _____

Individual Generator Power Factor
Rated Power Factor: Leading: _____Lagging: _____

Total Number of Generators in wind farm to be interconnected pursuant to this
Interconnection Request: _____ Elevation: _____ ___Single phase ___Three phase

Inverter Manufacturer, Model Name & Number (if used): _____

List of adjustable set points for the protective equipment or software: _____

Note: A completed Power Systems Load Flow data sheet must be supplied with the Interconnection Request.

Small Generating Facility Characteristic Data (for inverter-based machines)

Max design fault contribution current: Instantaneous or RMS?_____

Harmonics Characteristics: _____

Start-up requirements: _____

Small Generating Facility Characteristic Data (for rotating machines)

RPM Frequency: _____
(*) Neutral Grounding Resistor (If Applicable): _____

Synchronous Generators:

Direct Axis Synchronous Reactance, Xd: _____ P.U.
Direct Axis Transient Reactance, X' d: _____P.U.
Direct Axis Subtransient Reactance, X" d: _____P.U.
Negative Sequence Reactance, X2: _____ P.U.
Zero Sequence Reactance, X0: _____ P.U.
KVA Base: _____
Field Volts: _____
Field Amperes: _____

Induction Generators:

Motoring Power (kW): _____
I22t or K (Heating Time Constant): _____
Rotor Resistance, Rr: _____
Stator Resistance, Rs: _____
Stator Reactance, Xs: _____
Rotor Reactance, Xr: _____

Magnetizing Reactance, Xm: _____
Short Circuit Reactance, Xd": _____
Exciting Current: _____
Temperature Rise: _____
Frame Size: _____
Design Letter: _____
Reactive Power Required In Vars (No Load): _____
Reactive Power Required In Vars (Full Load): _____
Total Rotating Inertia, H: _____ Per Unit on kVA Base

Note: Please contact the CAISO prior to submitting the Interconnection Request to determine if the specified information above is required.

Excitation and Governor System Data for Synchronous Generators Only

Provide appropriate IEEE model block diagram of excitation system, governor system and power system stabilizer (PSS) in accordance with the regional reliability council criteria. A PSS may be determined to be required by applicable studies. A copy of the manufacturer's block diagram may not be substituted.

**Interconnection Facilities Information**

Will a transformer be used between the generator and the point of common coupling? ___Yes ___No

Will the transformer be provided by the Interconnection Customer? ____Yes ____No

Transformer Data (If Applicable, for Interconnection Customer-Owned Transformer):

Is the transformer: ____single phase _____three phase? Size: _____kVA
Transformer Impedance: _____% on _____kVA Base

If Three Phase:
Transformer Primary: _____ Volts _____ Delta _____Wye _____ Wye Grounded
Transformer Secondary: _____ Volts _____ Delta _____Wye _____ Wye Grounded
Transformer Tertiary: _____ Volts _____ Delta _____Wye _____ Wye Grounded

Transformer Fuse Data (If Applicable, for Interconnection Customer-Owned Fuse):

(Attach copy of fuse manufacturer's Minimum Melt and Total Clearing Time-Current Curves)

Manufacturer: _____ Type: _____ Size: _____Speed: _____

Interconnecting Circuit Breaker (if applicable):

Manufacturer: _____ Type: _____
Load Rating (Amps): _____ Interrupting Rating (Amps): _____ Trip Speed (Cycles): _____

Interconnection Protective Relays (If Applicable):

If Microprocessor-Controlled:

List of Functions and Adjustable Setpoints for the protective equipment or software:

Setpoint Function Minimum Maximum

_____ _____ _____

_____ _____ _____

_____ _____ _____

_____ _____ _____

_____ _____ _____

_____ _____ _____

If Discrete Components:

(Enclose Copy of any Proposed Time-Overcurrent Coordination Curves)

Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____
Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____
Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____
Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____
Manufacturer: _____ Type: _____ Style/Catalog No.: _____ Proposed Setting: _____

Current Transformer Data (If Applicable):

(Enclose Copy of Manufacturer's Excitation and Ratio Correction Curves)

Manufacturer: _____
Type: _____ Accuracy Class: __ Proposed Ratio Connection: ____

Manufacturer: _____
Type: _____ Accuracy Class: __ Proposed Ratio Connection: ____

Potential Transformer Data (If Applicable):

Manufacturer: _____
Type: _____ Accuracy Class: __ Proposed Ratio Connection: ____

Manufacturer: _____
Type: _____ Accuracy Class:__ Proposed Ratio Connection: ____

**General Information**

Enclose copy of site electrical one-line diagram showing the configuration of all Small Generating Facility equipment, current and potential circuits, and protection and control schemes. This one-line diagram must be signed and stamped by a licensed Professional Engineer if the Small Generator Facility is larger than 50 kW. Is One-Line Diagram Enclosed? ____Yes ____No

Enclose copy of any site documentation that indicates the precise physical location of the proposed Small Generating Facility (e.g., USGS topographic map or other diagram or documentation).

Proposed location of protective interface equipment on property (include address if different from the Interconnection Customer's address) _____

Enclose copy of any site documentation that describes and details the operation of the protection and control schemes. Is Available Documentation Enclosed? ___Yes ____No

Enclose copies of schematic drawings for all protection and control circuits, relay current circuits, relay potential circuits, and alarm/monitoring circuits (if applicable).
Are Schematic Drawings Enclosed? ___Yes ____No

**Applicant Signature**

I hereby certify that, to the best of my knowledge, all the information provided in this Interconnection Request is true and correct.

For Interconnection Customer: _____ Date: _____

## Attachment 3

## Certification Codes and Standards

IEEE1547 Standard for Interconnecting Distributed Resources with Electric Power Systems (including use of IEEE 1547.1 testing protocols to establish conformity)

UL 1741 Inverters, Converters, and Controllers for Use in Independent Power Systems

IEEE Std 929-2000 IEEE Recommended Practice for Utility Interface of Photovoltaic (PV) Systems

NFPA 70 (2002), National Electrical Code

IEEE Std C37.90.1-1989 (R1994), IEEE Standard Surge Withstand Capability (SWC) Tests for Protective Relays and Relay Systems

IEEE Std C37.90.2 (1995), IEEE Standard Withstand Capability of Relay Systems to Radiated Electromagnetic Interference from Transceivers

IEEE Std C37.108-1989 (R2002), IEEE Guide for the Protection of Network Transformers

IEEE Std C57.12.44-2000, IEEE Standard Requirements for Secondary Network Protectors

IEEE Std C62.41.2-2002, IEEE Recommended Practice on Characterization of Surges in Low Voltage (1000V and Less) AC Power Circuits

IEEE Std C62.45-1992 (R2002), IEEE Recommended Practice on Surge Testing for Equipment Connected to Low-Voltage (1000V and Less) AC Power Circuits

ANSI C84.1-1995 Electric Power Systems and Equipment – Voltage Ratings (60 Hertz)

IEEE Std 100-2000, IEEE Standard Dictionary of Electrical and Electronic Terms
NEMA MG 1-1998, Motors and Small Resources, Revision 3

IEEE Std 519-1992, IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems

NEMA MG 1-2003 (Rev 2004), Motors and Generators, Revision 1

## Attachment 4

## Certification of Small Generator Equipment Packages

1.0 Small Generating Facility equipment proposed for use separately or packaged with other equipment in an interconnection system shall be considered certified for interconnected operation if (1) it has been tested in accordance with industry standards for continuous utility interactive operation in compliance with the appropriate codes and standards referenced below by any Nationally Recognized Testing Laboratory (NRTL) recognized by the United States Occupational Safety and Health Administration to test and certify interconnection equipment pursuant to the relevant codes and standards listed in SGIP Attachment 3, (2) it has been labeled and is publicly listed by such NRTL at the time of the interconnection application, and (3) such NRTL makes readily available for verification all test standards and procedures it utilized in performing such equipment certification, and, with consumer approval, the test data itself. The NRTL may make such information available on its website and by encouraging such information to be included in the manufacturer's literature accompanying the equipment.

2.0 The Interconnection Customer must verify that the intended use of the equipment falls within the use or uses for which the equipment was tested, labeled, and listed by the NRTL.

3.0 Certified equipment shall not require further type-test review, testing, or additional equipment to meet the requirements of this interconnection procedure; however, nothing herein shall preclude the need for an on-site commissioning test by the parties to the interconnection nor follow-up production testing by the NRTL.

4.0 If the certified equipment package includes only interface components (switchgear, inverters, or other interface devices), then an Interconnection Customer must show that the generator or other electric source being utilized with the equipment package is compatible with the equipment package and is consistent with the testing and listing specified for this type of interconnection equipment.

5.0 Provided the generator or electric source, when combined with the equipment package, is within the range of capabilities for which it was tested by the NRTL, and does not violate the interface components' labeling and listing performed by the NRTL, no further design review, testing or additional equipment on the customer side of the point of common coupling shall be required to meet the requirements of this interconnection procedure.

6.0 An equipment package does not include equipment provided by the utility.

7.0 Any equipment package approved and listed in a state by that state's regulatory body for interconnected operation in that state prior to the effective date of these small generator interconnection procedures shall be considered certified under these procedures for use in that state.

**Attachment 5**

**Application, Procedures, and Terms and Conditions for Interconnecting a Certified Inverter-Based Small Generating Facility No Larger than 10 kW ("10 kW Inverter Process")**

1.0 The Interconnection Customer ("Customer") completes the Interconnection Request ("Application") and submits it to the Participating TO ("Company").

2.0 The Company acknowledges to the Customer receipt of the Application within three Business Days of receipt.

3.0 The Company evaluates the Application for completeness and notifies the Customer within ten Business Days of receipt that the Application is or is not complete and, if not, advises what material is missing.

4.0 The Company verifies that the Small Generating Facility can be interconnected safely and reliably using the screens contained in the Fast Track Process in the Small Generator Interconnection Procedures (SGIP). The Company has 15 Business Days to complete this process. Unless the Company determines and demonstrates that the Small Generating Facility cannot be interconnected safely and reliably, the Company approves the Application and returns it to the Customer. Note to Customer: Please check with the Company before submitting the Application if disconnection equipment is required.

5.0 After installation, the Customer returns the Certificate of Completion to the Company. Prior to parallel operation, the Company may inspect the Small Generating Facility for compliance with standards which may include a witness test, and may schedule appropriate metering replacement, if necessary.

6.0 The Company notifies the Customer in writing that interconnection of the Small Generating Facility is authorized. If the witness test is not satisfactory, the Company has the right to disconnect the Small Generating Facility. The Customer has no right to operate in parallel until a witness test has been performed, or previously waived on the Application. The Company is obligated to complete this witness test within ten Business Days of the receipt of the Certificate of Completion. If the Company does not inspect within ten Business Days or by mutual agreement of the Parties, the witness test is deemed waived.

7.0 Contact Information – The Customer must provide the contact information for the legal applicant (i.e., the Interconnection Customer). If another entity is responsible for interfacing with the Company, that contact information must be provided on the Application.

8.0 Ownership Information – Enter the legal names of the owner(s) of the Small Generating Facility. Include the percentage ownership (if any) by any utility or public utility holding company, or by any entity owned by either.

9.0 UL1741 Listed – This standard ("Inverters, Converters, and Controllers for Use in Independent Power Systems") addresses the electrical interconnection design of various forms of generating equipment. Many manufacturers submit their equipment to a Nationally Recognized Testing Laboratory (NRTL) that verifies compliance with UL1741. This "listing" is then marked on the equipment and supporting documentation.

**Application for Interconnecting a Certified Inverter-Based Small Generating Facility No Larger than 10kW**

This Application is considered complete when it provides all applicable and correct information required below. Additional information to evaluate the Application may be required.

Processing Fee
A non-refundable processing fee of $100 must accompany this Application.

Interconnection Customer
Name: _____
Contact Person: _____
Address: _____
City:_____State:_____Zip_____:
Telephone (Day): _____(Evening):_____
Fax:_____ E-Mail Address:_____

Contact (if different from Interconnection Customer)
Name: _____
Address: _____
City:_____State:_____Zip:_____
Telephone (Day):_____(Evening):_____
Fax:_____ __E-Mail Address:_____

Owner of the facility (include % ownership by any electric utility):_____

Small Generating Facility Information
Location (if different from above): _____
Electric Service Company: _____
Account Number: _____
Inverter Manufacturer:_ _____ Model_____
Nameplate Rating: _____ (kW) _____ (kVA) _____ (AC Volts)_____
Single Phase _____ Three Phase_____
System Design Capacity: _____ (kW) _____ (kVA)_____
Prime Mover: Photovoltaic Reciprocating Engine Fuel Cell
Turbine Other _____
Energy Source: Solar Wind Hydro Diesel Natural Gas
Fuel Oil Other (describe) _____
Is the equipment UL1741 Listed? _____Yes_____ No _____
If Yes, attach manufacturer's cut-sheet showing UL1741 listing

Estimated Installation Date: _____Estimated In-Service Date: _____

The 10 kW Inverter Process is available only for inverter-based Small Generating Facilities no larger than 10 kW that meet the codes, standards, and certification requirements of Attachments 3 and 4 of the Small Generator Interconnection Procedures (SGIP), or the Participating TO has reviewed the design or tested the proposed Small Generating Facility and is satisfied that it is safe to operate.

List components of the Small Generating Facility equipment package that are currently certified:

| | Equipment Type | Certifying Entity |
|---|---|---|
| 1. | _____ | _____ |
| 2. | _____ | _____ |

3. _____ _____
4. _____ _____
5. _____ _____

Interconnection Customer Signature

I hereby certify that, to the best of my knowledge, the information provided in this Application is true. I agree to abide by the Terms and Conditions for Interconnecting an Inverter-Based Small Generating Facility No Larger than 10kW and return the Certificate of Completion when the Small Generating Facility has been installed.

Signed: _____

Title: _____ Date: _____

Contingent Approval to Interconnect the Small Generating Facility

(For Company use only)

Interconnection of the Small Generating Facility is approved contingent upon the Terms and Conditions for Interconnecting an Inverter-Based Small Generating Facility No Larger than 10kW and return of the Certificate of Completion.

Company Signature: _____

Title: _____ Date: _____

Application ID number: _____

Company waives inspection/witness test? Yes___ No___

**Small Generating Facility Certificate of Completion**

Is the Small Generating Facility owner-installed? Yes_____ No _____

Interconnection Customer: _____

Contact Person: _____

Address: _____

Location of the Small Generating Facility (if different from above):

_____

City: _____ State: _____Zip Code: _____

Telephone (Day): _____ (Evening): _____

Fax: _____ E-Mail Address: _____

Electrician:

Name: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Day): _____ (Evening): _____

Fax: _____ E-Mail Address: _____

License number: _____

Date Approval to Install Facility granted by the Company: _____

Application ID number: _____

Inspection:

The Small Generating Facility has been installed and inspected in compliance with the local

building/electrical code of _____

Signed (Local electrical wiring inspector, or attach signed electrical inspection):

_____

Print Name: _____

Date: _____

As a condition of interconnection, you are required to send/fax a copy of this form along with a copy of the signed electrical permit to (insert Company information below):

Name: _____

Company: _____

Address:_____

City _____State _____ZIP: _____

Fax: _____

Approval to Energize the Small Generating Facility (For Company use only)
Energizing the Small Generating Facility is approved contingent upon the Terms and Conditions for Interconnecting an Inverter-Based Small Generating Facility No Larger than 10kW

Company Signature: _____

Title: _____ Date: _____

**Terms and Conditions for Interconnecting an Inverter-Based Small Generating Facility No Larger than 10kW**

**1.0 Construction of the Facility**

The Interconnection Customer (the "Customer") may proceed to construct (including operational testing not to exceed two hours) the Small Generating Facility when the Participating TO (the "Company") approves the Interconnection Request (the "Application") and returns it to the Customer.

**2.0 Interconnection and Operation**

The Customer may operate Small Generating Facility and interconnect with the Company's electric system once all of the following have occurred:

2.1 Upon completing construction, the Customer will cause the Small Generating Facility to be inspected or otherwise certified by the appropriate local electrical wiring inspector with jurisdiction, and

2.2 The Customer returns the Certificate of Completion to the Company, and

2.3 The Company has either:

2.3.1 Completed its inspection of the Small Generating Facility to ensure that all equipment has been appropriately installed and that all electrical connections have been made in accordance with applicable codes. All inspections must be conducted by the Company, at its own expense, within ten Business Days after receipt of the Certificate of Completion and shall take place at a time agreeable to the Parties. The Company shall provide a written statement that the Small Generating Facility has passed inspection or shall notify the Customer of what steps it must take to pass inspection as soon as practicable after the inspection takes place; or

2.3.2 If the Company does not schedule an inspection of the Small Generating Facility within ten business days after receiving the Certificate of Completion,the witness test is deemed waived (unless the Parties agree otherwise); or

2.3.3 The Company waives the right to inspect the Small Generating Facility.

2.4 The Company has the right to disconnect the Small Generating Facility in the event of improper installation or failure to return the Certificate of Completion.

2.5 Revenue quality metering equipment must be installed and tested in accordance with applicable ANSI standards.

**3.0 Safe Operations and Maintenance**

The Customer shall be fully responsible to operate, maintain, and repair the Small Generating Facility as required to ensure that it complies at all times with the interconnection standards to which it has been certified.

**4.0 Access**

The Company shall have access to the disconnect switch (if the disconnect switch is required) and metering equipment of the Small Generating Facility at all times. The Company shall provide reasonable notice to the Customer when possible prior to using its right of access.

**5.0 Disconnection**

The Company may temporarily disconnect the Small Generating Facility upon the following conditions:

5.1 For scheduled outages upon reasonable notice.

5.2 For unscheduled outages or emergency conditions.

5.3 If the Small Generating Facility does not operate in the manner consistent with these Terms and Conditions.

5.4 The Company shall inform the Customer in advance of any scheduled disconnection, or as is reasonable after an unscheduled disconnection.

**6.0 Indemnification**

The Parties shall at all times indemnify, defend, and save the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or inactions of its obligations under this agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

**7.0 Insurance**

The Parties each agree to maintain commercially reasonable amounts of insurance.

**8.0 Limitation of Liability**

Each party's liability to the other party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either party be liable to the other party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever, except as allowed under paragraph 6.0.

**9.0 Termination**

The agreement to operate in parallel may be terminated under the following conditions:

9.1 By the Customer
By providing written notice to the Company.

9.2 By the Company
If the Small Generating Facility fails to operate for any consecutive 12 month period or the Customer fails to remedy a violation of these Terms and Conditions.

9.3 Permanent Disconnection
In the event this Agreement is terminated, the Company shall have the right to disconnect its facilities or direct the Customer to disconnect its Small Generating Facility.

9.4 Survival Rights
This Agreement shall continue in effect after termination to the extent necessary to allow or require either Party to fulfill rights or obligations that arose under the Agreement.

**10.0 Assignment/Transfer of Ownership of the Facility**

This Agreement shall survive the transfer of ownership of the Small Generating Facility to a new owner when the new owner agrees in writing to comply with the terms of this Agreement and so notifies the Company.

**Attachment 6**

**Feasibility Study Agreement**

**THIS AGREEMENT** is made and entered into this_____day of_____
20___ by and between_____,
a_____organized and existing under the laws of the State of
_____, ("Interconnection Customer,") and
the California Independent System Operator Corporation, a California nonprofit public benefit corporation existing under the laws of the State of California, ("CAISO"). Interconnection Customer and CAISO each may be referred to as a "Party," or collectively as the "Parties."

**RECITALS**

**WHEREAS**, Interconnection Customer is proposing to develop a Small Generating Facility or generating capacity addition to an existing Small Generating Facility consistent with the Interconnection Request completed by Interconnection Customer on_____; and

**WHEREAS**, Interconnection Customer desires to interconnect the Small Generating Facility with the CAISO Controlled Grid; and

**WHEREAS**, Interconnection Customer has requested the CAISO to conduct or cause to be performed a feasibility study to assess the feasibility of interconnecting the proposed Small Generating Facility with the CAISO Controlled Grid, and of any Affected Systems;

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the Master Definitions Supplement, Appendix A of the CAISO Tariff.

2.0 The Interconnection Customer elects and the CAISO shall conduct or cause to be performed an interconnection feasibility study consistent the standard Small Generator Interconnection Procedures in accordance with the CAISO Tariff.

3.0 The scope of the feasibility study shall be subject to the assumptions set forth in Attachment A to this Agreement.

4.0 The feasibility study shall be based on the technical information provided by the Interconnection Customer in the Interconnection Request, as may be modified as the result of the Scoping Meeting. The CAISO reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the feasibility study and as designated in accordance with the standard Small Generator Interconnection Procedures. If the Interconnection Customer modifies its Interconnection Request, the time to complete the feasibility study may be extended by agreement of the Parties.

5.0 In performing the study, the CAISO shall rely, to the extent reasonably practicable, on existing studies of recent vintage. The Interconnection Customer shall not be charged for such existing studies; however, the Interconnection Customer shall be responsible for charges associated with any new study or modifications to existing studies that are reasonably necessary to perform the feasibility study.

6.0 The feasibility study report shall provide the following analyses for the purpose of identifying any potential adverse system impacts that would result from the interconnection of the Small Generating Facility as proposed:

6.1 Initial identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;

6.2 Initial identification of any thermal overload or voltage limit violations resulting from the interconnection;

6.3 Initial review of grounding requirements and electric system protection;

6.4 preliminary identification of financial impacts, if any, on Local Furnishing Bonds; and

6.5 Description and non-bonding estimated cost of facilities required to interconnect the proposed Small Generating Facility and to address the identified short circuit and power flow issues.

7.0 The feasibility study shall model the impact of the Small Generating Facility regardless of purpose in order to avoid the further expense and interruption of operation for reexamination of feasibility and impacts if the Interconnection Customer later changes the purpose for which the Small Generating Facility is being installed.

8.0 The study shall include the feasibility of any interconnection at a proposed project site where there could be multiple potential Points of Interconnection, as requested by the Interconnection Customer and at the Interconnection Customer's cost.

9.0 A deposit of the lesser of 50 percent of good faith estimated feasibility study costs or earnest money of $1,000 shall be required from the Interconnection Customer.

10.0 Once the feasibility study is completed, a feasibility study report shall be prepared and transmitted to the Interconnection Customer. Barring unusual circumstances, the feasibility study must be completed and the feasibility study report transmitted within 30 Business Days of the Interconnection Customer's agreement to conduct a feasibility study.

11.0 Any study fees shall be based on the CAISO's actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time.

12.0 The Interconnection Customer must pay any study costs that exceed the deposit without interest within 30 calendar days on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the CAISO shall refund such excess within 30 calendar days of the invoice without interest.

13.0 Miscellaneous.

13.1 Dispute Resolution. Any dispute, or assertion of a claim, arising out of or in connection with this Agreement, shall be resolved in accordance with Section 4.2 of the SGIP.

13.2 Confidentiality. Confidential Information shall be treated in accordance with Section 4.5 of the SGIP.

13.3 Binding Effect. This Agreement and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

13.4 Conflicts. In the event of a conflict between the body of this Agreement and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this Agreement shall prevail and be deemed the final intent of the Parties.

13.5 Rules of Interpretation. This Agreement, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this Agreement, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this Feasibility Study Agreement), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any applicable laws and regulations means such applicable laws and regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section, Attachment, or Appendix means such Article or Section of this Agreement or such Attachment or Appendix to this Agreement, or such Section of the SGIP or such Attachment or Appendix to the SGIP, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this Agreement as a whole and not to any particular Section; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".

13.6 Governing Law, Regulatory Authority, and Rules. The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of the state where the Point of Interconnection is located, without regard to its conflicts of law principles. This Agreement is subject to all Applicable Laws and Regulations. Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.

13.7 No Third Party Beneficiaries. This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

13.8 Waiver. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other

obligation, right, duty of this Agreement. Termination or default of this Agreement for any reason by the Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Participating TO or CAISO. Any waiver of this Agreement shall, if requested, be provided in writing.

Any waivers at any time by any Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

13.9 Headings. The descriptive headings of the various Articles and Sections of this Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Agreement.

13.10 Multiple Counterparts. This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

13.11 Amendment. The Parties may by mutual agreement amend this Agreement by a written instrument duly executed by both of the Parties.

13.12 Modification by the Parties. The Parties may by mutual agreement amend the Appendices to this Agreement by a written instrument duly executed by both of the Parties. Such amendment shall become effective and a part of this Agreement upon satisfaction of all applicable laws and regulations.

13.13 Reservation of Rights. The CAISO shall have the right to make a unilateral filing with FERC to modify this Agreement with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

13.14 No Partnership. This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

13.15 Assignment. This Agreement may be assigned by a Party only with the written consent of the other Party; provided that a Party may assign this Agreement without the consent of the other Party to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement; and provided further that the Interconnection Customer shall have the right to assign this Agreement, without the consent of the other Party, for collateral security purposes to aid in providing financing for the Generating Unit, provided that the Interconnection Customer will require any secured party, trustee or mortgagee to notify the other Party of any such assignment. Any financing arrangement entered into by the Interconnection Customer pursuant to this Article

will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify the other Party of the date and particulars of any such exercise of assignment right(s). Any attempted assignment that violates this Article is void and ineffective. Any assignment under this Agreement shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

13.16 Severability. If any provisions or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall negotiate in good faith to restore insofar as practicable the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

13.17 Nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this Agreement; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this Agreement in providing such services and each Party shall remain primarily liable to the other Parties for the performance of such subcontractor.

The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Parties for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall the Participating TO or the CAISO be liable for the actions or inactions of the Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under this Agreement. Any applicable obligation imposed by this Agreement upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

The obligations under this article will not be limited in any way by any limitation of subcontractor's insurance.

**IN WITNESS WHEREOF**, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**California Independent System Operator Corporation**

Signed_____

Name (Printed): _____

Title_____

**[Insert name of Interconnection Customer]**

Signed_____

Name (Printed):_____

Title_____

**Attachment A to**
**Feasibility Study Agreement**

**Assumptions Used in Conducting the Feasibility Study**

The feasibility study will be based upon the information set forth in the Interconnection Request and agreed upon in the Scoping Meeting held on _____:

1) Designation of Point of Interconnection and configuration to be studied.

2) Designation of alternative Points of Interconnection and configuration.

1) and 2) are to be completed by the Interconnection Customer. Other assumptions (listed below) are to be provided by the Interconnection Customer and the CAISO.

## Attachment 7

## System Impact Study Agreement

**THIS AGREEMENT** is made and entered into this_____day of_____
20___ by and between_____,
a_____organized and existing under the laws of the State of
_____, ("Interconnection Customer,") and
the California Independent System Operator Corporation, a California nonprofit public benefit corporation existing under the laws of the State of California, ("CAISO"). Interconnection Customer and CAISO each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS**, the Interconnection Customer is proposing to develop a Small Generating Facility or generating capacity addition to an existing Small Generating Facility consistent with the Interconnection Request completed by the Interconnection Customer on_____; and

**WHEREAS**, the Interconnection Customer desires to interconnect the Small Generating Facility with the CAISO Controlled Grid;

**WHEREAS**, the CAISO has completed a feasibility study and provided the results of said study to the Interconnection Customer (This recital to be omitted if the Parties have agreed to forego the feasibility study.); and

**WHEREAS**, the Interconnection Customer has requested the CAISO to conduct or cause to be performed a system impact study(s) to assess the impact of interconnecting the Small Generating Facility with the CAISO Controlled Grid, and of any Affected Systems;

**NOW, THEREFORE**, in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the Master Definitions Supplement, Appendix A of the CAISO Tariff.

2.0 The Interconnection Customer elects and the CAISO shall conduct or cause to be performed a system impact study(s) consistent with the standard Small Generator Interconnection Procedures in accordance with the CAISO Tariff.

3.0 The scope of a system impact study shall be subject to the assumptions set forth in Attachment A to this Agreement.

4.0 A system impact study will be based upon the results of the feasibility study and the technical information provided by Interconnection Customer in the Interconnection Request. The CAISO reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the system impact study. If the Interconnection Customer modifies its designated Point of Interconnection, Interconnection Request, or the technical information provided therein is modified, the time to complete the system impact study may be extended.

5.0 A system impact study shall consist of a short circuit analysis, a stability analysis, a power flow analysis, voltage drop and flicker studies, protection and set point coordination studies, an assessment of the potential magnitude of financial impacts, if any, on Local Furnishing Bonds and a proposed resolution, and grounding reviews, as necessary. A system impact study shall state the assumptions upon which it is based, state the results of the analyses, and provide the requirement or potential impediments to providing the requested interconnection service, including a preliminary indication of the cost and length of time that would be necessary to correct any problems identified in those analyses and implement the interconnection. A system impact study shall provide a list of facilities that are required as a result of the Interconnection Request and non-binding good faith estimates of cost responsibility and time to construct.

6.0 A Distribution System impact study shall incorporate a distribution load flow study, an analysis of equipment interrupting ratings, protection coordination study, voltage drop and flicker studies, protection and set point coordination studies, grounding reviews, and the impact on electric system operation, as necessary.

7.0 Affected Systems may participate in the preparation of a system impact study, with a division of costs among such entities as they may agree. All Affected Systems shall be afforded an opportunity to review and comment upon a system impact study that covers potential adverse system impacts on their electric systems, and the CAISO has 20 additional Business Days to complete a system impact study requiring review by Affected Systems.

8.0 If the CAISO uses a queuing procedure for sorting or prioritizing projects and their associated cost responsibilities for any required Network Upgrades, the system impact study shall consider all generating facilities (and with respect to paragraph 8.3 below, any identified Upgrades associated with such higher queued interconnection) that, on the date the system impact study is commenced -

8.1 Are directly interconnected with the CAISO Controlled Grid; or

8.2 Are interconnected with Affected Systems and may have an impact on the proposed interconnection; and

8.3 Have a pending higher queued Interconnection Request to interconnect with the CAISO Controlled Grid.

9.0 A Distribution System impact study, if required, shall be completed and the results transmitted to the Interconnection Customer within 30 Business Days after this Agreement is signed by the Parties. A CAISO Controlled Grid system impact study, if required, shall be completed and the results transmitted to the Interconnection Customer within 45 Business Days after this Agreement is signed by the Parties, or in accordance with the CAISO queuing procedures.

10.0 A deposit of the equivalent of the good faith estimated cost of a Distribution System impact study and one half the good faith estimated cost of a CAISO Controlled Grid system impact study shall be required from the Interconnection Customer.

11.0 Any study fees shall be based on the CAISO actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time.

12.0 The Interconnection Customer must pay any study costs that exceed the deposit without interest within 30 calendar days on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the CAISO shall refund such excess within 30 calendar days of the invoice without interest.

13.0 Miscellaneous.

13.1 Dispute Resolution. Any dispute, or assertion of a claim, arising out of or in connection with this Agreement, shall be resolved in accordance with Section 4.2 of the SGIP.

13.2 Confidentiality. Confidential Information shall be treated in accordance with Section 4.5 of the SGIP.

13.3 Binding Effect. This Agreement and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

13.4 Conflicts. In the event of a conflict between the body of this Agreement and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this Agreement shall prevail and be deemed the final intent of the Parties.

13.5 Rules of Interpretation. This Agreement, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this Agreement, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this System Impact Study Agreement), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any applicable laws and regulations means such applicable laws and regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section, Attachment, or Appendix means such Article or Section of this Agreement or such Attachment or Appendix to this Agreement, or such Section of the SGIP or such Attachment or Appendix to the SGIP, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this Agreement as a whole and not to any particular Section; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".

13.6 Governing Law, Regulatory Authority, and Rules. The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of the state where the Point of Interconnection is located, without regard to its conflicts of law principles. This Agreement is subject to all Applicable Laws and Regulations. Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.

13.7 No Third Party Beneficiaries. This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

13.8 Waiver. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other

obligation, right, duty of this Agreement. Termination or default of this Agreement for any reason by the Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Participating TO or CAISO. Any waiver of this Agreement shall, if requested, be provided in writing.

Any waivers at any time by any Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

13.9 Headings. The descriptive headings of the various Articles and Sections of this Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Agreement.

13.10 Multiple Counterparts. This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

13.11 Amendment. The Parties may by mutual agreement amend this Agreement by a written instrument duly executed by both of the Parties.

13.12 Modification by the Parties. The Parties may by mutual agreement amend the Appendices to this Agreement by a written instrument duly executed by both of the Parties. Such amendment shall become effective and a part of this Agreement upon satisfaction of all applicable laws and regulations.

13.13 Reservation of Rights. The CAISO shall have the right to make a unilateral filing with FERC to modify this Agreement with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

13.14 No Partnership. This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

13.15 Assignment. This Agreement may be assigned by a Party only with the written consent of the other Party; provided that a Party may assign this Agreement without the consent of the other Party to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement; and provided further that the Interconnection Customer shall have the right to assign this Agreement, without the consent of the other Party, for collateral security purposes to aid in providing financing for the Generating Unit, provided that the Interconnection Customer will require any secured party, trustee or mortgagee to notify the other Party of any such assignment. Any financing arrangement entered into by the Interconnection Customer pursuant to this Article will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee

will notify the other Party of the date and particulars of any such exercise of assignment right(s). Any attempted assignment that violates this Article is void and ineffective. Any assignment under this Agreement shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

13.16 Severability. If any provisions or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall negotiate in good faith to restore insofar as practicable the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

13.17 Nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this Agreement; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this Agreement in providing such services and each Party shall remain primarily liable to the other Parties for the performance of such subcontractor.

The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Parties for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall the Participating TO or the CAISO be liable for the actions or inactions of the Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under this Agreement. Any applicable obligation imposed by this Agreement upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

The obligations under this article will not be limited in any way by any limitation of subcontractor's insurance.

IN WITNESS THEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**California Independent System Operator Corporation**

Signed_____

Name (Printed): _____

Title_____

**[Insert name of Interconnection Customer]**

Signed_____

Name (Printed):_____

Title_____

**Attachment A to System Impact Study Agreement**

**Assumptions Used in Conducting the System Impact Study**

The system impact study shall be based upon the results of the feasibility study, subject to any modifications in accordance with the standard Small Generator Interconnection Procedures, and the following assumptions:

1) Designation of Point of Interconnection and configuration to be studied.

2) Designation of alternative Points of Interconnection and configuration.

1) and 2) are to be completed by the Interconnection Customer. Other assumptions (listed below) are to be provided by the Interconnection Customer and the CAISO.

## Attachment 8

## Facilities Study Agreement

**THIS AGREEMENT** is made and entered into this_____day of_____
20___ by and between_____,
a_____organized and existing under the laws of the State of
_____, ("Interconnection Customer,") and
the California Independent System Operator Corporation, a California nonprofit public benefit corporation existing under the laws of the State of California, ("CAISO"). Interconnection Customer and CAISO each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS,** the Interconnection Customer is proposing to develop a Small Generating Facility or generating capacity addition to an existing Small Generating Facility consistent with the Interconnection Request completed by the Interconnection Customer on_____; and

**WHEREAS**, the Interconnection Customer desires to interconnect the Small Generating Facility with the CAISO Controlled Grid;

**WHEREAS,** the CAISO has completed a system impact study and provided the results of said study to the Interconnection Customer; and

**WHEREAS**, the Interconnection Customer has requested the CAISO to conduct or cause to be performed a facilities study to specify and estimate the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the system impact study in accordance with Good Utility Practice to physically and electrically connect the Small Generating Facility with the CAISO Controlled Grid.

**NOW, THEREFORE,** in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated or the meanings specified in the Master Definitions Supplement, Appendix A of the CAISO Tariff.

2.0 The Interconnection Customer elects and the CAISO shall cause a facilities study consistent with the standard Small Generator Interconnection Procedures to be performed in accordance with the CAISO Tariff.

3.0 The scope of the facilities study shall be subject to data provided in Attachment A to this Agreement.

4.0 The facilities study shall specify and estimate the cost, including, if applicable, the cost of remedial measures that address the financial impacts, if any, on Local Furnishing Bonds, of the equipment, engineering, procurement and construction work (including overheads) needed to implement the conclusions of the system impact study(s). The facilities study shall also identify (1) the electrical switching configuration of the equipment, including, without limitation, transformer, switchgear, meters, and other station equipment, (2) the nature and estimated cost of the Participating TO's Interconnection Facilities and Upgrades necessary to accomplish the interconnection, and (3) an estimate of the time required to complete the construction and installation of such facilities or for effecting remedial measures that address the financial impacts, if any, on Local Furnishing Bonds.

5.0 The CAISO may propose to group facilities required for more than one Interconnection Customer in order to minimize facilities costs through economies of scale, but any Interconnection Customer may require the installation of facilities required for its own Small Generating Facility if it is willing to pay the costs of those facilities.

6.0 A deposit of the good faith estimated facilities study costs shall be required from the Interconnection Customer.

7.0 In cases where Upgrades are required, the facilities study must be completed within 45 Business Days of the receipt of this Agreement. In cases where no Upgrades are necessary, and the required facilities are limited to Interconnection Facilities, the facilities study must be completed within 30 Business Days.

8.0 Once the facilities study is completed, a facilities study report shall be prepared and transmitted to the Interconnection Customer. Barring unusual circumstances, the facilities study must be completed and the facilities study report transmitted within 30 Business Days of the Interconnection Customer's agreement to conduct a facilities study.

9.0 Any study fees shall be based on the CAISO's actual costs and will be invoiced to the Interconnection Customer after the study is completed and delivered and will include a summary of professional time.

10.0 The Interconnection Customer must pay any study costs that exceed the deposit without interest within 30 calendar days on receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced fees, the CAISO shall refund such excess within 30 calendar days of the invoice without interest.

11.0 Miscellaneous.

11.1 Dispute Resolution. Any dispute, or assertion of a claim, arising out of or in connection with this Agreement, shall be resolved in accordance with Section 4.2 of the SGIP.

11.2 Confidentiality. Confidential Information shall be treated in accordance with Section 4.5 of the SGIP.

11.3 Binding Effect. This Agreement and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

11.4 Conflicts. In the event of a conflict between the body of this Agreement and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this Agreement shall prevail and be deemed the final intent of the Parties.

11.5 Rules of Interpretation. This Agreement, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person’s successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this Agreement, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this Facilities Study Agreement), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any applicable laws and regulations means such applicable laws and regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section, Attachment, or Appendix means such Article or Section of this Agreement or such Attachment or Appendix to

this Agreement, or such Section of the SGIP or such Attachment or Appendix to the SGIP, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this Agreement as a whole and not to any particular Section; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".

11.6 Governing Law, Regulatory Authority, and Rules. The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of the state where the Point of Interconnection is located, without regard to its conflicts of law principles. This Agreement is subject to all Applicable Laws and Regulations. Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.

11.7 No Third Party Beneficiaries. This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

11.8 Waiver. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Agreement. Termination or default of this Agreement for any reason by the Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Participating TO or CAISO. Any waiver of this Agreement shall, if requested, be provided in writing.

Any waivers at any time by any Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

11.9 Headings. The descriptive headings of the various Articles and Sections of this Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Agreement.

11.10 Multiple Counterparts. This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

11.11 Amendment. The Parties may by mutual agreement amend this Agreement by a written instrument duly executed by both of the Parties.

11.12 Modification by the Parties. The Parties may by mutual agreement amend the Appendices to this Agreement by a written instrument duly executed by both of the Parties. Such amendment shall become effective and a part of this Agreement upon satisfaction of all applicable laws and regulations.

11.13 Reservation of Rights. The CAISO shall have the right to make a unilateral filing with FERC to modify this Agreement with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal

Power Act and FERC's rules and regulations thereunder, and Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

11.14 No Partnership. This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

11.15 Assignment. This Agreement may be assigned by a Party only with the written consent of the other Party; provided that a Party may assign this Agreement without the consent of the other Party to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement; and provided further that the Interconnection Customer shall have the right to assign this Agreement, without the consent of the other Party, for collateral security purposes to aid in providing financing for the Generating Unit, provided that the Interconnection Customer will require any secured party, trustee or mortgagee to notify the other Party of any such assignment. Any financing arrangement entered into by the Interconnection Customer pursuant to this Article will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify the other Party of the date and particulars of any such exercise of assignment right(s). Any attempted assignment that violates this Article is void and ineffective. Any assignment under this Agreement shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

11.16 Severability. If any provisions or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall negotiate in good faith to restore insofar as practicable the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

11.17 Nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this Agreement; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this Agreement in providing such services and each Party shall remain primarily liable to the other Parties for the performance of such subcontractor.

The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Parties for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall the Participating TO or the CAISO be liable for the actions or inactions of the Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under this Agreement. Any applicable obligation imposed by this Agreement upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

The obligations under this article will not be limited in any way by any limitation of subcontractor's insurance.

**IN WITNESS WHEREOF,** the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**California Independent System Operator Corporation**

Signed_____

Name (Printed):_____

Title_____

**[Insert name of Interconnection Customer]**

Signed_____

Name (Printed):_____

Title_____

**Attachment A to**
**Facilities Study Agreement**

**Data to Be Provided by the Interconnection Customer**
**with the Facilities Study Agreement**

Provide location plan and simplified one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

On the one-line diagram, indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)

On the one-line diagram, indicate the location of auxiliary power. (Minimum load on CT/PT) Amps

One set of metering is required for each generation connection to the new ring bus or existing Participating TO station. Number of generation connections: _____

Will an alternate source of auxiliary power be available during CT/PT maintenance?
Yes _____ No _____

Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation? Yes _____ No _____
(Please indicate on the one-line diagram).

What type of control system or PLC will be located at the Small Generating Facility?

_____

_____

What protocol does the control system or PLC use?

_____

_____

Please provide a 7.5-minute quadrangle map of the site. Indicate the plant, station, transmission line, and property lines.

Physical dimensions of the proposed interconnection station:

_____

## Attachment 9

## INTERCONNECTION PROCEDURES FOR A WIND GENERATING PLANT

Attachment 9 sets forth procedures specific to a wind generating plant. All other requirements of this SGIP continue to apply to wind generating plant interconnections.

### A. Special Procedures Applicable to Wind Generators

The wind plant Interconnection Customer, in completing the Interconnection Request required by Section 2.3 of this SGIP, may provide to the CAISO a set of preliminary electrical design specifications depicting the wind plant as a single equivalent generator. Upon satisfying these and other applicable Interconnection Request conditions, the wind plant may enter the queue and receive the Base Case data as provided for in this SGIP.

No later than six months after submitting an Interconnection Request completed in this manner, the wind plant Interconnection Customer must submit completed detailed electrical design specifications and other data (including collector system layout data) needed to allow the CAISO to complete the interconnection study.

**Appendix T**

**Small Generator Interconnection Agreement**

This Small Generator Interconnection Agreement ("Agreement") is made and entered into this _____ day of _____, 20__, by _____ (“Participating TO”), the California Independent System Operator Corporation, a California nonprofit public benefit corporation organized and existing under the laws of the State of California (“CAISO”) and _____(“Interconnection Customer”) each hereinafter sometimes referred to individually as “Party” or referred to collectively as the “Parties.”

**Participating TO Information**

Participating TO:_____

Attention:_____

Address:_____

City:_____ State: _____ Zip: _____

Phone: _____ Fax:_____

E-mail Address:_____

**CAISO Information**

Attention: _____

Address:_____

City:_____ State: _____ Zip: _____

Phone: _____ Fax:_____

E-mail Address:_____

**Interconnection Customer Information**

Interconnection Customer: _____

Address:_____

City:_____ State: _____ Zip: _____

Phone: _____ Fax:_____

E-mail Address:_____

Interconnection Customer Queue Position No: _____

In consideration of the mutual covenants set forth herein, the Parties agree as follows:

**Article 1. Scope and Limitations of Agreement**

**1.1** This Agreement shall be used for all Small Generating Facility Interconnection Requests submitted under the applicable generator procedure (either the Generator Interconnection Procedures (GIP) set forth in Appendix Y or the Small Generator Interconnection Procedures (SGIP) set forth in Appendix S) except for those submitted under the 10 kW Inverter Process contained in GIP Appendix 7 or SGIP Attachment 5. For those Interconnection Requests, Attachment 5 contains the terms and conditions which serve as the Interconnection Agreement.

**1.2** This Agreement governs the terms and conditions under which the Interconnection Customer's Small Generating Facility will interconnect with, and operate in parallel with, the Participating TO's Transmission System.

**1.3** This Agreement does not constitute an agreement to purchase or deliver the Interconnection Customer's power. The purchase or delivery of power and other services that the Interconnection Customer may require will be covered under separate agreements, if any. The Interconnection Customer will be responsible for separately making all necessary arrangements (including scheduling) for delivery of electricity in accordance with the CAISO Tariff.

**1.4** Nothing in this Agreement is intended to affect any other agreement between or among the Parties.

**1.5 Responsibilities of the Parties**

**1.5.1** The Parties shall perform all obligations of this Agreement in accordance with all Applicable Laws and Regulations, Operating Requirements, and Good Utility Practice. The Parties shall use the Large Generator Interconnection Agreement (CAISO Tariff Appendix V or Appendix CC, as applicable) to interpret the responsibilities of the Parties under this Agreement.

**1.5.2** The Interconnection Customer shall construct, interconnect, operate and maintain its Small Generating Facility and construct, operate, and maintain its Interconnection Facilities in accordance with the applicable manufacturer's recommended maintenance schedule, and in accordance with this Agreement, and with Good Utility Practice.

**1.5.3** The Participating TO shall construct, operate, and maintain its Interconnection Facilities and Upgrades in accordance with this Agreement, and with Good Utility Practice. The CAISO and the Participating TO shall cause the Participating TO's Transmission System to be operated and controlled in a safe and reliable manner and in accordance with this Agreement.

**1.5.4** The Interconnection Customer agrees to construct its facilities or systems in accordance with applicable specifications that meet or exceed those provided by the National Electrical Safety Code, the American National Standards Institute, IEEE, Underwriter's Laboratory, and Operating Requirements in effect at the time of construction and other applicable national and state codes and standards. The Interconnection Customer agrees to design, install, maintain, and operate its Small Generating Facility so as to reasonably minimize the likelihood of a disturbance adversely affecting or impairing the system or equipment of the Participating TO and any Affected Systems. The Interconnection Customer shall comply with the Participating TO's Interconnection Handbook. In the event of a conflict between the terms of this Agreement and the terms of the Participating TO's Interconnection Handbook, the terms in this Agreement shall govern.

**1.5.5** Each Party shall operate, maintain, repair, and inspect, and shall be fully responsible for the facilities that it now or subsequently may own unless otherwise specified in the Attachments to this Agreement. Each Party shall be responsible for the safe installation, maintenance, repair and condition of their respective lines and appurtenances on their respective sides of the Point of Change of Ownership. The Participating TO and the Interconnection Customer, as appropriate, shall provide Interconnection Facilities that adequately protect the CAISO Controlled Grid, the

Participating TO's electric system, the Participating TO's personnel, and other persons from damage and injury. The allocation of responsibility for the design, installation, operation, maintenance and ownership of Interconnection Facilities shall be delineated in the Attachments to this Agreement.

**1.5.6** The Participating TO and the CAISO shall coordinate with Affected Systems to support the interconnection.

**1.5.7** [This provision is intentionally omitted.]

**1.6 Parallel Operation Obligations**

Once the Small Generating Facility has been authorized to commence parallel operation, the Interconnection Customer shall abide by all rules and procedures pertaining to the parallel operation of the Small Generating Facility in the CAISO Balancing Authority Area, including, but not limited to; 1) the rules and procedures concerning the operation of generation set forth in the CAISO Tariff for the CAISO Controlled Grid and; 2) the Operating Requirements set forth in Attachment 5 of this Agreement.

**1.7 Metering**

The Interconnection Customer shall be responsible for the reasonable and necessary cost for the purchase, installation, operation, maintenance, testing, repair, and replacement of metering and data acquisition equipment specified in Attachments 2 and 3 of this Agreement. The Interconnection Customer's metering (and data acquisition, as required) equipment shall conform to applicable industry rules and Operating Requirements.

**1.8 Reactive Power and Primary Frequency Response**

**1.8.1** The Interconnection Customer shall design its Small Generating Facility to maintain a composite power delivery at continuous rated power output at the terminals of each generating unit at a power factor within the range of 0.95 leading to 0.90 lagging, unless the CAISO has established different requirements that apply to all similarly situated generators in the CAISO Balancing Authority Area on a comparable basis. The requirements of this paragraph shall not apply to asynchronous generators and the requirements of Attachment 7 shall apply instead. For Asynchronous Generating Facilities, executing a Facilities Study Agreement on or after September 21, 2016, the Interconnection Customer shall design the Small Generating Facility to maintain a composite power delivery at continuous rated power output at the high-side of the generator substation at a power factor within the range of 0.95 leading to 0.95 lagging, unless the CAISO has established a different power factor range that applies to all Asynchronous Generating Facilities on a comparable basis. This power factor range standard shall be dynamic and can be met using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors and reactors, or a combination of the two.

**1.8.2** Payment to the Interconnection Customer for reactive power that the Small Generating Facility provides or absorbs when the CAISO requests the Interconnection Customer to operate its Small Generating Facility outside the range specified in Article 1.8.1 will be made by the CAISO in accordance with the applicable provisions of the CAISO Tariff.

**1.8.3 Primary Frequency Response.** Interconnection Customer shall ensure the primary frequency response capability of its Small Generating Facility by installing, maintaining, and operating a functioning governor or equivalent controls. The term "functioning governor or equivalent controls" as used herein shall mean the required hardware and/or software that provides frequency responsive real power control with the ability to sense changes in system frequency and autonomously adjust the Small Generating Facility's real power output in accordance with the

droop and deadband parameters and in the direction needed to correct frequency deviations. Interconnection Customer is required to install a governor or equivalent controls with the capability of operating: (1) with a maximum 5 percent droop and ±0.036 Hz deadband; or (2) in accordance with the relevant droop, deadband, and timely and sustained response settings from Applicable Reliability Standards providing for equivalent or more stringent parameters. The droop characteristic shall be: (1) based on the nameplate capacity of the Small Generating Facility, and shall be linear in the range of frequencies between 59 to 61 Hz that are outside of the deadband parameter; or (2) based on Applicable Reliability Standards providing for an equivalent or more stringent parameter. The deadband parameter shall be: the range of frequencies above and below nominal (60 Hz) in which the governor or equivalent controls is not expected to adjust the Small Generating Facility's real power output in response to frequency deviations. The deadband shall be implemented: (1) without a step to the droop curve, that is, once the frequency deviation exceeds the deadband parameter, the expected change in the Small Generating Facility's real power output in response to frequency deviations shall start from zero and then increase (for under-frequency deviations) or decrease (for over-frequency deviations) linearly in proportion to the magnitude of the frequency deviation; or (2) in accordance with Applicable Reliability Standards providing for an equivalent or more stringent parameter. Interconnection Customer shall notify the CAISO that the primary frequency response capability of the Small Generating Facility has been tested and confirmed during commissioning. Once Interconnection Customer has synchronized the Small Generating Facility with the CAISO Controlled Grid, Interconnection Customer shall operate the Small Generating Facility consistent with the provisions specified in Sections 1.8.3.1 and 1.8.3.2 of this SGIA. The primary frequency response requirements contained herein shall apply to both synchronous and non-synchronous Small Generating Facilities.

**1.8.3.1 Governor or Equivalent Controls.** Whenever the Small Generating Facility is operated in parallel with the CAISO Controlled Grid, Interconnection Customer shall operate the Small Generating Facility with its governor or equivalent controls in service and responsive to frequency. Interconnection Customer shall, in coordination with the CAISO, set the deadband parameter to: (1) a maximum of ±0.036 Hz and set the droop parameter to a maximum of 5 percent; or (2) implement the relevant droop and deadband settings from Applicable Reliability Standards that provides for equivalent or more stringent parameters. Interconnection Customer shall be required to provide the status and settings of the governor or equivalent controls to the CAISO upon request. If Interconnection Customer needs to operate the Small Generating Facility with its governor or equivalent controls not in service, Interconnection Customer shall immediately notify the CAISO, and provide the following information: (1) the operating status of the governor or equivalent controls (i.e., whether it is currently out of service or when it will be taken out of service); (2) the reasons for removing the governor or equivalent controls from service; and (3) a reasonable estimate of when the governor or equivalent controls will be returned to service. Interconnection Customer shall make Reasonable Efforts to return its governor or equivalent controls into service as soon as practicable. Interconnection Customer shall make Reasonable Efforts to keep outages of the Small Generating Facility's governor or equivalent controls to a minimum whenever the Small Generating Facility is operated in parallel with the CAISO Controlled Grid.

**1.8.3.2 Timely and Sustained Response.** Interconnection Customer shall ensure that the Small Generating Facility's real power response to sustained frequency deviations outside of the deadband setting is automatically provided and shall begin immediately after frequency deviates outside of the deadband, and to the extent the Small Generating Facility has operating capability in the direction needed to correct the frequency deviation. Interconnection Customer shall not block or otherwise inhibit the ability of the governor or equivalent controls to respond and shall ensure that the response is not inhibited, except under certain operational constraints including, but not limited to, ambient temperature limitations, physical energy limitations, outages of mechanical equipment, or regulatory requirements. The Small Generating Facility shall sustain the

real power response at least until system frequency returns to a value within the deadband setting of the governor or equivalent controls. A FERC-approved Applicable Reliability Standard with equivalent or more stringent requirements shall supersede the above requirements.

**1.8.3.3 Exemptions.** Small Generating Facilities that are regulated by the Nuclear Regulatory Commission shall be exempt from Sections 1.8.3, 1.8.3.1, and 1.8.3.2 of this SGIA. Small Generating Facilities that are behind-the-meter generation that is sized-to-load (i.e., the thermal load and the generation are near-balanced in real-time operation and the generation is primarily controlled to maintain the unique thermal, chemical, or mechanical output necessary for the operating requirements of its host facility) shall be required to install primary frequency response capability in accordance with the droop and deadband capability requirements specified in Section 1.8.3, but shall be otherwise exempt from the operating requirements in Sections 1.8.3, 1.8.3.1, 1.8.3.2, and 1.8.3.4 of this SGIA.

**1.8.3.4 Electric Storage Resources.** Interconnection Customer interconnecting an electric storage resource shall establish an operating range in Attachment 5 of this SGIA that specifies a minimum state of charge and a maximum state of charge between which the electric storage resource will be required to provide primary frequency response consistent with the conditions set forth in Sections 1.8.3, 1.8.3.1, 1.8.3.2, and 1.8.3.3 of this SGIA. Attachment 5 shall specify whether the operating range is static or dynamic, and shall consider: (1) the expected magnitude of frequency deviations in the interconnection; (2) the expected duration that system frequency will remain outside of the deadband parameter in the interconnection; (3) the expected incidence of frequency deviations outside of the deadband parameter in the interconnection; (4) the physical capabilities of the electric storage resource; (5) operational limitations of the electric storage resource due to manufacturer specifications; and (6) any other relevant factors agreed to by the CAISO and Interconnection Customer, and in consultation with the relevant transmission owner or balancing authority as appropriate. If the operating range is dynamic, then Attachment 5 must establish how frequently the operating range will be reevaluated and the factors that may be considered during its reevaluation.

Interconnection Customer's electric storage resource is required to provide timely and sustained primary frequency response consistent with Section 1.8.3.2 of this SGIA when it is online and dispatched to inject electricity to the CAISO Controlled Grid and/or receive electricity from the Participating TO's Transmission System or the CAISO Controlled Grid. This excludes circumstances when the electric storage resource is not dispatched to inject electricity to the CAISO Controlled Grid and/or dispatched to receive electricity from the Participating TO's Transmission System or the CAISO Controlled Grid. If Interconnection Customer's electric storage resource is charging at the time of a frequency deviation outside of its deadband parameter, it is to increase (for over-frequency deviations) or decrease (for under-frequency deviations) the rate at which it is charging in accordance with its droop parameter. Interconnection Customer's electric storage resource is not required to change from charging to discharging, or vice versa, unless the response necessitated by the droop and deadband settings requires it to do so and it is technically capable of making such a transition.

**1.9** Capitalized terms used herein shall have the meanings specified in the Glossary of Terms in Attachment 1 or the body of this Agreement.

**Article 2. Inspection, Testing, Authorization, and Right of Access**

**2.1 Equipment Testing and Inspection**

**2.1.1** The Interconnection Customer shall test and inspect its Small Generating Facility and Interconnection Facilities prior to interconnection. The Interconnection Customer shall notify the Participating TO and the CAISO of such activities no fewer than five (5)Business Days (or as may be agreed to by the Parties) prior to such testing and inspection. Testing and inspection shall occur on a Business Day. The Participating TO and the CAISO may, at their own expense, send qualified personnel to the Small Generating Facility site to inspect the interconnection and observe the testing. The Interconnection Customer shall provide the Participating TO and the CAISO a written test report when such testing and inspection is completed.

**2.1.2** The Participating TO and the CAISO shall provide the Interconnection Customer written acknowledgment that they have received the Interconnection Customer's written test report. Such written acknowledgment shall not be deemed to be or construed as any representation, assurance, guarantee, or warranty by the Participating TO or the CAISO of the safety, durability, suitability, or reliability of the Small Generating Facility or any associated control, protective, and safety devices owned or controlled by the Interconnection Customer or the quality of power produced by the Small Generating Facility.

**2.2 Authorization Required Prior to Parallel Operation**

**2.2.1** The Participating TO and the CAISO shall use Reasonable Efforts to list applicable parallel operation requirements in Attachment 5 of this Agreement. Additionally, the Participating TO and the CAISO shall notify the Interconnection Customer of any changes to these requirements as soon as they are known. The Participating TO and the CAISO shall make Reasonable Efforts to cooperate with the Interconnection Customer in meeting requirements necessary for the Interconnection Customer to commence parallel operations by the in-service date.

**2.2.2** The Interconnection Customer shall not operate its Small Generating Facility in parallel with the Participating TO's Transmission System without prior written authorization of the Participating TO. The Participating TO will provide such authorization to the Interconnection Customer and the CAISO once the Participating TO receives notification that the Interconnection Customer has complied with all applicable parallel operation requirements. Such authorization shall not be unreasonably withheld, conditioned, or delayed.

**2.3 Right of Access to Premises**

**2.3.1** Upon reasonable notice, the Participating TO and the CAISO may send a qualified person to the premises of the Interconnection Customer at or immediately before the time the Small Generating Facility first produces energy to inspect the interconnection, and observe the commissioning of the Small Generating Facility (including any required testing), startup, and operation for a period of up to three (3) Business Days after initial start-up of the unit. In addition, the Interconnection Customer shall notify the Participating TO and the CAISO at least five (5) Business Days prior to conducting any on-site verification testing of the Small Generating Facility.

**2.3.2** Following the initial inspection process described above, at reasonable hours, and upon reasonable notice, or at any time without notice in the event of an emergency or hazardous condition, the Participating TO and the CAISO shall have access to the Interconnection Customer's premises for any reasonable purpose in connection with the performance of the obligations imposed on it by this Agreement or if necessary to meet its legal obligation to provide service to its customers.

**2.3.3** Each Party shall be responsible for its own costs associated with following this article.

**Article 3. Effective Date, Term, Termination, and Disconnection**

**3.1 Effective Date**

This Agreement shall become effective upon execution by the Parties subject to acceptance by FERC (if applicable), or if filed unexecuted, upon the date specified by the FERC. The Participating TO and the CAISO shall promptly file this Agreement with the FERC upon execution, if required.

**3.2 Term of Agreement**

This Agreement shall become effective on the Effective Date and shall remain in effect for a period of ____ years from the Effective Date (term specified in individual agreements to be ten (10) years or such other longer period as the Interconnection Customer may request) and shall be automatically renewed for each successive one-year period thereafter, unless terminated earlier in accordance with Article 3.3 of this Agreement.

**3.3 Termination**

No termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination, including the filing with FERC of a notice of termination of this Agreement (if required), which notice has been accepted for filing by FERC.

**3.3.1** The Interconnection Customer may terminate this Agreement at any time by giving the Participating TO and the CAISO twenty (20) Business Days written notice.

**3.3.2** Any Party may terminate this Agreement after Default pursuant to Article 7.6.

**3.3.3** Upon termination of this Agreement, the Small Generating Facility will be disconnected from the CAISO Controlled Grid. All costs required to effectuate such disconnection shall be borne by the terminating Party, unless such termination resulted from the non-terminating Party's Default of this Agreement or such non-terminating Party otherwise is responsible for these costs under this Agreement.

**3.3.4** The termination of this Agreement shall not relieve any Party of its liabilities and obligations, owed or continuing at the time of termination.

**3.3.5** The provisions of this article shall survive termination or expiration of this Agreement.

**3.4 Temporary Disconnection**

Temporary disconnection of the Small Generating Facility or associated Interconnection Facilities shall continue only for so long as reasonably necessary under Good Utility Practice.

**3.4.1 Emergency Conditions**

"Emergency Condition" shall mean a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; (2) that, in the case of the CAISO, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the CAISO Controlled Grid or the electric systems of others to which the CAISO Controlled Grid is directly connected; (3) that, in the case of the Participating TO, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Participating TO's Transmission System, the Participating TO's Interconnection Facilities, Distribution System, or the electric systems of others to which the Participating TO's electric system is directly connected; or (4) that,

in the case of the Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Small Generating Facility or the Interconnection Customer's Interconnection Facilities. Under Emergency Conditions, the CAISO or the Participating TO may immediately suspend interconnection service and temporarily disconnect the Small Generating Facility. The Participating TO or the CAISO shall notify the Interconnection Customer promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the Interconnection Customer's operation of the Small Generating Facility or the Interconnection Customer's Interconnection Facilities. The Interconnection Customer shall notify the Participating TO and the CAISO promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the CAISO Controlled Grid, the Participating TO's Interconnection Facilities, or any Affected Systems. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of the Interconnection Customer's or Participating TO's facilities and operations, its anticipated duration, and the necessary corrective action.

### 3.4.2 Routine Maintenance, Construction, and Repair

The Participating TO or the CAISO may interrupt interconnection service or curtail the output of the Small Generating Facility and temporarily disconnect the Small Generating Facility from the CAISO Controlled Grid when necessary for routine maintenance, construction, and repairs on the CAISO Controlled Grid or the Participating TO's electric system. The Party scheduling the interruption shall provide the Interconnection Customer with (5) five Business Days notice prior to such interruption. The Party scheduling the interruption shall use Reasonable Efforts to coordinate such reduction or temporary disconnection with the Interconnection Customer.

The Interconnection Customer shall update its planned maintenance schedules in accordance with the CAISO Tariff. The CAISO may request the Interconnection Customer to reschedule its maintenance as necessary to maintain the reliability of the CAISO Controlled Grid in accordance with the CAISO Tariff. Such planned maintenance schedules and updates and changes to such schedules shall be provided by the Interconnection Customer to the Participating TO concurrently with their submittal to the CAISO.

### 3.4.3 Forced Outages

During any forced outage, the Participating TO or the CAISO may suspend interconnection service to effect immediate repairs on the CAISO Controlled Grid or the Participating TO's electric system. The Participating TO or the CAISO shall use Reasonable Efforts to provide the Interconnection Customer with prior notice. If prior notice is not given, the Participating TO or the CAISO shall, upon request, provide the Interconnection Customer written documentation after the fact explaining the circumstances of the disconnection. The Interconnection Customer shall notify CAISO, as soon as practicable, of all forced outages or reductions of the Small Generating Facility in accordance with the CAISO Tariff.

### 3.4.4 Adverse Operating Effects

The Participating TO or the CAISO shall notify the Interconnection Customer as soon as practicable if, based on Good Utility Practice, operation of the Small Generating Facility may cause disruption or deterioration of service to other customers served from the same electric system, or if operating the Small Generating Facility could cause damage to the CAISO Controlled Grid, the Participating TO's Transmission System or Affected Systems. Supporting documentation used to reach the decision to disconnect shall be provided to the Interconnection Customer upon request. If, after notice, the Interconnection Customer fails to remedy the adverse operating effect within a reasonable time, the Participating TO or the CAISO may disconnect the Small Generating Facility. The Participating TO or the CAISO shall provide the Interconnection Customer with (5) five Business Day notice of such disconnection, unless the

provisions of Article 3.4.1 apply.

### 3.4.5 Modification of the Small Generating Facility

Prior to making any modification to the Small Generating Facility before it has achieved its Commercial Operation Date, the Interconnection Customer must first request that the CAISO evaluate whether any such proposed modification is a Material Modification and receive written authorization from the Participating TO and the CAISO. Such authorization shall not be unreasonably withheld. The CAISO may engage the services of the applicable Participating TO to assess the modification. Costs incurred by the Participating TO and CAISO (if any) shall be borne by the party making the request under Section 1.3.4 of Appendix S, and such costs shall be included in any CAISO invoice for modification assessment activities. Modifications shall be done in accordance with Good Utility Practice. If the Interconnection Customer has achieved its Commercial Operation Date, the CAISO and Participating TO(s) will review the requested modification pursuant to Sections 25 and 25.1(c) of the CAISO Tariff. If the Interconnection Customer makes such modification without the Participating TO's and the CAISO's prior written authorization, the Participating TO or the CAISO shall have the right to temporarily disconnect the Small Generating Facility. Any change to the Point of Interconnection, except those deemed acceptable under this article of the SGIA or so allowed elsewhere, shall constitute a Material Modification. The Interconnection Customer may then withdraw the proposed modification or proceed with a new Interconnection Request for such modification.

Notwithstanding Section 7.5 of Appendix DD, at any time after achieving its Commercial Operation Date, the Interconnection Customer may reduce the megawatt generating capacities of its Generating Facilities, subject to Section 25.1(c) of the CAISO Tariff. Section 7.5.11 of Appendix DD will still apply to such requests to reduce capacity.

### 3.4.6 Reconnection

The Parties shall cooperate with each other to restore the Small Generating Facility, Interconnection Facilities, the Participating TO's electric system, and the CAISO Controlled Grid to their normal operating state as soon as reasonably practicable following a temporary disconnection.

## Article 4. Costs for Interconnection Facilities and Distribution Updates

### 4.1 Interconnection Facilities

**4.1.1** The Interconnection Customer shall pay for the cost of the Interconnection Facilities itemized in Attachment 2 of this Agreement. The Participating TO shall provide a best estimate cost, including overheads, for the purchase and construction of its Interconnection Facilities and provide a detailed itemization of such costs. Costs associated with Interconnection Facilities may be shared with other entities that may benefit from such facilities by agreement of the Interconnection Customer, such other entities, the CAISO, and the Participating TO.

**4.1.2** The Interconnection Customer shall be responsible for its share of all reasonable expenses, including overheads, associated with (1) owning, operating, maintaining, repairing, and replacing its own Interconnection Facilities, and (2) operating, maintaining, repairing, and replacing the Participating TO's Interconnection Facilities.

### 4.2 Distribution Upgrades

The Participating TO shall design, procure, construct, install, and own the Distribution Upgrades described in Attachment 6 of this Agreement. If the Participating TO and the Interconnection

Customer agree, the Interconnection Customer may construct Distribution Upgrades that are located on land owned by the Interconnection Customer. The actual cost of the Distribution Upgrades, including overheads, shall be directly assigned to the Interconnection Customer.

## Article 5. Cost Responsibility for Network Upgrades

### 5.1 Applicability

No portion of this Article 5 shall apply unless the interconnection of the Small Generating Facility requires Network Upgrades.

### 5.2 Network Upgrades

The Participating TO shall design, procure, construct, install, and own the Network Upgrades described in Attachment 6 of this Agreement. If the Participating TO and the Interconnection Customer agree, the Interconnection Customer may construct Network Upgrades that are located on land owned by the Interconnection Customer. Unless the Participating TO elects to pay for Network Upgrades, the actual cost of the Network Upgrades, including overheads, shall be borne initially by the Interconnection Customer.

### 5.3 Transmission Credits

No later than thirty (30) calendar days prior to the Commercial Operation Date, the Interconnection Customer may make a one-time election by written notice to the CAISO and the Participating TO to receive Congestion Revenue Rights as defined in and as available under the CAISO Tariff at the time of the election in accordance with the CAISO Tariff, in lieu of a refund of the cost of Network Upgrades in accordance with Article 5.3.1.

#### 5.3.1 Repayment of Amounts Advanced for Network Upgrades

##### 5.3.1.1 Repayment of Amounts Advanced Regarding Non-Phased Generating Facilities

Upon the Commercial Operation Date of a Small Generating Facility that is not a Phased Generating Facility, the Interconnection Customer shall be entitled to a repayment, equal to the total amount paid to the Participating TO for the cost of Network Upgrades. Such amount shall include any tax gross-up or other tax-related payments associated with Network Upgrades not refunded to the Interconnection Customer, and shall be paid to the Interconnection Customer by the Participating TO on a dollar-for-dollar basis either through (1) direct payments made on a levelized basis over the five-year period commencing on the Commercial Operation Date; or (2) any alternative payment schedule that is mutually agreeable to the Interconnection Customer and Participating TO, provided that such amount is paid within five (5) years from the Commercial Operation Date. Notwithstanding the foregoing, if this Agreement terminates within five (5) years from the Commercial Operation Date, the Participating TO's obligation to pay refunds to the Interconnection Customer shall cease as of the date of termination.

##### 5.3.1.2 Repayment of Amounts Advanced Regarding Phased Generating Facilities

Upon the Commercial Operation Date of each phase of a Phased Generating Facility, the Interconnection Customer shall be entitled to a repayment equal to the amount paid to the Participating TO for the cost of Network Upgrades for that completed phase for which the Interconnection Customer is responsible, if all of the following conditions are satisfied:

(a) The Small Generating Facility is capable of being constructed in phases;

(b) The Small Generating Facility is specified in the SGIA as being constructed in phases;

(c) The completed phase corresponds to one of the phases specified in the SGIA;

(d) The Interconnection Customer has tendered notice pursuant to the SGIA that the phase has achieved Commercial Operation;

(e) All parties to the SGIA have agreed that the completed phase meets the requirements set forth in the SGIA and any other operating, metering, and interconnection requirements to permit generation output of the entire capacity of the completed phase as specified in the SGIA;

(f) The Network Upgrades necessary for the completed phase to meet the desired level of deliverability are in service; and

(g) The Interconnection Customer has posted one hundred (100) percent of the Interconnection Financial Security required for the Network Upgrades for all the phases of the Small Generating Facility.

Upon satisfaction of these conditions (a) through (g), the Interconnection Customer shall be entitled to receive a partial repayment of its financed cost responsibility in an amount equal to the percentage of the Small Generating Facility declared to be in Commercial Operation multiplied by the cost of the Network Upgrades associated with the completed phase. The Interconnection Customer shall be entitled to repayment in this manner for each completed phase until the entire Small Generating Facility is completed.

If the SGIA includes a partial termination provision and the partial termination right has been exercised with regard to a phase that has not been built, then the Interconnection Customer's eligibility for repayment under this Article as to the remaining phases shall not be diminished. If the Interconnection Customer completes one or more phases and then defaults on the SGIA, the Participating TO and the CAISO shall be entitled to offset any losses or damages resulting from the default against any repayments made for Network Upgrades related to the completed phases, provided that the Party seeking to exercise the offset has complied with any requirements which may be required to apply the stream of payments utilized to make the repayment to the Interconnection Customer as an offset.

Any repayment amount for completion of a phase shall include any tax gross-up or other tax-related payments associated with Network Upgrades not refunded to the Interconnection Customer, and shall be paid to the Interconnection Customer by the Participating TO on a dollar-for-dollar basis either through (1) direct payments made on a levelized basis over the five-year period commencing on the Commercial Operation Date; or (2) any alternative payment schedule that is mutually agreeable to the Interconnection Customer and Participating TO, provided that such amount is paid within five (5) years from the Commercial Operation Date. Notwithstanding the foregoing, if this Agreement terminates within five (5) years from the Commercial Operation Date, the Participating TO's obligation to pay refunds to the Interconnection Customer shall cease as of the date of termination.

#### 5.3.1.3 Interest Payments and Assignment Rights

Any repayment shall include interest calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date of any payment for Network Upgrades through the date on which the Interconnection Customer receives a repayment of such payment. Interest shall continue to accrue on the repayment obligation so long as this Agreement is in effect. The Interconnection Customer may assign such repayment rights to any person.

#### 5.3.1.4 Failure to Achieve Commercial Operation

If the Small Generating Facility fails to achieve commercial operation, but it or another generating facility is later constructed and makes use of the Network Upgrades, the Participating TO shall at that time reimburse Interconnection Customer for the amounts advanced for the Network Upgrades. Before any such reimbursement can occur, the Interconnection Customer, or the entity that ultimately constructs the generating facility, if different, is responsible for identifying the entity to which reimbursement must be made.

### 5.3.2 Special Provisions for Affected Systems

The Interconnection Customer shall enter into an agreement with the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid, as applicable, in accordance with the applicable generation interconnection procedure under which the Small Generating Facility was processed (SGIP or GIP). Such agreement shall specify the terms governing payments to be made by the Interconnection Customer to the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid. In no event shall the Participating TO be responsible for the repayment for any facilities that are not part of the Participating TO's Transmission System.

### 5.3.3 Rights Under Other Agreements

Notwithstanding any other provision of this Agreement, nothing herein shall be construed as relinquishing or foreclosing any rights, including but not limited to firm transmission rights, capacity rights, transmission congestion rights, or transmission credits, that the Interconnection Customer shall be entitled to, now or in the future, under any other agreement or tariff as a result of, or otherwise associated with, the transmission capacity, if any, created by the Network Upgrades, including the right to obtain cash reimbursements or transmission credits for transmission service that is not associated with the Small Generating Facility.

## Article 6. Billing, Payment, Milestones, and Interconnection Financial Security

### 6.1 Billing and Payment Procedures and Final Accounting

**6.1.1** The Participating TO shall bill the Interconnection Customer for the design, engineering, construction, and procurement costs of Interconnection Facilities and Upgrades contemplated by this Agreement on a monthly basis, or as otherwise agreed by the Parties. The Interconnection Customer shall pay each bill within thirty (30) calendar days of receipt, or as otherwise agreed to by the Parties. Notwithstanding the foregoing, any invoices between the CAISO and another Party shall be submitted and paid in accordance with the CAISO Tariff.

**6.1.2** Within six (6) months of completing the construction and installation of the Participating TO's Interconnection Facilities and/or Upgrades described in the Attachments to this Agreement, the Participating TO shall provide the Interconnection Customer with a final accounting report of any difference between (1) the Interconnection Customer's cost responsibility for the actual cost of such facilities or Upgrades, and (2) the Interconnection Customer's previous aggregate payments to the Participating TO for such facilities or Upgrades. If the Interconnection Customer's cost responsibility exceeds its previous aggregate payments, the Participating TO shall invoice the Interconnection Customer for the amount due and the Interconnection Customer shall make payment to the Participating TO within thirty (30) calendar days. If the Interconnection Customer's previous aggregate payments exceed its cost responsibility under this Agreement, the Participating TO shall refund to the Interconnection Customer an amount equal to the difference within thirty (30) calendar days of the final accounting report.

**6.2 Milestones**

The Parties shall agree on milestones for which each Party is responsible and list them in Attachment 4 of this Agreement. A Party's obligations under this provision may be extended by agreement. If a Party anticipates that it will be unable to meet a milestone for any reason other than a Force Majeure Event, as defined in Article 7.5.1, it shall immediately notify the other Parties of the reason(s) for not meeting the milestone and (1) propose the earliest reasonable alternate date by which it can attain this and future milestones, and (2) request appropriate amendments to Attachment 4. The Parties affected by the failure to meet a milestone shall not unreasonably withhold agreement to such an amendment unless (1) they will suffer significant uncompensated economic or operational harm from the delay, (2) attainment of the same milestone has previously been delayed, or (3) they have reason to believe that the delay in meeting the milestone is intentional or unwarranted notwithstanding the circumstances explained by the Party proposing the amendment.

**6.3 Interconnection Financial Security Arrangements for Small Generating Facilities Processed Under the Fast Track Process or Small Generating Facilities Processed under SGIP**

The terms and conditions of this Article 6.3 shall apply only to:

(i) Small Generating Facilities that are no larger than 5 MW that are processed under the Fast Track Process under the Generation Interconnection Procedures, CAISO Tariff Appendix Y; and

(ii) Small Generating Facilities processed under the Small Generation Interconnection Procedures set forth in CAISO Tariff Appendix S.

In such case, the terms of Article 6.4 below do not apply to this Agreement.

For easy reference, the Parties shall check the Box below when this Article 6.3 applies:

**[ ] THIS ARTICLE 6.3 APPLIES**

**6.3.1** At least twenty (20) Business Days prior to the commencement of the design, procurement, installation, or construction of a discrete portion of the Participating TO's Interconnection Facilities and Upgrades, the Interconnection Customer shall provide the Participating TO, at the Interconnection Customer's option, a guarantee, a surety bond, letter of credit or other form of security that is reasonably acceptable to the Participating TO and is consistent with the Uniform Commercial Code of the jurisdiction where the Point of Interconnection is located. Such security for payment shall be in an amount sufficient to cover the costs for constructing, designing, procuring, and installing the applicable portion of the Participating TO's Interconnection Facilities and Upgrades and shall be reduced on a dollar-for-dollar basis for payments made to the Participating TO under this Agreement during its term.

**6.3.2** If a guarantee is provided, the guarantee must be made by an entity that meets the creditworthiness requirements of the Participating TO, and contain terms and conditions that guarantee payment of any amount that may be due from the Interconnection Customer, up to an agreed-to maximum amount.

**6.3.3** If a letter of credit or surety bond is provided, the letter of credit or surety bond must be issued by a financial institution or insurer reasonably acceptable to the Participating TO and must specify a reasonable expiration date.

**6.4 Interconnection Financial Security Arrangements for All Other Small Generating Facilities**

The terms of this Article 6.4 apply to Small Generating Facilities that have been processed under either

(i) the Cluster Study Process or

(ii) the Independent Study Track Process of the Generation Interconnection Procedures set forth in CAISO Tariff Appendix Y. In such case, the provisions of Article 6.3 do not apply to this Agreement.

In such case, the terms of Article 6.3 above do not apply to this Agreement.

For easy reference, the Parties shall check the Box below when this Article 6.4 applies:

**[ ] THIS ARTICLE 6.4 APPLIES**

**6.4.1** The Interconnection Customer is obligated to provide all necessary Interconnection Financial Security required under Section 9 of the GIP in a manner acceptable under Section 9 of the GIP. Failure by the Interconnection Customer to timely satisfy the GIP's requirements for the provision of Interconnection Financial Security shall be deemed a breach of this Agreement and a condition of Default of this Agreement.

**6.4.2** Notwithstanding any other provision in this Agreement for notice of Default and opportunity to cure such Default, the CAISO or the Participating TO shall provide Interconnection Customer with written notice of any Default due to timely failure to post Interconnection Financial Security, and the Interconnection Customer shall have five (5) Business Days from the date of such notice to cure such Default by posting the required Interconnection Financial Security. If the Interconnection Customer fails to cure the Default, then this Agreement shall be deemed terminated.

**Article 7. Assignment, Liability, Indemnity, Force Majeure, and Default**

**7.1 Assignment**

This Agreement may be assigned by any Party upon fifteen (15) Business Days prior written notice and opportunity to object by the other Parties; provided that:

**7.1.1** Any Party may assign this Agreement without the consent of the other Parties to any affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement, provided that the Interconnection Customer promptly notifies the Participating TO and the CAISO of any such assignment;

**7.1.2** The Interconnection Customer shall have the right to assign this Agreement, without the consent of the Participating TO or the CAISO, for collateral security purposes to aid in providing financing for the Small Generating Facility, provided that the Interconnection Customer will promptly notify the Participating TO and the CAISO of any such assignment.

**7.1.3** Any attempted assignment that violates this article is void and ineffective. Assignment shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. An assignee is responsible for meeting the same financial, credit, and insurance obligations as the Interconnection Customer. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

**7.2 Limitation of Liability**

Each Party's liability to the other Parties for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall any Party be liable to the other Parties for any indirect, special, consequential, or punitive damages, except as authorized by this Agreement.

**7.3 Indemnity**

**7.3.1** This provision protects each Party from liability incurred to third parties as a result of carrying out the provisions of this Agreement. Liability under this provision is exempt from the general limitations on liability found in Article 7.2.

**7.3.2** The Parties shall at all times indemnify, defend, and hold the other Parties harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from another Party's action or failure to meet its obligations under this Agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

**7.3.3** If an indemnified Party is entitled to indemnification under this article as a result of a claim by a third party, and the indemnifying Party fails, after notice and reasonable opportunity to proceed under this article, to assume the defense of such claim, such indemnified Party may at the expense of the indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

**7.3.4** If an indemnifying Party is obligated to indemnify and hold any indemnified Party harmless under this article, the amount owing to the indemnified Party shall be the amount of such indemnified Party's actual loss, net of any insurance or other recovery.

**7.3.5** Promptly after receipt by an indemnified Party of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in this article may apply, the indemnified Party shall notify the indemnifying Party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying Party.

**7.4 Consequential Damages**

Other than as expressly provided for in this Agreement, no Party shall be liable under any provision of this Agreement for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to another Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

**7.5 Force Majeure**

**7.5.1** As used in this article, a Force Majeure Event shall mean "any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure Event does not include an act of negligence or intentional wrongdoing by the Party

claiming Force Majeure."

**7.5.2** If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, the Party affected by the Force Majeure Event (Affected Party) shall promptly notify the other Parties, either in writing or via the telephone, of the existence of the Force Majeure Event. The notification must specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the Affected Party is taking to mitigate the effects of the event on its performance. The Affected Party shall keep the other Parties informed on a continuing basis of developments relating to the Force Majeure Event until the event ends. The Affected Party will be entitled to suspend or modify its performance of obligations under this Agreement (other than the obligation to make payments) only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of Reasonable Efforts. The Affected Party will use Reasonable Efforts to resume its performance as soon as possible.

**7.6 Default**

**7.6.1** No Default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of a Force Majeure Event as defined in this Agreement or the result of an act or omission of another Party. Upon a Default, the affected non-defaulting Party(ies) shall give written notice of such Default to the defaulting Party. Except as provided in Article 7.6.2 and in Article 6.4.2, the defaulting Party shall have sixty (60) calendar days from receipt of the Default notice within which to cure such Default; provided however, if such Default is not capable of cure within 60 calendar days, the defaulting Party shall commence such cure within 20 calendar days after notice and continuously and diligently complete such cure within six months from receipt of the Default notice; and, if cured within such time, the Default specified in such notice shall cease to exist.

**7.6.2** If a Default is not cured as provided in this article, or if a Default is not capable of being cured within the period provided for herein, the affected non-defaulting Party(ies) shall have the right to terminate this Agreement by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not such Party(ies) terminates this Agreement, to recover from the defaulting Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this article will survive termination of this Agreement.

**Article 8. Insurance**

**8.1** The Interconnection Customer shall, at its own expense, maintain in force general liability insurance without any exclusion for liabilities related to the interconnection undertaken pursuant to this Agreement. The amount of such insurance shall be sufficient to insure against all reasonably foreseeable direct liabilities given the size and nature of the generating equipment being interconnected, the interconnection itself, and the characteristics of the system to which the interconnection is made. The Interconnection Customer shall obtain additional insurance only if necessary as a function of owning and operating a generating facility. Such insurance shall be obtained from an insurance provider authorized to do business in the State where the interconnection is located. Certification that such insurance is in effect shall be provided upon request of the Participating TO or CAISO, except that the Interconnection Customer shall show proof of insurance to the Participating TO and CAISO no later than ten Business Days prior to the anticipated Commercial Operation Date. If the Interconnection Customer is of sufficient credit-worthiness, it may propose to self-insure for such liabilities, and such a proposal shall not be unreasonably rejected.

**8.2** The Participating TO agrees to maintain general liability insurance or self-insurance consistent with the Participating TO’s commercial practice. Such insurance or self-insurance shall not exclude coverage for the Participating TO's liabilities undertaken pursuant to this Agreement.

**8.3** The CAISO agrees to maintain general liability insurance or self-insurance consistent with the CAISO's commercial practice. Such insurance shall not exclude coverage for the CAISO's liabilities undertaken pursuant to this Agreement.

**8.4** The Parties further agree to notify each other whenever an accident or incident occurs resulting in any injuries or damages that are included within the scope of coverage of such insurance, whether or not such coverage is sought.

**Article 9. Confidentiality**

**9.1** Confidential Information shall mean any confidential and/or proprietary information provided by one Party to another Party that is clearly marked or otherwise designated "Confidential." For purposes of this Agreement all design, operating specifications, and metering data provided by the Interconnection Customer shall be deemed Confidential Information regardless of whether it is clearly marked or otherwise designated as such.

**9.2** Confidential Information does not include information previously in the public domain, required to be publicly submitted or divulged by Governmental Authorities (after notice to the other Parties and after exhausting any opportunity to oppose such publication or release), or necessary to be divulged in an action to enforce this Agreement. Each Party receiving Confidential Information shall hold such information in confidence and shall not disclose it to any third party nor to the public without the prior written authorization from the Party providing that information, except to fulfill obligations under this Agreement, or to fulfill legal or regulatory requirements.

**9.2.1** Each Party shall employ at least the same standard of care to protect Confidential Information obtained from the other Parties as it employs to protect its own Confidential Information.

**9.2.2** Each Party is entitled to equitable relief, by injunction or otherwise, to enforce its rights under this provision to prevent the release of Confidential Information without bond or proof of damages, and may seek other remedies available at law or in equity for breach of this provision.

**9.3** Notwithstanding anything in this article to the contrary, and pursuant to 18 CFR § 1b.20, if FERC, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to this Agreement, the Party shall provide the requested information to FERC, within the time provided for in the request for information. In providing the information to FERC, the Party may, consistent with 18 CFR § 388.112, request that the information be treated as confidential and non-public by FERC and that the information be withheld from public disclosure. Parties are prohibited from notifying the other Parties to this Agreement prior to the release of the Confidential Information to FERC. The Party shall notify the other Parties to this Agreement when it is notified by FERC that a request to release Confidential Information has been received by FERC, at which time any of the Parties may respond before such information would be made public, pursuant to 18 CFR § 388.112. Requests from a state regulatory body conducting a confidential investigation shall be treated in a similar manner if consistent with the applicable state rules and regulations.

**Article 10. Disputes**

All disputes arising out of or in connection with this Agreement whereby relief is sought by or from CAISO shall be settled in accordance with the provisions of Article 13 of the CAISO Tariff, except that references to the CAISO Tariff in such Article 13 of the CAISO Tariff shall be read as reference to this Agreement. Disputes arising out of or in connection with this Agreement not subject to provisions of Article 13 of the CAISO Tariff shall be resolved as follows:

**10.1** The Parties agree to attempt to resolve all disputes arising out of the interconnection process according to the provisions of this article.

**10.2** In the event of a dispute, either Party shall provide the other Party with a written Notice of Dispute. Such Notice shall describe in detail the nature of the dispute.

**10.3** If the dispute has not been resolved within two Business Days after receipt of the Notice, either Party may contact FERC's Dispute Resolution Service (DRS) for assistance in resolving the dispute.

**10.4** The DRS will assist the Parties in either resolving their dispute or in selecting an appropriate dispute resolution venue (e.g., mediation, settlement judge, early neutral evaluation, or technical expert) to assist the Parties in resolving their dispute. DRS can be reached at 1-877-337-2237 or via the internet at http://www.ferc.gov/legal/adr.asp.

**10.5** Each Party agrees to conduct all negotiations in good faith and will be responsible for one-half of any costs paid to neutral third-parties.

**10.6** If neither Party elects to seek assistance from the DRS, or if the attempted dispute resolution fails, then either Party may exercise whatever rights and remedies it may have in equity or law consistent with the terms of this Agreement.

**Article 11. Taxes**

**11.1** The Parties agree to follow all applicable tax laws and regulations, consistent with FERC policy and Internal Revenue Service requirements.

**11.2** Each Party shall cooperate with the other Parties to maintain the other Parties' tax status. Nothing in this Agreement is intended to adversely affect the Participating TO's tax exempt status with respect to the issuance of bonds including, but not limited to, local furnishing bonds.

**Article 12. Miscellaneous**

**12.1 Governing Law, Regulatory Authority, and Rules**

The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of the state of _____ (where the Point of Interconnection is located), without regard to its conflicts of law principles. This Agreement is subject to all Applicable Laws and Regulations. Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.

**12.2 Amendment**

The Parties may amend this Agreement by a written instrument duly executed by all of the Parties, or under Article 12.12 of this Agreement.

**12.3 No Third-Party Beneficiaries**

This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and where permitted, their assigns.

**12.4 Waiver**

**12.4.1** The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

**12.4.2** Any waiver at any time by any Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Agreement. Termination or Default of this Agreement for any reason by Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Participating TO. Any waiver of this Agreement shall, if requested, be provided in writing.

**12.5 Entire Agreement**

This Agreement, including all Attachments, constitutes the entire agreement among the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between or among the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this Agreement.

**12.6 Multiple Counterparts**

This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

**12.7 No Partnership**

This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership among the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

**12.8 Severability**

If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall negotiate in good faith to restore insofar as practicable the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

**12.9 Security Arrangements**

Infrastructure security of electric system equipment and operations and control hardware and software is essential to ensure day-to-day reliability and operational security. FERC expects all transmission providers, market participants, and interconnection customers interconnected to electric systems to comply with Applicable Reliability Criteria. All public utilities are expected to meet basic standards for system infrastructure and operational security, including physical, operational, and cyber-security practices.

**12.10 Environmental Releases**

Each Party shall notify the other Parties, first orally and then in writing, of the release of any hazardous substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Small Generating Facility or the Interconnection Facilities, each of which may reasonably be expected to affect the other Parties. The notifying Party shall (1) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than 24 hours after such Party becomes aware of the occurrence, and (2) promptly furnish to the other Parties copies of any publicly available reports filed with any governmental

authorities addressing such events.

**12.11 Subcontractors**

Nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this Agreement; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this Agreement in providing such services and each Party shall remain primarily liable to the other Parties for the performance of such subcontractor.

**12.11.1** The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Parties for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall the Participating TO or the CAISO be liable for the actions or inactions of the Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under this Agreement. Any applicable obligation imposed by this Agreement upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

**12.11.2** The obligations under this article will not be limited in any way by any limitation of subcontractor's insurance.

**12.12 Reservation of Rights**

The CAISO and Participating TO shall each have the right to make a unilateral filing with FERC to modify this Agreement pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following articles of this Agreement and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these articles:

Introductory Paragraph, 1.1, 1.2, 1.3, 1.4, 1.5.1, 1.5.2, 1.5.3, 1.5.4, 1.5.5, 1.5.6, 1.5.7, 1.6, 1.7, 1.8.1, 1.9, 2.1, 2.2.1, 2.3, 3, 4.1.1 (last sentence only), 5.1, 5.3, 6.2, 7, 8, 9, 11, 12, 13, Attachment 1, Attachment 4, Attachment 5, and Attachment 7.

The Participating TO shall have the exclusive right to make a unilateral filing with FERC to modify this Agreement pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following articles of this Agreement and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these articles:

2.2.2, 4.1.1 (all but the last sentence), 4.1.2, 4.2, 5.2, 6.1.1 (all but the last sentence), 6.1.2, 6.3, 10 (all but preamble), Attachment 2, Attachment 3 and Attachment 6.

The CAISO shall have the exclusive right to make a unilateral filing with FERC to modify this Agreement pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following articles of this Agreement and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these articles:

1.8.2, 6.1.1 (last sentence only) and 10 (preamble only).

The Interconnection Customer, the CAISO, and the Participating TO shall have the right to make a unilateral filing with FERC to modify this Agreement under any applicable provision of the Federal Power Act and FERC's rules and regulations; provided that each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before

FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations, except to the extent that the Parties otherwise mutually agree as provided herein.

**Article 13. Notices**

**13.1 General**

Unless otherwise provided in this Agreement, any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if delivered in person, delivered by recognized national courier service, or sent by first class mail, postage prepaid, to the person specified below:

If to the Interconnection Customer:

Interconnection Customer: _____
Attention: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ Fax: _____

If to the Participating TO:

Participating TO: _____
Attention: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ Fax: _____

If to the CAISO:

California Independent System Operator Corporation

Attention: _____
250 Outcropping Way
Folsom, CA 95630
Phone: (916) 351-4400 Fax: _____

**13.2 Billing and Payment**

Billings and payments shall be sent to the addresses set out below:

Interconnection Customer: _____
Attention: _____
Address: _____
City: _____ State: _____ Zip: _____

Participating TO: _____
Attention: _____
Address: _____
City: _____ State: _____ Zip: _____

**13.3 Alternative Forms of Notice**

Any notice or request required or permitted to be given by any Party to the other Parties and not required by this Agreement to be given in writing may be so given by telephone, facsimile or e-mail to the telephone numbers and e-mail addresses set out below:

Interconnection Customer: _____
Attention: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ Fax: _____
E-mail address: _____

If to the Participating TO:

Participating TO: _____
Attention: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ Fax: _____
E-mail address: _____

If to the CAISO:

California Independent System Operator Corporation

Attention: _____
Address: 250 Outcropping Way
City: Folsom State: CA Zip: 95630
Phone: (916) 351-4400 Fax: _____
E-mail address: _____

**13.4 Designated Operating Representative**

The Parties may also designate operating representatives to conduct the communications which may be necessary or convenient for the administration of this Agreement. This person will also serve as the point of contact with respect to operations and maintenance of the Party's facilities.

Interconnection Customer's Operating Representative:

Interconnection Customer: _____
Attention: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ Fax: _____

Participating TO's Operating Representative:

Participating TO: _____
Attention: _____
Address: _____
City: _____ State: _____ Zip: _____
Phone: _____ Fax: _____

CAISO's Operating Representative

California Independent System Operator Corporation
Attention: _____
Address: 250 Outcropping Way
City: Folsom State: CA Zip: 95630
Phone: (916) 351-4400 Fax: _____

**13.5 Changes to the Notice Information**

Any Party may change this information by giving five Business Days written notice to the other Parties prior to the effective date of the change.

**Article 14. Signatures**

**IN WITNESS WHEREOF,** the Parties have caused this Agreement to be executed by their respective duly authorized representatives.

For the California Independent System Operator Corporation

By:_____

Name: _____

Title:_____

Date:_____

For the Participating TO

By:_____

Name: _____

Title: _____

Date: _____

For the Interconnection Customer

By:_____

Name: _____

Title: _____

Date: _____

**Attachment 1**

**Glossary of Terms**

**Affected System** – An electric system other than the CAISO Controlled Grid that may be affected by the proposed interconnection, including the Participating TO's electric system that is not part of the CAISO Controlled Grid.

**Applicable Laws and Regulations** – All duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.

**Balancing Authority Area** – The collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.

**Business Day** – Monday through Friday, excluding federal holidays and the day after Thanksgiving Day.

**CAISO Controlled Grid** – The system of transmission lines and associated facilities of the parties to a Transmission Control Agreement that have been placed under the CAISO's Operational Control.

**CAISO Tariff** – The CAISO's tariff, as filed with FERC, and as amended or supplemented from time to time, or any successor tariff.

**Commercial Operation Date** – The date on which a Small Generating Facility commenced generating electricity for sale as agreed upon by the Participating TO and the Interconnection Customer and in accordance with any implementation plan agreed to by the Participating TO and the CAISO for multiple individual generating units or project phases at a Small Generating Facility where an Interconnection Customer intends to establish separate Commercial Operation Dates for those generating units or project phases.

**Default** – The failure of a breaching Party to cure its breach under this Agreement.

**Distribution System** – Those non-CAISO-controlled transmission and distribution facilities owned by the Participating TO.

**Distribution Upgrades** – The additions, modifications, and upgrades to the Participating TO's Distribution System. Distribution Upgrades do not include Interconnection Facilities.

**Good Utility Practice** – Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be any one of a number of the optimum practices, methods, or acts to the exclusion of all others, but rather to be

acceptable practices, methods, or acts generally accepted in the region.

**Governmental Authority** – Any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the Interconnection Customer, CAISO, Participating TO, or any affiliate thereof.

**Interconnection Facilities** – The Participating TO's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Small Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Small Generating Facility to the Participating TO's Transmission System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades or Network Upgrades.

**Interconnection Handbook** – A handbook, developed by the Participating TO and posted on the Participating TO's website or otherwise made available by the Participating TO, describing technical and operational requirements for wholesale generators and loads connected to the Participating TO's Transmission System, as such handbook may be modified or superseded from time to time. The Participating TO's standards contained in the Interconnection Handbook shall be deemed consistent with Good Utility Practice and applicable reliability standards.

**Interconnection Request** – A request, in accordance with the CAISO Tariff, to interconnect a new Small Generating Facility, or to increase the capacity of, or make a Material Modification to the operating characteristics of, an existing Small Generating Facility that is interconnected with the CAISO Controlled Grid.

**Material Modification** – A modification that has a material impact on the cost or timing of any Interconnection Request or any other valid interconnection request with a later queue priority date.

**Network Upgrades** – Additions, modifications, and upgrades to the Participating TO's Transmission System required at or beyond the point at which the Small Generating Facility interconnects with the CAISO Controlled Grid to accommodate the interconnection of the Small Generating Facility with the CAISO Controlled Grid. Network Upgrades do not include Distribution Upgrades.

**Operational Control** – The rights of the CAISO under a Transmission Control Agreement and the CAISO Tariff to direct the parties to the Transmission Control Agreement how to operate their transmission lines and facilities and other electric plant affecting the reliability of those lines and facilities for the purpose of affording comparable non-discriminatory transmission access and meeting applicable reliability criteria.

**Operating Requirements** – Any operating and technical requirements that may be applicable due to the CAISO, Western Electricity Coordinating Council, Balancing Authority Area, or the Participating TO's requirements, including those set forth in this Agreement.

**Party or Parties** – The Participating TO, CAISO, Interconnection Customer or the applicable combination of the above.

**Phased Generating Facility** – A Small Generating Facility that is structured to be completed and to achieve Commercial Operation in two or more successive sequences that are specified in this SGIA, such that each sequence comprises a portion of the total megawatt generation capacity of the entire Small Generating Facility.

**Point of Interconnection** – The point where the Interconnection Facilities connect with the Participating TO's Transmission System.

**Reasonable Efforts** – With respect to an action required to be attempted or taken by a Party under this Agreement, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

**Small Generating Facility** – The Interconnection Customer's device for the production of electricity identified in the Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

**Transmission Control Agreement** – CAISO FERC Electric Tariff No. 7.

**Transmission System** – The facilities owned and operated by the Participating TO and that have been placed under the CAISO's Operational Control, which facilities form part of the CAISO Controlled Grid.

**Upgrades** – The required additions and modifications to the Participating TO's Transmission System and Distribution System at or beyond the Point of Interconnection. Upgrades may be Network Upgrades or Distribution Upgrades. Upgrades do not include Interconnection Facilities.

**Attachment 2**

**Description of Costs of Facilities and Metering Equipment**

Equipment, including the Small Generating Facility, Interconnection Facilities, and metering equipment shall be itemized and identified as being owned by the Interconnection Customer or the Participating TO. The Participating TO will provide a best estimate itemized cost, including overheads, of its Interconnection Facilities and metering equipment, and a best estimate itemized cost of the annual operation and maintenance expenses associated with its Interconnection Facilities and metering equipment.

**Attachment 3**

**One-Line Diagram Depicting the Small Generating Facility, Interconnection**

**Facilities, Metering Equipment, and Upgrades**

**Attachment 4**

**Milestones**

In-Service Date: _____

Critical milestones and responsibility as agreed to by the Parties:

| | Milestone/Date | Responsible Party |
|---|---|---|
| (1) | | |
| (2) | | |
| (3) | | |
| (4) | | |
| (5) | | |
| (6) | | |
| (7) | | |
| (8) | | |
| (9) | | |
| (10) | | |

Agreed to by:

For the CAISO _____ Date _____

For the Participating TO _____ Date: _____

For the Interconnection Customer _____ Date: _____

**Attachment 5**

**Additional Operating Requirements for the CAISO Controlled Grid and Affected Systems Needed to Support the Interconnection Customer's Needs**

The Participating TO and the CAISO shall also provide requirements that must be met by the Interconnection Customer prior to initiating parallel operation with the CAISO Controlled Grid.

**Attachment 6**

**Participating TO's Description of its Upgrades and Best Estimate of Upgrade Costs**

The Participating TO shall describe Upgrades and provide an itemized best estimate of the cost, including overheads, of the Upgrades and annual operation and maintenance expenses associated with such Upgrades. The Participating TO shall functionalize Upgrade costs and annual expenses as either transmission or distribution related.

**Attachment 7**

**INTERCONNECTION REQUIREMENTS FOR AN ASYNCHRONOUS SMALL GENERATING FACILITY**

Attachment 7 sets forth requirements and provisions specific to all Asynchronous Generating Facilities. All other requirements of this Agreement continue to apply to Asynchronous Generating Facility interconnections.

## A. Technical Standards Applicable to Asynchronous Generating Facilities

### i. Low Voltage Ride-Through (LVRT) Capability

An Asynchronous Generating Facility shall be able to remain online during voltage disturbances up to the time periods and associated voltage levels set forth in the requirements below.

1. An Asynchronous Generating Facility shall remain online for the voltage disturbance caused by any fault on the transmission grid, or within the Asynchronous Generating Facility between the Point of Interconnection and the high voltage terminals of the Asynchronous Generating Facility's step up transformer, having a duration equal to the lesser of the normal three-phase fault clearing time (4-9 cycles) or one-hundred fifty (150) milliseconds, plus any subsequent post-fault voltage recovery to the final steady-state post-fault voltage. Clearing time shall be based on the maximum normal clearing time associated with any three-phase fault location that reduces the voltage at the Asynchronous Generating Facility's Point of Interconnection to 0.2 per-unit of nominal voltage or less, independent of any fault current contribution from the Asynchronous Generating Facility.

2. An Asynchronous Generating Facility shall remain online for any voltage disturbance caused by a single-phase fault on the transmission grid, or within the Asynchronous Generating Facility between the Point of Interconnection and the high voltage terminals of the Asynchronous Generating Facility's step up transformer, with delayed clearing, plus any subsequent post-fault voltage recovery to the final steady-state post-fault voltage. Clearing time shall be based on the maximum backup clearing time associated with a single point of failure (protection or breaker failure) for any single-phase fault location that reduces any phase-to-ground or phase-to-phase voltage at the Asynchronous Generating Facility's Point of Interconnection to 0.2 per-unit of nominal voltage or less, independent of any fault current contribution from the Asynchronous Generating Facility.

3. Remaining on-line shall be defined as continuous connection between the Point of Interconnection and the Asynchronous Generating Facility's units, without any mechanical isolation. Asynchronous Generating Facilities may cease to inject current into the transmission grid during a fault.

4. The Asynchronous Generating Facility is not required to remain on line during multi-phased faults exceeding the duration described in Section A.i.1 of this Attachment 7 or single-phase faults exceeding the duration described in Section A.i.2 of this Attachment 7.

5. The requirements of this Section A.i. of this Attachment 7 do not apply to faults that occur between the Asynchronous Generating Facility's terminals and the high side of the step-up transformer to the high-voltage transmission system.

6. Asynchronous Generating Facilities may be tripped after the fault period if this action is intended as part of a Remedial Action Scheme.

7. Asynchronous Generating Facilities may meet the requirements of this Section A.i of this Attachment 7 through the performance of the generating units or by installing additional equipment within the Asynchronous Generating Facility, or by a combination of generating unit performance and additional equipment.

8. The provisions of this Section A.i of this Attachment 7 apply only if the voltage at the Point of Interconnection has remained within the range of 0.9 and 1.10 per-unit of nominal voltage for the preceding two seconds, excluding any sub-cycle transient deviations.

**ii. Frequency Disturbance Ride-Through Capacity**

An Asynchronous Generating Facility shall comply with the off nominal frequency requirements set forth in the WECC Under Frequency Load Shedding Relay Application Guide or successor requirements as they may be amended from time to time.

**iii. Power Factor Design Criteria (Reactive Power)**

An Asynchronous Generating Facility shall operate within a power factor within the range of 0.95 leading to 0.95 lagging, measured at the Point of Interconnection as defined in this SLGIA in order to maintain a specified voltage schedule, if the Phase II Interconnection Study shows that such a requirement is necessary to ensure safety or reliability. The power factor range standard can be met by using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors, or a combination of the two, if agreed to by the Participating TO and CAISO. The Interconnection Customer shall not disable power factor equipment while the Asynchronous Generating Facility is in operation. Asynchronous Generating Facilities shall also be able to provide sufficient dynamic voltage support in lieu of the power system stabilizer and automatic voltage regulation at the generator excitation system if the Phase II Interconnection Study shows this to be required for system safety or reliability

**iv. Supervisory Control and Data Acquisition (SCADA) Capability**

An Asynchronous Generating Facility shall provide SCADA capability to transmit data and receive instructions from the Participating TO and CAISO to protect system reliability. The Participating TO and CAISO and the Asynchronous Generating Facility Interconnection Customer shall determine what SCADA information is essential for the proposed Asynchronous Generating Facility, taking into account the size of the plant and its characteristics, location, and importance in maintaining generation resource adequacy and transmission system reliability.

**v. Power System Stabilizers (PSS)**

Power system stabilizers are not required for Asynchronous Generating Facilities.

**Attachment 8.**

**[This Attachment is Intentionally Omitted]**

# Appendix U

# Standard Large Generator Interconnection Procedures

## Section 1 Objectives and Definitions

### 1.1 Objectives

The objective of this LGIP is to implement FERC's Order No. 2003 setting forth the requirements for Large Generating Facility interconnections to the CAISO Controlled Grid. This LGIP applies to Interconnection Requests not assigned to a Queue Cluster Window pursuant to the terms of this CAISO Tariff for the performance of its Interconnection Studies.

### 1.2 Definitions

#### 1.2.1 Master Definitions Supplement

Unless the context otherwise requires, any word or expression defined in the Master Definitions Supplement, Appendix A to the CAISO Tariff, shall have the same meaning where used in this LGIP. A reference to a Section or an Appendix is a reference to a Section or an Appendix of the CAISO Tariff. References to LGIP are to this Appendix U.

#### 1.2.2 Special Definitions for this LGIP

In this LGIP, the following words and expressions shall have the meanings set opposite them:

**"Confidential Information"** shall mean any confidential, proprietary or trade secret information of a plan, specification, pattern, procedure, design, device, list, concept, policy or compilation relating to the present or planned business of a Party, which is designated as confidential by the Party supplying the information, whether conveyed orally, electronically, in writing, through inspection, or otherwise, subject to Section 13.1 of this LGIP.

**"Dispute Resolution"** shall mean the procedure set forth in this LGIP for resolution of a dispute between the Parties.

**"Force Majeure"** shall mean any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure event does not include acts of negligence or intentional wrongdoing by the Party claiming Force Majeure.

**"Governmental Authority"** shall mean any federal, state, local or other governmental, regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the Interconnection Customer, CAISO, or Participating TO, or any Affiliate thereof.

**"Party"** or **"Parties"** shall mean the CAISO, Participating TO(s), Interconnection Customer or the applicable combination of the above.

**"Reasonable Efforts"** shall mean, with respect to an action required to be attempted or taken by a Party under the Standard Large Generator Interconnection Procedures, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

**"Roles and Responsibilities Agreement"** shall mean the Agreement for the Allocation of Responsibilities with Regard to Large Generator Interconnection Procedures and Interconnection Study Agreements, a pro forma version of which is attached to this LGIP.

## Section 2. Scope and Application

### 2.1 Application of Standard LGIP

Sections 2 through 13 of this LGIP apply to processing an Interconnection Request pertaining to a Large Generating Facility that is not assigned to a Queue Cluster Window pursuant to the terms of this CAISO Tariff for the performance of its Interconnection Studies.

### 2.2 Comparability

The CAISO shall receive, process and analyze Interconnection Requests in a timely manner as set forth in this LGIP. The CAISO will use the same Reasonable Efforts in processing and analyzing Interconnection Requests from all Interconnection Customers, whether the Generating Facilities are owned by a Participating TO, its subsidiaries, or Affiliates or others.

### 2.3 Base Case Data

The CAISO and/or the applicable Participating TO(s) shall provide base power flow, short circuit and stability databases, including all underlying assumptions, and contingency list upon request subject to applicable confidentiality provisions in LGIP Section 13.1. The applicable Participating TO(s) and the CAISO are permitted to require that the Interconnection Customer sign a confidentiality agreement before the release of commercially sensitive information or Critical Energy Infrastructure Information (as that term is defined by FERC) in the Base Case data. Such Base Cases shall include (i) generation projects and (ii) transmission projects, including merchant transmission projects that are proposed for the transmission system for which a transmission expansion plan has been submitted and approved by the applicable authority.

### 2.4 No Applicability To Transmission Service

Nothing in this LGIP shall constitute a request for transmission service or confer upon an Interconnection Customer any right to receive transmission service.

## Section 3. Interconnection Requests

### 3.1 General

Pursuant to CAISO Tariff Section 25.1, an Interconnection Customer shall submit to the CAISO an Interconnection Request in the form of Appendix 1 to this LGIP and a refundable deposit of $10,000. The CAISO will forward a copy of the Interconnection Request to the applicable Participating TO within one (1) Business Day of receipt. The CAISO shall apply the deposit toward the cost of an Interconnection Feasibility Study.

The Interconnection Customer shall submit a separate Interconnection Request for each site and may submit multiple Interconnection Requests for a single site. The Interconnection Customer must submit a deposit with each Interconnection Request even when more than one request is submitted for a single site. An Interconnection Request to evaluate one site at two different voltage levels shall be treated as two Interconnection Requests.

At the Interconnection Customer's option, the applicable Participating TO(s), the CAISO and Interconnection Customer will identify alternative Point(s) of Interconnection and configurations at the Scoping Meeting to evaluate in this process and attempt to eliminate alternatives in a reasonable fashion given resources and information available. Interconnection Customer will

select the definitive Point of Interconnection to be studied and one alternative Point of Interconnection no later than the execution of the first Interconnection Feasibility Study Agreement.

### 3.2 Roles And Responsibilities

(a) Each Interconnection Request will be subject to the direction and oversight of the CAISO. The CAISO will conduct or cause to be performed the required Interconnection Studies and any additional studies the CAISO determines to be reasonably necessary, and will direct the applicable Participating TO to perform portions of studies where the Participating TO has specific and non-transferable expertise or data and can conduct the studies more efficiently and cost effectively than the CAISO. The CAISO will coordinate with Affected System Operators in accordance with LGIP Section 3.7.

(b) The CAISO will complete or cause to be completed all studies as required within the timelines provided in this LGIP. Any portion of the studies performed at the direction of the CAISO by the Participating TOs or by a third party shall also be completed within timelines provided in this LGIP.

(c) The CAISO has established a pro forma Roles and Responsibilities Agreement, attached hereto and incorporated herein by reference, for execution by the CAISO and the applicable Participating TOs.

(d) Each Interconnection Customer shall pay the actual costs of all Interconnection Studies, and any additional studies the CAISO determines to be reasonably necessary in response to the Interconnection Request. The CAISO shall reimburse the Participating TO for the actual cost of any portion of all Interconnection Studies that such Participating TO performs at the direction of the CAISO.

### 3.3 Interconnection Service

**3.3.1 The Product.** Interconnection Service allows the Interconnection Customer to connect the Large Generating Facility to the CAISO Controlled Grid and be eligible to deliver the Large Generating Facility's output using the available capacity of the CAISO Controlled Grid. Interconnection Service does not in and of itself convey any right to deliver electricity to any specific customer or point of delivery.

**3.3.2 The Interconnection Studies.** The Interconnection Studies consist of, but are not limited to, short circuit/fault duty, steady state (thermal and voltage) and stability analyses. The Interconnection Studies will identify direct Interconnection Facilities and required Reliability Network Upgrades necessary to mitigate thermal overloads and voltage violations, and address short circuit, stability, and reliability issues associated with the requested Interconnection Service.

The Interconnection Studies will also identify necessary Delivery Network Upgrades to allow full output of the proposed Large Generating Facility under a variety of potential system conditions, and the maximum allowed output, under a variety of potential system conditions, of the interconnecting Large Generating Facility without the Delivery Network Upgrades.

#### 3.3.3 Deliverability Assessment

**3.3.3.1 The Product.** A Deliverability Assessment will be performed which shall determine the Interconnection Customer's Large Generating Facility's ability to deliver its energy to the CAISO Controlled Grid under peak load conditions. The Deliverability Assessment will provide the Interconnection Customer with information as to the level of deliverability without Network Upgrades, and the Deliverability Assessment will provide the Interconnection Customer with information as to the required Network Upgrades to enable the Interconnection Customer's Large

Generating Facility the ability to deliver the full output of the proposed Large Generating Facility to the CAISO Controlled Grid based on specified study assumptions.

Thus, the Deliverability Assessment results will provide the Interconnection Customer two (2) data points on the scale of deliverability: 1) a deliverability level with no Network Upgrades, and 2) the required Network Upgrades to support 100% deliverability.

Deliverability of a new Large Generating Facility will be assessed on the same basis as all other existing resources interconnected to the CAISO Controlled Grid.

**3.3.3.2 The Assessment.** The Deliverability Assessment will identify the facilities that are required to enable the Interconnection Customer's Large Generating Facility to meet the requirements for deliverability and as a general matter, that such Large Generating Facility's interconnection is also studied with the CAISO Controlled Grid at peak load, under a variety of severely stressed conditions, to determine whether, with the Large Generating Facility at full output, the aggregate of generation in the local area can be delivered to the aggregate of load on the CAISO Controlled Grid, consistent with the CAISO's reliability criteria and procedures. This approach assumes that some portion of existing resources that are designated as deliverable is displaced by the output of the Interconnection Customer's Large Generating Facility. This Deliverability Assessment in and of itself does not convey any right to deliver electricity to any specific customer or point of delivery. The CAISO Controlled Grid may also be studied under non-peak load conditions. However, upon request by the Interconnection Customer, the Deliverability Assessment must explain in writing to the Interconnection Customer why the study of non-peak load conditions is required for reliability purposes.

**3.3.3.3 Deliverability Transfers.** Interconnection Customers may transfer Deliverability pursuant to Section 8.9.9 of Appendix DD to the CAISO Tariff.

### 3.3.4 Surplus Interconnection Service

Interconnection Customers may transfer Surplus Interconnection Service to Section 3.4 of Appendix DD.

## 3.4 Network Upgrades

### 3.4.1 Initial Funding

Unless the Participating TO elects to fund the capital for Reliability and Delivery Network Upgrades, they shall be solely funded by the Interconnection Customer.

### 3.4.2 [Section Intentionally Omitted]

### 3.4.3 Repayment of Amounts Advanced for Network Upgrades

Upon the Commercial Operation Date, the Interconnection Customer shall be entitled to a repayment for the cost of Network Upgrades. Such amount shall be paid to the Interconnection Customer by the applicable Participating TO(s) on a dollar-for-dollar basis either through (1) direct payments made on a levelized basis over the five-year period commencing on the Commercial Operation Date; or (2) any alternative payment schedule that is mutually agreeable to the Interconnection Customer and Participating TO, provided that such amount is paid within five (5) years of the Commercial Operation Date. Any repayment shall include interest calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date of any payment for Network Upgrades through the date on which the Interconnection Customer receives a repayment of such payment. The Interconnection Customer may assign such repayment rights to any person.

Instead of direct payments, the Interconnection Customer may elect to receive Congestion Revenue Rights (CRRs) in accordance with the CAISO Tariff associated with the Network Upgrades that were funded by the Interconnection Customer, to the extent such CRRs or alternative rights are available under the CAISO Tariff at the time of the election. Such CRRs would take effect upon the Commercial Operation Date of the Large Generating Facility in accordance with the LGIA.

### 3.4.4 Special Provisions for Affected Systems and Other Affected Participating TOs

The Interconnection Customer shall enter into an agreement with the owner of the Affected System and/or other affected Participating TO(s), as applicable. The agreement shall specify the terms governing payments to be made by the Interconnection Customer to the owner of the Affected System and/or other affected Participating TO(s) as well as the repayment by the owner of the Affected System and/or other affected Participating TO(s). If the affected entity is another Participating TO, the initial form of agreement will be the LGIA, as appropriately modified.

Any repayment by the owner of the Affected System shall be in accordance with FERC Order No. 2003-B (109 FERC ¶ 61,287).

## 3.5 Valid Interconnection Request

### 3.5.1 Initiating an Interconnection Request

To initiate an Interconnection Request, the Interconnection Customer must submit all of the following: (i) a $10,000 deposit, (ii) a completed application in the form of LGIP Appendix 1, and (iii) demonstration of Site Control or a posting of an additional deposit of $10,000. Such deposits may be applied toward any Interconnection Studies pursuant to the Interconnection Request. If the Interconnection Customer demonstrates Site Control within the cure period specified in LGIP Section 3.5.3 after submitting its Interconnection Request, the additional deposit shall be refundable; otherwise, all such deposit(s), additional and initial, become non-refundable.

The expected In-Service Date of the new Large Generating Facility or increase in capacity of the existing Generating Facility shall be no more than the process window for the regional expansion planning period (or in the absence of a regional planning process, the process window for the CAISO's expansion planning period) not to exceed seven years from the date the Interconnection Request is received by the CAISO, unless the Interconnection Customer demonstrates that engineering, permitting and construction of the new Large Generating Facility or increase in capacity of the existing Generating Facility will take longer than the regional expansion planning period. The In-Service Date may succeed the date the Interconnection Request is received by the CAISO by a period up to ten years, or longer where the Interconnection Customer, the applicable Participating TO and the CAISO agree, such agreement not to be unreasonably withheld.

### 3.5.2 Acknowledgment of Interconnection Request

The CAISO shall acknowledge receipt of the Interconnection Request within six (6) Business Days of receipt of the request and attach a copy of the received Interconnection Request to the acknowledgement.

### 3.5.3 Deficiencies in Interconnection Request

An Interconnection Request will not be considered to be a valid request until all items in LGIP Section 3.5.1 have been received and deemed valid by the CAISO. If an Interconnection Request fails to meet the requirements set forth in LGIP Section 3.5.1, the CAISO shall notify the

Interconnection Customer within six (6) Business Days of receipt of the initial Interconnection Request of the reasons for such failure and that the Interconnection Request does not constitute a valid request. The Interconnection Customer shall provide the CAISO the additional requested information needed to constitute a valid request within ten (10) Business Days after receipt of such notice. Failure by the Interconnection Customer to comply with this LGIP Section 3.5.3 shall be treated in accordance with LGIP Section 3.8.

### 3.5.4 Scoping Meeting

Within ten (10) Business Days after the CAISO notifies the Interconnection Customer of a valid Interconnection Request, the CAISO shall establish a date agreeable to the Interconnection Customer and the applicable Participating TO(s) for the Scoping Meeting, and such date shall be no later than thirty (30) calendar days from notification of the valid Interconnection Request, unless otherwise mutually agreed upon by the Parties. The CAISO shall determine whether the Interconnection Request is at or near the boundary of an affected Participating TO(s) service territory or of any other Affected System(s) so as to potentially affect such third parties. If such a determination is made, the CAISO shall invite the affected Participating TO(s), and/or Affected System Operator(s) in accordance with LGIP Section 3.7, to the Scoping Meeting by informing such third parties of the time and place of the scheduled Scoping Meeting as soon as practicable.

The purpose of the Scoping Meeting shall be to discuss alternative interconnection options, to exchange information including any transmission data that would reasonably be expected to impact such interconnection options, to analyze such information and to determine the potential feasible Points of Interconnection. The applicable Participating TO(s) and the CAISO will bring to the meeting such already available technical data, including, but not limited to: (i) general facility loadings, (ii) general instability issues, (iii) general short circuit issues, (iv) general voltage issues, and (v) general reliability issues, as may be reasonably required to accomplish the purpose of the meeting.

The Interconnection Customer will bring to the Scoping Meeting as much large generator technical data in Attachment A to LGIP Appendix 1, and system studies previously performed, as available. The applicable Participating TO(s), the CAISO and the Interconnection Customer will also bring to the meeting personnel and other resources as may be reasonably required to accomplish the purpose of the meeting in the time allocated for the meeting. On the basis of the meeting, the Interconnection Customer shall designate its Point of Interconnection, pursuant to LGIP Section 6.1, and one alternative Point of Interconnection. The duration of the meeting shall be sufficient to accomplish its purpose.

The CAISO shall prepare minutes from the meeting, verified by the Interconnection Customer and the other attendees, that will include, at a minimum, discussions among the applicable Participating TO(s) and the CAISO of what the expected results may be for the Interconnection Feasibility Study.

## 3.6 Internet Posting

The CAISO will maintain on the CAISO Website a list of all Interconnection Requests. The list will identify, for each Interconnection Request: (i) the maximum summer and winter megawatt electrical output; (ii) the location by county and state; (iii) the station or transmission line or lines where the interconnection will be made; (iv) the projected In-Service Date; (v) the status of the Interconnection Request, including Queue Position; (vi) the availability of any studies related to the Interconnection Request; (vii) the date of the Interconnection Request; (viii) the type of Generating Facility to be constructed (combined cycle, base load or combustion turbine and fuel type); (ix) for Interconnection Requests that have not resulted in a completed interconnection, an explanation as to why it was not completed; and (x) project name.

Except in the case of an Affiliate, the list will not disclose the identity of the Interconnection Customer until the Interconnection Customer executes an LGIA or requests that the applicable Participating TO(s) and the CAISO file an unexecuted LGIA with FERC. The CAISO shall post on the CAISO Website an advance notice whenever a Scoping Meeting will be held with an Affiliate of a Participating TO.

The CAISO shall post to the CAISO Website any deviations from the study timelines set forth herein. Interconnection Study reports and Optional Interconnection Study reports shall be posted to the CAISO Website subsequent to the meeting among the Interconnection Customer, the applicable Participating TO(s) and the CAISO to discuss the applicable study results. The CAISO shall also post any known deviations in the Large Generating Facility's In-Service Date.

### 3.7 Coordination with Affected Systems

The CAISO will notify the Affected System Operators that are potentially affected by the project proposed by the Interconnection Customer. The CAISO will coordinate the conduct of any studies required to determine the impact of the Interconnection Request on Affected Systems with Affected System Operators, to the extent possible, and, if possible, the CAISO will include those results (if available) in its applicable Interconnection Study within the time frame specified in this LGIP. The CAISO will include such Affected System Operators in all meetings held with the Interconnection Customer as required by this LGIP. The Interconnection Customer will cooperate with the CAISO in all matters related to the conduct of studies and the determination of modifications to Affected Systems, including signing separate study agreements with Affected System owners and paying for necessary studies. An entity which may be an Affected System shall cooperate with the CAISO in all matters related to the conduct of studies and the determination of modifications to Affected Systems.

### 3.8 Withdrawal

The Interconnection Customer may withdraw its Interconnection Request at any time by written notice of such withdrawal to the CAISO and the CAISO will notify the applicable Participating TO(s), within three (3) Business Days of receipt of such a notice. In addition, if the Interconnection Customer fails to adhere to all requirements of this LGIP, except as provided in LGIP Section 13.5 (Disputes), the CAISO shall deem the Interconnection Request to be withdrawn and shall provide written notice to the Interconnection Customer within five (5) Business Days of the deemed withdrawal and an explanation of the reasons for such deemed withdrawal. Upon receipt of such written notice, the Interconnection Customer shall have fifteen (15) Business Days in which to either respond with information or actions that cures the deficiency or to notify the CAISO of its intent to pursue Dispute Resolution.

Withdrawal shall result in the loss of the Interconnection Customer's Queue Position, if any. If an Interconnection Customer disputes the withdrawal and loss of its Queue Position, then during Dispute Resolution, the Interconnection Customer's Interconnection Request is eliminated from the queue until such time that the outcome of Dispute Resolution would restore its Queue Position. An Interconnection Customer that withdraws or is deemed to have withdrawn its Interconnection Request shall pay to the CAISO all costs that have been prudently incurred or irrevocably have been committed to be incurred with respect to that Interconnection Request prior to the CAISO's receipt of notice described above. The Interconnection Customer must pay all monies due to the Participating TO before it is allowed to obtain any Interconnection Study data or results. The CAISO will reimburse the applicable Participating TO(s) for all work performed associated with the Interconnection Request at the CAISO's direction.

The CAISO shall update the CAISO Website Queue Position posting. The CAISO shall refund to the Interconnection Customer any portion of the Interconnection Customer's deposit or study payments that exceed the costs that the CAISO has incurred or Participating TO(s) have incurred, including interest calculated in accordance with section 35.19a(a)(2) of FERC's

regulations. In the event of such withdrawal, the CAISO, subject to the confidentiality provisions of LGIP Section 13.1, shall provide, at the Interconnection Customer's request, all information that the CAISO developed for any completed study conducted up to the date of withdrawal of the Interconnection Request.

### 3.9 Reductions in Generating Facility Capacity

#### 3.9.1 De Minimis Capacity Reductions

If the actual MW capacity of its Generating Facility is reduced by no more than the greater of five percent (5%) of its MW capacity or 10 MW, but by no more than twenty-five percent (25%) of the MW capacity of the Generating Facility, such a one-time reduction shall not constitute a breach of the Interconnection Customer's obligations under the CAISO Tariff or its Generator Interconnection Agreement. The MW capacity value of a Generating Facility for purposes of this section shall be established by reference to the capacity as set forth in the Interconnection Customer's currently applicable Generator Interconnection Agreement. No capacity reductions permitted under this section shall operate to diminish the Interconnection Customer's responsibility for any costs or other obligations set forth in its Generator Interconnection Agreement or the CAISO Tariff.

#### 3.9.2 [Not Used]

## Section 4. Queue Position

### 4.1 General

The CAISO shall assign a Queue Position based upon the date and time of receipt of the valid Interconnection Request; provided that, if the sole reason an Interconnection Request is not valid is the lack of required information on the application form, and the Interconnection Customer provides such information in accordance with LGIP Section 3.5.3, then the CAISO shall assign the Interconnection Customer a Queue Position based on the date the application form was originally filed. Moving a Point of Interconnection shall result in a lowering of Queue Position if it is deemed a Material Modification under LGIP Section 4.4.3.

The queue position of each Interconnection Request will be used to determine the order of performing the Interconnection Studies and determination of cost responsibility for the facilities necessary to accommodate the Interconnection Request. A higher Queue Position Interconnection Request is one that has been placed "earlier" in the CAISO's queue in relation to another Interconnection Request that is lower queued. The cost of the common upgrades for clustered Interconnection Requests may be allocated without regard to queue position.

### 4.2 Clustering

At the CAISO's option, and in coordination with the applicable Participating TO(s), Interconnection Requests may be studied serially or in clusters for the purpose of the Interconnection System Impact Study.

Clustering shall be implemented on the basis of Queue Position. If the CAISO elects, in coordination with applicable Participating TO(s), to study Interconnection Requests using Clustering, all Interconnection Requests received within a period not to exceed one hundred and eighty (180) calendar days, hereinafter referred to as the "Queue Cluster Window" shall be studied together without regard to the nature of the underlying Interconnection Service. The

deadline for completing all Interconnection System Impact Studies for which an Interconnection System Impact Study Agreement has been executed during a Queue Cluster Window shall be in accordance with LGIP Section 7.4, for all Interconnection Requests assigned to the same Queue Cluster Window. The CAISO may agree to conduct the study of an Interconnection Request separately to the extent warranted by Good Utility Practice based upon the electrical remoteness of the proposed Large Generating Facility.

Clustering Interconnection System Impact Studies shall be conducted in such a manner to ensure the efficient implementation of the applicable regional transmission expansion plan in light of the transmission system's capabilities at the time of each study.

The Queue Cluster Window shall have a fixed time interval based on fixed annual opening and closing dates. Any changes to the established Queue Cluster Window interval and opening or closing dates shall be announced with a posting on the CAISO Website beginning at least one hundred and eighty (180) calendar days in advance of the change and continuing thereafter through the end date of the first Queue Cluster Window that is to be modified.

### 4.3 Transferability of Queue Position

An Interconnection Customer may transfer its Queue Position to another entity only if such entity acquires the specific Generating Facility identified in the Interconnection Request and the Point of Interconnection does not change.

### 4.4 Modifications

The Interconnection Customer shall submit to the CAISO, in writing, modifications to any information provided in the Interconnection Request. The CAISO will forward the Interconnection Customer's modification to the applicable Participating TO(s) within one (1) Business Day of receipt. The Interconnection Customer shall retain its Queue Position if the modifications are in accordance with LGIP Sections 4.4.1, 4.4.2 or 4.4.5, or are determined not to be Material Modifications pursuant to LGIP Section 4.4.3.

Notwithstanding the above, during the course of the Interconnection Studies, the Interconnection Customer, the applicable Participating TO(s), or the CAISO may identify changes to the planned interconnection that may improve the costs and benefits (including reliability) of the interconnection, and the ability of the proposed change to accommodate the Interconnection Request. To the extent the identified changes are acceptable to the applicable Participating TO(s), the CAISO, and Interconnection Customer, such acceptance not to be unreasonably withheld, the CAISO shall modify the Point of Interconnection and/or configuration in accordance with such changes and proceed with any re-studies necessary to do so in accordance with LGIP Section 6.4, LGIP Section 7.6 and LGIP Section 8.5 as applicable and the Interconnection Customer shall retain its Queue Position.

**4.4.1** Prior to the return of the executed Interconnection System Impact Study Agreement to the CAISO, modifications permitted under this Section shall include specifically: (a) a decrease of up to 60 percent of electrical output (MW) of the proposed project; (b) modifying the technical parameters associated with the Large Generating Facility technology or the Large Generating Facility step-up transformer impedance characteristics; and (c) modifying the interconnection configuration. For plant increases, the incremental increase in plant output will go to the end of the queue for the purposes of cost allocation and study analysis.

**4.4.2** Prior to the return of the executed Interconnection Facility Study Agreement to the CAISO, the modifications permitted under this Section shall include specifically: (a) additional 15 percent decrease of electrical output (MW), and (b) Large Generating Facility technical parameters associated with modifications to Large Generating Facility technology and transformer impedances; provided, however, the incremental costs associated with those modifications are

the responsibility of the requesting Interconnection Customer.

**4.4.3** Prior to making any modification other than those specifically permitted by LGIP Sections 4.4.1, 4.4.2, and 4.4.5, the Interconnection Customer must first request that the CAISO evaluate whether such modification is a Material Modification. In response to the Interconnection Customer's request, the CAISO, in coordination with the affected Participating TO, shall evaluate the proposed modifications and the CAISO shall inform the Interconnection Customer in writing of whether the modifications would constitute a Material Modification. The CAISO may engage the services of the applicable Participating TO to assess the modification. Costs incurred by the Participating TO and CAISO (if any) shall be borne by the party making the request under Section 5.1, and such costs shall be included in any CAISO invoice for modification assessment activities. Any change to the Point of Interconnection, except those deemed acceptable under LGIP Sections 4.4.1, 6.1, 7.2 or so allowed elsewhere, shall constitute a Material Modification. The Interconnection Customer may then withdraw the proposed modification or proceed with a new Interconnection Request for such modification.

**4.4.4 [NOT USED]**

**4.4.5** Extensions of less than three (3) cumulative years in the Commercial Operation Date of the Large Generating Facility to which the Interconnection Request relates are not material and should be handled through construction sequencing.

**4.4.6** The Interconnection Customer shall provide the CAISO a $10,000 deposit for the modification assessment at the time the request is submitted. Except as provided below, any modification assessment will be concluded, and a response provided to the Interconnection Customer in writing, within forty-five (45) calendar days from the date the CAISO receives all of the following: the Interconnection Customer's written notice to modify the project, technical data required to assess the request and payment of the $10,000 deposit. If the modification assessment cannot be completed within that time period, the CAISO shall notify the Interconnection Customer and provide an estimated completion date with an explanation of the reasons why additional time is required.

The Interconnection Customer will be responsible for the actual costs incurred by the CAISO and applicable Participating TO(s) in conducting the modification assessment. If the actual costs of the modification assessment are less than the deposit provided by the Interconnection Customer, the Interconnection Customer will be refunded the balance. If the actual costs of the modification assessment are greater than the deposit provided by the Interconnection Customer, the Interconnection Customer shall pay the balance within 30 days of being invoiced. The CAISO shall coordinate the modification request with the Participating TO(s). The Participating TO(s) shall invoice the CAISO for any assessment work within seventy-five (75) calendar days of completion of the assessment, and, within thirty (30) days thereafter, the CAISO shall issue an invoice or refund to the Interconnection Customer, as applicable, based upon such submitted Participating TO invoices and the CAISO's own costs for the assessment.

The CAISO will publish cost data regarding modification assessments in accordance with the terms set forth in a Business Practice Manual.

Notwithstanding any other provision, all refunds pursuant to this Appendix U will be processed in accordance with the CAISO's generally accepted accounting practices, including monthly batched deposit refund disbursements. Any CAISO deadline will be tolled to the extent the Interconnection Customer has not provided the CAISO with the appropriate documents to facilitate the Interconnection Customer's refund, or if the Interconnection Customer has any outstanding invoice balance due to the CAISO on another project owned by the same Interconnection Customer.

**4.4.7 Commercial Viability Criteria for Retention of Deliverability beyond Ten Years in Queue**

The CAISO's agreement to modifications requested pursuant to Section 4.4.3 for an Interconnection Customer that has exceeded or will exceed ten (10) years from the date the Interconnection Request is received by the CAISO with retention of Deliverability will be predicated upon the Interconnection Customer's ability to meet and maintain the following commercial viability criteria:

a) Providing proof of having, at a minimum, applied for the necessary governmental permits or authorizations, and that the permitting authority has deemed such documentation as data adequate for the authority to initiate its review process;

b) Providing proof of having an executed and regulator-approved power purchase agreement. Power purchase agreements must have the point of interconnection, capacity, fuel type, technology, and site location in common with the Interconnection Customer and GIA;

c) Demonstrating Site Exclusivity for 100% of the property necessary to construct the facility through the Commercial Operation Date requested in the modification request. A Site Exclusivity Deposit does not satisfy this criterion;

d) Having an executed Generator Interconnection Agreement ("GIA"); and

e) Being in good standing with the GIA such that neither the Participating TO nor the CAISO has provided a Notice of Breach that has not been cured and the Interconnection Customer has not commenced sufficient curative actions.

Interconnection Customers that satisfied these commercial viability criteria before November 27, 2018, on the basis of balance-sheet or binding financing may continue to do so in their annual review. The CAISO will not consider the addition of energy storage; changes to the type, number, or manufacturer of inverters; or insubstantial changes to the Generating Facility as modifications under this Section. Interconnection Customers may request such modifications pursuant to this LGIP.

If the Interconnection Customer fails to meet all of the commercial viability criteria but informs the CAISO that it intends to proceed with the modified Commercial Operation Date, the Generating Facility's Deliverability Status will become Energy-Only Deliverability Status. . Interconnection Customers that become Energy Only for failure to meet these criteria may not reduce their cost responsibility or Interconnection Financial Security for any assigned Delivery Network Upgrades as a result of converting to Energy Only unless the CAISO and Participating TO(s) determine that the Interconnection Customer's assigned Delivery Network Upgrade(s) is no longer needed for current Interconnection Customers.

If an Interconnection Customer satisfies all the commercial viability criteria except criterion (b), the CAISO will postpone converting the Generating Facility to Energy-Only Deliverability Status for one year from the day the Interconnection Customer submits the modification request, or eleven years after the CAISO received the Interconnection Request, whichever occurs later. Interconnection Customers exercising this provision must continue to meet all other commercial viability criteria.

If an Interconnection Customer has declared Commercial Operation for a portion of a Generating Facility, or one or more Phases of a Phased Generating Facility, the CAISO will not convert to Energy-Only the portion of the Generating Facility that is in service and operating in the CAISO markets. Instead, the portion of the Generating Facility that has not been developed will be converted to Energy-Only Deliverability Status, resulting in Partial Capacity Deliverability Status for the Generating Facility. However, where the Generating Facility has multiple Resource IDs for the Generating Facility, each Resource ID will have its own Deliverability Status independent from the Generating Facility. Any individual Resource ID may have Full Capacity Deliverability Status where the Generating Facility as a whole would have Partial Capacity Deliverability Status. If the Generating Facility downsizes pursuant to Section 7.5 of Appendix DD to the CAISO Tariff to the amount in service and operating in the CAISO markets, it will revert to Full Capacity Deliverability Status.

#### 4.4.7.1 Annual Review

For Interconnection Customers extending their Commercial Operation Date beyond the ten-year threshold and retaining Deliverability pursuant to Section 4.4.7, the CAISO will perform an annual review of commercial viability. If any Interconnection Customer fails to maintain its level of commercial viability, the Deliverability Status of the Generating Facility corresponding to the Interconnection Request will convert to Energy-Only Deliverability Status.

### 4.4.8 Alignment with Power Purchase Agreements

An Interconnection Customer with an executed GIA and an executed, regulator-approved power purchase agreement may request to automatically extend the GIA In-Service Date to align with its power purchase agreement for that Generating Facility, including any extension or amendment. Interconnection Customers requesting alignment must provide a copy of the power purchase agreement and evidence of regulatory approval. Requests to align the Commercial Operation Date with power purchase agreements are not exempt from the commercial viability criteria provisions in Section 4.4.7, where applicable.

### 4.4.9 Fuel-type Modifications

Notwithstanding any other provisions in this LGIP or the Interconnection Customer's GIA, the Interconnection Customer may not modify its fuel type, including through the addition or replacement of Generating Units, by more than the greater of five percent (5%) of its capacity or 10 MW (but by no more than twenty-five percent (25%) of its capacity), where:

(a) the Interconnection Customer has exceeded ten (10) years from the date the CAISO received its Interconnection Request without achieving its Commercial Operation Date;

(b) the Interconnection Customer's current Commercial Operation Date exceeds ten (10) years from the date the CAISO received the Interconnection Request; or

(c) the change in fuel type will require the Interconnection Customer's Commercial Operation Date to exceed ten (10) years from the date the CAISO received its Interconnection Request.

The CAISO will not consider the addition of energy storage; changes to the type, number, or manufacturer of inverters; or insubstantial changes to the Generating Facility as fuel-type modifications. Interconnection Customers may request such modifications pursuant to this LGIP.

### 4.4.10 Conversion to Energy Only

In addition to the options provided in this LGIP, an Interconnection Customer may convert to Energy Only, Partial Capacity Deliverability Status, or a lower fraction of Partial Capacity Deliverability Status. This conversion will become effective through the reassessment process described in Section 7.4 of Appendix DD to the CAISO tariff. Interconnection Customers that become Energy Only may not reduce their cost responsibility or Interconnection Financial Security for any assigned Delivery Network Upgrades as a result of converting to Energy Only unless the CAISO and Participating TO(s) determine that the Interconnection Customer's assigned Delivery Network Upgrade(s) is no longer needed for current Interconnection Customers.

### 4.4.11 Permissible Technological Advancements

Interconnection Customers may request Permissible Technological Advancements pursuant to Section 6.7.2.4 of Appendix DD.

## Section 5. Interconnection Requests Submitted Before LGIP in Effect

### 5.1 Queue Position For Pending Requests

**5.1.1** Any Interconnection Customer assigned a queue position prior to the effective date of this LGIP shall retain that relative queue position.

**5.1.1.1** If an Interconnection Study agreement has not been executed as of the effective date of this LGIP, then such Interconnection Study, and any subsequent Interconnection Studies, shall be processed in accordance with this LGIP.

**5.1.1.2** If an Interconnection Study agreement has been executed prior to the effective date of this LGIP, such Interconnection Study shall be completed in accordance with the terms of such agreement. With respect to any remaining studies for which an Interconnection Customer has not signed an Interconnection Study agreement prior to the effective date of the LGIP, the Participating TO must offer the Interconnection Customer the option of either continuing under the Participating TO's existing interconnection study process pursuant to CAISO Tariff Appendix W or going forward with the completion of the necessary Interconnection Studies (for which it does not have a signed Interconnection Studies agreement) in accordance with this LGIP.

**5.1.1.3** If an agreement to interconnect a Generating Unit has been submitted to FERC for approval before the effective date of the LGIP, then the agreement would be grandfathered.

### 5.1.2 Transition Period

To the extent necessary, the Participating TO and/or the CAISO and Interconnection Customers with an outstanding request (i.e., an interconnection request or application for which an agreement to interconnect a Generating Unit has not been submitted to FERC for approval as of the effective date of this LGIP) shall transition to this LGIP within a reasonable period of time not to exceed sixty (60) calendar days. The use of the term "outstanding request" herein shall mean any interconnection request or application, on the effective date of this LGIP: (i) that has been submitted but not yet accepted by the CAISO or the Participating TO; (ii) where the related interconnection agreement has not yet been submitted to FERC for approval in executed or unexecuted form, (iii) where the relevant interconnection study agreements have not yet been executed, or (iv) where any of the relevant interconnection studies are in process but not yet completed. Any Interconnection Customer with an outstanding request as of the effective date of this LGIP may request a reasonable extension of any deadline, otherwise applicable, if necessary to avoid undue hardship or prejudice to its Interconnection Request. A reasonable extension

shall be granted by the CAISO, as applicable, to the extent consistent with the intent and process provided for under this LGIP.

### 5.2 Change in CAISO Operational Control

If the CAISO no longer has control of the portion of the CAISO Controlled Grid at the Point of Interconnection during the period when an Interconnection Request is pending, the CAISO shall transfer to applicable Participating TO which has ownership of the Point of Interconnection any amount of the deposit or payment with interest thereon that exceeds the cost that it incurred to evaluate the request for interconnection. Any difference between such net deposit amount and the costs that the successor Participating TO incurs to evaluate the request for interconnection shall be paid by or refunded to the Interconnection Customer, as appropriate. The CAISO shall coordinate with the applicable Participating TO which has ownership of the Point of Interconnection to complete any Interconnection Study, as appropriate, that the CAISO has begun but has not completed. If the Participating TO has tendered a draft LGIA to the Interconnection Customer but the Interconnection Customer has neither executed the LGIA or requested the filing of an unexecuted LGIA with FERC, unless otherwise provided, the Interconnection Customer must complete negotiations with the applicable Participating TO which has the ownership of the Point of Interconnection

## Section 6. Interconnection Feasibility Study

### 6.1 Interconnection Feasibility Study Agreement

Simultaneously with the acknowledgement of a valid Interconnection Request, the CAISO shall provide to the Interconnection Customer a pro forma Interconnection Feasibility Study Agreement. The pro forma Interconnection Feasibility Study Agreement shall specify that the Interconnection Customer is responsible for the actual cost of the Interconnection Feasibility Study. Within five (5) Business Days following the Scoping Meeting, the Interconnection Customer shall specify for inclusion in the attachment to the Interconnection Feasibility Study Agreement the Point of Interconnection and one alternative Point of Interconnection. Within fifteen (15) Business Days following the CAISO's receipt of such designation, the CAISO, in coordination with the Participating TO shall provide to the Interconnection Customer a signed Interconnection Feasibility Study Agreement, which shall include a good faith estimate of the cost for completing the Interconnection Feasibility Study. The Interconnection Customer shall execute and deliver to the CAISO the Interconnection Feasibility Study Agreement along with an additional $10,000 deposit no later than thirty (30) calendar days after its receipt.

On or before the return of the executed Interconnection Feasibility Study Agreement to the CAISO, the Interconnection Customer shall provide to the CAISO valid technical data called for in LGIP Appendix 1, Attachment A.

If the Interconnection Feasibility Study uncovers any unexpected result(s) not contemplated during the Scoping Meeting, a substitute Point of Interconnection identified by the Interconnection Customer, the applicable Participating TO(s) and CAISO, and acceptable to the others, such acceptance not to be unreasonably withheld, will be substituted for the designated Point of Interconnection specified above without loss of Queue Position, and re-studies shall be completed pursuant to LGIP Section 6.4 as applicable. For the purpose of this LGIP Section 6.1, if the CAISO, applicable Participating TO(s) and Interconnection Customer cannot agree on the substituted Point of Interconnection, then the Interconnection Customer may direct that the alternative as specified in the Interconnection Feasibility Study Agreement, as specified pursuant to LGIP Section 3.5.4, shall be the substitute.

If the Interconnection Customer, the applicable Participating TO, and the CAISO agree to forgo

the Interconnection Feasibility Study, the CAISO will tender an Interconnection System Impact Study Agreement within fifteen (15) Business Days from receipt of the Interconnection Customer's designated Point of Interconnection and alternative, pursuant to the procedures specified in Section 7 of this LGIP, and apply the deposits made in accordance with LGIP Section 3.5.1, in addition to the deposit made in accordance with LGIP Section 7, towards the Interconnection System Impact Study.

### 6.2 Scope of Interconnection Feasibility Study

The Interconnection Feasibility Study shall preliminarily evaluate the feasibility of the proposed interconnection to the CAISO Controlled Grid.

The Interconnection Feasibility Study will consider Base Cases as well as all generating facilities (and with respect to (iv), any identified Network Upgrades) that, on the date the Interconnection Feasibility Study is commenced: (i) are directly interconnected to the CAISO Controlled Grid; (ii) are interconnected to Affected Systems and may have an impact on the Interconnection Request; (iii) have a pending request to interconnect to an Affected System; (iv) have a pending higher queued Interconnection Request to interconnect to the CAISO Controlled Grid; and (v) have no Queue Position but have executed an LGIA or requested that an unexecuted LGIA be filed with FERC. The Interconnection Feasibility Study will consist of a power flow and short circuit analysis. The Interconnection Feasibility Study will provide a list of facilities on the applicable Participating TOs' portion of the CAISO Controlled Grid and a non-binding good faith estimate of cost and cost responsibility and a non-binding good faith estimated time to construct. In addition, the Interconnection Feasibility Study will describe what results are expected in the Interconnection System Impact Study and any other financial impacts (i.e., on Local Furnishing Bonds).

### 6.3 Interconnection Feasibility Study Procedures

Existing studies shall be used to the extent practicable when conducting the Interconnection Feasibility Study. The CAISO shall use Reasonable Efforts to complete a draft Interconnection Feasibility Study no later than forty-five (45) calendar days after the CAISO receives the fully executed Interconnection Feasibility Study Agreement. The CAISO shall share applicable study results for review and comment, provide the study results to any other potentially-impacted Participating TO(s), and incorporate comments and issue a final Interconnection Feasibility Study to the Interconnection Customer within sixty (60) calendar days following receipt of the fully executed Interconnection Feasibility Study Agreement. At the request of the Interconnection Customer or at any time the CAISO determines that the study cannot be completed within the required time frame for completing the Interconnection Feasibility Study, the CAISO shall notify the Interconnection Customer as to the schedule status of the Interconnection Feasibility Study. If the Interconnection Feasibility Study cannot be completed within that time period, the CAISO shall notify the Interconnection Customer and provide an estimated completion date with an explanation of the reasons why additional time is required.

Upon request, the CAISO shall provide the Interconnection Customer supporting documentation, workpapers and relevant power flow and short circuit databases for the Interconnection Feasibility Study, subject to confidentiality arrangements consistent with LGIP Sections 2.3 and 13.1.

#### 6.3.1 Meeting with the Participating TO(s) and CAISO

Within ten (10) Business Days of providing an Interconnection Feasibility Study report to the Interconnection Customer, the CAISO, the applicable Participating TO(s), and the Interconnection Customer shall meet to discuss the results of the Interconnection Feasibility Study.

### 6.4 [NOT USED]

## Section 7. Interconnection System Impact Study

### 7.1 Interconnection System Impact Study Agreement

Simultaneously with the delivery of the Interconnection Feasibility Study to the Interconnection Customer, the CAISO shall provide to the Interconnection Customer an Interconnection System Impact Study Agreement. The Interconnection System Impact Study Agreement shall provide that the Interconnection Customer shall compensate the CAISO for the actual cost of the Interconnection System Impact Study. Within three (3) Business Days following the Interconnection Feasibility Study results meeting, CAISO in coordination with the applicable Participating TO(s) shall provide to the Interconnection Customer a signed Interconnection System Impact Study Agreement which shall include a non-binding good faith estimate of the cost and timeframe for completing the Interconnection System Impact Study.

### 7.2 Execution of Interconnection System Impact Study Agreement

The Interconnection Customer shall execute the Interconnection System Impact Study Agreement and deliver the executed Interconnection System Impact Study Agreement to the CAISO no later than thirty (30) calendar days after its receipt along with a $50,000 deposit.

If the Interconnection Customer does not provide all such valid technical data, such as Attachment A to LGIP Appendix 1, when it delivers the Interconnection System Impact Study Agreement, the CAISO shall notify the Interconnection Customer of the deficiency within five (5) Business Days of the receipt of the executed Interconnection System Impact Study Agreement and the Interconnection Customer shall cure the deficiency within ten (10) Business Days of receipt of the notice, provided, however, such deficiency does not include failure to deliver the executed Interconnection System Impact Study Agreement or deposit.

If the Interconnection System Impact Study uncovers any unexpected result(s) not contemplated during the Scoping Meeting and the Interconnection Feasibility Study, a substitute Point of Interconnection identified by either the Interconnection Customer, the CAISO, or the applicable Participating TO(s), and acceptable to the others, such acceptance not to be unreasonably withheld, will be substituted for the designated Point of Interconnection specified above without loss of Queue Position, and re-studies shall be completed pursuant to LGIP Section 7.6 as applicable. If the CAISO, applicable Participating TO(s) and the Interconnection Customer cannot agree that the results were unexpected, then the CAISO will make a determination that the results were either expected or unexpected. For the purpose of this LGIP Section 7.2, if the applicable Participating TO(s), CAISO and Interconnection Customer cannot agree on the substituted Point of Interconnection, then the Interconnection Customer may direct that the alternative as specified in the Interconnection Feasibility Study Agreement, as specified pursuant to LGIP Section 3.5.4, shall be the substitute.

### 7.3 Scope of Interconnection System Impact Study

The Interconnection System Impact Study shall evaluate the impact of the proposed interconnection on the reliability of the CAISO Controlled Grid. The Interconnection System Impact Study will consider Base Cases as well as all generating facilities (and with respect to (iv) below, any identified Network Upgrades associated with such higher queued Interconnection Request) that, on the date the Interconnection System Impact Study is commenced: (i) are directly interconnected to the CAISO Controlled Grid; (ii) are interconnected to Affected Systems and may have an impact on the Interconnection Request; (iii) have a pending request to interconnect to an Affected System; (iv) have a pending higher queued Interconnection Request to interconnect to the CAISO Controlled Grid; and (v) have no Queue Position but have executed an LGIA or requested that an unexecuted LGIA be filed with FERC.

The Interconnection System Impact Study will consist of a short circuit analysis, a stability analysis, a power flow analysis and a Deliverability Assessment as described in LGIP Sections 3.3.2 and 3.3.3. The Interconnection System Impact Study will state the assumptions upon which it is based; state the results of the analyses; and provide the requirements or potential impediments to providing the requested Interconnection Service, including a preliminary indication of the cost and length of time that would be necessary to correct any problems identified in those analyses and implement the interconnection. The Interconnection System Impact Study will provide a list of facilities on the CAISO Controlled Grid that are required as a result of the Interconnection Request and a non-binding good faith estimate of cost and cost responsibility and a non-binding good faith estimated time to construct and estimate of any other financial impacts (i.e., on Local Furnishing Bonds.

### 7.4 Interconnection System Impact Study Procedures

The CAISO shall coordinate the Interconnection System Impact Study with applicable Participating TO(s) and any Affected System that is affected by the Interconnection Request pursuant to LGIP Section 3.7 above. Existing studies shall be used to the extent practicable when conducting the Interconnection System Impact Study. The CAISO will coordinate Base Case development with the applicable Participating TOs to ensure the Base Cases are accurately developed. The CAISO shall use Reasonable Efforts to complete a draft Interconnection System Impact Study within ninety (90) calendar days after the receipt of the executed Interconnection System Impact Study Agreement, study payment, and valid technical data. The CAISO will share applicable study results with the applicable Participating TO(s), for review and comment, and will incorporate comments into the study report. The CAISO will issue a final Interconnection System Impact Study report to the Interconnection Customer within one hundred twenty (120) calendar days after the receipt of the executed Interconnection System Impact Study Agreement, study payment, and valid technical data. If the CAISO uses Clustering, the CAISO shall use Reasonable Efforts to deliver a completed Interconnection System Impact Study within one hundred twenty (120) calendar days after the close of the Queue Cluster Window.

At the request of the Interconnection Customer or at any time the CAISO determines that it will not meet the required time frame for completing the Interconnection System Impact Study, the CAISO shall notify the Interconnection Customer as to the schedule status of the Interconnection System Impact Study. If the Interconnection System Impact Study cannot be completed within the time period, the CAISO shall notify the Interconnection Customer and provide an estimated completion date with an explanation of the reasons why additional time is required.

Upon request, the CAISO shall provide the Interconnection Customer all supporting documentation, workpapers and relevant pre-Interconnection Request and post-Interconnection Request power flow, short circuit and stability databases for the Interconnection System Impact Study, subject to confidentiality arrangements consistent with LGIP Section 13.1.

### 7.5 Meeting with the CAISO and Participating TO(s)

Within ten (10) Business Days of providing an Interconnection System Impact Study report to the Interconnection Customer, the applicable Participating TO(s), the CAISO and the Interconnection Customer shall meet to discuss the results of the Interconnection System Impact Study.

### 7.6 [NOT USED]

## Section 8. Interconnection Facilities Study

### 8.1 Interconnection Facilities Study Agreement

Simultaneously with the delivery of the Interconnection System Impact Study report to the Interconnection Customer, the CAISO shall provide to the Interconnection Customer a pro forma Interconnection Facilities Study Agreement. The pro forma Interconnection Facilities Study Agreement shall provide that the Interconnection Customer shall compensate the CAISO for the actual cost of the Interconnection Facilities Study. Within ten (10) Business Days following the Interconnection System Impact Study results meeting, the CAISO shall provide to the Interconnection Customer a signed Interconnection Facilities Study Agreement which shall include a non-binding good faith estimate of the cost and timeframe for completing the Interconnection Facilities Study.

The Interconnection Customer shall execute the Interconnection Facilities Study Agreement and deliver the executed Interconnection Facilities Study Agreement to the CAISO within thirty (30) calendar days after its receipt, together with the required technical data and the greater of $100,000 or the Interconnection Customer's portion of the estimated monthly cost of conducting the Interconnection Facilities Study.

**8.1.1** For studies where the estimated cost exceeds $100,000, the CAISO may invoice the Interconnection Customer on a monthly basis for the work to be conducted on the Interconnection Facilities Study for the remaining balance of the estimated Interconnection Facilities Study cost. The Interconnection Customer shall pay invoiced amounts within thirty (30) calendar days of receipt of invoice. The CAISO shall continue to hold the amounts on deposit until settlement of the final invoice.

### 8.2 Scope of Interconnection Facilities Study

The Interconnection Facilities Study shall specify and estimate the cost of the equipment, engineering, procurement and construction work, including the financial impacts (i.e., on Local Furnishing Bonds), if any, and schedule for effecting remedial measures that address such financial impacts, needed on the CAISO Controlled Grid to implement the conclusions of the Interconnection System Impact Study in accordance with Good Utility Practice to physically and electrically connect the Interconnection Customer's Interconnection Facilities to the CAISO Controlled Grid. The Interconnection Facilities Study shall also identify the electrical switching configuration of the connection equipment, including, without limitation: the transformer, switchgear, meters, and other station equipment; the nature and estimated cost of any Participating TO's Interconnection Facilities and Network Upgrades necessary to accomplish the interconnection; and an estimate of the time required to complete the construction and installation of such facilities.

### 8.3 Interconnection Facilities Study Procedures

The CAISO shall coordinate the Interconnection Facilities Study with the Participating TO(s) and any Affected System pursuant to LGIP Section 3.7 above. Existing studies shall be used to the extent practicable in conducting the Interconnection Facilities Study. The CAISO, in collaboration with the Participating TO(s), shall use Reasonable Efforts to complete the study and issue a draft Interconnection Facilities Study report to the Interconnection Customer. Prior to issuing draft study results to the Interconnection Customer, the CAISO shall share study results with the Participating TO(s) for review and incorporate comments as necessary. Within the following number of days after receipt of an executed Interconnection Facilities Study Agreement, the CAISO shall provide a draft Interconnection Facilities Study report to the Interconnection Customer: one hundred twenty (120) calendar days, with no more than a +/- 20 percent cost estimate contained in the report; or two hundred ten (210) calendar days, if the Interconnection Customer requests a +/- 10 percent cost estimate. At the request of the Interconnection Customer or at any time the CAISO determines that the required time frame for completing the Interconnection Facilities Study will not be met, the CAISO shall notify the Interconnection

Customer as to the schedule status of the Interconnection Facilities Study. If the Interconnection Facilities Study cannot be conducted and a draft Interconnection Facilities Study report cannot be issued within the time required, the CAISO shall notify the Interconnection Customer and provide an estimated completion date and an explanation of the reasons why additional time is required.

The Interconnection Customer shall, within thirty (30) calendar days after receipt of the draft report, either (i) provide written comments to the CAISO, which the CAISO, to the extent the comments are applicable, shall include in the final report, or (ii) provide a statement to the Participating TO and CAISO that it will not provide comments. The CAISO shall issue the final Interconnection Facilities Study report within fifteen (15) Business Days of receiving the Interconnection Customer's comments or promptly upon receiving the Interconnection Customer's statement that it will not provide comments. The CAISO may reasonably extend such fifteen (15) Business Day period upon notice to the Interconnection Customer if the Interconnection Customer's comments require the applicable Participating TO(s) and/or CAISO to perform additional analyses or make other significant modifications prior to the issuance of the final Interconnection Facilities Study report. Upon request, the CAISO shall provide the Interconnection Customer supporting documentation, workpapers, and databases or data developed in the preparation of the Interconnection Facilities Study, subject to confidentiality arrangements consistent with LGIP Section 13.1.

### 8.4 Meeting with the CAISO and Applicable Participating TO(s)

Within ten (10) Business Days of providing a draft Interconnection Facilities Study report to the Interconnection Customer, the applicable Participating TO(s), the CAISO and the Interconnection Customer shall meet to discuss the results of the Interconnection Facilities Study. Within ten (10) Business Days of this meeting the Interconnection Customer shall make the election of which Delivery Network Upgrades identified in the Interconnection Facilities Study are to be installed. Any operating constraints on the Interconnection Customer's Generating Facility arising out of the Interconnection Customer's election not to install the Delivery Network Upgrades shall be as set forth in Article 9 and Appendix C of the LGIA.

### 8.5 Re-Study

If re-study of the Interconnection Facilities Study is required due to a higher queued project dropping out of the queue or a modification of a higher queued project pursuant to LGIP Section 4.4, or any other effective change in information which necessitates a re-study, the CAISO shall so notify the Interconnection Customer in writing. Upon receipt of such notice, the Interconnection Customer shall provide the CAISO within ten (10) Business Days a written request that the CAISO either (i) terminate the study and withdraw the Interconnection Request; or (ii) continue the study. If the Interconnection Customer requests the CAISO to continue the study, the Interconnection Customer shall pay the CAISO an additional $50,000 deposit for the re-study along with providing written notice for the CAISO to continue.

Such re-study shall take no longer than sixty (60) calendar days from the date the CAISO receives the Interconnection Customer's written notice to continue the study and payment of the additional $50,000 deposit. The CAISO shall share applicable study results with the applicable Participating TO(s) for review and comment and incorporate comments, as appropriate. The CAISO will issue a final Interconnection Facilities Study report to the Interconnection Customer within eighty (80) calendar days following receipt of the Interconnection Customer's written notice to continue the study and payment of the additional $50,000 deposit. If the Interconnection Facilities Study cannot be completed within that time period, the CAISO shall notify the Interconnection Customer and provide an estimated completion date with an explanation of the reasons why additional time is required. Any and all costs of re-study shall be borne by the Interconnection Customer being re-studied. The CAISO will coordinate the re-study with the Participating TO(s). The Participating TO(s) will invoice the CAISO for any assessment work within seventy-five (75) calendar days of completion of the assessment, and, within thirty (30)

days thereafter, the CAISO will issue an invoice or refund to the Interconnection Customer, as applicable, based upon such submitted Participating TO invoices and the CAISO's own costs for the assessment. If the actual costs of the re-study are greater than the deposit provided by the Interconnection Customer, the Interconnection Customer will pay the balance within thirty (30) days of being invoiced.

## Section 9. Engineering & Procurement ("E&P") Agreement

Prior to executing an LGIA, an Interconnection Customer may, in order to advance the implementation of its interconnection, request and the applicable Participating TO(s) shall offer the Interconnection Customer, an E&P Agreement that authorizes the applicable Participating TO(s) to begin engineering and procurement of long lead-time items necessary for the establishment of the interconnection. However, the applicable Participating TO(s) shall not be obligated to offer an E&P Agreement if the Interconnection Customer is in Dispute Resolution as a result of an allegation that the Interconnection Customer has failed to meet any milestones or comply with any prerequisites specified in other parts of the LGIP. The E&P Agreement is an optional procedure and it will not alter the Interconnection Customer's Queue Position or In-Service Date. The E&P Agreement shall provide for the Interconnection Customer to pay the cost of all activities authorized by the Interconnection Customer and to make advance payments or provide other satisfactory security for such costs.

The Interconnection Customer shall pay the cost of such authorized activities and any cancellation costs for equipment that is already ordered for its interconnection, which cannot be mitigated as hereafter described, whether or not such items or equipment later become unnecessary. If the Interconnection Customer withdraws its application for interconnection or either Party terminates the E&P Agreement, to the extent the equipment ordered can be canceled under reasonable terms, the Interconnection Customer shall be obligated to pay the associated cancellation costs. To the extent that the equipment cannot be reasonably canceled, the applicable Participating TO(s) may elect: (i) to take title to the equipment, in which event the applicable Participating TO(s) shall refund the Interconnection Customer any amounts paid by Interconnection Customer for such equipment and shall pay the cost of delivery of such equipment, or (ii) to transfer title to and deliver such equipment to the Interconnection Customer, in which event the Interconnection Customer shall pay any unpaid balance and cost of delivery of such equipment.

## Section 10. Optional Interconnection Study

### 10.1 Optional Interconnection Study Agreement

On or after the date when the Interconnection Customer receives Interconnection System Impact Study results, the Interconnection Customer may request, and the CAISO shall conduct or cause to be conducted, a reasonable number of Optional Interconnection Studies. The request shall describe the assumptions that the Interconnection Customer wishes to be studied within the scope described in LGIP Section 10.2. Within five (5) Business Days after receipt of a request for an Optional Interconnection Study, the CAISO shall provide to the Interconnection Customer an Optional Interconnection Study Agreement.

The Optional Interconnection Study Agreement shall: (i) specify the technical data that the Interconnection Customer must provide for each phase of the Optional Interconnection Study, (ii) specify the Interconnection Customer's assumptions as to which Interconnection Requests with higher Queue Positions will be excluded from the Optional Interconnection Study case and assumptions as to the type of interconnection service for Interconnection Requests remaining in the Optional Interconnection Study case, and (iii) the CAISO's estimate of the cost of the Optional Interconnection Study. To the extent known by the CAISO, such estimate shall include any costs expected to be incurred by any Affected System whose participation is necessary to complete the Optional Interconnection Study. Notwithstanding the above, the CAISO shall not be required as a

result of an Optional Interconnection Study request to conduct any additional Interconnection Studies with respect to any other Interconnection Request.

The Interconnection Customer shall execute the Optional Interconnection Study Agreement within ten (10) Business Days of receipt and deliver the Optional Interconnection Study Agreement, the technical data and a $50,000 deposit to the CAISO as applicable. The CAISO will coordinate the study with the Participating TO(s). The Participating TO(s) will invoice the CAISO for any assessment work within seventy-five (75) calendar days of completion of the assessment, and, within thirty (30) days thereafter, the CAISO will issue an invoice or refund to the Interconnection Customer, as applicable, based upon such submitted Participating TO invoices and the CAISO's own costs for the assessment. If the actual costs of the study are greater than the deposit provided by the Interconnection Customer, the Interconnection Customer will pay the balance within thirty (30) days of being invoiced.

Notwithstanding any other provision, all refunds pursuant to this Appendix U will be processed in accordance with the CAISO's generally accepted accounting practices, including monthly batched deposit refund disbursements. Any CAISO deadline will be tolled to the extent the Interconnection Customer has not provided the CAISO with the appropriate documents to facilitate the Interconnection Customer's refund, or if the Interconnection Customer has any outstanding invoice balance due to the CAISO on another project owned by the same Interconnection Customer.

### 10.2 Scope of Optional Interconnection Study

The Optional Interconnection Study will consist of a sensitivity analysis based on the assumptions specified by the Interconnection Customer in the Optional Interconnection Study Agreement. The Optional Interconnection Study will also identify the Participating TOs' Interconnection Facilities and the Network Upgrades, and the estimated cost thereof, that may be required to provide transmission service or Interconnection Service based upon the results of the Optional Interconnection Study. The Optional Interconnection Study shall be performed solely for informational purposes. The CAISO shall use Reasonable Efforts to coordinate the study with any Affected Systems that may be affected by the types of Interconnection Services that are being studied. The CAISO shall utilize existing studies to the extent practicable in conducting the Optional Interconnection Study.

### 10.3 Optional Interconnection Study Procedures

The CAISO shall use Reasonable Efforts to have the Optional Interconnection Study completed within a mutually agreed upon time period specified within the Optional Interconnection Study Agreement. If the Optional Interconnection Study cannot be completed within such time period, the CAISO shall notify the Interconnection Customer and provide an estimated completion date and an explanation of the reasons why additional time is required. Any difference between the study payment and the actual cost of the study shall be paid to the CAISO, as applicable, or refunded to the Interconnection Customer, as appropriate. Upon request, the CAISO with support and cooperation of the applicable Participating TO(s) shall provide the Interconnection Customer supporting documentation and workpapers, and databases or data developed in the preparation of the Optional Interconnection Study, subject to confidentiality arrangements consistent with LGIP Sections 2.3 and 13.1.

## Section 11. Standard Large Generator Interconnection Agreement (LGIA)

### 11.1 Tender

**11.1.1** Within thirty (30) calendar days after the CAISO receives the Interconnection Customer's written comments, or notification of no comments, to the draft Interconnection Facilities Study report, the applicable Participating TO(s) and the CAISO shall tender a draft LGIA, together with draft

appendices. The draft LGIA shall be in the form of the FERC-approved standard form LGIA set forth in CAISO Tariff Appendix V. The Interconnection Customer shall provide written comments, or notification of no comments, to the draft appendices to the applicable Participating TO(s) and the CAISO within (30) calendar days of receipt.

**11.1.2** Consistent with Sections 3.4.4 and 11.1.1 of this LGIP, when the transmission system of a Participating TO, in which the Point of Interconnection is not located, is affected, such Participating TO shall tender a separate agreement, in the form of the LGIA, as appropriately modified.

## 11.2 Negotiation

Notwithstanding LGIP Section 11.1, at the request of the Interconnection Customer, the applicable Participating TO(s) and CAISO shall begin negotiations with the Interconnection Customer concerning the appendices to the LGIA at any time after the Interconnection Customer executes the Interconnection Facilities Study Agreement. The applicable Participating TO(s) and CAISO and the Interconnection Customer shall negotiate concerning any disputed provisions of the appendices to the draft LGIA for not more than sixty (60) calendar days after tender of the final Interconnection Facilities Study report. If the Interconnection Customer determines that negotiations are at an impasse, it may request termination of the negotiations at any time after tender of the draft LGIA pursuant to LGIP Section 11.1 and request submission of the unexecuted LGIA with FERC or initiate Dispute Resolution procedures pursuant to LGIP Section 13.5. If the Interconnection Customer requests termination of the negotiations, but within ninety (90) calendar days after issuance of the final Interconnection Facilities Study report fails to request either the filing of the unexecuted LGIA or initiate Dispute Resolution, it shall be deemed to have withdrawn its Interconnection Request. Unless otherwise agreed by the Parties, if the Interconnection Customer has not executed and returned the LGIA, requested filing of an unexecuted LGIA, or initiated Dispute Resolution procedures pursuant to LGIP Section 13.5 within ninety (90) calendar days after issuance of the final Interconnection Facilities Study report, it shall be deemed to have withdrawn its Interconnection Request. The CAISO shall provide to the Interconnection Customer a final LGIA within ten (10) Business Days after the completion of the negotiation process and receipt of all requested information.

## 11.3 Execution and Filing

At the time that the Interconnection Customer either returns the executed LGIA or requests the filing of an unexecuted LGIA as specified below, the Interconnection Customer shall provide the applicable Participating TO(s) and CAISO (A) reasonable evidence of continued Site Control or (B) posting to the applicable Participating TO(s) of $250,000, non-refundable additional security, which shall be applied toward future construction costs. At the same time, the Interconnection Customer also shall provide reasonable evidence that one or more of the following milestones in the development of the Large Generating Facility, at the Interconnection Customer election, has been achieved: (i) the execution of a contract for the supply or transportation of fuel to the Large Generating Facility; (ii) the execution of a contract for the supply of cooling water to the Large Generating Facility; (iii) execution of a contract for the engineering for, procurement of major equipment for, or construction of, the Large Generating Facility; (iv) execution of a contract for the sale of electric energy or capacity from the Large Generating Facility; or (v) application for an air, water, or land use permit.

The Interconnection Customer shall either: (i) execute the appropriate number of originals of the tendered LGIA as specified in the directions provided by the CAISO and return them to the CAISO, as directed, for completion of the execution process; or (ii) request in writing that the applicable Participating TO(s) and CAISO file with FERC an LGIA in unexecuted form. The LGIA shall be considered executed as of the date that all Parties have signed the LGIA. As soon as

practicable, but not later than ten (10) Business Days after receiving either the executed originals of the tendered LGIA (if it does not conform with a FERC-approved standard form of interconnection agreement) or the request to file an unexecuted LGIA, the applicable Participating TO(s) and CAISO shall file the LGIA with FERC, as necessary, together with an explanation of any matters as to which the Interconnection Customer and the applicable Participating TO(s) or CAISO disagree and support for the costs that the applicable Participating TO(s) propose to charge to the Interconnection Customer under the LGIA. An unexecuted LGIA should contain terms and conditions deemed appropriate by the applicable Participating TO(s) and CAISO for the Interconnection Request. If the Parties agree to proceed with design, procurement, and construction of facilities and upgrades under the agreed-upon terms of the unexecuted LGIA, they may proceed pending FERC action.

### 11.4 Commencement of Interconnection Activities

If the Interconnection Customer executes the final LGIA, the applicable Participating TO(s), CAISO and the Interconnection Customer shall perform their respective obligations in accordance with the terms of the LGIA, subject to modification by FERC. Upon submission of an unexecuted LGIA, the Interconnection Customer, applicable Participating TO(s) and CAISO may proceed to comply with the unexecuted LGIA, pending FERC action.

### 11.5 Interconnection Customer to Meet PTO Handbook Requirements

The Interconnection Customer's Interconnection Facilities shall be designed, constructed, operated and maintained in accordance with the applicable Participating TO's Interconnection Handbook

## Section 12. Building PTO Interconnection Facilities and Network Upgrades

### 12.1 Schedule

The applicable Participating TO(s) and the Interconnection Customer shall negotiate in good faith concerning a schedule for the construction of the applicable Participating TO's Interconnection Facilities and the Network Upgrades.

### 12.2 Construction Sequencing

#### 12.2.1 General

In general, the In-Service Date in the LGIA of an Interconnection Customer seeking interconnection to the CAISO Controlled Grid will determine the sequence of construction of Network Upgrades.

**12.2.2** Advance Construction of Network Upgrades that are an Obligation of an Entity other than the Interconnection Customer

An Interconnection Customer with an LGIA, in order to maintain its In-Service Date, may request that the applicable Participating TO(s) advance to the extent necessary the completion of Network Upgrades that: (i) were assumed in the Interconnection Studies for such Interconnection Customer, (ii) are necessary to support such In-Service Date, and (iii) would otherwise not be completed, pursuant to a contractual obligation of an entity other than the Interconnection Customer that is seeking interconnection to the CAISO Controlled Grid, in time to support such In-Service Date. Upon such request, the applicable Participating TO(s) will use Reasonable Efforts to advance the construction of such Network Upgrades to accommodate such request; provided that the Interconnection Customer commits to pay the applicable Participating TO(s): (i) any associated expediting costs and (ii) the cost of such Network Upgrades.

The applicable Participating TO(s) will refund to the Interconnection Customer both the expediting costs and the cost of Network Upgrades, in accordance with Article 11.4 of the LGIA. Consequently, the entity with a contractual obligation to construct such Network Upgrades shall be obligated to pay only that portion of the costs of the Network Upgrades that the applicable Participating TO(s) have not refunded to the Interconnection Customer. Payment by that entity shall be due on the date that it would have been due had there been no request for advance construction. The applicable Participating TO(s) shall forward to the Interconnection Customer the amount paid by the entity with a contractual obligation to construct the Network Upgrades as payment in full for the outstanding balance owed to the Interconnection Customer. The applicable Participating TO(s) then shall refund to that entity the amount that it paid for the Network Upgrades, in accordance with Article 11.4 of the LGIA.

**12.2.3** Advancing Construction of Network Upgrades that are Part of an Expansion Plan of the Participating TO

An Interconnection Customer with an LGIA, in order to maintain its In-Service Date as specified in the LGIA, may request that the applicable Participating TO(s) advance to the extent necessary the completion of Network Upgrades that: (i) are necessary to support such In-Service Date and (ii) would otherwise not be completed, pursuant to an expansion plan of the applicable Participating TO(s), in time to support such In-Service Date. Upon such request, the applicable Participating TO(s) will use Reasonable Efforts to advance the construction of such Network Upgrades to accommodate such request; provided that the Interconnection Customer commits to pay the applicable Participating TO(s) any associated expediting costs. The Interconnection Customer shall be entitled to refunds, if any, in accordance with this LGIP and the LGIA, for any expediting costs paid.

**12.2.4 Amended Interconnection Study**

An Interconnection Study will be amended, as needed, to determine the facilities necessary to support the requested In-Service Date as specified in the LGIA. This amended study will include those transmission facilities, Large Generating Facilities and any other generating facilities that are expected to be in service on or before the requested In-Service Date. If an amendment to an Interconnection Study is required, the CAISO shall notify the Interconnection Customer in writing. Upon receipt of such notice, the Interconnection Customer shall provide the CAISO within ten (10) Business Days a written request that the CAISO either (i) terminate the amended study and withdraw the Interconnection Customer's Interconnection Request or (ii) continue with the amended study. If the Interconnection Customer requests the CAISO to continue with the amended study, the Interconnection Customer shall pay the CAISO an additional $50,000 deposit for the amended study along with providing written notice for the CAISO to continue. Such amended study shall take no longer than sixty (60) calendar days from the date the CAISO receives the Interconnection Customer's written notice to continue the study and payment of the additional $50,000 deposit. The CAISO shall share applicable study results with the applicable Participating TO(s) for review and comment, and incorporate comments and issue a final study to the Interconnection Customer within eighty (80) calendar days from the date of the Interconnection Customer's written notice to continue the study and payment of the additional $50,000 deposit. If the amended Interconnection Study cannot be completed within that time period, the CAISO shall notify the Interconnection Customer and provide an estimated completion date with an explanation of the reasons why additional time is required. Any and all costs of the amended study shall be borne by the Interconnection Customer being re-studied. The CAISO will coordinate the study with the Participating TO(s). The Participating TO(s) will invoice the CAISO for any assessment work within seventy-five (75) calendar days of completion of the assessment, and, within thirty (30) days thereafter, the CAISO will issue an invoice or refund to the Interconnection Customer, as applicable, based upon such submitted Participating TO invoices and the CAISO's own costs for the assessment. If the actual costs of the study are greater than the deposit provided by the Interconnection Customer, the Interconnection Customer will pay the balance within thirty (30) days of being invoiced.

## Section 13. Miscellaneous

### 13.1 Confidentiality

Confidential Information shall include, without limitation, all information relating to a Party's technology, research and development, business affairs, and pricing, and any information supplied by any of the Parties to the other Parties prior to the execution of an LGIA.

Information is Confidential Information only if it is clearly designated or marked in writing as confidential on the face of the document, or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Parties receiving the information that the information is confidential.

If requested by any Party, the other Parties shall provide in writing, the basis for asserting that the information referred to in this Section warrants confidential treatment, and the requesting Party may disclose such writing to the appropriate Governmental Authority. Each Party shall be responsible for the costs associated with affording confidential treatment to its information.

The confidentiality provisions of this LGIP are limited to information provided pursuant to this LGIP.

#### 13.1.1 Scope

Confidential Information shall not include information that the receiving Party can demonstrate: (1) is generally available to the public other than as a result of a disclosure by the receiving Party; (2) was in the lawful possession of the receiving Party on a non confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a third party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the disclosing Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the disclosing Party; (5) is, or becomes, publicly known, through no wrongful act or omission of the receiving Party or breach of the LGIA; or (6) is required, in accordance with LGIP Section 13.1.6, Order of Disclosure, to be disclosed by any Governmental Authority or is otherwise required to be disclosed by law or subpoena, or is necessary in any legal proceeding establishing rights and obligations under the LGIP. Information designated as Confidential Information will no longer be deemed confidential if the Party that designated the information as confidential notifies the other Parties that it no longer is confidential.

#### 13.1.2 Release of Confidential Information

No Party shall release or disclose Confidential Information to any other person, except to its employees, consultants, Affiliates (limited by FERC's Standards of Conduct requirements set forth in Part 358 of FERC's Regulations, 18 C.F.R. 358), or to parties who may be or considering providing financing to or equity participation with the Interconnection Customer, or to potential purchasers or assignees of the Interconnection Customer, on a need to know basis in connection with these procedures, unless such person has first been advised of the confidentiality provisions of this LGIP Section 13.1 and has agreed to comply with such provisions. Notwithstanding the foregoing, a Party providing Confidential Information to any person shall remain primarily responsible for any release of Confidential Information in contravention of this LGIP Section 13.1.

#### 13.1.3 Rights

Each Party retains all rights, title, and interest in the Confidential Information that each Party discloses to the other Parties. The disclosure by each Party to the other Parties of Confidential

Information shall not be deemed a waiver by a Party or any other person or entity of the right to protect the Confidential Information from public disclosure.

**13.1.4 No Warrantie.**

By providing Confidential Information, no Party makes any warranties or representations as to its accuracy or completeness. In addition, by supplying Confidential Information, no Party obligates itself to provide any particular information or Confidential Information to the other Parties nor to enter into any further agreements or proceed with any other relationship or joint venture.

**13.1.5 Standard of Care**

Each Party shall use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from unauthorized disclosure, publication or dissemination. Each Party may use Confidential Information solely to fulfill its obligations to the other Parties under these procedures or its regulatory requirements.

**13.1.6 Order of Disclosure**

If a court or a Government Authority or entity with the right, power, and apparent authority to do so requests or requires any Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party shall provide the other Parties with prompt notice of such request(s) or requirement(s) so that the other Parties may seek an appropriate protective order or waive compliance with the terms of the LGIP. Notwithstanding the absence of a protective order or waiver, the Party may disclose such Confidential Information which, in the opinion of its counsel, the Party is legally compelled to disclose. Each Party will use Reasonable Efforts to obtain reliable assurance that confidential treatment will be accorded any Confidential Information so furnished.

**13.1.7 Remedies**

Monetary damages are inadequate to compensate a Party for another Party's breach of its obligations under this LGIP Section 13.1. Each Party accordingly agrees that the other Parties shall be entitled to equitable relief, by way of injunction or otherwise, if the first Party breaches or threatens to breach its obligations under this LGIP Section 13.1, which equitable relief shall be granted without bond or proof of damages, and the receiving Party shall not plead in defense that there would be an adequate remedy at law. Such remedy shall not be deemed an exclusive remedy for the breach of this LGIP Section 13.1, but shall be in addition to all other remedies available at law or in equity. Further, the covenants contained herein are necessary for the protection of legitimate business interests and are reasonable in scope. No Party, however, shall be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with this LGIP Section 13.1.

**13.1.8 Disclosure to FERC, its Staff, or a State**

Notwithstanding anything in this LGIP Section 13.1 to the contrary, and pursuant to 18 C.F.R. section 1b.20, if FERC or its staff, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to the LGIP, the Party shall provide the requested information to FERC or its staff, within the time provided for in the request for information. In providing the information to FERC or its staff, the Party must, consistent with 18 C.F.R. section 388.112, request that the information be treated as confidential and non-public by FERC and its staff and that the information be withheld

from public disclosure. Parties are prohibited from notifying the other Parties prior to the release of the Confidential Information to FERC or its staff. The Party shall notify the other applicable Parties when it is notified by FERC or its staff that a request to release Confidential Information has been received by FERC, at which time any of the Parties may respond before such information would be made public, pursuant to 18 C.F.R. section 388.112. Requests from a state regulatory body conducting a confidential investigation shall be treated in a similar manner, consistent with applicable state rules and regulations.

**13.1.9** Subject to the exception in LGIP Section 13.1.8, any Confidential Information shall not be disclosed by the other Parties to any person not employed or retained by the other Parties, except to the extent disclosure is (i) required by law; (ii) reasonably deemed by the disclosing Party to be required to be disclosed in connection with a dispute between or among the Parties, or the defense of litigation or dispute; (iii) otherwise permitted by consent of the other Parties, such consent not to be unreasonably withheld; or (iv) necessary to fulfill its obligations under this LGIP or as a transmission service provider or a Balancing Authority including disclosing the Confidential Information to an RTO or ISO or to a subregional, regional or national reliability organization or planning group. The Party asserting confidentiality shall notify the other Parties in writing of the information it claims is confidential. Prior to any disclosures of another Party's Confidential Information under this subparagraph, or if any third party or Governmental Authority makes any request or demand for any of the information described in this subparagraph, the disclosing Party agrees to promptly notify the other Party in writing and agrees to assert confidentiality and cooperate with the other Party in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order or other reasonable measures.

**13.1.10** This provision shall not apply to any information that was or is hereafter in the public domain (except as a result of a breach of this provision).

**13.1.11** The Participating TO or CAISO shall, at the Interconnection Customer's election, destroy, in a confidential manner, or return the Confidential Information provided at the time of Confidential Information is no longer needed.

### 13.2 Delegation of Responsibility

The CAISO and the Participating TOs may use the services of subcontractors as deemed appropriate to perform their obligations under this LGIP. The applicable Participating TO or CAISO shall remain primarily liable to the Interconnection Customer for the performance of its respective subcontractors and compliance with its obligations of this LGIP. The subcontractor shall keep all information provided confidential and shall use such information solely for the performance of such obligation for which it was provided and no other purpose.

### 13.3 Obligation for Study Costs

The CAISO shall charge and the Interconnection Customer shall pay the actual costs of the Interconnection Studies. Any difference between the study deposit and the actual cost of the applicable Interconnection Study shall be paid by or refunded to the Interconnection Customer. Any invoices for Interconnection Studies shall include a detailed and itemized accounting of the cost of each Interconnection Study. The Interconnection Customer shall pay any such undisputed costs within thirty (30) calendar days of receipt of an invoice therefor. The CAISO shall not be obligated to continue to have any studies conducted unless the Interconnection Customer has paid all undisputed amounts in compliance herewith. In the event an Interconnection Study is performed by the CAISO, or is performed by a third party consultant pursuant to LGIP Section 13.4, the Interconnection Customer shall pay only the costs of those activities performed by the Participating TO to adequately review or validate that Interconnection Study.

### 13.4 Third Parties Performing Studies

If (i) at the time of the signing of an Interconnection Study agreement there is disagreement as to the estimated time to complete an Interconnection Study, (ii) the Interconnection Customer receives notice pursuant to LGIP Sections 6.3, 7.4 or 8.3 that an Interconnection Study cannot be completed within the applicable timeframe for such Interconnection Study, or (iii) the Interconnection Customer receives neither the Interconnection Study nor a notice under LGIP Sections 6.3, 7.4 or 8.3 within the applicable timeframe for such Interconnection Study, then the Interconnection Customer may request that the CAISO: (1) utilize a third party consultant reasonably acceptable to the Interconnection Customer, the CAISO, and the Participating TO or (2) utilize the applicable Participating TO(s) to perform such Interconnection Study under the direction of the CAISO. At other times, the Participating TO or CAISO may also utilize a third party consultant to perform such Interconnection Study, either in response to a general request of the Interconnection Customer, or on its own volition.

In all cases, use of a third party consultant shall be in accord with Article 26 of the LGIA (Subcontractors) and limited to situations where the CAISO determines that doing so will help maintain or accelerate the study process for the Interconnection Customer's pending Interconnection Request and not interfere with the CAISO's or Participating TO's progress on Interconnection Studies for other pending Interconnection Requests. In cases where the Interconnection Customer requests use of a third party consultant to perform such Interconnection Study, the Interconnection Customer and the Participating TO or CAISO shall negotiate all of the pertinent terms and conditions, including reimbursement arrangements and the estimated study completion date and study review deadline. The applicable Participating TO(s) and the CAISO shall convey all workpapers, data bases, study results and all other supporting documentation prepared to date with respect to the Interconnection Request as soon as practicable upon the Interconnection Customer's request subject to the confidentiality provision in LGIP Section 13.1. In any case, such third party contract may be entered into with the Interconnection Customer, the applicable Participating TO(s), or the CAISO at the Participating TO's or CAISO's discretion. If the Interconnection Customer enters into a third party Interconnection Study agreement, the Interconnection Customer shall provide the Interconnection Study to the CAISO and the Participating TO for review, and such third party Interconnection Study agreement shall provide for reimbursement by the Interconnection Customer of the CAISO's and Participating TO's actual cost of participating in and reviewing the Interconnection Study. In the case of (iii) the Interconnection Customer maintains its right to submit a claim to Dispute Resolution to recover the costs of such third party study. Such third party consultant shall be required to comply with this LGIP, Article 26 of the LGIA (Subcontractors), the CAISO Tariff, and the relevant Participating TO's TO Tariff as would apply if the Participating TO or CAISO were to conduct the Interconnection Study and shall use the information provided to it solely for purposes of performing such services and for no other purposes. The applicable Participating TO(s) and the CAISO shall cooperate with such third party consultant and the Interconnection Customer to complete and issue the Interconnection Study in the shortest reasonable time.

### 13.5 Disputes

All disputes arising out of or in connection with this LGIP whereby relief is sought by or from the CAISO shall be settled in accordance with the CAISO ADR Procedures. Disputes arising out of or in connection with this LGIP not subject to the CAISO ADR Procedures shall be resolved as follows:

#### 13.5.1 Submission

In the event either Party has a dispute, or asserts a claim, that arises out of or in connection with the LGIA, the LGIP, or their performance, such Party (the "disputing Party") shall provide the other Party with written notice of the dispute or claim ("Notice of Dispute"). Such dispute or claim

shall be referred to a designated senior representative of each Party for resolution on an informal basis as promptly as practicable after receipt of the Notice of Dispute by the other Party. In the event the designated representatives are unable to resolve the claim or dispute through unassisted or assisted negotiations within thirty (30) calendar days of the other Party's receipt of the Notice of Dispute, such claim or dispute may, upon mutual agreement of the Parties, be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below. In the event the Parties do not agree to submit such claim or dispute to arbitration, each Party may exercise whatever rights and remedies it may have in equity or at law consistent with the terms of the LGIA and LGIP.

### 13.5.2 External Arbitration Procedures

Any arbitration initiated under these procedures shall be conducted before a single neutral arbitrator appointed by the Parties. If the Parties fail to agree upon a single arbitrator within ten (10) calendar days of the submission of the dispute to arbitration, each Party shall choose one arbitrator who shall sit on a three-member arbitration panel.

The two arbitrators so chosen shall within twenty (20) calendar days select a third arbitrator to chair the arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the Parties an opportunity to be heard and, except as otherwise provided herein, shall conduct the arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("Arbitration Rules") and any applicable FERC regulations or RTO rules; provided, however, in the event of a conflict between the Arbitration Rules and the terms of this LGIP Section 13, the terms of this LGIP Section 13 shall prevail.

### 13.5.3 Arbitration Decisions

Unless otherwise agreed by the Parties, the arbitrator(s) shall render a decision within ninety (90) calendar days of appointment and shall notify the Parties in writing of such decision and the reasons therefor. The arbitrator(s) shall be authorized only to interpret and apply the provisions of the LGIA and LGIP and shall have no power to modify or change any provision of the LGIA and LGIP in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in the Federal Arbitration Act or the Administrative Dispute Resolution Act. The final decision of the arbitrator must also be filed with FERC if it affects jurisdictional rates, terms and conditions of service, Interconnection Facilities, or Network Upgrades.

### 13.5.4 Costs.

Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable: (1) the cost of the arbitrator chosen by the Party to sit on the three member panel and one half of the cost of the third arbitrator chosen; or (2) one half the cost of the single arbitrator jointly chosen by the Parties.

## 13.6 Local Furnishing Bonds

### 13.6.1 Participating TOs That Own Facilities Financed by Local Furnishing Bonds

This provision is applicable only to a Participating TO that has financed facilities for the local furnishing of electric energy with Local Furnishing Bonds. Notwithstanding any other provisions of this LGIP, the Participating TO and the CAISO shall not be required to provide Interconnection

Service to the Interconnection Customer pursuant to this LGIP and the LGIA if the provision of such Interconnection Service would jeopardize the tax-exempt status of any Local Furnishing Bond(s) issued for the benefit of the Participating TO.

### 13.6.2 Alternative Procedures for Requesting Interconnection Service

If a Participating TO determines that the provision of Interconnection Service requested by the Interconnection Customer would jeopardize the tax-exempt status of any Local Furnishing Bond(s) issued for the benefit of the Participating TO, it shall advise the Interconnection Customer and the CAISO within (30) calendar days of receipt of the Interconnection Request.

The Interconnection Customer thereafter may renew its request for the same interconnection Service by tendering an application under Section 211 of the Federal Power Act, in which case the Participating TO, within ten (10) calendar days of receiving a copy of the Section 211 application, will waive its rights to a request for service under Section 213(a) of the Federal Power Act and to the issuance of a proposed order under Section 212(c) of the Federal Power Act, and the CAISO and Participating TO shall provide the requested Interconnection Service pursuant to the terms and conditions set forth in this LGIP and the LGIA.

## Appendix 1 INTERCONNECTION REQUEST

Provide three copies of this completed form pursuant to Section 7 of this LGIP Appendix 1 below.

1. The undersigned Interconnection Customer submits this request to interconnect its Large Generating Facility with the CAISO Controlled Grid pursuant to the CAISO Tariff.

2. This Interconnection Request is for (check one):

   _____ A proposed new Large Generating Facility.

   _____ An increase in the generating capacity or a Material Modification of an existing Generating Facility.

3. [NOT USED]

4. The Interconnection Customer provides the following information:

   a. Address or location, including the county, of the proposed new Large Generating Facility site or, in the case of an existing Generating Facility, the name and specific location, including the county, of the existing Generating Facility;

   b. Maximum megawatt electrical output of the proposed new Large Generating Facility or the amount of megawatt increase in the generating capacity of an existing Generating Facility;

   c. Type of project (i.e., gas turbine, hydro, wind, etc.) and general description of the equipment configuration;

   d. Proposed In-Service Date, Trial Operation date and Commercial Operation Date by day, month, and year and term of service;

   e. Name, address, telephone number, and e-mail address of the Interconnection Customer's contact person;

   f. Approximate location of the proposed Point of Interconnection; and

   g. Interconnection Customer data (set forth in Attachment A)

5. Applicable deposit amount as specified in the LGIP.

6. Evidence of Site Control as specified in the LGIP and name(s), address(es) and contact information of site owner(s) (check one):

   _____ Is attached to this Interconnection Request

   _____ Will be provided at a later date in accordance with this LGIP

7. This Interconnection Request shall be submitted to the representative indicated below:

New Resource Interconnection
California ISO
P.O. Box 639014
Folsom, CA 95763-9014

Overnight address: 250 Outcropping Way, Folsom, CA 95630

8. Representative of the Interconnection Customer to contact:

[To be completed by the Interconnection Customer]

9. This Interconnection Request is submitted by:

Name of the Interconnection Customer: _____

By (signature): _____

Name (type or print): _____

Title: _____

Date: _____

**Attachment A**
**To LGIP Appendix 1**
**Interconnection Request**

**LARGE GENERATING FACILITY DATA**

Provide three copies of this completed form pursuant to Section 7 of LGIP Appendix 1.

**1. Provide two original prints and one reproducible copy (no larger than 36" x 24") of the following:**

A. Site drawing to scale, showing generator location and Point of Interconnection with the CAISO Controlled Grid.
B. Single-line diagram showing applicable equipment such as generating units, step-up transformers, auxiliary transformers, switches/disconnects of the proposed interconnection, including the required protection devices and circuit breakers. For wind generator farms, the one line diagram should include the distribution lines connecting the various groups of generating units, the generator capacitor banks, the step up transformers, the distribution lines, and the substation transformers and capacitor banks at the Point of Interconnection with the CAISO Controlled Grid.

**2. Generating Facility Information**

A) Total Generating Facility rated output (kW): _____
B) Generating Facility auxiliary Load (kW): _____
C) Project net capacity (kW): _____
D) Standby Load when Generating Facility is off-line (kW): _____
E) Number of Generating Units: _____
(Please repeat the following items for each generator)
F) Individual generator rated output (kW for each unit): _____
G) Manufacturer: _____
H) Year Manufactured: _____
I) Nominal Terminal Voltage: _____
J) Rated Power Factor (%): _____
K) Type (Induction, Synchronous, D.C. with Inverter): _____
L) Phase (3 phase or single phase): _____
M) Connection (Delta, Grounded WYE, Ungrounded WYE, impedance grounded): _____
N) Generator Voltage Regulation Range: _____
O) Generator Power Factor Regulation Range: _____
P) For combined cycle plants, specify the plant output for an outage of the steam turbine or an outage of a single combustion turbine:

**Synchronous Generator – General Information:**
(Please repeat the following for each generator)

A. Rated Generator speed (rpm):_____
B. Rated MVA: _____
C. Rated Generator Power Factor: _____
D. Generator Efficiency at Rated Load (%): _____
E. Moment of Inertia (including prime mover): _____
F. Inertia Time Constant (on machine base) H: _____ sec or MJ/MVA
G. SCR (Short-Circuit Ratio - the ratio of the field current required for rated open-circuit voltage to the field current required for rated short-circuit current): _____
H. Please attach generator reactive capability curves.
I. Rated Hydrogen Cooling Pressure in psig (Steam Units only): _____

J. Please attach a plot of generator terminal voltage versus field current that shows the air gap line, the open-circuit saturation curve, and the saturation curve at full load and rated power factor.

**4. Excitation System Information**

(Please repeat the following for each generator)

A. Indicate the Manufacturer _____ and Type _____of excitation system used for the generator. For exciter type, please choose from 1 to 8 below or describe the specific excitation system.

1) Rotating DC commutator exciter with continuously acting regulator. The regulator power source is independent of the generator terminal voltage and current.

2) Rotating DC commentator exciter with continuously acting regulator. The regulator power source is bus fed from the generator terminal voltage.

3) Rotating DC commutator exciter with non-continuously acting regulator (i.e., regulator adjustments are made in discrete increments).

4) Rotating AC Alternator Exciter with non-controlled (diode) rectifiers. The regulator power source is independent of the generator terminal voltage and current (not bus-fed).

5) Rotating AC Alternator Exciter with controlled (thyristor) rectifiers. The regulator power source is fed from the exciter output voltage.

6) Rotating AC Alternator Exciter with controlled (thyristor) rectifiers.

7) Static Exciter with controlled (thyristor) rectifiers. The regulator power source is bus-fed from the generator terminal voltage.

8) Static Exciter with controlled (thyristor) rectifiers. The regulator power source is bus-fed from a combination of generator terminal voltage and current (compound-source controlled rectifiers system.

B. Attach a copy of the block diagram of the excitation system from its instruction manual. The diagram should show the input, output, and all feedback loops of the excitation system.
C. Excitation system response ratio (ASA): _____
D. Full load rated exciter output voltage: _____
E. Maximum exciter output voltage (ceiling voltage): _____
F. Other comments regarding the excitation system?
_____
_____
_____

**5. Power System Stabilizer Information.**

(Please repeat the following for each generator. All new generators are required to install PSS unless an exemption has been obtained from WECC. Such an exemption can be obtained for units that do not have suitable excitation systems.)

A. Manufacturer: _____
B. Is the PSS digital or analog? _____
C. Note the input signal source for the PSS?
_____ Bus frequency _____ Shaft speed _____ Bus Voltage
_____ Other (specify source)
D. Please attach a copy of a block diagram of the PSS from the PSS Instruction Manual and the correspondence between dial settings and the time constants or PSS gain.
E: Other comments regarding the PSS?
_____
_____
_____

**6. Turbine-Governor Information**
(Please repeat the following for each generator)

Please complete Part A for steam, gas or combined-cycle turbines, Part B for hydro turbines, and Part C for both.

A. Steam, gas or combined-cycle turbines:

1.) List type of unit (Steam, Gas, or Combined-cycle):_____
2.) If steam or combined-cycle, does the turbine system have a reheat process (i.e., both high and low pressure turbines)? _____
3.) If steam with reheat process, or if combined-cycle, indicate in the space provided, the percent of full load power produced by each turbine:
Low pressure turbine or gas turbine:_____%
High pressure turbine or steam turbine:_____%

B. Hydro turbines:

1.) Turbine efficiency at rated load: _____%
2.) Length of penstock: _____ft
3.) Average cross-sectional area of the penstock: _____ft2
4.) Typical maximum head (vertical distance from the bottom of the penstock, at the gate, to the water level): _____ft
5.) Is the water supply run-of-the-river or reservoir: _____
6.) Water flow rate at the typical maximum head: _____ft3/sec
7.) Average energy rate: _____kW-hrs/acre-ft
8.) Estimated yearly energy production: _____kW-hrs

C. Complete this section for each machine, independent of the turbine type.

1.) Turbine manufacturer: _____
2.) Maximum turbine power output: _____MW
3.) Minimum turbine power output (while on line): _____MW
4.) Governor information:
a: Droop setting (speed regulation): _____
b: Is the governor mechanical-hydraulic or electro-hydraulic (Electro-hydraulic governors have an electronic speed sensor and transducer.)? _____
c: Other comments regarding the turbine governor system?
_____
_____
_____
_____

**7. Generator and Associated Equipment – Dynamic Models:**

**A. Synchronous Generators**

For each generator, governor, exciter and power system stabilizer, select the appropriate dynamic model from the General Electric PSLF Program Manual and provide the required input data. The manual is available on the GE website at www.gepower.com. Select the following links within the website: 1) Our Businesses, 2) GE Power Systems, 3) Energy Consulting, 4) GE PSLF Software, 5) GE PSLF User's Manual.

There are links within the GE PSLF User's Manual to detailed descriptions of specific models, a definition of each parameter, a list of the output channels, explanatory notes, and a control system block diagram. The block diagrams are also available on the CAISO Website.

If you require assistance in developing the models, we suggest you contact General Electric. Accurate models are important to obtain accurate study results. Costs associated with any changes in facility requirements that are due to differences between model data provided by the generation developer and the actual generator test data, may be the responsibility of the generation developer.

**B. Asynchronous Generators**

For each generator, the Interconnection Customer must provide WECC approved standard study models (standard models), rather than user-defined models, to the extent standard models are available. If standard models for the generator are not available then the Interconnection Customer may supply user-written or equivalent models.

**8. Induction Generator Data:**

A. Rated Generator Power Factor at rated load: _____
B. Moment of Inertia (including prime mover): _____
C. Do you wish reclose blocking? Yes ___, No ___
Note: Sufficient capacitance may be on the line now, or in the future, and the generator may self-excite unexpectedly.

**9. Generator Short Circuit Data**

For each generator, provide the following reactances expressed in p.u. on the generator base:

- X"1 – positive sequence subtransient reactance: _____
- X"2 – negative sequence subtransient reactance: _____
- X"0 – zero sequence subtransient reactance: _____

Generator Grounding:

A. _____ Solidly grounded
B. _____ Grounded through an impedance

Impedance value in p.u on generator base. R:_____p.u.
X:_____p.u.
C. _____ Ungrounded

**10. Step-Up Transformer Data**

For each step-up transformer, fill out the data form provided in Table 1.

**11. Line Data**

There is no need to provide data for new lines that are to be planned by the Participating TO. However, for transmission lines that are to be planned by the generation developer, please provide the following information:

Nominal Voltage: _____
Line Length (miles): _____
Line termination Points: _____
Conductor Type: _____ Size: _____
If bundled. Number per phase: _____, Bundle spacing: _____in.
Phase Configuration. Vertical: _____, Horizontal: _____
Phase Spacing (ft): A-B: _____, B-C: _____, C-A: _____
Distance of lowest conductor to Ground: _____ft
Ground Wire Type: _____ Size: _____ Distance to Ground: _____ft
Attach Tower Configuration Diagram
Summer line ratings in amperes (normal and emergency) _____
Resistance ( R ): _____ p.u.**
Reactance: ( X): _____ p.u**
Line Charging (B/2): _____ p.u**
** On 100-MVA and nominal line voltage (kV) Base

**12. Wind Generators**

Number of generators to be interconnected pursuant to this Interconnection Request: ____

Elevation: _____ _____ Single Phase _____ Three Phase

Inverter manufacturer, model name, number, and version:
_____

List of adjustable setpoints for the protective equipment or software:
_____

Field Volts: _____
Field Amperes: _____
Motoring Power (kW): _____
Neutral Grounding Resistor (If Applicable): _____
$I_2^2t$ or K (Heating Time Constant): _____
Rotor Resistance: _____
Stator Resistance: _____
Stator Reactance: _____
Rotor Reactance: _____
Magnetizing Reactance: _____
Short Circuit Reactance: _____
Exciting Current: _____
Temperature Rise: _____
Frame Size: _____
Design Letter: _____
Reactive Power Required In Vars (No Load):_____
Reactive Power Required In Vars (Full Load):_____
Total Rotating Inertia, H: _____ Per Unit on KVA Base

Note: A completed General Electric Company Power Systems Load Flow (PSLF) data sheet must be supplied with the Interconnection Request. If other data sheets are more appropriate to the proposed device then they shall be provided and discussed at Scoping Meeting.

TABLE 1

TRANSFORMER DATA

UNIT_____

NUMBER OF TRANSFORMERS_____ PHASE _____

| RATED KVA | H Winding | X Winding | Y Winding |
|---|---|---|---|
| Connection (Delta, Wye, Gnd.) | _____ | _____ | _____ |
| 55 C Rise | _____ | _____ | _____ |
| 65 C Rise | _____ | _____ | _____ |
| RATED VOLTAGE | _____ | _____ | _____ |
| BIL | _____ | _____ | _____ |
| AVAILABLE TAPS (planned or existing) | _____ | _____ | _____ |
| LOAD TAP CHANGER? | _____ | _____ | _____ |
| TAP SETTINGS | _____ | _____ | _____ |

COOLING TYPE : OA_____ OA/FA_____ OA/FA/FA_____ OA/FOA_____

| IMPEDANCE | H-X | H-Y | X-Y |
|---|---|---|---|
| Percent | _____ | _____ | _____ |
| MVA Base | _____ | _____ | _____ |
| Tested Taps | _____ | _____ | _____ |
| WINDING RESISTANCE | H | X | Y |
| Ohms | _____ | _____ | _____ |

CURRENT TRANSFORMER RATIOS

H_____ X_____ Y_____ N_____

PERCENT EXCITING CURRENT 100 % Voltage; _____ 110% Voltage_____

Supply copy of nameplate and manufacture's test report when available

## Appendix 2 LGIP INTERCONNECTION PROCEDURES FOR A WIND GENERATING PLANT

LGIP Appendix 2 sets forth procedures specific to a wind generating plant. All other requirements of this LGIP continue to apply to wind generating plant interconnections.

A. Special Procedures Applicable to Wind Generators

The wind plant Interconnection Customer, in completing the Interconnection Request required by Section 3.1 of this LGIP, may provide to the CAISO a set of preliminary electrical design specifications depicting the wind plant as a single equivalent generator. Upon satisfying these and other applicable Interconnection Request conditions, the wind plant may enter the queue and receive the Base Case data as provided for in this LGIP.

No later than six (6) months after submitting an Interconnection Request completed in this manner, the wind plant Interconnection Customer must submit completed detailed electrical design specifications and other data (including collector system layout data) needed to allow the CAISO to complete the Interconnection Study.

## Appendix 3 Interconnection Feasibility Study Agreement

THIS AGREEMENT is made and entered into this_____day of_____, 20____ by and between _____, a _____ organized and existing under the laws of the State of ____, ("Interconnection Customer") and the California Independent System Operator Corporation, a California nonprofit public benefit corporation existing under the laws of the State of California, ("CAISO"). The Interconnection Customer and the CAISO each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS,** the Interconnection Customer is proposing to develop a Large Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by the Interconnection Customer dated[1]; and

[footnote 1: This recital to be omitted if the Interconnection Customer has elected to forego the Interconnection Feasibility Study.]

**WHEREAS,** the Interconnection Customer desires to interconnect the Large Generating Facility with the CAISO Controlled Grid; and

**WHEREAS,** the Interconnection Customer has requested the CAISO to conduct or cause to be performed an Interconnection Feasibility Study to assess the feasibility of interconnecting the proposed Large Generating Facility.

**NOW, THEREFORE,** in consideration of and subject to the mutual covenants contained herein the Parties agree as follows:

**1.0** When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in the CAISO's FERC-approved Standard Large Generation Interconnection Procedures ("LGIP") or the Master Definitions Supplement, Appendix A to the CAISO Tariff, as applicable.

**2.0** The Interconnection Customer elects and the CAISO shall conduct or cause to be performed an Interconnection Feasibility Study consistent with the LGIP in accordance with the CAISO Tariff.

**3.0** The scope of the Interconnection Feasibility Study shall be subject to the assumptions set forth in Attachment A to this Agreement.

**4.0** The Interconnection Feasibility Study shall be based on the technical information provided by the Interconnection Customer in the Interconnection Request, as may be modified as the result of the Scoping Meeting. The CAISO reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Interconnection Feasibility Study and as designated in accordance with Section 3.5.4 of the LGIP. If, after the designation of the Point of Interconnection pursuant to Section 3.5.4 of the LGIP, the Interconnection Customer modifies its Interconnection Request pursuant to Section 4.4 of the LGIP, the time to complete the Interconnection Feasibility Study may be extended.

**5.0** The Interconnection Feasibility Study report shall provide the following information:

- preliminary identification of any circuit breaker short circuit capability limits exceeded on the Participating TO's electric system or the CAISO Controlled Grid as a result of the interconnection;

- preliminary identification of any thermal overload or voltage limit violations on the Participating TO's electric system or the CAISO Controlled Grid resulting from the interconnection;

- preliminary description and non-binding good faith estimate of cost and cost responsibility for and time for construction of the Participating TO's facilities required to interconnect the Large Generating Facility to the Participating TO's electric system or the CAISO Controlled Grid and to address the identified short circuit and power flow issues;

- preliminary identification of financial impacts, if any, on Local Furnishing Bonds; and

- expected results in the Interconnection System Impact Study.

**6.0** In addition to the deposit(s) paid by the Interconnection Customer pursuant to Section 3.5.1 of the LGIP, the Interconnection Customer shall provide a deposit of $10,000 for the performance of the Interconnection Feasibility Study.

Following the issuance of the Interconnection Feasibility Study to the Interconnection Customer the CAISO shall charge and the Interconnection Customer shall pay the actual costs of the Interconnection Feasibility Study, inclusive of any re-studies and amendments to the Interconnection Feasibility Study, pursuant to Section 9 of this Agreement.

Any difference between the deposits made toward the Interconnection Feasibility Study, amendments and re-studies to the Interconnection Feasibility Study, and the actual cost of the study shall be paid by or refunded to the Interconnection Customer, as appropriate in accordance with Section 13.3 of the LGIP.

**7.0** Pursuant to Section 3.7 of the LGIP, the CAISO will coordinate the conduct of any studies required to determine the impact of the Interconnection Request on Affected Systems. The CAISO may provide a copy of the Interconnection Feasibility Study results to an Affected System Operator and the Western Electricity Coordinating Council. Requests for review and input from Affected System Operators or the Western Electricity Coordinating Council may arrive at any time prior to interconnection, and a revision of the Interconnection Feasibility Study or re-study may be required in such event.

**8.0** Substantial portions of technical data and assumptions used to perform the Interconnection Feasibility Study, such as system conditions, existing and planned generation, and unit modeling, may change after the CAISO provides the Interconnection Feasibility Study results to the Interconnection Customer.

Study results will reflect available data at the time the CAISO provides the Interconnection Feasibility Study to the Interconnection Customer. The CAISO shall not be responsible for any additional costs, including, without limitation, costs of new or additional facilities, system upgrades, or schedule changes, that may be incurred by the Interconnection Customer as a result of changes in such data and assumptions.

**9.0** In the event that a re-study or amendment of the Interconnection Feasibility Study is required, the CAISO shall provide notification of the need for such re-study or amendment, and the Interconnection Customer shall provide direction as to whether to proceed with the re-study or amendment and any associated deposit payment pursuant to Section 6.4 or Section 12.2.4 of the LGIP, as applicable.

**10.0** The CAISO shall maintain records and accounts of all costs incurred in performing the Interconnection Feasibility Study, inclusive of any re-studies or amendments thereto, in sufficient detail to allow verification of all costs incurred, including associated overheads. The

Interconnection Customer shall have the right, upon reasonable notice, within a reasonable time following receipt of the final cost report associated with this Interconnection Feasibility Study at the CAISO's offices and at its own expense, to audit the CAISO's records as necessary and as appropriate in order to verify costs incurred by the CAISO. Any audit requested by the Interconnection Customer shall be completed, and written notice of any audit dispute provided to the CAISO, within one hundred eighty (180) calendar days following receipt by the Interconnection Customer of the CAISO's notification of the final costs of the Interconnection Feasibility Study, inclusive of any re-study or amendment thereto.

**11.0** In accordance with Section 3.8 of the LGIP, the Interconnection Customer may withdraw its Interconnection Request at any time by written notice to the CAISO. Upon receipt of such notice, this Agreement shall terminate.

Pursuant to Section 6.1 of the LGIP, this Agreement shall become effective upon the date the fully executed Agreement and deposit specified in Section 6 of this Agreement are received by the CAISO. If the CAISO does not receive the fully executed Agreement and payment pursuant to Section 6.1 of the LGIP, then the Interconnection Request will be deemed withdrawn upon the Interconnection Customer's receipt of written notice by the CAISO pursuant to Section 3.8 of the LGIP.

**Miscellaneous.**

**Dispute Resolution.** Any dispute, or assertion of a claim, arising out of or in connection with this Interconnection Feasibility Study Agreement, shall be resolved in accordance with Section 13.5 of the LGIP

**Confidentiality.** Confidential Information shall be treated in accordance with Section 13.1 of the LGIP.

**Binding Effect.** This Interconnection Feasibility Study Agreement and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

**Conflicts.** In the event of a conflict between the body of this Interconnection Feasibility Study Agreement and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this Interconnection Feasibility Study Agreement shall prevail and be deemed the final intent of the Parties.

**Rules of Interpretation.** This Interconnection Feasibility Study Agreement, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this Interconnection Feasibility Study Agreement, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this Interconnection Feasibility Study Agreement) , document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any applicable laws and regulations means such applicable laws and regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article or Section of this Interconnection Feasibility Study Agreement or such Appendix to this Interconnection Feasibility Study Agreement, or such Section to the LGIP or such Appendix to the LGIP, as the case may be; (6) "hereunder," "hereof," "herein," "hereto" and words of similar import shall be deemed references to this Interconnection Feasibility Study Agreement as a whole and not to any particular Article; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination

of any period of time, "from" means "from and including," "to" means "to but excluding" and "through" means "through and including."

**Entire Agreement.** This Interconnection Feasibility Study Agreement, including all Appendices and Schedules attached hereto, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this Interconnection Feasibility Study Agreement. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this Interconnection Feasibility Study Agreement.

**No Third Party Beneficiaries.** This Interconnection Feasibility Study Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

**Waiver.** The failure of a Party to this Interconnection Feasibility Study Agreement to insist, on any occasion, upon strict performance of any provision of this Interconnection Feasibility Study Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this Interconnection Feasibility Study Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Interconnection Feasibility Study Agreement. Termination or default of this Interconnection Feasibility Study Agreement for any reason by the Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Participating TO or CAISO. Any waiver of this Interconnection Feasibility Study Agreement shall, if requested, be provided in writing.

Any waivers at any time by any Party of its rights with respect to any default under this Interconnection Feasibility Study Agreement, or with respect to any other matter arising in connection with this Interconnection Feasibility Study Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Interconnection Feasibility Study Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Interconnection Feasibility Study Agreement shall not constitute or be deemed a waiver of such right.

**Headings.** The descriptive headings of the various Articles and Sections of this Interconnection Feasibility Study Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Interconnection Feasibility Study Agreement.

**Multiple Counterparts.** This Interconnection Feasibility Study Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

**Amendment.** The Parties may by mutual agreement amend this Interconnection Feasibility Study Agreement by a written instrument duly executed by both of the Parties.

**Modification by the Parties.** The Parties may by mutual agreement amend the Appendices to this Interconnection Feasibility Study Agreement by a written instrument duly executed by both of the Parties. Such amendment shall become effective and a part of this Interconnection Feasibility

Study Agreement upon satisfaction of all applicable laws and regulations.

**Reservation of Rights.** The CAISO shall have the right to make a unilateral filing with FERC to modify this Interconnection Feasibility Study Agreement with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this Interconnection Feasibility Study Agreement pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Interconnection Feasibility Study Agreement shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**No Partnership.** This Interconnection Feasibility Study Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

**Assignment.** This Interconnection Feasibility Study Agreement may be assigned by a Party only with the written consent of the other Party; provided that a Party may assign this Interconnection Feasibility Study Agreement without the consent of the other Party to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Interconnection Feasibility Study Agreement; and provided further that the Interconnection Customer shall have the right to assign this Interconnection Feasibility Study Agreement, without the consent of the other Party, for collateral security purposes to aid in providing financing for the Large Generating Unit, provided that the Interconnection Customer will require any secured party, trustee or mortgagee to notify the other Party of any such assignment. Any financing arrangement entered into by the Interconnection Customer pursuant to this Article will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify the other Party of the date and particulars of any such exercise of assignment right(s). Any attempted assignment that violates this Article is void and ineffective. Any assignment under this Interconnection Feasibility Study Agreement shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

**IN WITNESS WHEREOF,** the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**California Independent System Operator Corporation**

By: _____

Title: _____

Date: _____

**[Insert name of the Interconnection Customer]**

By: _____

Title: _____

Date: _____

**Attachment A to Interconnection Feasibility Study Agreement**

**ASSUMPTIONS USED IN CONDUCTING THE**

**INTERCONNECTION FEASIBILITY STUDY**

The Interconnection Feasibility Study will be based upon the information set forth in the Interconnection Request and agreed upon in the Scoping Meeting held on _____:

Designation of Point of Interconnection and configuration to be studied.

Designation of alternative Point(s) of Interconnection and configuration.

[Above assumptions to be completed by the Interconnection Customer and other assumptions to be provided by the Interconnection Customer and the CAISO.

## Appendix 4

## Interconnection System Impact Study Agreement

THIS AGREEMENT is made and entered into this_____day of_____, 20____ by and between _____ _____, a_____organized and existing under the laws of the State of _____, ("Interconnection Customer") and the California Independent System Operator Corporation, a California nonprofit public benefit corporation existing under the laws of the State of California, ("CAISO"). The Interconnection Customer and the CAISO each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS,** the Interconnection Customer is proposing to develop a Large Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by the Interconnection Customer dated _____; and

**WHEREAS,** the Interconnection Customer desires to interconnect the Large Generating Facility with the CAISO Controlled Grid; and

**WHEREAS,** the CAISO has completed an Interconnection Feasibility Study (the "Feasibility Study") and provided the results of said study to the Interconnection Customer; and

**WHEREAS,** the Interconnection Customer has requested the CAISO to conduct or cause to be performed an Interconnection System Impact Study to assess the impact of interconnecting the Large Generating Facility;

**NOW, THEREFORE,** in consideration of and subject to the mutual covenants contained herein the Parties agree as follows:

**1.0** When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in the CAISO's FERC-approved Standard Large Generation Interconnection Procedures ("LGIP") or the Master Definitions Supplement, Appendix A to the CAISO Tariff, as applicable.

**2.0** The Interconnection Customer elects and the CAISO shall conduct or cause to be performed an Interconnection System Impact Study consistent with the LGIP in accordance with the CAISO Tariff.

**3.0** The scope of the Interconnection System Impact Study shall be subject to the assumptions set forth in Attachment A to this Agreement.

**4.0** The Interconnection System Impact Study will be based upon the results of the Interconnection Feasibility Study and the technical information provided by the Interconnection Customer in the Interconnection Request, subject to any modifications in accordance with Section 4.4 of the LGIP. The CAISO reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Interconnection System Impact Study. If the Interconnection Customer modifies its designated Point of Interconnection, Interconnection Request, or the technical information provided therein is modified, the time to complete the Interconnection System Impact Study may be extended.

**5.0** The Interconnection System Impact Study report shall provide the following information:

- identification of any circuit breaker short circuit capability limits exceeded on the Participating TO's electric system or the CAISO Controlled Grid as a result of the interconnection;

- identification of any thermal overload or voltage limit violations on the Participating TO's electric system or the CAISO Controlled Grid resulting from the interconnection;

- identification of any instability or inadequately damped response to system disturbances on the Participating TO's electric system or the CAISO Controlled Grid resulting from the interconnection;

  a description and non-binding, good faith estimate of cost and cost responsibility for and time for construction of facilities on the Participating TO's electric system required to interconnect the Large Generating Facility to the CAISO Controlled Grid and to address the identified short circuit, instability, and power flow issues on the CAISO Controlled Grid;

  a Deliverability Assessment on the CAISO Controlled Grid pursuant to Section 3.3 of the LGIP; and

  assessment of the potential magnitude of financial impacts, if any, on Local Furnishing Bonds and a proposed resolution.

**6.0** The Interconnection Customer shall provide a deposit of $50,000 for the performance of the Interconnection System Impact Study. The good faith estimate for the time of completion of the Interconnection System Impact Study is _____ [insert date].

Following the issuance of the Interconnection System Impact Study, the CAISO shall charge and the Interconnection Customer shall pay the actual costs of the Interconnection System Impact Study, inclusive of any re-studies and amendments to the Interconnection System Impact Study, pursuant to Section 9 of this Agreement.

Any difference between the deposit made toward the Interconnection System Impact Study, amendments and re-studies to the Interconnection System Impact Study, and the actual cost of the study shall be paid by or refunded to the Interconnection Customer, as appropriate in accordance with Section 13.3 of the LGIP.

**7.0** Pursuant to Section 3.7 of the LGIP, the CAISO will coordinate the conduct of any studies required to determine the impact of the Interconnection Request on Affected Systems. The CAISO may provide a copy of the Interconnection System Impact Study results to an Affected System Operator and the Western Electricity Coordinating Council. Requests for review and input from Affected System Operators or the Western Electricity Coordinating Council may arrive at any time prior to interconnection, and a revision of the Interconnection System Impact Study or re-study may be required in such event.

**8.0** Substantial portions of technical data and assumptions used to perform the Interconnection System Impact Study, such as system conditions, existing and planned generation, and unit modeling, may change after the CAISO provides the Interconnection System Impact Study results to the

Interconnection Customer. Study results will reflect available data at the time the CAISO provides the Interconnection System Impact Study to the Interconnection Customer. The CAISO shall not be responsible for any additional costs, including, without limitation, costs of new or

additional facilities, system upgrades, or schedule changes, that may be incurred by the Interconnection Customer as a result of changes in such data and assumptions.

**9.0** In the event that a re-study or amendment of the Interconnection System Impact Study is required, the CAISO shall provide notification of the need for such re-study or amendment, and the Interconnection Customer shall provide direction as to whether to proceed with the re-study or amendment and any associated deposit payment pursuant to Section 7.6 or Section 12.2.4 of the LGIP, as applicable.

**10.0** The CAISO shall maintain records and accounts of all costs incurred in performing the Interconnection System Impact Study, inclusive of any re-studies or amendments thereto, in sufficient detail to allow verification of all costs incurred, including associated overheads. The Interconnection Customer shall have the right, upon reasonable notice, within a reasonable time at the CAISO's offices and at its own expense, to audit the CAISO's records as necessary and as appropriate in order to verify costs incurred by the CAISO. Any audit requested by the Interconnection Customer shall be completed, and written notice of any audit dispute provided to the CAISO representative, within one hundred eighty (180) calendar days following receipt by the Interconnection Customer of the CAISO's notification of the final costs of the Interconnection System Impact Study, inclusive of any re-study or amendment thereto.

**11.0** In accordance with Section 3.8 of the LGIP, the Interconnection Customer may withdraw its Interconnection Request at any time by written notice to the CAISO. Upon receipt of such notice, this Agreement shall terminate.

Pursuant to Section 7.2 of the LGIP, this Agreement shall become effective upon the date the fully executed Agreement and deposit specified in Section 6 of this Agreement are received by the CAISO. If the CAISO does not receive the fully executed Agreement and payment pursuant to Section 7.2 of the LGIP, then the Interconnection Request will be deemed withdrawn upon the Interconnection Customer's receipt of written notice by the CAISO pursuant to Section 3.8 of the LGIP.

**Miscellaneous.**

**Dispute Resolution.** Any dispute, or assertion of a claim, arising out of or in connection with this Interconnection System Impact Study Agreement, shall be resolved in accordance with Section 13.5 of the LGIP.

**Confidentiality.** Confidential Information shall be treated in accordance with Section 13.1 of the LGIP.

**Binding Effect.** This Interconnection System Impact Study Agreement and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

**Conflicts.** In the event of a conflict between the body of this Interconnection System Impact Study Agreement and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this Interconnection System Impact Study Agreement shall prevail and be deemed the final intent of the Parties.

**Rules of Interpretation.** This Interconnection System Impact Study Agreement, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this Interconnection System Impact Study Agreement, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this Interconnection System Impact Study Agreement), document,

instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any applicable laws and regulations means such applicable laws and regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article or Section of this Interconnection System Impact Study Agreement or such Appendix to this Interconnection System Impact Study Agreement, or such Section to the LGIP or such Appendix to the LGIP, as the case may be; (6) "hereunder," "hereof," "herein," "hereto" and words of similar import shall be deemed references to this Interconnection System Impact Study Agreement as a whole and not to any particular Article, Section, or other provision hereof or thereof; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including," "to" means "to but excluding" and "through" means "through and including."

**Entire Agreement.** This Interconnection System Impact Study Agreement, including all Appendices and Schedules attached hereto, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this Interconnection System Impact Study Agreement. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this Interconnection System Impact Study Agreement.

**No Third Party Beneficiaries.** This Interconnection System Impact Study Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

**Waiver.** The failure of a Party to this Interconnection System Impact Study Agreement to insist, on any occasion, upon strict performance of any provision of this Interconnection System Impact Study Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this Interconnection System Impact Study Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Interconnection System Impact Study Agreement. Termination or default of this Interconnection System Impact Study Agreement for any reason by the Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Participating TO or CAISO. Any waiver of this Interconnection System Impact Study Agreement shall, if requested, be provided in writing.

Any waivers at any time by any Party of its rights with respect to any default under this Interconnection System Impact Study Agreement, or with respect to any other matter arising in connection with this Interconnection System Impact Study Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Interconnection System Impact Study Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Interconnection System Impact Study Agreement shall not constitute or be deemed a waiver of such right.

**Headings.** The descriptive headings of the various Articles and Sections of this Interconnection System Impact Study Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Interconnection System Impact Study

Agreement.

**Multiple Counterparts.** This Interconnection System Impact Study Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

**Amendment.** The Parties may by mutual agreement amend this Interconnection System Impact Study Agreement by a written instrument duly executed by both of the Parties.

**Modification by the Parties.** The Parties may by mutual agreement amend the Appendices to this Interconnection System Impact Study Agreement by a written instrument duly executed by both of the Parties. Such amendment shall become effective and a part of this Interconnection System Impact Study Agreement upon satisfaction of all applicable laws and regulations.

**Reservation of Rights.** The CAISO shall have the right to make a unilateral filing with FERC to modify this Interconnection System Impact Study Agreement with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this Interconnection System Impact Study Agreement pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Interconnection System Impact Study Agreement shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**No Partnership.** This Interconnection System Impact Study Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

**Assignment.** This Interconnection System Impact Study Agreement may be assigned by a Party only with the written consent of the other Party; provided that a Party may assign this Interconnection System Impact Study Agreement without the consent of the other Party to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Interconnection System Impact Study Agreement; and provided further that the Interconnection Customer shall have the right to assign this Interconnection System Impact Study Agreement, without the consent of the other Party, for collateral security purposes to aid in providing financing for the Large Generating Unit, provided that the Interconnection Customer will require any secured party, trustee or mortgagee to notify the other Party of any such assignment. Any financing arrangement entered into by the Interconnection Customer pursuant to this Article will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify the other Party of the date and particulars of any such exercise of assignment right(s). Any attempted assignment that violates this Article is void and ineffective. Any assignment under this Interconnection System Impact Study Agreement shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

**IN WITNESS THEREOF,** the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**California Independent System Operator Corporation**

By: _____

Title: _____

Date: _____

**[Insert name of the Interconnection Customer]**

By: _____

Title: _____

Date: _____

**Attachment A**

**Interconnection System Impact**

**Study Agreement**

**ASSUMPTIONS USED IN CONDUCTING THE**

**INTERCONNECTION SYSTEM IMPACT STUDY**

The Interconnection System Impact Study will be based upon the results of the Interconnection Feasibility Study, subject to any modifications in accordance with Section 4.4 of the LGIP, and the following assumptions:

Designation of Point of Interconnection and configuration to be studied.

Designation of alternative Point(s) of Interconnection and configuration.

[Above assumptions to be completed by the Interconnection Customer and other assumptions to be provided by the Interconnection Customer and the CAISO

## Appendix 5 Interconnection Study Agreement

**THIS AGREEMENT** is made and entered into this _____ day of_____, 20____ by and between _____ _____, a _____organized and existing under the laws of the State of _____, ("Interconnection Customer") and the California Independent System Operator Corporation, a California nonprofit public benefit corporation existing under the laws of the State of California, ("CAISO"). The Interconnection Customer and the CAISO each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS,** the Interconnection Customer is proposing to develop a Large Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by the Interconnection Customer dated _____; and

**WHEREAS,** the Interconnection Customer desires to interconnect the Large Generating Facility with the CAISO Controlled Grid;

**WHEREAS,** the CAISO has completed an Interconnection System Impact Study (the "System Impact Study") and provided the results of said study to the Interconnection Customer; and

**WHEREAS,** the Interconnection Customer has requested the CAISO to conduct or cause to be performed an Interconnection Facilities Study to specify and estimate the cost of the equipment, engineering, procurement and construction work needed on the Participating TO's electric system to implement the conclusions of the Interconnection System Impact Study in accordance with Good Utility Practice to physically and electrically connect the Large Generating Facility to the CAISO Controlled Grid.

**NOW, THEREFORE,** in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

**1.0** When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in the CAISO's FERC-approved Standard Large Generation Interconnection Procedures ("LGIP") or the Master Definitions Supplement, Appendix A to the CAISO Tariff, as applicable.

**2.0** The Interconnection Customer elects and the CAISO shall conduct or cause to be performed an Interconnection Facilities Study consistent with the LGIP tin accordance with the CAISO Tariff.

**3.0** The scope of the Interconnection Facilities Study shall be subject to the assumptions set forth in Attachment A and the data provided in Attachment B to this Agreement.

**4.0** The Interconnection Facilities Study report (i) shall provide a description, estimated cost, including, if applicable, the cost of remedial measures that address the financial impacts, if any, on Local Furnishing Bonds, of (consistent with Attachment A), and schedule for required facilities or for effecting remedial measures that address the financial impacts, if any, on Local Furnishing Bonds within each Participating TO's electric system to interconnect the Large Generating Facility to the CAISO Controlled Grid and (ii) shall address the short circuit, instability, and power flow issues identified in the Interconnection System Impact Study.

**5.0** The Interconnection Customer shall provide a deposit of the greater of $100,000 or the Interconnection Customer's portion of the estimated monthly cost for the performance of the Interconnection Facilities Study. The time for completion of the Interconnection Facilities Study is specified in Attachment A.

For studies where the estimated cost exceeds $100,000, the CAISO may invoice Interconnection Customer on a monthly basis for the work to be conducted on the Interconnection Facilities Study for the remaining balance of the estimated Interconnection Facilities Study cost. The Interconnection Customer shall pay invoiced amounts within thirty (30) calendar days of receipt of invoice. The CAISO shall continue to hold the amounts on deposit until settlement of the final invoice.

Following the issuance of the Interconnection Facilities Study, the CAISO shall charge and the Interconnection Customer shall pay the actual costs of the Interconnection Facilities Study, inclusive of any re-studies and amendments to the Interconnection Facilities Study, pursuant to Section 9 of this Agreement.

Any difference between the deposit made toward the Interconnection Facilities Study and the actual cost of the study, inclusive of any re-studies and amendments thereto, shall be paid by or refunded to the Interconnection Customer, as appropriate in accordance with Section 13.3 of the LGIP.

**6.0** The Interconnection Facilities Study will be based upon the results of the Interconnection System Impact Study and the technical information provided by the Interconnection Customer in the Interconnection Request, subject to any modifications in accordance with Section 4.4 of the LGIP. The CAISO reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Interconnection Facilities Study.

If the Interconnection Customer modifies its Interconnection Request or the technical information provided therein is modified, the time to complete the Interconnection Facilities Study may be extended.

**7.0** Pursuant to Section 3.7 of the LGIP, the CAISO will coordinate the conduct of any studies required to determine the impact of the Interconnection Request on Affected Systems. The CAISO may provide a copy of the Interconnection Facilities Study results to an Affected System Operator and the Western Electricity Coordinating Council. Requests for review and input from Affected System Operators or the Western Electricity Coordinating Council may arrive at any time prior to interconnection, and a revision of the Interconnection Facilities Study or re-study may be required in such event.

**8.0** Substantial portions of technical data and assumptions used to perform the Interconnection Facilities Study, such as system conditions, existing and planned generation, and unit modeling, may change after the CAISO provides the Interconnection Facilities Study results to the Interconnection Customer. Study results will reflect available data at the time the CAISO provides the Interconnection Facilities Study to the Interconnection Customer. The CAISO shall not be responsible for any additional costs, including, without limitation, costs of new or additional facilities, system upgrades, or schedule changes, that may be incurred by the Interconnection Customer as a result of changes in such data and assumptions.

**9.0** In the event that a re-study or amendment of the Interconnection Facilities Study is required, the CAISO shall provide notification of the need for such re-study or amendment, and the Interconnection

Customer shall provide direction as to whether to proceed with the re-study or amendment and any associated deposit payment pursuant to Section 8.5 or Section 12.2.4 of the LGIP, as applicable.

**10.0** The CAISO shall maintain records and accounts of all costs incurred in performing the Interconnection Facilities Study, inclusive of any re-studies or amendments thereto, in sufficient detail to allow verification of all costs incurred, including associated overhead. The Interconnection Customer shall have the right, upon reasonable notice, within a reasonable time at the CAISO's offices and at its own expense, to audit the CAISO's records as necessary and as appropriate in order to verify costs incurred by the CAISO. Any audit requested by the Interconnection Customer shall be completed, and written notice of any audit dispute provided to the CAISO within one hundred eighty (180) calendar days following receipt by the Interconnection Customer of the CAISO's notification of the final costs of the Interconnection Facilities Study, inclusive of any re-study or amendment thereto.

**11.0** In accordance with Section 3.8 of the LGIP, the Interconnection Customer may withdraw its Interconnection Request at any time by written notice to the CAISO. Upon receipt of such notice, this Agreement shall terminate.

**12.0** Pursuant to Section 8.1 of the LGIP, this Agreement shall become effective upon the date the fully executed Agreement and deposit specified in Section 6 of this Agreement are received by the CAISO. If the CAISO does not receive the fully executed Agreement and payment pursuant to Section 8.1 of the LGIP, then the Interconnection Request will be deemed withdrawn upon the Interconnection Customer's receipt of written notice by the CAISO pursuant to Section 3.8 of the LGIP.

**13.0 Miscellaneous.**

**13.1 Dispute Resolution.** Any dispute, or assertion of a claim, arising out of or in connection with this Interconnection Facilities Study Agreement, shall be resolved in accordance with Section 13.5 of the LGIP.

**13.2 Confidentiality.** Confidential Information shall be treated in accordance with Section 13.1 of the LGIP.

**13.3 Binding Effect.** This Interconnection Facilities Study Agreement and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

**13.4 Conflicts.** In the event of a conflict between the body of this Interconnection Facilities Study Agreement and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this Interconnection Facilities Study Agreement shall prevail and be deemed the final intent of the Parties.

**13.5 Rules of Interpretation.** This Interconnection Facilities Study Agreement, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this Interconnection Facilities Study Agreement, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this Interconnection Facilities Study Agreement), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any applicable laws and regulations means such applicable laws and regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time,

including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article or Section of this Interconnection Facilities Study Agreement or such Appendix to this Interconnection Facilities Study Agreement, or such Section to the LGIP or such Appendix to the LGIP, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this Interconnection Facilities Study Agreement as a whole and not to any particular Article, Section, or other provision hereof or thereof; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".

**13.6 Entire Agreement.** This Interconnection Facilities Study Agreement, including all Appendices and Schedules attached hereto, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this Interconnection Facilities Study Agreement. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this Interconnection Facilities Study Agreement.

**13.7 No Third Party Beneficiaries.** This Interconnection Facilities Study Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

**13.8 Waiver.** The failure of a Party to this Interconnection Facilities Study Agreement to insist, on any occasion, upon strict performance of any provision of this Interconnection Facilities Study Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this Interconnection Facilities Study Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Interconnection Facilities Study Agreement. Termination or default of this Interconnection Facilities Study Agreement for any reason by the Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Participating TO or CAISO. Any waiver of this Interconnection Facilities Study Agreement shall, if requested, be provided in writing.

Any waivers at any time by any Party of its rights with respect to any default under this Interconnection Facilities Study Agreement, or with respect to any other matter arising in connection with this Interconnection Facilities Study Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Interconnection Facilities Study Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Interconnection Facilities Study Agreement shall not constitute or be deemed a waiver of such right.

**13.9 Headings.** The descriptive headings of the various Articles and Sections of this Interconnection Facilities Study Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Interconnection Facilities Study Agreement.

**13.10 Multiple Counterparts.** This Interconnection Facilities Study Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

**13.11 Amendment.** The Parties may by mutual agreement amend this Interconnection Facilities Study Agreement by a written instrument duly executed by both of the Parties.

**13.12 Modification by the Parties.** The Parties may by mutual agreement amend the Appendices to this Interconnection Facilities Study Agreement by a written instrument duly executed by both of the Parties. Such amendment shall become effective and a part of this Interconnection Facilities Study Agreement upon satisfaction of all applicable laws and regulations.

**13.13 Reservation of Rights.** The CAISO shall have the right to make a unilateral filing with FERC to modify this Interconnection Facilities Study Agreement with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this Interconnection Facilities Study Agreement pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Interconnection Facilities Study Agreement shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**13.14 No Partnership.** This Interconnection Facilities Study Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

**13.15 Assignment.** This Interconnection Facilities Study Agreement may be assigned by a Party only with the written consent of the other Party; provided that a Party may assign this Interconnection Facilities Study Agreement without the consent of the other Party to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Interconnection Facilities Study Agreement; and provided further that the Interconnection Customer shall have the right to assign this Interconnection Facilities Study Agreement, without the consent of the other Party, for collateral security purposes to aid in providing financing for the Large Generating Unit, provided that the Interconnection Customer will require any secured party, trustee or mortgagee to notify the other Party of any such assignment. Any financing arrangement entered into by the Interconnection Customer pursuant to this Article will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify the other Party of the date and particulars of any such exercise of assignment right(s). Any attempted assignment that violates this Article is void and ineffective. Any assignment under this Interconnection Facilities Study Agreement shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

**IN WITNESS WHEREOF,** the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**California Independent System Operator Corporation**

By: _____

Title: _____

Date: _____

**[Insert name of the Interconnection Customer]**

By: _____

Title: _____

Date: _____

**Attachment A**

**Interconnection Facilities**

**Study Agreement**

**INTERCONNECTION CUSTOMER SCHEDULE ELECTION FOR CONDUCTING THE INTERCONNECTION FACILITIES STUDY**

The CAISO shall use Reasonable Efforts to complete the study and issue a draft Interconnection Facilities Study report to the Interconnection Customer. Prior to issuing draft study results to the Interconnection Customer, the Participating TO and CAISO shall share results for review and incorporate comments within the following number of days after of receipt of an executed copy of this Interconnection Facilities Study Agreement:

- one hundred twenty (120) calendar days with no more than a +/- 20 percent cost estimate contained in the report, or

- two hundred ten (210) calendar days with no more than a +/- 10 percent cost estimate contained in the report.

**Attachment B**

**Interconnection Facilities**

**Study Agreement**

**DATA FORM TO BE PROVIDED BY THE INTERCONNECTION CUSTOMER**

**WITH THE INTERCONNECTION FACILITIES STUDY AGREEMENT**

Provide two copies of this completed form and other required plans and diagrams in accordance with Section 8.1 of the LGIP.

Provide location plan and one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

One set of metering is required for each generation connection to the new bus or existing CAISO Controlled Grid station. Number of generation connections: _____

On the one line indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)

On the one line indicate the location of auxiliary power. (Minimum load on CT/PT)

Will an alternate source of auxiliary power be available during CT/PT maintenance?

_____ Yes _____ No

Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation? _____ Yes _____ No

(Please indicate on one line).

What type of control system or PLC will be located at the Interconnection Customer's Large Generating Facility?

_____

_____

_____

What protocol does the control system or PLC use?

_____

_____

_____

Please provide a 7.5-minute quadrangle of the site. Sketch the plant, station, transmission line, and property line.

Physical dimensions of the proposed interconnection station:

Bus length from generation to interconnection station:

Line length from interconnection station to the Participating TO's transmission line.

Tower number observed in the field. (Painted on tower leg)*

Number of third party easements required for transmission lines*:

* To be completed in coordination with the Participating TO or CAISO.

Is the Large Generating Facility in the Participating TO's service area?

_____ Yes _____ No

Local service provider for auxiliary and other power:_____

Please provide proposed schedule dates:

| | |
|---|---|
| Begin Construction | Date: _____ |
| Generator step-up transformer receives back feed power | Date: _____ |
| Generation Testing | Date: _____ |
| Commercial Operation | Date: _____ |

Level of Deliverability: Choose one of the following:

_____ Deliverability with no Network Upgrades

_____ 100% Deliverability

## Appendix 6 Optional Interconnection Study Agreement

**THIS AGREEMENT** is made and entered into this _____ day of _____, 20___ by and between _____, a _____ organized and existing under the laws of the State of _____, ("Interconnection Customer") and the California Independent System Operator Corporation, a California nonprofit public benefit corporation existing under the laws of the State of California, ("CAISO"). The Interconnection Customer and the CAISO each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

**WHEREAS,** the Interconnection Customer is proposing to develop a Large Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by the Interconnection Customer dated _____;

**WHEREAS,** the Interconnection Customer is proposing to establish an interconnection with the CAISO Controlled Grid; and

**WHEREAS,** the Interconnection Customer has submitted to the CAISO an Interconnection Request; and

**WHEREAS,** on or after the date when the Interconnection Customer receives the Interconnection System Impact Study results, the Interconnection Customer has further requested that the CAISO conduct or cause to be performed an Optional Interconnection Study;

**NOW, THEREFORE,** in consideration of and subject to the mutual covenants contained herein the Parties agree as follows:

**1.0** When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in the CAISO's FERC-approved Standard Large Generation Interconnection Procedures ("LGIP") or the Master Definitions Supplement, Appendix A to the CAISO Tariff, as applicable.

**2.0** The Interconnection Customer elects and the CAISO shall conduct or cause to be performed an Optional Interconnection Study consistent with the LGIP in accordance with the CAISO Tariff.

**3.0** The scope of the Optional Interconnection Study shall be subject to the assumptions set forth in Attachment A to this Agreement.

**4.0** The Optional Interconnection Study shall be performed solely for informational purposes.

**5.0** The Optional Interconnection Study report shall provide a sensitivity analysis based on the assumptions specified by the Interconnection Customer in Attachment A to this Agreement. The Optional Interconnection Study will identify the Participating TO's Interconnection Facilities and the Network Upgrades, and the estimated cost thereof, including, if applicable, the cost of remedial measures that address the financial impacts, if any, on Local Furnishing Bonds, that may be required to provide transmission service or interconnection service based upon the assumptions specified by the Interconnection Customer in Attachment A.

**6.0** The Interconnection Customer shall provide a deposit of $10,000 for the performance of the Optional Interconnection Study. The CAISO's good faith estimate for the time of completion of the Optional Interconnection Study is _____ [insert date].

Following the issuance of the Optional Interconnection Study, the CAISO shall charge and the Interconnection Customer shall pay the actual costs of the Optional Interconnection Study.

Any difference between the initial payment and the actual cost of the study shall be paid by or refunded to the Interconnection Customer, as appropriate.

**7.0** Substantial portions of technical data and assumptions used to perform the Optional Interconnection Study, such as system conditions, existing and planned generation, and unit modeling, may change after the CAISO provides the Optional Interconnection Study results to the Interconnection Customer. Study results will reflect available data at the time the CAISO provides the Optional Interconnection Study to the Interconnection Customer. The CAISO shall not be responsible for any additional costs, including without limitation, costs of new or additional facilities, system upgrades, or schedule changes, that may be incurred by the Interconnection Customer as a result of changes in such data and assumptions.

**8.0** The CAISO shall maintain records and accounts of all costs incurred in performing the Optional Interconnection Study in sufficient detail to allow verification of all costs incurred, including associated overheads. The Interconnection Customer shall have the right, upon reasonable notice, within a reasonable time at the CAISO's offices and at its own expense, to audit the CAISO's records as necessary and as appropriate in order to verify costs incurred by the CAISO. Any audit requested by the Interconnection Customer shall be completed, and written notice of any audit dispute provided to the CAISO representative, within one hundred eighty (180) calendar days following receipt by the Interconnection Customer of the CAISO's notification of the final costs of the Optional Interconnection Study.

**9.0** Pursuant to Section 10.1 of the LGIP, this Agreement shall become effective upon the date the fully executed Agreement and deposit specified in Section 6 of this Agreement are received by the CAISO. If the CAISO does not receive the fully executed Agreement and payment pursuant to Section 10.1 of the LGIP, then the offer reflected in this Agreement will expire and this Agreement will be of no effect.

**10.0 Miscellaneous.**

**10.1 Dispute Resolution.** Any dispute, or assertion of a claim, arising out of or in connection with this Optional Interconnection Study Agreement, shall be resolved in accordance with Section 13.5 of the LGIP.

**10.2 Confidentiality.** Confidential Information shall be treated in accordance with Section 13.1 of the LGIP.

**10.3 Binding Effect.** This Optional Interconnection Study Agreement and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

**10.4 Conflicts.** In the event of a conflict between the body of this Optional Interconnection Study Agreement and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this Optional Interconnection Study Agreement shall prevail and be deemed the final intent of the Parties.

**10.5 Rules of Interpretation.** This Optional Interconnection Study Agreement, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this Optional Interconnection Study Agreement, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement

(including this Optional Interconnection Study Agreement), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any applicable laws and regulations means such applicable laws and regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article or Section of this Optional Interconnection Study Agreement or such Appendix to this Optional Interconnection Study Agreement, or such Section to the LGIP or such Appendix to the LGIP, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this Optional Interconnection Study Agreement as a whole and not to any particular Article, Section, or other provision hereof or thereof; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".

**10.6 Entire Agreement.** This Optional Interconnection Study Agreement, including all Appendices and Schedules attached hereto, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this Optional Interconnection Study Agreement. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this Optional Interconnection Study Agreement.

**10.7 No Third Party Beneficiaries.** This Optional Interconnection Study Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

**10.8 Waiver.** The failure of a Party to this Optional Interconnection Study Agreement to insist, on any occasion, upon strict performance of any provision of this Optional Interconnection Study Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this Optional Interconnection Study Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Optional Interconnection Study Agreement. Termination or default of this Optional Interconnection Study Agreement for any reason by the Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the other Party. Any waiver of this Optional Interconnection Study Agreement shall, if requested, be provided in writing.

Any waivers at any time by any Party of its rights with respect to any default under this Optional Interconnection Study Agreement, or with respect to any other matter arising in connection with this Optional Interconnection Study Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Optional Interconnection Study Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Optional Interconnection Study Agreement shall not constitute or be deemed a waiver of such right.

**10.9 Headings.** The descriptive headings of the various Articles and Sections of this Optional Interconnection Study Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Optional Interconnection Study Agreement.

**10.10 Multiple Counterparts.** This Optional Interconnection Study Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

**10.11 Amendment.** The Parties may by mutual agreement amend this Optional Interconnection Study Agreement by a written instrument duly executed by both of the Parties.

**10.12 Modification by the Parties.** The Parties may by mutual agreement amend the Appendices to this Optional Interconnection Study Agreement by a written instrument duly executed by both of the Parties. Such amendment shall become effective and a part of this Optional Interconnection Study Agreement upon satisfaction of all applicable laws and regulations.

**10.13 Reservation of Rights.** The CAISO shall have the right to make a unilateral filing with FERC to modify this Optional Interconnection Study Agreement with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this Optional Interconnection Study Agreement pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Optional Interconnection Study Agreement shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**10.14 No Partnership.** This Optional Interconnection Study Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

**10.15 Assignment.** This Optional Interconnection Study Agreement may be assigned by a Party only with the written consent of the other Party; provided that a Party may assign this Optional Interconnection Study Agreement without the consent of the other Party to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Optional Interconnection Study Agreement; and provided further that the Interconnection Customer shall have the right to assign this Optional Interconnection Study Agreement, without the consent of the other Party, for collateral security purposes to aid in providing financing for the Large Generating Unit, provided that the Interconnection Customer will require any secured party, trustee or mortgagee to notify the other Party of any such assignment. Any financing arrangement entered into by the Interconnection Customer pursuant to this Article will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify the other Party of the date and particulars of any such exercise of assignment right(s). Any attempted assignment that violates this Article is void and ineffective. Any assignment under this Optional Interconnection Study Agreement shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

**IN WITNESS WHEREOF,** the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**California Independent System Operator Corporation**

By: _____

Title: _____

Date: _____

**[Insert name of the Interconnection Customer]**

By: _____

Title: _____

Date: _____

**Attachment A**

**Optional Interconnection**

**Study Agreement**

**ASSUMPTIONS USED IN CONDUCTING**

**THE OPTIONAL INTERCONNECTION STUDY**

[To be completed by the Interconnection Customer consistent with Section 10 of the LGIP.]

**Appendix 7 Agreement for Allocating LGIP and Study Responsibilities**

**AGREEMENT FOR THE ALLOCATION OF RESPONSIBILITIES WITH REGARD TO**

**LARGE GENERATOR INTERCONNECTION PROCEDURES AND INTERCONNECTION STUDY**

**AGREEMENTS**

This Agreement for the Allocation of Responsibilities With Regard to Large Generator Interconnection Procedures and Interconnection Study Agreements ("Agreement"), dated November 1, 2005, is entered into between the California Independent System Operator Corporation ("CAISO") and [NAME OF PTO] U _____ ("PTO"). The CAISO and PTO are jointly referred to as the "Parties" and individually, as a "Party."

**WHEREAS,** this Agreement will ensure an independent assessment of new Large Generating Facility impacts on the CAISO Controlled Grid and take advantage of the respective expertise of the Parties to facilitate efficient and cost effective Interconnection Study procedures in a manner consistent with the Federal Energy Regulatory Commission's ("FERC") July 1, 2005 Order (112 FERC ¶ 61,009), FERC's August 26, 2005 Order (112 FERC ¶ 61,231), and prior FERC Orders recognizing that Order No. 2003 did not allocate responsibilities between transmission owners and transmission providers for the provision of Interconnection Service and suggesting those parties enter into an agreement to allocate those responsibilities. Southwest Power Pool, Inc., 106 FERC ¶ 61,254 (2004).

**NOW THEREFORE,** in view of the respective responsibilities assigned to the Parties and the foregoing FERC orders, the CAISO and PTO agree to the following allocation of responsibilities for a centralized Interconnection Study process under the direction and oversight of the CAISO:

**1. DEFINITIONS.**

Unless otherwise defined herein, all capitalized terms shall have the meaning set forth in the CAISO Tariff.

**2. TERM OF AGREEMENT.**

This Agreement shall become effective upon the date the provisions of the CAISO Tariff implementing the centralized Interconnection Study process required by the July 1 Order and the August 26 Order are accepted and made effective by FERC, and shall remain in effect until (1) terminated by all Parties in writing, or (2) with respect to the PTO, upon the termination of that entity's status as a PTO pursuant to the Transmission Control Agreement, as amended from time to time.

**3. PROVISIONS FOR ALLOCATION OF RESPONSIBILITIES BETWEEN CAISO AND PTO.**

**3.1 Interconnection Service:** The Parties acknowledge that, as the transmission provider, the CAISO is responsible for reliably operating the transmission grid. The Parties also recognize that while the CAISO is a transmission provider under the CAISO Tariff, the CAISO does not own any transmission facilities, and the PTO owns, constructs, and maintains the facilities to which Large Generating Facilities are to be interconnected, and that the PTO may construct or modify facilities to allow the interconnection. While the Parties recognize that the CAISO will be responsible for conducting or causing to be performed Interconnection Studies and similar studies, the PTO will participate in these studies and conduct certain portions of studies, under the direction and oversight of, and approval by, the CAISO, as provided in this Agreement. The CAISO shall not enter into any Interconnection Study agreement with an Interconnection Customer that is contrary to these rights.

**3.2 [INTENTIONALLY LEFT BLANK]**

**3.3 Transmission Owners' Right to Participation in Studies, Committees and Meetings:**

**3.3.1** In the event that an Interconnection Customer proposes to interconnect a Large Generating Facility with the PTO's facilities, or the PTO is an owner of an affected system, the PTO shall have the right to participate in any Interconnection Feasibility Study, Interconnection System Impact Study, Interconnection Facilities Study, or any other study conducted in connection with such request for Interconnection Service. "Participate" in this Section 3.3.1 means physically perform any study or portion thereof in connection with an Interconnection Request, under the direction and oversight of, and approval by, the CAISO pursuant to Section 3.4 of this Agreement; provide or receive input, data or other information regarding any study or portion thereof consistent with Section 3.4 of this Agreement; and, when any study or portion thereof in connection with an Interconnection Request is physically performed by an entity other than the PTO, perform activities necessary to adequately review or validate, as appropriate, any results of the study or portions thereof and provide recommendations.

**3.3.2** In the event that an Interconnection Customer proposes to interconnect a Large Generating Facility with the PTO's facilities, or the PTO is an owner of an affected system, the PTO shall have the right to participate in all meetings expressly established pursuant to the CAISO LGIP. As appropriate, the PTO may participate in all other material or substantive communications in connection with an Interconnection Request.

**3.4 Interconnection Study Responsibility Allocation:** In complying with its responsibility for conducting or causing to be performed Interconnection Studies, the CAISO will assign responsibility for performance of portions of the Interconnection Studies to the PTO, under the direction and oversight of, and approval by, the CAISO, as set forth in Attachment A, except as specifically qualified as follows:

**3.4.1** Unless an Interconnection Customer specifically requests that a third party perform an Interconnection Study pursuant to LGIP Section 13.4, for any tasks specifically assigned to the PTO pursuant to Attachment A or otherwise mutually agreed upon by the CAISO and the PTO, the CAISO reserves the right, on a case-by-case basis, to perform or reassign to a mutually agreed upon and pre-qualified contractor such task only where: (a) the quality and accuracy of prior PTO Interconnection Study work product resulting from assigned tasks has been deemed deficient by the CAISO, the CAISO has notified the PTO pursuant to the notice provision of Section 4.16 of this Agreement in writing of the deficiency, and the deficiency has not been cured pursuant to Section 3.4.2 of this Agreement; (b) the timeliness of PTO Interconnection Study work product has been deemed deficient, and either (i) the CAISO has not been notified of the reasons and actions taken to address the timeliness of the work, or (ii) if notified, the stated reasons and actions taken are insufficient or unjustifiable and the PTO has not cured the deficiency pursuant to Section 3.4.2 of this Agreement; (c) the PTO has failed, in a mutually agreed upon timeframe, to provide the CAISO with information or data related to an Interconnection Request despite a written request by the CAISO, pursuant to Section 3.5 hereof, to do so, and such data is the responsibility of the PTO to provide to the CAISO, subject to Section 4.3 of this Agreement; (d) the PTO advises the CAISO in writing that it does not have the resources to adequately or timely perform the task according to the applicable timelines set forth in Attachment A; or (e) the estimated cost of the PTO performing the task has been determined in writing by the CAISO to significantly exceed the cost of the CAISO or mutually agreed upon contractor performing the task, inclusive of the costs that will be incurred by the PTO in exercising its review rights of the results of any such tasks performed by such third party(ies). If the CAISO deviates from the assignments set forth in Attachment A based on the foregoing factors, the CAISO will provide the PTO with a written explanation for the deviation and any associated reassignments of work. The PTO may contest the deviation pursuant to the Dispute Resolution procedures set forth in Section 4.1 of this Agreement.

Task(s) may only be reassigned in accordance with this Section 3.4.1 where the PTO has been deemed to be deficient in relation to that (those) particular task(s).

**3.4.2 Cure for re-assigned Interconnection Study work**

The CAISO shall not reassign task(s) without the opportunity to cure, as specified in Section 3.4.1 of this Agreement. The following actions will serve to cure the deficiencies and result in restoring the assignment(s) as provided in Attachment A:

a) The CAISO and PTO shall negotiate in good faith and agree to a corrective action plan proposed by the PTO, including a reasonably adequate cure period, and the corrective action plan is satisfactorily implemented.

b) The CAISO determines the deficiency is cured without an action plan.

**3.4.3** Assessment of prior PTO Interconnection Study work shall only be based on work conducted under the process that becomes effective concurrent with the effective date of this Agreement. Further, assessment of prior PTO Interconnection Study work shall be based on work conducted no earlier than the eighteen (18) month period prior to the date of the CAISO notice of deviation from assignments set forth in Attachment A to this Agreement.

**3.5 Information Exchange:** The PTO shall provide the CAISO, subject to confidentiality requirements in Section 4.3 of this Agreement, with any documentation or data requested by the CAISO reasonably necessary to permit the CAISO to perform, review, validate and approve any Interconnection Study, or portion thereof, performed by the PTO. The CAISO shall provide the PTO with any documentation or data requested by the PTO, subject to confidentiality requirements in Section 4.3 of this Agreement, reasonably necessary to perform, review, and validate any Interconnection Study, or portion thereof.

**3.6 Consistency with Provisions for Centralized Interconnection Study Process:** The CAISO and PTO have determined that the processes and allocation of responsibilities in Section 3.4 of this Agreement ensure that impacts to the CAISO Controlled Grid are independently assessed and that the assignment of responsibilities minimizes handoffs, takes advantage of non-transferable skills, and promotes the efficiency and cost-effectiveness of the centralized Interconnection Study processes, consistent with LGIP Section 3.2.

**3.7 Re-Studies:** If any re-studies are required, the CAISO will confer with the PTO as to the need for a re-study. The CAISO will make the final determination regarding the need for a re-study, subject to dispute resolution procedures.

**3.8 Use of Contractors:** Nothing in this Agreement shall prevent either the CAISO or the PTO from using qualified, mutually agreed upon third party contractors to meet that Party's rights or obligations under this Agreement or the LGIP. To promote the efficiency of the process, the CAISO and PTO will collaborate to identify a list of the mutually agreed to qualified contractors available to the Parties.

**3.9 Performance Standards:** Each Party shall perform all of its obligations under the LGIP, this Agreement, and any FERC approved Interconnection Study procedures that may be adopted by the CAISO to implement the LGIP or this Agreement in accordance with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice.

**3.10 Recovery of Costs:** In accordance with Section 13.3 of the LGIP, the PTOs shall recover all actual costs from the CAISO incurred in performing Interconnection Studies or portions thereof assigned to it by the CAISO, including all costs incurred in exercising its right to review, and make recommendations on, Interconnection Studies or portions thereof performed by the CAISO and/or

contractors under Section 3.8 of this Agreement.

## 4 GENERAL TERMS AND CONDITIONS.

**4.1 Dispute Resolution:** In the event any dispute regarding the terms, conditions, and performance of this Agreement is not settled informally, the Parties shall follow the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff.

**4.2 Liability:** No Party to this Agreement shall be liable to any other Party for any direct, indirect, special, incidental or consequential losses, damages, claims, liabilities, costs or expenses (including attorneys fees and court costs) arising from the performance or non-performance of its obligations under this Agreement regardless of the cause (including intentional action, willful action, gross or ordinary negligence, or force majeure); provided, however, that a Party may seek equitable or other non-monetary relief as may be necessary to enforce this Agreement and that damages for which a Party may be liable to another Party under another agreement will not be considered damages under this Agreement.

**4.3 Confidentiality:** Confidential Information shall be treated in accordance with Section 13.1 of the LGIP.

**4.4 Binding Effect:** This Agreement and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

**4.5 Conflicts:** In the event of a conflict between the body of this Agreement and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this Agreement shall prevail and be deemed the final intent of the Parties.

**4.6 Rules of Interpretation:** This Agreement, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this Agreement, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this Agreement), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any applicable laws and regulations means such applicable laws and regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article or Section of this Agreement or such Appendix to this Agreement, or such Section of the LGIP or such Appendix to the LGIP, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this Agreement as a whole and not to any particular Article; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".

**4.7 Entire Agreement:** This Agreement, including all Attachments hereto, constitutes the entire agreement among the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, among the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants, which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this Agreement.

**4.8 No Third Party Beneficiaries:** This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations,

associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

**4.9 Waiver:** The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party. Any waiver at any time by a Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Agreement. Any waiver of this Agreement shall, if requested, be provided in writing. Any waivers at any time by any Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**4.10 Headings:** The descriptive headings of the various Articles and Sections of this Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Agreement.

**4.11 Multiple Counterparts:** This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

**4.12 Modification by the Parties:** The Parties may amend this Agreement and any Appendices to this Agreement only (1) by mutual agreement of the Parties by a written instrument duly executed by the Parties, subject to FERC approval or (2) upon the issuance of a FERC order, pursuant to Section 206 of the Federal Power Act. It is the Parties' intent that FERC's right to change any provision of this Agreement shall be limited to the maximum extent permissible by law and that any such change, if permissible, shall be in accordance with the Mobile-Sierra public interest standard applicable to fixed rate agreements. United Gas Pipe Line Co. v. Mobile Gas Service Corp., 350 U.S. 332 (1956). Such amendment shall become effective and a part of this Agreement upon satisfaction of all applicable laws and regulations. Notwithstanding the foregoing, Attachment B (Notices) may be modified as set forth in Section 4.15 of this Agreement, and the CAISO and the PTO may from time to time mutually agree to deviate from Attachment A in accordance with the provisions of this Agreement, however, such deviation shall be subject to Section 4.9 of this Agreement and not considered a course of dealing.

**4.13 No Partnership:** This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

**4.14 Assignment:** This Agreement may be assigned by a Party only with the written consent of the other Parties; provided that a Party may assign this Agreement without the consent of the other Parties to any Affiliate of the assigning Party with an equal or greater creditrating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement. Any attempted assignment that violates this Article is void and ineffective. Any assignment under this Agreement shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

**4.15 Notices:** Any notice, demand, or request provided in this Agreement, or served, given, or made in connection with it, will be in writing and deemed properly served, given, or made if delivered in person, transmitted by facsimile, or sent by United States mail, postage prepaid, to the persons specified in Attachment B hereto unless otherwise provided in this Agreement. Any Party may at any time, by notice to all other Parties, change the designation or address of the person specified

in Attachment B as the person who receives notices pursuant to this Agreement.

**IN WITNESS WHEREOF,** the Parties have executed this Agreement in multiple originals, each of which shall constitute and be an original effective agreement among the Parties.

**California Independent System Operator Corporation**

By: _____

Title: _____

Date: _____

**[NAME OF PTO]**

By: _____

Title: _____

Date: _____

**ATTACHMENT A**

**INTERCONNECTION STUDY RESPONSIBILITY ALLOCATION**

Description of Large Generator Interconnection Process: Roles and Responsibilities of CAISO and PTOs.

**Purpose:** This Attachment A to the "AGREEMENT FOR THE ALLOCATION OF RESPONSIBILITIES WITH REGARD TO LARGE GENERATOR INTERCONNECTION PROCEDURES AND INTERCONNECTION STUDY AGREEMENTS" serves as further clarification of the roles and responsibilities of the parties to this Agreement. The CAISO will assign responsibility for performance of portions of the Interconnection Studies to the relevant PTOs, under the direction and oversight of, and approval by, the CAISO, as set forth in this Attachment A. This document serves as a general overview of only the roles and responsibilities as between the CAISO and PTOs. This Agreement does not include the process steps, involvement or obligations of the Interconnection Customer (IC). This Agreement is not inclusive of all procedures necessary to comply with all provisions of the LGIA, LGIP and Interconnection Study agreements.

**Interconnection Request (IR) Process**

1. CAISO forwards the IR to the PTO within one (1) Business Day (BD) of receipt of IR from Interconnection Customer (IC)

2. PTO(s) provides any feed back regarding IR to CAISO within 3 BD

3. PTO(s) provides draft study plan at Scoping Meeting.

4. CAISO distributes draft Scoping Meeting minutes for review within 3 BD of Scoping Meeting.

5. PTO(s) provide any comments to the Scoping Meeting minutes within 2 BD of receipt of draft Scoping Meeting minutes.

6. CAISO issues the final Scoping Meeting minutes within 3 BD of receipt of comments.

**Interconnection Feasibility Study Process:**

1. CAISO forwards IC Point of Interconnection and any LGIP Appendix 1, Attachment A data to the PTO(s) within 1 BD of CAISO receipt.

2. PTO(s) develop updated draft study plan based on technical data collected by CAISO from IC within 7 BD.

3. CAISO and PTO(s) coordinate to finalize study plan within 2 BD. CAISO approves the study plan.

4. CAISO tenders a signed IFSA to IC, with final study plan included in Attachment A, within 5 BD (for a total of 15 BD from CAISO receipt of Point of Interconnection from IC in accordance with LGIP Section 6.1).

5. After CAISO receives executed study agreement, CAISO forwards any additional LGIP Appendix 1, Attachment A data to PTO(s) within 1 BD.

6. If during the course of the assigned portions of the study the PTO(s) determines the data is not sufficient to complete the study, PTO(s) informs CAISO and CAISO notices IC in

accordance with LGIP Section 3.8.

7. PTO(s) must participate in study review meeting; date to be agreeable to PTO(s) and within 10 BD of CAISO providing study report to IC (LGIP Section 6.3.1).

8. CAISO and PTO collaborate on any re-study issues. CAISO will direct any necessary re-studies.

**Interconnection Feasibility Study Timeline**

| (1) Load Flow | **Typical Calendar Days** | **Typical Cumulative Days** |
|---|---|---|
| CAISO directs PTO(s) to Develop draft Base Cases (Milestone) | 0 | 0 |
| PTO(s) develop draft Base Cases and deliver to CAISO | 7 | 7 |
| CAISO reviews Base Cases and provides direction to PTO(s) At the direction of the CAISO, PTO(s) develops contingency lists and provide to CAISO. | 7 | 14 |
| PTO incorporates CAISO directions into Base Cases; CAISO approves Base Cases; CAISO reviews and approves contingency lists. If there is disagreement on the contingency list, the CAISO and PTO(s) must coordinate to revise the contingency list. CAISO approves the contingency list. | 7 | 21 |
| CAISO performs Load Flow & prepares summary results of impacted systems (other PTO(s) or Affected Systems) and submits results to impacted systems. Such results may include CAISO proposed solutions for mitigation to any violations uncovered in the Load Flow study. | 7 | 28 |
| Impacted PTO(s) review CAISO results and recommend mitigation solutions as appropriate. | 5 | 33 |
| **Short Circuit Duty (concurrent with Load Flow Activity)** | | |
| At the CAISO's direction, PTO(s) develop Base Case, and run short circuit analyses. | 10 | 10 |
| PTO(s) to perform facilities review | 18 | 28 |
| PTO(s) prepare draft study results and submit to the CAISO for review, recommendations and direction. | 5 | 33 |
| (2) Facility cost estimates | | |
| At the CAISO's direction, PTO(s) to prepare non-binding cost estimates and schedule for the direct assignment facilities and network upgrades identified in the power flow and short circuit duty analyses. | 7 | 40 |
| **Finalizing Report** | | |
| At the CAISO's direction, PTO(s) to prepare draft report for impacts in their service territory. | 5 | 45 |
| CAISO compiles all results into a draft report that covers grid impacts. | 5 | 50 |
| PTO(s) reviews CAISO integrated report and provides comments to CAISO. | 4 | 54 |
| CAISO incorporates PTO(s) comments. If PTO(s') comments conflict with CAISO conclusions, then CAISO and PTO must | 6 | 60 |

| | | |
|---|---|---|
| coordinate to resolve conflicts. Any remaining conflicts must be noted in final report. | | |
| CAISO provides final CAISO approved report to IC, impacted PTOs, and any applicable Affected Systems. (Milestone) | 0 | 0 |
| (3) Load Power Flow | **Typical Calendar Days** | **Typical Cumulative Days** |
| CAISO directs PTO(s) to Develop draft Base Cases (Milestone) | 0 | 0 |
| PTO(s) develop draft Base Cases and deliver to CAISO | 7 | 7 |
| CAISO reviews Base Cases and provides direction to PTO(s) At the direction of the CAISO, PTO(s) develops contingency lists and provide to CAISO. | 7 | 14 |
| PTO incorporates CAISO directions into Base Cases; CAISO approves Base Cases; CAISO reviews and approves contingency lists. If there is disagreement on the contingency list, the CAISO and PTO(s) must coordinate to revise the contingency list. CAISO approves the contingency list. | 7 | 21 |
| CAISO performs Load Flow & prepares summary results of impacted systems (other PTO(s) or Affected Systems) and submits results to impacted systems. Such results may include CAISO proposed solutions for mitigation to any violations uncovered in the Load Flow study. | 7 | 28 |
| Impacted PTO(s) review CAISO results and recommend mitigation solutions as appropriate. | 5 | 33 |
| **Short Circuit Duty (concurrent with Load Flow Activity)** | | |
| At the CAISO's direction, PTO(s) develop Base Case, and run short circuit analyses. | 10 | 10 |
| PTO(s) to perform facilities review | 18 | 28 |
| PTO(s) prepare draft study results and submit to the CAISO for review, recommendations and direction. | 5 | 33 |
| (4) Facility cost estimates | | |
| At the CAISO's direction, PTO(s) to prepare non-binding cost estimates and schedule for the direct assignment facilities and network upgrades identified in the power flow and short circuit duty analyses. | 7 | 40 |
| **Finalizing Report** | | |
| At the CAISO's direction, PTO(s) to prepare draft report for impacts in their service territory. | 5 | 45 |
| CAISO compiles all results into a draft report that covers grid impacts. | 5 | 50 |
| PTO(s) reviews CAISO integrated report and provides comments to CAISO. | 4 | 54 |
| CAISO incorporates PTO(s) comments. If PTO(s') comments conflict with CAISO conclusions, then CAISO and PTO must coordinate to resolve conflicts. Any remaining conflicts must be noted in final report. | 6 | 60 |
| CAISO provides final CAISO approved report to IC, impacted PTOs, and any applicable Affected Systems. (Milestone) | 0 | 0 |

**Interconnection System Impact Study Process**

1. Prior to beginning the ISIS process as outlined in this Attachment A, the CAISO will notify the PTOs of potential seams issues and discuss the nature of the concerns with the PTOs. Where the CAISO determines that there is a reasonable expectation that the new Large Generating Facility to be interconnected in one PTO area may impact system performance in other PTO areas within the CAISO Controlled Grid that does not comply with the applicable planning standards, the CAISO will conduct or cause to be performed the ISIS Load Flow, Post Transient and Stability analyses, as appropriate, to assess the extent of the impact on the grid and evaluate mitigation solutions. Applicable planning standards include FERC approved CAISO Planning Standards, as may be amended from time to time, and the NERC/WECC Planning Standards, as may be amended from time to time. Further, there may be circumstances where information, including available studies, is not sufficient for the CAISO to make a reasonable engineering determination whether the new Large Generating Facility to be interconnected in one PTO area could cause system performance in other PTO areas (i.e. within the CAISO Controlled Grid) that does not comply with the applicable planning standards and, in such circumstances, the CAISO may nonetheless conduct or cause to be performed the ISIS Load Flow, Post Transient and Stability analyses to make such a determination.

2. At the CAISO's direction, the PTO develops a draft ISIS study plan and determines if available technical data is sufficient to complete ISIS.

3. PTO submits draft study plan to CAISO for review, direction and approval within seven (7) BD of CAISO tendering Interconnection Feasibility Study report to IC.

4. CAISO and PTO coordinate to finalize study plan within three (3) BD. CAISO approves the study plan.

5. CAISO tenders a signed ISISA to IC with final study plan included in Attachment A, within three (3) BD.

6. Upon receipt of executed study agreement, CAISO forwards any additional Attachment A, LGIP Appendix 1 data to PTO(s) within one (1) BD.

7. If the data provided by IC is insufficient to perform the study, PTO notifies CAISO within two (2) BD of CAISO receipt of the executed study agreement, and the CAISO notifies the IC within two (2) BD (total of five (5) BD per LGIP Section 7.2) to correct any deficiencies within ten (10) BD or the IR will be deemed withdrawn, triggering LGIP Section 3.8.

8. PTO must participate in study review meeting; date to be agreeable to PTO and within ten (10) BD of CAISO providing study report to IC (LGIP Section 7.5).

9. CAISO to confer with PTO as to the need for a re-study. CAISO makes the final determination subject to dispute resolution procedures.

**Interconnection System Impact Study Timeline**

| **Standard System Impact Study Load Flow/Post Transient/Stability Process** | **Typical Calendar Days** | **Typical Cumulative Days** |
|---|---|---|
| At the CAISO's direction, PTO(s) develop draft Base Case(s) | 0 | 0 |
| PTO(s) develop(s) draft Base Case(s) and deliver(s) to CAISO | 14 | 14 |
| CAISO reviews Base Case(s) and provides direction to PTO<br>At the CAISO's direction, PTO develops contingency lists | 7 | 21 |
| PTO incorporates CAISO's directions into Base Cases<br>CAISO approves Base Case(s)<br>CAISO reviews and approves contingency lists | 7 | 28 |
| At the CAISO's direction, the PTO may perform the ISIS Load Flow, Post Transient and Stability analyses & prepare mitigation solutions, as appropriate and submits draft study results to CAISO for review and direction*. | 21 | 49 |
| *Pursuant to the terms of item 1 above: where the CAISO performs the ISIS Load Flow, Post Transient and Stability analyses to determine grid impacts and evaluate mitigation solutions, the potentially impacted PTOs may, as part of the review process, perform activities to adequately review or validate Load Flow, Post Transient and Stability Analysis to assess CAISO results and recommend alternative solutions. (In the case of this election, "PTOs" should be substituted for "PTO" for remainder of ISIS process.) | | |
| PTO develops or supplements CAISO proposed mitigation plans and/or develops alternative mitigation plans for consideration, as appropriate, and submits to CAISO for review and direction | 14 | 63 |
| **Short Circuit Duty (concurrent with the LF/PT/S)** | | |
| CAISO to coordinate with other potentially affected facility owners2 | n/a | n/a |
| CAISO directs PTO to develop Base Case and run short circuit analysis | 21 | 21 |
| PTO to perform facilities review | 35 | 56 |
| PTO to prepare draft study results and submits to the CAISO for review and direction | 7 | 63 |
| **Facility cost estimates and schedules** | | |
| At the CAISO direction, PTO(s) to prepare cost estimates and schedules for the direct assignment facilities and network upgrades identified in the ISIS power flow, short circuit duty, post transient, and stability studies. | 20 | 83 |
| **Final Report** | | |
| At the CAISO's direction, PTO(s) prepares draft report for impacts in their service territory. | 7 | 90 |
| [Footnote 2: In accordance with the WECC Short Circuit Duty Procedure] | | |
| CAISO compiles all results into a draft report that covers grid impacts, as appropriate. CAISO reviews integrated draft report and submits comments, recommendations and direction to the PTO | 9 | 99 |

| **Standard System Impact Study Load Flow/Post Transient/Stability Process** | **Typical Calendar Days** | **Typical Cumulative Days** |
|---|---|---|
| PTO incorporates CAISO's directions, conclusions and recommendations. If CAISO conclusions and recommendations conflict with PTO conclusions then CAISO and PTO must coordinate to resolve conflicts. Any remaining conflicts must be noted in the final report. | 14 | 113 |
| PTO submits final draft report less the deliverability results to the CAISO. The CAISO will finalize the report and tender the CAISO approved report to the IC after incorporating Deliverability Assessment results. | | |
| CAISO Deliverability Assessment (concurrent with other studies) As part of the Deliverability Assessment process pursuant to LGIP Section 3.3.3, the CAISO may also perform studies pursuant to LGIP Section 3.3.2 to determine potential operating limitations on the generator due to constraints under a variety of system conditions. | | |
| PTO provides GE PSLF compatible change files for all project changes since last Deliverability Assessment, including subject LGIP project. | 14 | 14 |
| CAISO incorporates project changes into Deliverability Assessment Base Case. | 7 | 21 |
| CAISO provides Deliverability Assessment & prepares results summary. | 14 | 35 |
| CAISO provides initial Deliverability Assessment results with no upgrades and upgrades necessary for full deliverability | 14 | 49 |
| CAISO reviews Load Flow, post transient, and stability analysis mitigation options. (The timing of this action should be in sync with completion of Load Flow study results) | 11 | 60 |
| CAISO has the opportunity to revise Delivery Network Upgrades necessary for full deliverability, based on optimization with LF results. | 7 | 67 |
| At the CAISO's direction, PTO to provide deliverability related upgrade costs and schedules, as appropriate. (This action should occur when PTO is performing cost analysis for Load Flow and Short Circuit Duty upgrades) | 16 | 83 |
| CAISO drafts Deliverability Assessment results. | 7 | 90 |
| PTO reviews/comments on Deliverability Assessment results. | 12 | 102 |
| CAISO incorporates PTO comments on the Deliverability Assessment results, as appropriate. Any remaining conflicts must be noted in final report. | 11 | 113 |
| **Final Study Report** | | |
| CAISO provides final approved report to IC, PTO, and any applicable affected systems. | 7 | 120 |

**Interconnection Facilities Study Process****

**All Interconnection Facilities Studies will be under the direction and oversight of, and approval by, the CAISO and may involve more than one PTO.

1. Within five (5) BD of the ISIS study review meeting, the PTO develops draft Interconnection Facilities Study plan and submits to CAISO for review and approval.

2. CAISO submits executed Interconnection Facilities Study Agreement to IC within five (5) BD.

3. Upon receipt of executed Interconnection Facilities Study Agreement from IC, CAISO submits to PTO technical data provided by IC within one (1) BD.

4. If the data provided by IC is insufficient to perform the study, PTO notifies CAISO within three (3) BD and the CAISO notifies the IC within two (2) BD (total of five (5) BD per LGIP) that IR is deemed withdrawn and the reason for the withdrawal. IC has fifteen (15) BD to cure withdrawal notice (LGIP goes directly to withdrawal pursuant to LGIP Section 3.8).

5. PTO conducts Interconnection Facilities Study and submits draft report to CAISO.

6. CAISO forwards draft report to IC for comments.

7. CAISO forwards IC comments or notice of no comments to PTO within one (1) BD of receipt.

8. PTO incorporates IC comments within five (5) BDs and submits updated draft to CAISO for review and comment.

9. CAISO reviews and comments, provides recommendations and direction on PTO draft Interconnection Facilities Study report within two (2) BD.

10. PTO reviews/incorporates CAISO directions within five (5) BD and sends revised report to CAISO.

11. CAISO issues final report to IC within two (2) BD (total of fifteen (15) BD). If PTO comments conflict with CAISO recommendations and conclusions, CAISO and PTO must coordinate to resolve conflicts. Any remaining conflicts must be noted in the final report.

12. CAISO, PTO(s), and IC meet within ten (10) BDs from issuance of draft report.

13. CAISO and PTO collaborate on any re-study issues. CAISO will direct any necessary re-studies and/or progress to LGIA process.

**ATTACHMENT B**

**CONTACTS FOR NOTICES**

**[Section 4.15]**

**California ISO**

Manager, Transmission Engineering

250 Outcropping Way

Folsom, CA 95630

Phone: 916.351.2104

Fax: 916.351.2264

**[NAME OF PTO]**

[Address of PTO]

**Appendix V**

**STANDARD LARGE GENERATOR INTERCONNECTION AGREEMENT**

**[INTERCONNECTION CUSTOMER]**

**[PARTICIPATING TO]**

**CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

THIS STANDARD LARGE GENERATOR INTERCONNECTION AGREEMENT ("LGIA") is made and entered into this ____ day of _____ 20___, by and among _____, a _____ organized and existing under the laws of the State/Commonwealth of _____ ("Interconnection Customer" with a Large Generating Facility), _____, a corporation organized and existing under the laws of the State of California ("Participating TO"), and California Independent System Operator Corporation, a California nonprofit public benefit corporation organized and existing under the laws of the State of California ("CAISO"). Interconnection Customer, Participating TO, and CAISO each may be referred to as a "Party" or collectively as the "Parties."

**RECITALS**

**WHEREAS,** CAISO exercises Operational Control over the CAISO Controlled Grid; and

**WHEREAS,** the Participating TO owns, operates, and maintains the Participating TO's Transmission System; and

**WHEREAS,** Interconnection Customer intends to own, lease and/or control and operate the Generating Facility identified as a Large Generating Facility in Appendix C to this LGIA; and

**WHEREAS,** Interconnection Customer, Participating TO, and CAISO have agreed to enter into this LGIA for the purpose of interconnecting the Large Generating Facility with the Participating TO's Transmission System;

**NOW, THEREFORE,** in consideration of and subject to the mutual covenants contained herein, it is agreed:

When used in this LGIA, terms with initial capitalization that are not defined in Article 1 shall have the meanings specified in the Article in which they are used.

## Article 1. Definitions

**Adverse System Impact** shall mean the negative effects due to technical or operational limits on conductors or equipment being exceeded that may compromise the safety and reliability of the electric system.

**Affected System** shall mean an electric system other than the CAISO Controlled Grid that may be affected by the proposed interconnection, including the Participating TO's electric system that is not part of the CAISO Controlled Grid.

**Affiliate** shall mean, with respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

**Applicable Laws and Regulations** shall mean all duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.

**Applicable Reliability Council** shall mean the Western Electricity Coordinating Council or its successor.

**Applicable Reliability Standards** shall mean the requirements and guidelines of NERC, the Applicable Reliability Council, and the Balancing Authority Area of the Participating TO's Transmission System to which the Generating Facility is directly connected, including requirements adopted pursuant to Section 215 of the Federal Power Act.

**Balancing Authority** shall mean the responsible entity that integrates resource plans ahead of time, maintains load-interchange-generation balance within a Balancing Authority Area, and supports Interconnection frequency in real time.

**Balancing Authority Area** shall mean the collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.

**Base Case** shall mean the base case power flow, short circuit, and stability data bases used for the Interconnection Studies.

**Breach** shall mean the failure of a Party to perform or observe any material term or condition of this LGIA.

**Breaching Party** shall mean a Party that is in Breach of this LGIA.

**Business Day** shall mean Monday through Friday, excluding federal holidays and the day after Thanksgiving Day.

**Calendar Day** shall mean any day including Saturday, Sunday or a federal holiday.

**Commercial Operation** shall mean the status of an Electric Generating Unit at a Generating Facility that has commenced generating electricity for sale, excluding electricity generated during Trial Operation.

**Commercial Operation Date of an Electric Generating Unit** shall mean the date on which the Electric Generating Unit at the Generating Facility commences Commercial Operation as agreed to by the applicable Participating TO and the Interconnection Customer pursuant to Appendix E to

this LGIA.

**Confidential Information** shall mean any confidential, proprietary or trade secret information of a plan, specification, pattern, procedure, design, device, list, concept, policy or compilation relating to the present or planned business of a Party, which is designated as confidential by the Party supplying the information, whether conveyed orally, electronically, in writing, through inspection, or otherwise, subject to Article 22.1.2.

**Default** shall mean the failure of a Breaching Party to cure its Breach in accordance with Article 17 of this LGIA.

**Distribution System** shall mean those non-CAISO-controlled transmission and distribution facilities owned by the Participating TO.

**Distribution Upgrades** shall mean the additions, modifications, and upgrades to the Participating TO's Distribution System. Distribution Upgrades do not include Interconnection Facilities.

**Effective Date** shall mean the date on which this LGIA becomes effective upon execution by the Parties subject to acceptance by FERC, or if filed unexecuted, upon the date specified by FERC.

**Electric Generating Unit** shall mean an individual electric generator and its associated plant and apparatus whose electrical output is capable of being separately identified and metered.

**Emergency Condition** shall mean a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (2) that, in the case of the CAISO, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the CAISO Controlled Grid or the electric systems of others to which the CAISO Controlled Grid is directly connected; (3) that, in the case of the Participating TO, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Participating TO's Transmission System, Participating TO's Interconnection Facilities, Distribution System, or the electric systems of others to which the Participating TO's electric system is directly connected; or (4) that, in the case of the Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Generating Facility or Interconnection Customer's Interconnection Facilities. System restoration and black start shall be considered Emergency Conditions; provided, that Interconnection Customer is not obligated by this LGIA to possess black start capability.

**Environmental Law** shall mean Applicable Laws or Regulations relating to pollution or protection of the environment or natural resources.

**Federal Power Act** shall mean the Federal Power Act, as amended, 16 U.S.C. §§ 791a et seq.

**FERC** shall mean the Federal Energy Regulatory Commission or its successor.

**Force Majeure** shall mean any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure event does not include acts of negligence or intentional wrongdoing by the Party claiming Force Majeure.

**Generating Facility** shall mean the Interconnection Customer's Electric Generating Unit(s) used for the production of electricity identified in the Interconnection Customer's Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

**Generating Facility Capacity** shall mean the net capacity of the Generating Facility and the aggregate net capacity of the Generating Facility where it includes multiple energy production devices.

**Good Utility Practice** shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be any one of a number of the optimum practices, methods, or acts to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

**Governmental Authority** shall mean any federal, state, local or other governmental, regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the Interconnection Customer, CAISO, Participating TO, or any Affiliate thereof.

**Hazardous Substances** shall mean any chemicals, materials or substances defined as or included in the definition of "hazardous substances," "hazardous wastes," "hazardous materials," "hazardous constituents," "restricted hazardous materials," "extremely hazardous substances," "toxic substances," "radioactive substances," "contaminants," "pollutants," "toxic pollutants" or words of similar meaning and regulatory effect under any applicable Environmental Law, or any other chemical, material or substance, exposure to which is prohibited, limited or regulated by any applicable Environmental Law.

**Initial Synchronization Date** shall mean the date upon which an Electric Generating Unit is initially synchronized and upon which Trial Operation begins.

**In-Service Date** shall mean the date upon which the Interconnection Customer reasonably expects it will be ready to begin use of the Participating TO's Interconnection Facilities to obtain back feed power.

**Interconnection Customer's Interconnection Facilities** shall mean all facilities and equipment, as identified in Appendix A of this LGIA, that are located between the Generating Facility and the Point of Change of Ownership, including any modification, addition, or upgrades to such facilities and equipment necessary to physically and electrically interconnect the Generating Facility to the Participating TO's Transmission System. Interconnection Customer's Interconnection Facilities are sole use facilities.

**Interconnection Facilities** shall mean the Participating TO's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Generating Facility to the Participating TO's Transmission System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

**Interconnection Facilities Study** shall mean the study conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), or a third party consultant for the Interconnection Customer to determine a list of facilities (including the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades), the cost of those facilities, and the time required to interconnect the Generating Facility with the Participating TO's

Transmission System.

**Interconnection Facilities Study Agreement** shall mean the agreement between the Interconnection Customer and the CAISO for conducting the Interconnection Facilities Study.

**Interconnection Feasibility Study** shall mean the preliminary evaluation conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), or a third party consultant for the Interconnection Customer of the system impact and cost of interconnecting the Generating Facility to the Participating TO's Transmission System.

**Interconnection Handbook** shall mean a handbook, developed by the Participating TO and posted on the Participating TO's web site or otherwise made available by the Participating TO, describing technical and operational requirements for wholesale generators and loads connected to the Participating TO's portion of the CAISO Controlled Grid, as such handbook may be modified or superseded from time to time. Participating TO's standards contained in the Interconnection Handbook shall be deemed consistent with Good Utility Practice and Applicable Reliability Standards. In the event of a conflict between the terms of this LGIA and the terms of the Participating TO's Interconnection Handbook, the terms in this LGIA shall apply.

**Interconnection Request** shall mean a request, in the form of Appendix 1 to the Standard Large Generator Interconnection Procedures, in accordance with the CAISO Tariff.

**Interconnection Service** shall mean the service provided by the Participating TO and CAISO associated with interconnecting the Interconnection Customer's Generating Facility to the Participating TO's Transmission System and enabling the CAISO Controlled Grid to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of this LGIA, the Participating TO's Transmission Owner Tariff, and the CAISO Tariff.

**Interconnection Study** shall mean any of the following studies: the Interconnection Feasibility Study, the Interconnection System Impact Study, and the Interconnection Facilities Study conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), or a third party consultant for the Interconnection Customer pursuant to the Standard Large Generator Interconnection Procedures.

**Interconnection System Impact Study** shall mean the engineering study conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), or a third party consultant for the Interconnection Customer that evaluates the impact of the proposed interconnection on the safety and reliability of the Participating TO's Transmission System and, if applicable, an Affected System. The study shall identify and detail the system impacts that would result if the Generating Facility were interconnected without project modifications or system modifications, focusing on the Adverse System Impacts identified in the Interconnection Feasibility Study, or to study potential impacts, including but not limited to those identified in the Scoping Meeting as described in the Standard Large Generator Interconnection Procedures.

**IRS** shall mean the Internal Revenue Service.

**CAISO Controlled Grid** shall mean the system of transmission lines and associated facilities of the parties to the Transmission Control Agreement that have been placed under the CAISO's Operational Control.

**CAISO Tariff** shall mean the CAISO's tariff, as filed with FERC, and as amended or supplemented from time to time, or any successor tariff.

**Large Generating Facility** shall mean a Generating Facility having a Generating Facility Capacity of more than 20 MW.

**Loss** shall mean any and all damages, losses, and claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties.

**Material Modification** shall mean those modifications that have a material impact on the cost or timing of any Interconnection Request or any other valid interconnection request with a later queue priority date.

**Metering Equipment** shall mean all metering equipment installed or to be installed for measuring the output of the Generating Facility pursuant to this LGIA at the metering points, including but not limited to instrument transformers, MWh-meters, data acquisition equipment, transducers, remote terminal unit, communications equipment, phone lines, and fiber optics.

**NERC** shall mean the North American Electric Reliability Corporation or its successor organization.

**Net Scheduled Generating Unit** shall mean an Electric Generating Unit identified in a Net Scheduled PGA operated as a single unit such that the energy bid or self-schedule with the CAISO is the net value of the aggregate electrical net output of the Electric Generating Unit and the self-provided load.

**Net Scheduled PGA** shall mean a Net Scheduled Participating Generator Agreement specifying the special provisions for the operating relationship between a Net Scheduled Generating Unit and the CAISO, a pro forma version of which is set forth in Appendix B.3 of the CAISO Tariff.

**Network Upgrades** shall be Participating TO's Delivery Network Upgrades and Participating TO's Reliability Network Upgrades.

**Operational Control** shall mean the rights of the CAISO under the Transmission Control Agreement and the CAISO Tariff to direct the parties to the Transmission Control Agreement how to operate their transmission lines and facilities and other electric plant affecting the reliability of those lines and facilities for the purpose of affording comparable non-discriminatory transmission access and meeting applicable reliability criteria.

**Participating TO's** Delivery Network Upgrades shall mean the additions, modifications, and upgrades to the Participating TO's Transmission System at or beyond the Point of Interconnection, other than Reliability Network Upgrades, identified in the Interconnection Studies, as identified in Appendix A, to relieve constraints on the CAISO Controlled Grid.

**Participating TO's Interconnection Facilities** shall mean all facilities and equipment owned, controlled or operated by the Participating TO from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to this LGIA, including any modifications, additions or upgrades to such facilities and equipment. Participating TO's Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

**Participating TO's Reliability Network Upgrades** shall mean the additions, modifications, and upgrades to the Participating TO's Transmission System at or beyond the Point of Interconnection, identified in the Interconnection Studies, as identified in Appendix A, necessary to interconnect the Large Generating Facility safely and reliably to the Participating TO's Transmission System, which would not have been necessary but for the interconnection of the Large Generating Facility, including additions, modifications, and upgrades necessary to remedy short circuit or stability problems resulting from the interconnection of the Large Generating Facility to the Participating TO's Transmission System. Participating TO's Reliability Network Upgrades also include, consistent with Applicable Reliability Council practice, the Participating

TO's facilities necessary to mitigate any adverse impact the Large Generating Facility's interconnection may have on a path's Applicable Reliability Council rating.

**Participating TO's Transmission System** shall mean the facilities owned and operated by the Participating TO and that have been placed under the CAISO's Operational Control, which facilities form part of the CAISO Controlled Grid.

**Party or Parties** shall mean the Participating TO, CAISO, Interconnection Customer or the applicable combination of the above.

**Point of Change of Ownership** shall mean the point, as set forth in Appendix A to this LGIA, where the Interconnection Customer's Interconnection Facilities connect to the Participating TO's Interconnection Facilities.

**Point of Interconnection** shall mean the point, as set forth in Appendix A to this LGIA, where the Interconnection Facilities connect to the Participating TO's Transmission System.

**Reasonable Efforts** shall mean, with respect to an action required to be attempted or taken by a Party under this LGIA, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

**Scoping Meeting** shall mean the meeting among representatives of the Interconnection Customer, the Participating TO(s), other Affected Systems, and the CAISO conducted for the purpose of discussing alternative interconnection options, to exchange information including any transmission data and earlier study evaluations that would be reasonably expected to impact such interconnection options, to analyze such information, and to determine the potential feasible Points of Interconnection.

**Stand Alone Network Upgrades** shall mean Network Upgrades that the Interconnection Customer may construct without affecting day-to-day operations of the CAISO Controlled Grid or Affected Systems during their construction. The Participating TO, the CAISO, and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to this LGIA.

**Standard Large Generator Interconnection Procedures (LGIP)** shall mean the CAISO protocol that sets forth the interconnection procedures applicable to an Interconnection Request pertaining to a Large Generating Facility that is included in CAISO Tariff Appendix U.

**System Protection Facilities** shall mean the equipment, including necessary protection signal communications equipment, that protects (1) the Participating TO's Transmission System, Participating TO's Interconnection Facilities, CAISO Controlled Grid, and Affected Systems from faults or other electrical disturbances occurring at the Generating Facility and (2) the Generating Facility from faults or other electrical system disturbances occurring on the CAISO Controlled Grid, Participating TO's Interconnection Facilities, and Affected Systems or on other delivery systems or other generating systems to which the CAISO Controlled Grid is directly connected.

**Transmission Control Agreement** shall mean CAISO FERC Electric Tariff No. 7.

**Trial Operation** shall mean the period during which the Interconnection Customer is engaged in on-site test operations and commissioning of an Electric Generating Unit prior to Commercial Operation.

**Article 2. Effective Date and Term**

**2.1 Effective Date.** This LGIA shall become effective upon execution by the Parties subject to acceptance by FERC (if applicable), or if filed unexecuted, upon the date specified by FERC. The CAISO and Participating TO shall promptly file this LGIA with FERC upon execution in accordance with Article 3.1, if required.

**2.2 Term of Agreement.** Subject to the provisions of Article 2.3, this LGIA shall remain in effect for a period of ____ years from the Effective Date (Term Specified in Individual Agreements to be ten (10) years or such other longer period as the Interconnection Customer may request) and shall be automatically renewed for each successive one-year period thereafter.

**2.3 Termination Procedures.**

**2.3.1 Written Notice.** This LGIA may be terminated by the Interconnection Customer after giving the CAISO and the Participating TO ninety (90) Calendar Days advance written notice, or by the CAISO and the Participating TO notifying FERC after the Generating Facility permanently ceases Commercial Operation.

**2.3.2 Default.** A Party may terminate this LGIA in accordance with Article 17.

**2.3.3 Suspension of Work.** This LGIA may be deemed terminated in accordance with Article 5.16.

**2.3.4** Notwithstanding Articles 2.3.1, 2.3.2, and 2.3.3, no termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination, including the filing with FERC of a notice of termination of this LGIA, which notice has been accepted for filing by FERC.

**2.4 Termination Costs.** If this LGIA terminates pursuant to Article 2.3 above, the Interconnection Customer shall pay all costs incurred or irrevocably committed to be incurred in association with the Interconnection Customer's interconnection (including any cancellation costs relating to orders or contracts for Interconnection Facilities and equipment) and other expenses, including any Network Upgrades and Distribution Upgrades for which the Participating TO or CAISO has incurred expenses or has irrevocably committed to incur expenses and has not been reimbursed by the Interconnection Customer, as of the date of the other Parties' receipt of the notice of termination, subject to the limitations set forth in this Article 2.4. Nothing in this Article 2.4 shall limit the Parties' rights under Article 17.

**2.4.1** Notwithstanding the foregoing, in the event of termination by a Party, all Parties shall use commercially Reasonable Efforts to mitigate the costs, damages and charges arising as a consequence of termination. With respect to any portion of the Participating TO's Interconnection Facilities that have not yet been constructed or installed, the Participating TO shall to the extent possible and with the Interconnection Customer's authorization cancel any pending orders of, or return, any materials or equipment for, or contracts for construction of, such facilities; provided that in the event the Interconnection Customer elects not to authorize such cancellation, the Interconnection Customer shall assume all payment obligations with respect to such materials, equipment, and contracts, and the Participating TO shall deliver such material and equipment, and, if necessary, assign such contracts, to the Interconnection Customer as soon as practicable, at the Interconnection Customer's expense. To the extent that the Interconnection Customer has already paid the Participating TO for any or all such costs of materials or equipment not taken by the Interconnection Customer, the Participating TO shall promptly refund such amounts to the Interconnection Customer, less any costs, including penalties, incurred by the Participating TO to cancel any pending orders of or return such materials, equipment, or contracts.

**2.4.2** The Participating TO may, at its option, retain any portion of such materials, equipment, or facilities that the Interconnection Customer chooses not to accept delivery of, in which case the Participating TO shall be responsible for all costs associated with procuring such materials, equipment, or facilities.

**2.4.3** With respect to any portion of the Interconnection Facilities, and any other facilities already installed or constructed pursuant to the terms of this LGIA, Interconnection Customer shall be responsible for all costs associated with the removal, relocation or other disposition or retirement of such materials, equipment, or facilities.

**2.5 Disconnection.** Upon termination of this LGIA, the Parties will take all appropriate steps to disconnect the Large Generating Facility from the Participating TO's Transmission System. All costs required to effectuate such disconnection shall be borne by the terminating Party, unless such termination resulted from the non-terminating Party's Default of this LGIA or such non-terminating Party otherwise is responsible for these costs under this LGIA.

**2.6 Survival.** This LGIA shall continue in effect after termination to the extent necessary to provide for final billings and payments and for costs incurred hereunder, including billings and payments pursuant to this LGIA; to permit the determination and enforcement of liability and indemnification obligations arising from acts or events that occurred while this LGIA was in effect; and to permit each Party to have access to the lands of the other Parties pursuant to this LGIA or other applicable agreements, to disconnect, remove or salvage its own facilities and equipment.

## Article 3. Regulatory Filings and CAISO Tariff Compliance

**3.1 Filing.** The Participating TO and the CAISO shall file this LGIA (and any amendment hereto) with the appropriate Governmental Authority(ies), if required. The Interconnection Customer may request that any information so provided be subject to the confidentiality provisions of Article 22. If the Interconnection Customer has executed this LGIA, or any amendment thereto, the Interconnection Customer shall reasonably cooperate with the Participating TO and CAISO with respect to such filing and to provide any information reasonably requested by the Participating TO or CAISO needed to comply with applicable regulatory requirements.

**3.2 Agreement Subject to CAISO Tariff.** The Interconnection Customer will comply with all applicable provisions of the CAISO Tariff, including the LGIP.

**3.3 Relationship Between this LGIA and the CAISO Tariff.** With regard to rights and obligations between the Participating TO and the Interconnection Customer, if and to the extent a matter is specifically addressed by a provision of this LGIA (including any appendices, schedules or other attachments to this LGIA), the provisions of this LGIA shall govern. If and to the extent a provision of this LGIA is inconsistent with the CAISO Tariff and dictates rights and obligations between the CAISO and the Participating TO or the CAISO and the Interconnection Customer, the CAISO Tariff shall govern.

**3.4 Relationship Between this LGIA and the Net Scheduled PGA.** With regard to the rights and obligations of a Net Scheduled Generating Unit that has entered into a Net Scheduled PGA with the CAISO and has entered into this LGIA, if and to the extent a matter is specifically addressed by a provision of the Net Scheduled PGA that is inconsistent with this LGIA, the terms of the Net Scheduled PGA shall govern.

**Article 4. Scope of Service**

**4.1 Interconnection Service.** Interconnection Service allows the Interconnection Customer to connect the Large Generating Facility to the Participating TO's Transmission System and be eligible to deliver the Large Generating Facility's output using the available capacity of the CAISO Controlled Grid. To the extent the Interconnection Customer wants to receive Interconnection Service, the Participating TO shall construct facilities identified in Appendices A and C that the Participating TO is responsible to construct.

Interconnection Service does not necessarily provide the Interconnection Customer with the capability to physically deliver the output of its Large Generating Facility to any particular load on the CAISO Controlled Grid without incurring congestion costs. In the event of transmission constraints on the CAISO Controlled Grid, the Interconnection Customer's Large Generating Facility shall be subject to the applicable congestion management procedures in the CAISO Tariff in the same manner as all other resources.

**4.2 Provision of Service.** The Participating TO and the CAISO shall provide Interconnection Service for the Large Generating Facility.

**4.3 Performance Standards.** Each Party shall perform all of its obligations under this LGIA in accordance with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice, and to the extent a Party is required or prevented or limited in taking any action by such regulations and standards, such Party shall not be deemed to be in Breach of this LGIA for its compliance therewith. If such Party is the CAISO or Participating TO, then that Party shall amend the LGIA and submit the amendment to FERC for approval.

**4.4 No Transmission Service.** The execution of this LGIA does not constitute a request for, nor the provision of, any transmission service under the CAISO Tariff, and does not convey any right to deliver electricity to any specific customer or point of delivery.

**4.5 Interconnection Customer Provided Services.** The services provided by Interconnection Customer under this LGIA are set forth in Article 9.6 and Article 13.5.1. Interconnection Customer shall be paid for such services in accordance with Article 11.6.

**Appendix 5. Facilities, Engineering Procurement, and Construction**

Interconnection Facilities, Network Upgrades, and Distribution Upgrades shall be studied, designed, and constructed pursuant to Good Utility Practice. Such studies, design and construction shall be based on the assumed accuracy and completeness of all technical information received by the Participating TO and the CAISO from the Interconnection Customer associated with interconnecting the Large Generating Facility.

**5.1 Options.** Unless otherwise mutually agreed among the Parties, the Interconnection Customer shall select the In-Service Date, Initial Synchronization Date, and Commercial Operation Date; and either Standard Option or Alternate Option set forth below for completion of the Participating TO's Interconnection Facilities and Network Upgrades as set forth in Appendix A, Interconnection Facilities, Network Upgrades, and Distribution Upgrades, and such dates and selected option shall be set forth in Appendix B, Milestones.

**5.1.1 Standard Option.** The Participating TO shall design, procure, and construct the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades, using Reasonable Efforts to complete the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades by the dates set forth in Appendix B, Milestones. The Participating TO shall not be required to undertake any action which is inconsistent with its standard safety practices, its material and equipment specifications, its design criteria and construction

procedures, its labor agreements, and Applicable Laws and Regulations. In the event the Participating TO reasonably expects that it will not be able to complete the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades by the specified dates, the Participating TO shall promptly provide written notice to the Interconnection Customer and the CAISO and shall undertake Reasonable Efforts to meet the earliest dates thereafter.

**5.1.2 Alternate Option.** If the dates designated by the Interconnection Customer are acceptable to the Participating TO, the Participating TO shall so notify the Interconnection Customer within thirty (30) Calendar Days, and shall assume responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities by the designated dates.

If the Participating TO subsequently fails to complete the Participating TO's Interconnection Facilities by the In-Service Date, to the extent necessary to provide back feed power; or fails to complete Network Upgrades by the Initial Synchronization Date to the extent necessary to allow for Trial Operation at full power output, unless other arrangements are made by the Parties for such Trial Operation; or fails to complete the Network Upgrades by the Commercial Operation Date, as such dates are reflected in Appendix B, Milestones; the Participating TO shall pay the Interconnection Customer liquidated damages in accordance with Article 5.3, Liquidated Damages, provided, however, the dates designated by the Interconnection Customer shall be extended day for day for each day that the CAISO refuses to grant clearances to install equipment.

**5.1.3 Option to Build.** If the dates designated by the Interconnection Customer are not acceptable to the Participating TO, the Participating TO shall so notify the Interconnection Customer within thirty (30) Calendar Days, and unless the Parties agree otherwise, the Interconnection Customer shall have the option to assume responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades. If the Interconnection Customer elects to exercise its option to assume responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, it shall so notify the Participating TO within thirty (30) Calendar Days of receipt of the Participating TO's notification that the designated dates are not acceptable to the Participating TO. The Participating TO, CAISO, and Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify such Stand Alone Network Upgrades in Appendix A to this LGIA. Except for Stand Alone Network Upgrades, the Interconnection Customer shall have no right to construct Network Upgrades under this option.

**5.1.4 Negotiated Option.** If the Interconnection Customer elects not to exercise its option under Article 5.1.3, Option to Build, the Interconnection Customer shall so notify the Participating TO within thirty (30) Calendar Days of receipt of the Participating TO's notification that the designated dates are not acceptable to the Participating TO, and the Parties shall in good faith attempt to negotiate terms and conditions (including revision of the specified dates and liquidated damages, the provision of incentives or the procurement and construction of a portion of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades by the Interconnection Customer) pursuant to which the Participating TO is responsible for the design, procurement and construction of the Participating TO's Interconnection Facilities and Network Upgrades. If the Parties are unable to reach agreement on such terms and conditions, the Participating TO shall assume responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Network Upgrades pursuant to Article 5.1.1, Standard Option.

**5.2 General Conditions Applicable to Option to Build.** If the Interconnection Customer assumes responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades,

(1) the Interconnection Customer shall engineer, procure equipment, and construct the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades (or portions thereof) using Good Utility Practice and using standards and specifications

provided in advance by the Participating TO;

(2) The Interconnection Customer's engineering, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades shall comply with all requirements of law to which the Participating TO would be subject in the engineering, procurement or construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades;

(3) the Participating TO shall review, and the Interconnection Customer shall obtain the Participating TO's approval of, the engineering design, equipment acceptance tests, and the construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, which approval shall not be unreasonably withheld, and the CAISO may, at its option, review the engineering design, equipment acceptance tests, and the construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades;

(4) prior to commencement of construction, the Interconnection Customer shall provide to the Participating TO, with a copy to the CAISO for informational purposes, a schedule for construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, and shall promptly respond to requests for information from the Participating TO;

(5) at any time during construction, the Participating TO shall have the right to gain unrestricted access to the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades and to conduct inspections of the same;

(6) at any time during construction, should any phase of the engineering, equipment procurement, or construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades not meet the standards and specifications provided by the Participating TO, the Interconnection Customer shall be obligated to remedy deficiencies in that portion of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades;

(7) the Interconnection Customer shall indemnify the CAISO and Participating TO for claims arising from the Interconnection Customer's construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades under the terms and procedures applicable to Article 18.1 Indemnity;

(8) The Interconnection Customer shall transfer control of the Participating TO's Interconnection Facilities to the Participating TO and shall transfer Operational Control of Stand Alone Network Upgrades to the CAISO;

(9) Unless the Parties otherwise agree, the Interconnection Customer shall transfer ownership of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades to the Participating TO. As soon as reasonably practicable, but within twelve months after completion of the construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, the Interconnection Customer shall provide an invoice of the final cost of the construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades to the Participating TO, which invoice shall set forth such costs in sufficient detail to enable the Participating TO to reflect the proper costs of such facilities in its transmission rate base and to identify the investment upon which refunds will be provided;

(10) the Participating TO shall accept for operation and maintenance the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades to the extent engineered, procured, and constructed in accordance with this Article 5.2; and

(11) The Interconnection Customer's engineering, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades shall comply with all requirements of the "Option to Build" conditions set forth in Appendix C. Interconnection Customer shall deliver to the Participating TO "as-built" drawings, information, and any other documents that are reasonably required by the Participating TO to assure that the Interconnection Facilities and Stand-Alone Network Upgrades are built to the standards and specifications required by the Participating TO.

**5.3 Liquidated Damages.** The actual damages to the Interconnection Customer, in the event the Participating TO's Interconnection Facilities or Network Upgrades are not completed by the dates designated by the Interconnection Customer and accepted by the Participating TO pursuant to subparagraphs 5.1.2 or 5.1.4, above, may include Interconnection Customer's fixed operation and maintenance costs and lost opportunity costs. Such actual damages are uncertain and impossible to determine at this time. Because of such uncertainty, any liquidated damages paid by the Participating TO to the Interconnection Customer in the event that the Participating TO does not complete any portion of the Participating TO's Interconnection Facilities or Network Upgrades by the applicable dates, shall be an amount equal to ½ of 1 percent per day of the actual cost of the Participating TO's Interconnection Facilities and Network Upgrades, in the aggregate, for which the Participating TO has assumed responsibility to design, procure and construct.

However, in no event shall the total liquidated damages exceed 20 percent of the actual cost of the Participating TO's Interconnection Facilities and Network Upgrades for which the Participating TO has assumed responsibility to design, procure, and construct. The foregoing payments will be made by the Participating TO to the Interconnection Customer as just compensation for the damages caused to the Interconnection Customer, which actual damages are uncertain and impossible to determine at this time, and as reasonable liquidated damages, but not as a penalty or a method to secure performance of this LGIA. Liquidated damages, when the Parties agree to them, are the exclusive remedy for the Participating TO's failure to meet its schedule.

No liquidated damages shall be paid to the Interconnection Customer if: (1) the Interconnection Customer is not ready to commence use of the Participating TO's Interconnection Facilities or Network Upgrades to take the delivery of power for the Electric Generating Unit's Trial Operation or to export power from the Electric Generating Unit on the specified dates, unless the Interconnection Customer would have been able to commence use of the Participating TO's Interconnection Facilities or Network Upgrades to take the delivery of power for Electric Generating Unit's Trial Operation or to export power from the Electric Generating Unit, but for the Participating TO's delay; (2) the Participating TO's failure to meet the specified dates is the result of the action or inaction of the Interconnection Customer or any other interconnection customer who has entered into an interconnection agreement with the CAISO and/or Participating TO, action or inaction by the CAISO, or any cause beyond the Participating TO's reasonable control or reasonable ability to cure; (3) the Interconnection Customer has assumed responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades; or (4) the Parties have otherwise agreed.

In no event shall the CAISO have any responsibility or liability to the Interconnection Customer for liquidated damages pursuant to the provisions of this Article 5.3.

**5.4 Power System Stabilizers.** The Interconnection Customer shall procure, install, maintain and operate Power System Stabilizers in accordance with the guidelines and procedures established by the Applicable Reliability Council and in accordance with the provisions of Section 4.6.5.1 of the CAISO Tariff. The CAISO reserves the right to establish reasonable minimum acceptable

settings for any installed Power System Stabilizers, subject to the design and operating limitations of the Large Generating Facility. If the Large Generating Facility's Power System Stabilizers are removed from service or not capable of automatic operation, the Interconnection Customer shall immediately notify the CAISO and the Participating TO and restore the Power System Stabilizers to operation as soon as possible. The CAISO shall have the right to order the reduction in output or disconnection of the Large Generating Facility if the reliability of the CAISO Controlled Grid would be adversely affected as a result of improperly tuned Power System Stabilizers. The requirements of this Article 5.4 shall not apply to wind generators of the induction type.

**5.5 Equipment Procurement.** If responsibility for construction of the Participating TO's Interconnection Facilities or Network Upgrades is to be borne by the Participating TO, then the Participating TO shall commence design of the Participating TO's Interconnection Facilities or Network Upgrades and procure necessary equipment as soon as practicable after all of the following conditions are satisfied, unless the Parties otherwise agree in writing:

**5.5.1** The CAISO, in coordination with the applicable Participating TO(s), has completed the Interconnection Facilities Study pursuant to the Interconnection Facilities Study Agreement;

**5.5.2** The Participating TO has received written authorization to proceed with design and procurement from the Interconnection Customer by the date specified in Appendix B, Milestones; and

**5.5.3** The Interconnection Customer has provided security to the Participating TO in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

**5.6 Construction Commencement.** The Participating TO shall commence construction of the Participating TO's Interconnection Facilities and Network Upgrades for which it is responsible as soon as practicable after the following additional conditions are satisfied:

**5.6.1** Approval of the appropriate Governmental Authority has been obtained for any facilities requiring regulatory approval;

**5.6.2** Necessary real property rights and rights-of-way have been obtained, to the extent required for the construction of a discrete aspect of the Participating TO's Interconnection Facilities and Network Upgrades;

**5.6.3** The Participating TO has received written authorization to proceed with construction from the Interconnection Customer by the date specified in Appendix B, Milestones; and

**5.6.4** The Interconnection Customer has provided payment and security to the Participating TO in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

**5.7 Work Progress.** The Parties will keep each other advised periodically as to the progress of their respective design, procurement and construction efforts. Any Party may, at any time, request a progress report from another Party. If, at any time, the Interconnection Customer determines that the completion of the Participating TO's Interconnection Facilities will not be required until after the specified In-Service Date, the Interconnection Customer will provide written notice to the Participating TO and CAISO of such later date upon which the completion of the Participating TO's Interconnection Facilities will be required.

**5.8 Information Exchange.** As soon as reasonably practicable after the Effective Date, the Parties shall exchange information regarding the design and compatibility of the Interconnection Customer's Interconnection Facilities and Participating TO's Interconnection Facilities and compatibility of the Interconnection Facilities with the Participating TO's Transmission System, and shall work diligently and in good faith to make any necessary design changes.

**5.9 Limited Operation.** If any of the Participating TO's Interconnection Facilities or Network Upgrades are not reasonably expected to be completed prior to the Commercial Operation Date of the Electric Generating Unit, the Participating TO and/or CAISO, as applicable, shall, upon the request and at the expense of the Interconnection Customer, perform operating studies on a timely basis to determine the extent to which the Electric Generating Unit and the Interconnection Customer's Interconnection Facilities may operate prior to the completion of the Participating TO's Interconnection Facilities or Network Upgrades consistent with Applicable Laws and Regulations, Applicable Reliability Standards, Good Utility Practice, and this LGIA. The Participating TO and CAISO shall permit Interconnection Customer to operate the Electric Generating Unit and the Interconnection Customer's Interconnection Facilities in accordance with the results of such studies.

**5.10 Interconnection Customer's Interconnection Facilities.** The Interconnection Customer shall, at its expense, design, procure, construct, own and install the Interconnection Customer's Interconnection Facilities, as set forth in Appendix A.

**5.10.1 Large Generating Facility and Interconnection Customer's Interconnection Facilities Specifications.** The Interconnection Customer shall submit initial specifications for the Interconnection Customer's Interconnection Facilities and Large Generating Facility, including System Protection Facilities, to the Participating TO and the CAISO at least one hundred eighty (180) Calendar Days prior to the Initial Synchronization Date; and final specifications for review and comment at least ninety (90) Calendar Days prior to the Initial Synchronization Date. The Participating TO and the CAISO shall review such specifications pursuant to this LGIA and the LGIP to ensure that the Interconnection Customer's Interconnection Facilities and Large Generating Facility are compatible with the technical specifications, operational control, safety requirements, and any other applicable requirements of the Participating TO and the CAISO and comment on such specifications within thirty (30) Calendar Days of the Interconnection Customer's submission. All specifications provided hereunder shall be deemed confidential.

**5.10.2 Participating TO's and CAISO's Review.** The Participating TO's and the CAISO's review of the Interconnection Customer's final specifications shall not be construed as confirming, endorsing, or providing a warranty as to the design, fitness, safety, durability or reliability of the Large Generating Facility, or the Interconnection Customer's Interconnection Facilities. Interconnection Customer shall make such changes to the Interconnection Customer's Interconnection Facilities as may reasonably be required by the Participating TO or the CAISO, in accordance with Good Utility Practice, to ensure that the Interconnection Customer's Interconnection Facilities are compatible with the technical specifications, Operational Control, and safety requirements of the Participating TO or the CAISO.

**5.10.3 Interconnection Customer's Interconnection Facilities Construction.** The Interconnection Customer's Interconnection Facilities shall be designed and constructed in accordance with Good Utility Practice. Within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Participating TO and Interconnection Customer agree on another mutually acceptable deadline, the Interconnection Customer shall deliver to the Participating TO and CAISO "as-built" drawings, information and documents for the Interconnection Customer's Interconnection Facilities and the Electric Generating Unit(s), such as: a one-line diagram, a site plan showing the Large Generating Facility and the Interconnection Customer's Interconnection Facilities, plan and elevation drawings showing the layout of the Interconnection Customer's Interconnection Facilities, a relay functional diagram, relaying AC and DC schematic wiring diagrams and relay settings for all facilities associated with the Interconnection Customer's step-up transformers, the facilities connecting the Large Generating Facility to the step-up transformers and the Interconnection Customer's Interconnection Facilities, and the impedances (determined by factory tests) for the associated step-up transformers and the Electric Generating Units. The Interconnection Customer shall provide the Participating TO and the CAISO specifications for the excitation system, automatic voltage regulator, Large Generating Facility control and protection settings, transformer tap settings, and communications, if applicable. Any

deviations from the relay settings, machine specifications, and other specifications originally submitted by the Interconnection Customer shall be assessed by the Participating TO and the CAISO pursuant to the appropriate provisions of this LGIA and the LGIP.

**5.10.4 Interconnection Customer to Meet Requirements of the Participating TO's Interconnection Handbook.** The Interconnection Customer shall comply with the Participating TO's Interconnection Handbook.

**5.11 Participating TO's Interconnection Facilities Construction.** The Participating TO's Interconnection Facilities shall be designed and constructed in accordance with Good Utility Practice. Upon request, within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Participating TO and Interconnection Customer agree on another mutually acceptable deadline, the Participating TO shall deliver to the Interconnection Customer and the CAISO the following "as-built" drawings, information and documents for the Participating TO's Interconnection Facilities [include appropriate drawings and relay diagrams].

The Participating TO will obtain control for operating and maintenance purposes of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades upon completion of such facilities. Pursuant to Article 5.2, the CAISO will obtain Operational Control of the Stand Alone Network Upgrades prior to the Commercial Operation Date.

**5.12 Access Rights.** Upon reasonable notice and supervision by a Party, and subject to any required or necessary regulatory approvals, a Party ("Granting Party") shall furnish at no cost to the other Party ("Access Party") any rights of use, licenses, rights of way and easements with respect to lands owned or controlled by the Granting Party, its agents (if allowed under the applicable agency agreement), or any Affiliate, that are necessary to enable the Access Party to obtain ingress and egress to construct, operate, maintain, repair, test (or witness testing), inspect, replace or remove facilities and equipment to: (i) interconnect the Large Generating Facility with the Participating TO's Transmission System; (ii) operate and maintain the Large Generating Facility, the Interconnection Facilities and the Participating TO's Transmission System; and (iii) disconnect or remove the Access Party's facilities and equipment upon termination of this LGIA. In exercising such licenses, rights of way and easements, the Access Party shall not unreasonably disrupt or interfere with normal operation of the Granting Party's business and shall adhere to the safety rules and procedures established in advance, as may be changed from time to time, by the Granting Party and provided to the Access Party.

**5.13 Lands of Other Property Owners.** If any part of the Participating TO's Interconnection Facilities and/or Network Upgrades are to be installed on property owned by persons other than the Interconnection Customer or Participating TO, the Participating TO shall at the Interconnection Customer's expense use efforts, similar in nature and extent to those that it typically undertakes on its own behalf or on behalf of its Affiliates, including use of its eminent domain authority, and to the extent consistent with state law, to procure from such persons any rights of use, licenses, rights of way and easements that are necessary to construct, operate, maintain, test, inspect, replace or remove the Participating TO's Interconnection Facilities and/or Network Upgrades upon such property.

**5.14 Permits.** Participating TO and Interconnection Customer shall cooperate with each other in good faith in obtaining all permits, licenses and authorization that are necessary to accomplish the interconnection in compliance with Applicable Laws and Regulations. With respect to this paragraph, the Participating TO shall provide permitting assistance to the Interconnection Customer comparable to that provided to the Participating TO's own, or an Affiliate's generation.

**5.15 Early Construction of Base Case Facilities.** The Interconnection Customer may request the Participating TO to construct, and the Participating TO shall construct, using Reasonable Efforts to accommodate Interconnection Customer's In-Service Date, all or any portion of any Network Upgrades required for Interconnection Customer to be interconnected to the Participating TO's

Transmission System which are included in the Base Case of the Interconnection Studies for the Interconnection Customer, and which also are required to be constructed for another interconnection customer, but where such construction is not scheduled to be completed in time to achieve Interconnection Customer's In-Service Date.

**5.16 Suspension.** The Interconnection Customer may request to suspend at any time all work associated with the construction and installation of the Participating TO's Interconnection Facilities, Network Upgrades, and/or Distribution Upgrades required under this LGIA . Interconnection Customers seeking to suspend construction will provide the CAISO and Participating TO a request for assessment pursuant to Section 4.4.6 of the LGIP, a modification assessment deposit, and an anticipated end date of the suspension. Interconnection Customers may request a suspension for the maximum amount of time in lieu of providing an anticipated end date. The CAISO and Participating TO will approve suspension requests where:

(a) the Participating TO's electrical system and the CAISO Controlled Grid shall be left in a safe and reliable condition in accordance with Good Utility Practice and the Participating TO's safety and reliability criteria and the CAISO's Applicable Reliability Standards; and

(b) the CAISO and Participating TO determine the suspension will not result in a Material Modification.

During suspension, the Interconnection Customer may request to extend or shorten their suspension period, consistent with the maximum period provided in this Article. The CAISO and Participating TO will approve such requests where they meet criteria (a) and (b), above. Requests to extend or shorten extensions will require a new modification assessment request and deposit. The Interconnection Customer shall be responsible for all reasonable and necessary costs for suspension for which the Participating TO (i) has incurred pursuant to this LGIA prior to the suspension and (ii) incurs in suspending such work, including any costs incurred to perform such work as may be necessary to ensure the safety of persons and property and the integrity of the Participating TO's electric system during such suspension and, if applicable, any costs incurred in connection with the cancellation or suspension of material, equipment and labor contracts which the Participating TO cannot reasonably avoid; provided, however, that prior to canceling or suspending any such material, equipment or labor contract, the Participating TO shall obtain Interconnection Customer's authorization to do so.

The Participating TO shall invoice the Interconnection Customer for such costs pursuant to Article 12 and shall use due diligence to minimize its costs. In the event Interconnection Customer suspends work required under this LGIA pursuant to this Article 5.16, and has not requested the Participating TO to recommence the work or has not itself recommenced work required under this LGIA on or before the expiration of three (3) years following commencement of such suspension, this LGIA shall be deemed terminated. The three-year period shall begin on the date the Interconnection Customer provides in its request, if approved. Ninety (90) days before the anticipated end date of the suspension, the Participating TO and the CAISO will tender an amended draft LGIA with new construction milestones. The Parties agree to negotiate the amended draft LGIA in good faith such that it can be executed by the end of the suspension.

**5.17 Taxes.**

**5.17.1 Interconnection Customer Payments Not Taxable.** The Parties intend that all payments or property transfers made by the Interconnection Customer to the Participating TO for the installation of the Participating TO's Interconnection Facilities and the Network Upgrades shall be non-taxable, either as contributions to capital, or as a refundable advance, in accordance with the Internal Revenue Code and any applicable state income tax laws and shall not be taxable as contributions in aid of construction or otherwise under the Internal Revenue Code and any applicable state income tax laws.

**5.17.2 Representations and Covenants.** In accordance with IRS Notice 2001-82 and IRS Notice 88-129, the Interconnection Customer represents and covenants that (i) ownership of the electricity generated at the Large Generating Facility will pass to another party prior to the transmission of the electricity on the CAISO Controlled Grid, (ii) for income tax purposes, the amount of any payments and the cost of any property transferred to the Participating TO for the Participating TO's Interconnection Facilities will be capitalized by the Interconnection Customer as an intangible asset and recovered using the straight-line method over a useful life of twenty (20) years, and (iii) any portion of the Participating TO's Interconnection Facilities that is a "dual-use intertie," within the meaning of IRS Notice 88-129, is reasonably expected to carry only a de minimis amount of electricity in the direction of the Large Generating Facility. For this purpose, "de minimis amount" means no more than 5 percent of the total power flows in both directions, calculated in accordance with the "5 percent test" set forth in IRS Notice 88-129. This is not intended to be an exclusive list of the relevant conditions that must be met to conform to IRS requirements for non-taxable treatment.

At the Participating TO's request, the Interconnection Customer shall provide the Participating TO with a report from an independent engineer confirming its representation in clause (iii), above. The Participating TO represents and covenants that the cost of the Participating TO's Interconnection Facilities paid for by the Interconnection Customer without the possibility of refund or credit will have no net effect on the base upon which rates are determined.

**5.17.3 Indemnification for the Cost Consequence of Current Tax Liability Imposed Upon the Participating TO.** Notwithstanding Article 5.17.1, the Interconnection Customer shall protect, indemnify and hold harmless the Participating TO from the cost consequences of any current tax liability imposed against the Participating TO as the result of payments or property transfers made by the Interconnection Customer to the Participating TO under this LGIA for Interconnection Facilities, as well as any interest and penalties, other than interest and penalties attributable to any delay caused by the Participating TO.

The Participating TO shall not include a gross-up for the cost consequences of any current tax liability in the amounts it charges the Interconnection Customer under this LGIA unless (i) the Participating TO has determined, in good faith, that the payments or property transfers made by the Interconnection Customer to the Participating TO should be reported as income subject to taxation or (ii) any Governmental Authority directs the Participating TO to report payments or property as income subject to taxation; provided, however, that the Participating TO may require the Interconnection Customer to provide security for Interconnection Facilities, in a form reasonably acceptable to the Participating TO (such as a parental guarantee or a letter of credit), in an amount equal to the cost consequences of any current tax liability under this Article 5.17. The Interconnection Customer shall reimburse the Participating TO for such costs on a fully grossed-up basis, in accordance with Article 5.17.4, within thirty (30) Calendar Days of receiving written notification from the Participating TO of the amount due, including detail about how the amount was calculated.

The indemnification obligation shall terminate at the earlier of (1) the expiration of the ten year testing period and the applicable statute of limitation, as it may be extended by the Participating TO upon request of the IRS, to keep these years open for audit or adjustment, or (2) the occurrence of a subsequent taxable event and the payment of any related indemnification obligations as contemplated by this Article 5.17.

**5.17.4 Tax Gross-Up Amount.** The Interconnection Customer's liability for the cost consequences of any current tax liability under this Article 5.17 shall be calculated on a fully grossed-up basis. Except as may otherwise be agreed to by the parties, this means that the Interconnection Customer will pay the Participating TO, in addition to the amount paid for the Interconnection Facilities and Network Upgrades, an amount equal to (1) the current taxes imposed on the Participating TO ("Current Taxes") on the excess of (a) the gross income realized by the Participating TO as a result of payments or property transfers made by the Interconnection

Customer to the Participating TO under this LGIA (without regard to any payments under this Article 5.17) (the "Gross Income Amount") over (b) the present value of future tax deductions for depreciation that will be available as a result of such payments or property transfers (the "Present Value Depreciation Amount"), plus (2) an additional amount sufficient to permit the Participating TO to receive and retain, after the payment of all Current Taxes, an amount equal to the net amount described in clause (1).

For this purpose, (i) Current Taxes shall be computed based on the Participating TO's composite federal and state tax rates at the time the payments or property transfers are received and the Participating TO will be treated as being subject to tax at the highest marginal rates in effect at that time (the "Current Tax Rate"), and (ii) the Present Value Depreciation Amount shall be computed by discounting the Participating TO's anticipated tax depreciation deductions as a result of such payments or property transfers by the Participating TO's current weighted average cost of capital. Thus, the formula for calculating the Interconnection Customer's liability to the Participating TO pursuant to this Article 5.17.4 can be expressed as follows: (Current Tax Rate x (Gross Income Amount – Present Value of Tax Depreciation))/(1-Current Tax Rate). Interconnection Customer's estimated tax liability in the event taxes are imposed shall be stated in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades.

**5.17.5 Private Letter Ruling or Change or Clarification of Law.** At the Interconnection Customer's request and expense, the Participating TO shall file with the IRS a request for a private letter ruling as to whether any property transferred or sums paid, or to be paid, by the Interconnection Customer to the Participating TO under this LGIA are subject to federal income taxation. The Interconnection Customer will prepare the initial draft of the request for a private letter ruling, and will certify under penalties of perjury that all facts represented in such request are true and accurate to the best of the Interconnection Customer's knowledge. The Participating TO and Interconnection Customer shall cooperate in good faith with respect to the submission of such request, provided, however, the Interconnection Customer and the Participating TO explicitly acknowledge (and nothing herein is intended to alter) Participating TO's obligation under law to certify that the facts presented in the ruling request are true, correct and complete.

The Participating TO shall keep the Interconnection Customer fully informed of the status of such request for a private letter ruling and shall execute either a privacy act waiver or a limited power of attorney, in a form acceptable to the IRS, that authorizes the Interconnection Customer to participate in all discussions with the IRS regarding such request for a private letter ruling. The Participating TO shall allow the Interconnection Customer to attend all meetings with IRS officials about the request and shall permit the Interconnection Customer to prepare the initial drafts of any follow-up letters in connection with the request.

**5.17.6 Subsequent Taxable Events.** If, within 10 years from the date on which the relevant Participating TO's Interconnection Facilities are placed in service, (i) the Interconnection Customer Breaches the covenants contained in Article 5.17.2, (ii) a "disqualification event" occurs within the meaning of IRS Notice 88-129, or (iii) this LGIA terminates and the Participating TO retains ownership of the Interconnection Facilities and Network Upgrades, the Interconnection Customer shall pay a tax gross-up for the cost consequences of any current tax liability imposed on the Participating TO, calculated using the methodology described in Article 5.17.4 and in accordance with IRS Notice 90-60.

**5.17.7 Contests.** In the event any Governmental Authority determines that the Participating TO's receipt of payments or property constitutes income that is subject to taxation, the Participating TO shall notify the Interconnection Customer, in writing, within thirty (30) Calendar Days of receiving notification of such determination by a Governmental Authority. Upon the timely written request by the Interconnection Customer and at the Interconnection Customer's sole expense, the Participating TO may appeal, protest, seek abatement of, or otherwise oppose such determination. Upon the Interconnection Customer's written request and sole expense, the Participating TO may file a claim for refund with respect to any taxes paid under this Article 5.17,

whether or not it has received such a determination. The Participating TO reserve the right to make all decisions with regard to the prosecution of such appeal, protest, abatement or other contest, including the selection of counsel and compromise or settlement of the claim, but the Participating TO shall keep the Interconnection Customer informed, shall consider in good faith suggestions from the Interconnection Customer about the conduct of the contest, and shall reasonably permit the Interconnection Customer or an Interconnection Customer representative to attend contest proceedings.

The Interconnection Customer shall pay to the Participating TO on a periodic basis, as invoiced by the Participating TO, the Participating TO's documented reasonable costs of prosecuting such appeal, protest, abatement or other contest, including any costs associated with obtaining the opinion of independent tax counsel described in this Article 5.17.7. The Participating TO may abandon any contest if the Interconnection Customer fails to provide payment to the Participating TO within thirty (30) Calendar Days of receiving such invoice.

At any time during the contest, the Participating TO may agree to a settlement either with the Interconnection Customer's consent or, if such consent is refused, after obtaining written advice from independent nationally-recognized tax counsel, selected by the Participating TO, but reasonably acceptable to the Interconnection Customer, that the proposed settlement represents a reasonable settlement given the hazards of litigation. The Interconnection Customer's obligation shall be based on the amount of the settlement agreed to by the Interconnection Customer, or if a higher amount, so much of the settlement that is supported by the written advice from nationally-recognized tax counsel selected under the terms of the preceding paragraph. The settlement amount shall be calculated on a fully grossed-up basis to cover any related cost consequences of the current tax liability. The Participating TO may also settle any tax controversy without receiving the Interconnection Customer's consent or any such written advice; however, any such settlement will relieve the Interconnection Customer from any obligation to indemnify the Participating TO for the tax at issue in the contest (unless the failure to obtain written advice is attributable to the Interconnection Customer's unreasonable refusal to the appointment of independent tax counsel).

**5.17.8 Refund.** In the event that (a) a private letter ruling is issued to the Participating TO which holds that any amount paid or the value of any property transferred by the Interconnection Customer to the Participating TO under the terms of this LGIA is not subject to federal income taxation, (b) any legislative change or administrative announcement, notice, ruling or other determination makes it reasonably clear to the Participating TO in good faith that any amount paid or the value of any property transferred by the Interconnection Customer to the Participating TO under the terms of this LGIA is not taxable to the Participating TO, (c) any abatement, appeal, protest, or other contest results in a determination that any payments or transfers made by the Interconnection Customer to the Participating TO are not subject to federal income tax, or (d) if the Participating TO receives a refund from any taxing authority for any overpayment of tax attributable to any payment or property transfer made by the Interconnection Customer to the Participating TO pursuant to this LGIA, the Participating TO shall promptly refund to the Interconnection Customer the following:

(i) any payment made by Interconnection Customer under this Article 5.17 for taxes that is attributable to the amount determined to be non-taxable, together with interest thereon,

(ii) interest on any amounts paid by the Interconnection Customer to the Participating TO for such taxes which the Participating TO did not submit to the taxing authority, calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date payment was made by the Interconnection Customer to the date the Participating TO refunds such payment to the Interconnection Customer, and

(iii) with respect to any such taxes paid by the Participating TO, any refund or credit the Participating TO receives or to which it may be entitled from any Governmental Authority,

interest (or that portion thereof attributable to the payment described in clause (i), above) owed to the Participating TO for such overpayment of taxes (including any reduction in interest otherwise payable by the Participating TO to any Governmental Authority resulting from an offset or credit); provided, however, that the Participating TO will remit such amount promptly to the Interconnection Customer only after and to the extent that the Participating TO has received a tax refund, credit or offset from any Governmental Authority for any applicable overpayment of income tax related to the Participating TO's Interconnection Facilities.

The intent of this provision is to leave the Parties, to the extent practicable, in the event that no taxes are due with respect to any payment for Interconnection Facilities and Network Upgrades hereunder, in the same position they would have been in had no such tax payments been made.

**5.17.9 Taxes Other Than Income Taxes.** Upon the timely request by the Interconnection Customer, and at the Interconnection Customer's sole expense, the CAISO or Participating TO may appeal, protest, seek abatement of, or otherwise contest any tax (other than federal or state income tax) asserted or assessed against the CAISO or Participating TO for which the Interconnection Customer may be required to reimburse the CAISO or Participating TO under the terms of this LGIA. The Interconnection Customer shall pay to the Participating TO on a periodic basis, as invoiced by the Participating TO, the Participating TO's documented reasonable costs of prosecuting such appeal, protest, abatement, or other contest. The Interconnection Customer, the CAISO, and the Participating TO shall cooperate in good faith with respect to any such contest. Unless the payment of such taxes is a prerequisite to an appeal or abatement or cannot be deferred, no amount shall be payable by the Interconnection Customer to the CAISO or Participating TO for such taxes until they are assessed by a final, non-appealable order by any court or agency of competent jurisdiction. In the event that a tax payment is withheld and ultimately due and payable after appeal, the Interconnection Customer will be responsible for all taxes, interest and penalties, other than penalties attributable to any delay caused by the Participating TO.

**5.18 Tax Status.** Each Party shall cooperate with the others to maintain the other Parties' tax status. Nothing in this LGIA is intended to adversely affect the CAISO's or any Participating TO's tax exempt status with respect to the issuance of bonds including, but not limited to, Local Furnishing Bonds.

**5.19 Modification.**

**5.19.1 General.** The Interconnection Customer or the Participating TO may undertake modifications to its facilities, Section 25.1(c) and Section 25 of the CAISO Tariff if the Interconnection Customer has achieved its Commercial Operation Date, and subject to Section 4.4 of the LGIP if it has not. If a Party plans to undertake a modification that reasonably may be expected to affect the other Parties' facilities, that Party shall provide to the other Parties sufficient information regarding such modification so that the other Parties may evaluate the potential impact of such modification prior to commencement of the work. Such information shall be deemed to be confidential hereunder and shall include information concerning the timing of such modifications and whether such modifications are expected to interrupt the flow of electricity from the Large Generating Facility. The Party desiring to perform such work shall provide the relevant drawings, plans, and specifications to the other Parties at least ninety (90) Calendar Days in advance of the commencement of the work or such shorter period upon which the Parties may agree, which agreement shall not unreasonably be withheld, conditioned or delayed.

Notwithstanding Section 7.5 of Appendix DD, at any time after achieving its Commercial Operation Date, the Interconnection Customer may reduce the megawatt generating capacities of its Generating Facilities, subject to Section 25.1(c) of the CAISO Tariff. Section 7.5.11 of Appendix DD will still apply to such requests to reduce capacity.

**5.19.2 Standards.** Any additions, modifications, or replacements made to a Party's facilities shall be designed, constructed and operated in accordance with this LGIA and Good Utility Practice.

**5.19.3 Modification Costs.** The Interconnection Customer shall not be directly assigned the costs of any additions, modifications, or replacements that the Participating TO makes to the Participating TO's Interconnection Facilities or the Participating TO's Transmission System to facilitate the interconnection of a third party to the Participating TO's Interconnection Facilities or the Participating TO's Transmission System, or to provide transmission service to a third party under the CAISO Tariff. The Interconnection Customer shall be responsible for the costs of any additions, modifications, or replacements to the Interconnection Facilities that may be necessary to maintain or upgrade such Interconnection Facilities consistent with Applicable Laws and Regulations, Applicable Reliability Standards or Good Utility Practice.

## Article 6. Testing and Inspection

**6.1 Pre-Commercial Operation Date Testing and Modifications.** Prior to the Commercial Operation Date, the Participating TO shall test the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades and the Interconnection Customer shall test the Large Generating Facility and the Interconnection Customer's Interconnection Facilities to ensure their safe and reliable operation. Similar testing may be required after initial operation. Each

Party shall make any modifications to its facilities that are found to be necessary as a result of such testing. The Interconnection Customer shall bear the cost of all such testing and modifications. The Interconnection Customer shall not commence initial parallel operation of an Electric Generating Unit with the Participating TO's Transmission System until the Participating TO provides prior written approval, which approval shall not be unreasonably withheld, for operation of such Electric Generating Unit. The Interconnection Customer shall generate test energy at the Large Generating Facility only if it has arranged for the delivery of such test energy.

**6.2 Post-Commercial Operation Date Testing and Modifications.** Each Party shall at its own expense perform routine inspection and testing of its facilities and equipment in accordance with Good Utility Practice as may be necessary to ensure the continued interconnection of the Large Generating Facility with the Participating TO's Transmission System in a safe and reliable manner. Each Party shall have the right, upon advance written notice, to require reasonable additional testing of the other Party's facilities, at the requesting Party's expense, as may be in accordance with Good Utility Practice.

**6.3 Right to Observe Testing.** Each Party shall notify the other Parties at least fourteen (14) days in advance of its performance of tests of its Interconnection Facilities or Generating Facility. The other Parties have the right, at their own expense, to observe such testing.

**6.4 Right to Inspect.** Each Party shall have the right, but shall have no obligation to: (i) observe another Party's tests and/or inspection of any of its System Protection Facilities and other protective equipment, including Power System Stabilizers; (ii) review the settings of another Party's System Protection Facilities and other protective equipment; and (iii) review another Party's maintenance records relative to the Interconnection Facilities, the System Protection Facilities and other protective equipment. A Party may exercise these rights from time to time as it deems necessary upon reasonable notice to the other Party. The exercise or non-exercise by a Party of any such rights shall not be construed as an endorsement or confirmation of any element or condition of the Interconnection Facilities or the System Protection Facilities or other protective equipment or the operation thereof, or as a warranty as to the fitness, safety, desirability, or reliability of same. Any information that a Party obtains through the exercise of any of its rights under this Article 6.4 shall be deemed to be Confidential Information and treated pursuant to Article 22 of this LGIA.

## Article 7. Metering

**7.1 General.** Each Party shall comply with the Applicable Reliability Council requirements. The Interconnection Customer and CAISO shall comply with the provisions of the CAISO Tariff regarding metering, including Section 10 of the CAISO Tariff. Unless otherwise agreed by the Participating TO and the Interconnection Customer, the Participating TO may install additional Metering Equipment at the Point of Interconnection prior to any operation of any Electric Generating Unit and shall own, operate, test and maintain such Metering Equipment. Power flows to and from the Large Generating Facility shall be measured at or, at the CAISO's or Participating TO's option for its respective Metering Equipment, compensated to, the Point of Interconnection. The CAISO shall provide metering quantities to the Interconnection Customer upon request in accordance with the CAISO Tariff by directly polling the CAISO's meter data acquisition system. The Interconnection Customer shall bear all reasonable documented costs associated with the purchase, installation, operation, testing and maintenance of the Metering Equipment.

**7.2 Check Meters.** The Interconnection Customer, at its option and expense, may install and operate, on its premises and on its side of the Point of Interconnection, one or more check meters to check the CAISO-polled meters or the Participating TO's meters. Such check meters shall be for check purposes only and shall not be used for the measurement of power flows for purposes of this LGIA, except in the case that no other means are available on a temporary basis at the option of the CAISO or the Participating TO. The check meters shall be subject at all reasonable times to inspection and examination by the CAISO or Participating TO or their designees. The installation, operation and maintenance thereof shall be performed entirely by the Interconnection Customer in accordance with Good Utility Practice.

**7.3 Participating TO Retail Metering.** The Participating TO may install retail revenue quality meters and associated equipment, pursuant to the Participating TO's applicable retail tariffs.

## Article 8. Communications

**8.1 Interconnection Customer Obligations.** The Interconnection Customer shall maintain satisfactory operating communications with the CAISO in accordance with the provisions of the CAISO Tariff and with the Participating TO's dispatcher or representative designated by the Participating TO. The Interconnection Customer shall provide standard voice line, dedicated voice line and facsimile communications at its Large Generating Facility control room or central dispatch facility through use of either the public telephone system, or a voice communications system that does not rely on the public telephone system. The Interconnection Customer shall also provide the dedicated data circuit(s) necessary to provide Interconnection Customer data to the CAISO and Participating TO as set forth in Appendix D, Security Arrangements Details. The data circuit(s) shall extend from the Large Generating Facility to the location(s) specified by the CAISO and Participating TO. Any required maintenance of such communications equipment shall be performed by the Interconnection Customer. Operational communications shall be activated and maintained under, but not be limited to, the following events: system paralleling or separation, scheduled and unscheduled shutdowns, equipment clearances, and hourly and daily load data.

**8.2 Remote Terminal Unit.** Prior to the Initial Synchronization Date of each Electric Generating Unit, a Remote Terminal Unit, or equivalent data collection and transfer equipment acceptable to the Parties, shall be installed by the Interconnection Customer, or by the Participating TO at the Interconnection Customer's expense, to gather accumulated and instantaneous data to be telemetered to the location(s) designated by the CAISO and by the Participating TO through use of a dedicated point-to-point data circuit(s) as indicated in Article 8.1.

Telemetry to the CAISO shall be provided in accordance with the CAISO's technical standards for direct telemetry. For telemetry to the Participating TO, the communication protocol for the data

circuit(s) shall be specified by the Participating TO. Instantaneous bi-directional real power and reactive power flow and any other required information must be telemetered directly to the location(s) specified by the Participating TO.

Each Party will promptly advise the other Parties if it detects or otherwise learns of any metering, telemetry or communications equipment errors or malfunctions that require the attention and/or correction by another Party. The Party owning such equipment shall correct such error or malfunction as soon as reasonably feasible.

**8.3 No Annexation.** Any and all equipment placed on the premises of a Party shall be and remain the property of the Party providing such equipment regardless of the mode and manner of annexation or attachment to real property, unless otherwise mutually agreed by the Parties.

## Article 9. Operations

**9.1 General.** Each Party shall comply with the Applicable Reliability Council requirements. Each Party shall provide to the other Party all information that may reasonably be required by the other Party to comply with Applicable Laws and Regulations and Applicable Reliability Standards.

**9.2 Balancing Authority Area Notification.** At least three months before Initial Synchronization Date, the Interconnection Customer shall notify the CAISO and Participating TO in writing of the Balancing Authority Area in which the Large Generating Facility intends to be located. If the Interconnection Customer intends to locate the Large Generating Facility in a Balancing Authority Area other than the Balancing Authority Area within whose electrically metered boundaries the Large Generating Facility is located, and if permitted to do so by the relevant transmission tariffs, all necessary arrangements, including but not limited to those set forth in Article 7 and Article 8 of this LGIA, and remote Balancing Authority Area generator interchange agreements, if applicable, and the appropriate measures under such agreements, shall be executed and implemented prior to the placement of the Large Generating Facility in the other Balancing Authority Area.

**9.3 CAISO and Participating TO Obligations.** The CAISO and Participating TO shall cause the Participating TO's Transmission System to be operated and controlled in a safe and reliable manner and in accordance with this LGIA. The Participating TO at the Interconnection Customer's expense shall cause the Participating TO's Interconnection Facilities to be operated, maintained and controlled in a safe and reliable manner and in accordance with this LGIA. The CAISO and Participating TO may provide operating instructions to the Interconnection Customer consistent with this LGIA and Participating TO and CAISO operating protocols and procedures as they may change from time to time. The Participating TO and CAISO will consider changes to their operating protocols and procedures proposed by the Interconnection Customer.

**9.4 Interconnection Customer Obligations.** The Interconnection Customer shall at its own expense operate, maintain and control the Large Generating Facility and the Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA. The Interconnection Customer shall operate the Large Generating Facility and the Interconnection Customer's Interconnection Facilities in accordance with all applicable requirements of the Balancing Authority Area of which it is part, including such requirements as set forth in Appendix C, Interconnection Details, of this LGIA. Appendix C, Interconnection Details, will be modified to reflect changes to the requirements as they may change from time to time. A Party may request that another Party provide copies of the requirements set forth in Appendix C, Interconnection Details, of this LGIA. The Interconnection Customer shall not commence Commercial Operation of an Electric Generating Unit with the Participating TO's Transmission System until the Participating TO provides prior written approval, which approval shall not be unreasonably withheld, for operation of such Electric Generating Unit.

**9.5 Start-Up and Synchronization.** Consistent with the Parties' mutually acceptable procedures, the Interconnection Customer is responsible for the proper synchronization of each Electric Generating Unit to the CAISO Controlled Grid.

**9.6 Reactive Power.**

**9.6.1 Power Factor Design Criteria.** The Interconnection Customer shall design the Large Generating Facility to maintain a composite power delivery at continuous rated power output at the terminals of the Electric Generating Unit at a power factor within the range of 0.95 leading to 0.90 lagging, unless the CAISO has established different requirements that apply to all generators in the Balancing Authority Area on a comparable basis. Power factor design criteria for wind generators are provided in Appendix H of this LGIA.

For Asynchronous Generating Facilities submitting a written request to continue a re-study under Section 6.4 of Appendix U of the CAISO Tariff on or after September 21, 2016, the Interconnection Customer shall design the Large Generating Facility to maintain a composite power delivery at continuous rated power output at the high-side of the generator substation at a power factor within the range of 0.95 leading to 0.95 lagging, unless the CAISO has established a different power factor range that applies to all Asynchronous Generating Facilities on a comparable basis. This power factor range standard shall be dynamic and can be met using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors and reactors, or a combination of the two.

**9.6.2 Voltage Schedules.** Once the Interconnection Customer has synchronized an Electric Generating Unit with the CAISO Controlled Grid, the CAISO or Participating TO shall require the Interconnection Customer to maintain a voltage schedule by operating the Electric Generating Unit to produce or absorb reactive power within the design limitations of the Electric Generating Unit set forth in Article 9.6.1 (Power Factor Design Criteria). CAISO's voltage schedules shall treat all sources of reactive power in the Balancing Authority Area in an equitable and not unduly discriminatory manner. The Participating TO shall exercise Reasonable Efforts to provide the Interconnection Customer with such schedules at least one (1) day in advance, and the CAISO or Participating TO may make changes to such schedules as necessary to maintain the reliability of the CAISO Controlled Grid or the Participating TO's electric system. The Interconnection Customer shall operate the Electric Generating Unit to maintain the specified output voltage or power factor within the design limitations of the Electric Generating Unit set forth in Article 9.6.1 (Power Factor Design Criteria), and as may be required by the CAISO to operate the Electric Generating Unit at a specific voltage schedule within the design limitations set forth in Article 9.6.1. If the Interconnection Customer is unable to maintain the specified voltage or power factor, it shall promptly notify the CAISO and the Participating TO.

**9.6.2.1 Governors and Regulators.** Whenever an Electric Generating Unit is operated in parallel with the CAISO Controlled Grid and the speed governors (if installed on the Electric Generating Unit pursuant to Good Utility Practice) and voltage regulators are capable of operation, the Interconnection Customer shall operate the Electric Generating Unit with its speed governors and voltage regulators in automatic operation. If the Electric Generating Unit's speed governors and voltage regulators are not capable of such automatic operation, the Interconnection Customer shall immediately notify the CAISO and the Participating TO and ensure that the Electric Generating Unit operates as specified in Article 9.6.2 through manual operation and that such Electric Generating Unit's reactive power production or absorption (measured in MVARs) are within the design capability of the Electric Generating Unit(s) and steady state stability limits. The Interconnection Customer shall restore the speed governors and voltage regulators to automatic operation as soon as possible. If the Large Generating Facility's speed governors and voltage regulators are improperly tuned or malfunctioning, the CAISO shall have the right to order the reduction in output or disconnection of the Large Generating Facility if the reliability of the CAISO Controlled Grid would be adversely affected. The Interconnection Customer shall not cause its

Large Generating Facility to disconnect automatically or instantaneously from the CAISO Controlled Grid or trip any Electric Generating Unit comprising the Large Generating Facility for an under or over frequency condition unless the abnormal frequency condition persists for a time period beyond the limits set forth in ANSI/IEEE Standard C37.106, or such other standard as applied to other generators in the Balancing Authority Area on a comparable basis.

**9.6.3 Payment for Reactive Power.** CAISO is required to pay the Interconnection Customer for reactive power that Interconnection Customer provides or absorbs from an Electric Generating Unit when the CAISO requests the Interconnection Customer to operate its Electric Generating Unit outside the range specified in Article 9.6.1, provided that if the CAISO pays other generators for reactive power service within the specified range, it must also pay the Interconnection Customer. Payments shall be pursuant to Article 11.6 or such other agreement to which the CAISO and Interconnection Customer have otherwise agreed.

**9.7 Outages and Interruptions.**

**9.7.1 Outages.**

**9.7.1.1 Outage Authority and Coordination.** Each Party may in accordance with Good Utility Practice in coordination with the other Parties remove from service any of its respective Interconnection Facilities or Network Upgrades that may impact another Party's facilities as necessary to perform maintenance or testing or to install or replace equipment. Absent an Emergency Condition, the Party scheduling a removal of such facility(ies) from service will use Reasonable Efforts to schedule such removal on a date and time mutually acceptable to all Parties. In all circumstances any Party planning to remove such facility(ies) from service shall use Reasonable Efforts to minimize the effect on the other Parties of such removal.

**9.7.1.2 Outage Schedules.** The CAISO shall post scheduled outages of CAISO Controlled Grid facilities in accordance with the provisions of the CAISO Tariff. The Interconnection Customer shall submit its planned maintenance schedules for the Large Generating Facility to the CAISO in accordance with the CAISO Tariff. The Interconnection Customer shall update its planned maintenance schedules in accordance with the CAISO Tariff. The CAISO may request the Interconnection Customer to reschedule its maintenance as necessary to maintain the reliability of the CAISO Controlled Grid in accordance with the CAISO Tariff. Such planned maintenance schedules and updates and changes to such schedules shall be provided by the Interconnection Customer to the Participating TO concurrently with their submittal to the CAISO. The CAISO shall compensate the Interconnection Customer for any additional direct costs that the Interconnection Customer incurs as a result of having to reschedule maintenance in accordance with the CAISO Tariff. The Interconnection Customer will not be eligible to receive compensation, if during the twelve (12) months prior to the date of the scheduled maintenance, the Interconnection Customer had modified its schedule of maintenance activities.

**9.7.1.3 Outage Restoration.** If an outage on a Party's Interconnection Facilities or Network Upgrades adversely affects another Party's operations or facilities, the Party that owns or controls the facility that is out of service shall use Reasonable Efforts to promptly restore such facility(ies) to a normal operating condition consistent with the nature of the outage. The Party that owns or controls the facility that is out of service shall provide the other Parties, to the extent such information is known, information on the nature of the Emergency Condition, if the outage is caused by an Emergency Condition, an estimated time of restoration, and any corrective actions required. Initial verbal notice shall be followed up as soon as practicable with written notice explaining the nature of the outage, if requested by a Party, which may be provided by e-mail or facsimile.

**9.7.2 Interruption of Service.** If required by Good Utility Practice to do so, the CAISO or the Participating TO may require the Interconnection Customer to interrupt or reduce deliveries of electricity if such delivery of electricity could adversely affect the CAISO's or the Participating

TO's ability to perform such activities as are necessary to safely and reliably operate and maintain the Participating TO's electric system or the CAISO Controlled Grid. The following provisions shall apply to any interruption or reduction permitted under this Article 9.7.2:

**9.7.2.1** The interruption or reduction shall continue only for so long as reasonably necessary under Good Utility Practice;

**9.7.2.2** Any such interruption or reduction shall be made on an equitable, non-discriminatory basis with respect to all generating facilities directly connected to the CAISO Controlled Grid, subject to any conditions specified in this LGIA;

**9.7.2.3** When the interruption or reduction must be made under circumstances which do not allow for advance notice, the CAISO or Participating TO, as applicable, shall notify the Interconnection Customer by telephone as soon as practicable of the reasons for the curtailment, interruption, or reduction, and, if known, its expected duration. Telephone notification shall be followed by written notification, if requested by the Interconnection Customer, as soon as practicable;

**9.7.2.4** Except during the existence of an Emergency Condition, the CAISO or Participating TO shall notify the Interconnection Customer in advance regarding the timing of such interruption or reduction and further notify the Interconnection Customer of the expected duration. The CAISO or Participating TO shall coordinate with the Interconnection Customer using Good Utility Practice to schedule the interruption or reduction during periods of least impact to the Interconnection Customer, the CAISO, and the Participating TO;

**9.7.2.5** The Parties shall cooperate and coordinate with each other to the extent necessary in order to restore the Large Generating Facility, Interconnection Facilities, the Participating TO's Transmission System, and the CAISO Controlled Grid to their normal operating state, consistent with system conditions and Good Utility Practice.

**9.7.3 Under-Frequency and Over Frequency Conditions.** The CAISO Controlled Grid is designed to automatically activate a load-shed program as required by the Applicable Reliability Council in the event of an under-frequency system disturbance. The Interconnection Customer shall implement under-frequency and over-frequency protection set points for the Large Generating Facility as required by the Applicable Reliability Council to ensure "ride through" capability. Large Generating Facility response to frequency deviations of pre-determined magnitudes, both under-frequency and over-frequency deviations, shall be studied and coordinated with the Participating TO and CAISO in accordance with Good Utility Practice. The term "ride through" as used herein shall mean the ability of a Generating Facility to stay connected to and synchronized with the CAISO Controlled Grid during system disturbances within a range of under-frequency and over-frequency conditions, in accordance with Good Utility Practice.

**9.7.4 System Protection and Other Control Requirements.**

**9.7.4.1 System Protection Facilities.** The Interconnection Customer shall, at its expense, install, operate and maintain System Protection Facilities as a part of the Large Generating Facility or the Interconnection Customer's Interconnection Facilities. The Participating TO shall install at the Interconnection Customer's expense any System Protection Facilities that may be required on the Participating TO's Interconnection Facilities or the Participating TO's Transmission System as a result of the interconnection of the Large Generating Facility and the Interconnection Customer's Interconnection Facilities.

**9.7.4.2** The Participating TO's and Interconnection Customer's protection facilities shall be designed and coordinated with other systems in accordance with Applicable Reliability Council criteria and Good Utility Practice.

**9.7.4.3** The Participating TO and Interconnection Customer shall each be responsible for protection of its facilities consistent with Good Utility Practice.

**9.7.4.4** The Participating TO's and Interconnection Customer's protective relay design shall incorporate the necessary test switches to perform the tests required in Article 6. The required test switches will be placed such that they allow operation of lockout relays while preventing breaker failure schemes from operating and causing unnecessary breaker operations and/or the tripping of the Interconnection Customer's Electric Generating Units.

**9.7.4.5** The Participating TO and Interconnection Customer will test, operate and maintain System Protection Facilities in accordance with Good Utility Practice and, if applicable, the requirements of the Participating TO's Interconnection Handbook.

**9.7.4.6** Prior to the in-service date, and again prior to the Commercial Operation Date, the Participating TO and Interconnection Customer or their agents shall perform a complete calibration test and functional trip test of the System Protection Facilities. At intervals suggested by Good Utility Practice, the standards and procedures of the Participating TO, including, if applicable, the requirements of the Participating TO's Interconnection Handbook, and following any apparent malfunction of the System Protection Facilities, each Party shall perform both calibration and functional trip tests of its System Protection Facilities. These tests do not require the tripping of any in-service generation unit. These tests do, however, require that all protective relays and lockout contacts be activated.

**9.7.5 Requirements for Protection.** In compliance with Good Utility Practice and, if applicable, the requirements of the Participating TO's Interconnection Handbook, the Interconnection Customer shall provide, install, own, and maintain relays, circuit breakers and all other devices necessary to remove any fault contribution of the Large Generating Facility to any short circuit occurring on the Participating TO's Transmission System not otherwise isolated by the Participating TO's equipment, such that the removal of the fault contribution shall be coordinated with the protective requirements of the Participating TO's Transmission System. Such protective equipment shall include, without limitation, a disconnecting device with fault current-interrupting capability located between the Large Generating Facility and the Participating TO's Transmission System at a site selected upon mutual agreement (not to be unreasonably withheld, conditioned or delayed) of the Parties. The Interconnection Customer shall be responsible for protection of the Large Generating Facility and the Interconnection Customer's other equipment from such conditions as negative sequence currents, over- or under-frequency, sudden load rejection, over- or under-voltage, and generator loss-of-field. The Interconnection Customer shall be solely responsible to disconnect the Large Generating Facility and the Interconnection Customer's other equipment if conditions on the CAISO Controlled Grid could adversely affect the Large Generating Facility.

**9.7.6 Power Quality.** Neither the Participating TO's nor the Interconnection Customer's facilities shall cause excessive voltage flicker nor introduce excessive distortion to the sinusoidal voltage or current waves as defined by ANSI Standard C84.1-1989, in accordance with IEEE Standard 519, any applicable superseding electric industry standard, or any alternative Applicable Reliability Council standard. In the event of a conflict between ANSI Standard C84.1-1989, any applicable superseding electric industry standard, or any alternative Applicable Reliability Council standard, the alternative Applicable Reliability Council standard shall control.

**9.8 Switching and Tagging Rules.** Each Party shall provide the other Parties a copy of its switching and tagging rules that are applicable to the other Parties' activities. Such switching and tagging rules shall be developed on a non-discriminatory basis. The Parties shall comply with applicable switching and tagging rules, as amended from time to time, in obtaining clearances for work or for switching operations on equipment.

**9.9 Use of Interconnection Facilities by Third Parties.**

**9.9.1 Purpose of Interconnection Facilities.** Except as may be required by Applicable Laws and Regulations, or as otherwise agreed to among the Parties, the Interconnection Facilities shall be constructed for the sole purpose of interconnecting the Large Generating Facility to the Participating TO's Transmission System and shall be used for no other purpose.

**9.9.2 Third Party Users.** If required by Applicable Laws and Regulations or if the Parties mutually agree, such agreement not to be unreasonably withheld, to allow one or more third parties to use the Participating TO's Interconnection Facilities, or any part thereof, the Interconnection Customer will be entitled to compensation for the capital expenses it incurred in connection with the Interconnection Facilities based upon the pro rata use of the Interconnection Facilities by the Participating TO, all third party users, and the Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually-agreed upon methodology. In addition, cost responsibility for ongoing costs, including operation and maintenance costs associated with the Interconnection Facilities, will be allocated between the Interconnection Customer and any third party users based upon the pro rata use of the Interconnection Facilities by the Participating TO, all third party users, and the Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually agreed upon methodology. If the issue of such compensation or allocation cannot be resolved through such negotiations, it shall be submitted to FERC for resolution.

**9.10 Disturbance Analysis Data Exchange.** The Parties will cooperate with one another in the analysis of disturbances to either the Large Generating Facility or the CAISO Controlled Grid by gathering and providing access to any information relating to any disturbance, including information from oscillography, protective relay targets, breaker operations and sequence of events records, and any disturbance information required by Good Utility Practice.

**Article 10. Maintenance**

**10.1 Participating TO Obligations.** The Participating TO shall maintain the Participating TO's Transmission System and the Participating TO's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA.

**10.2 Interconnection Customer Obligations.** The Interconnection Customer shall maintain the Large Generating Facility and the Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA.

**10.3 Coordination.** The Parties shall confer regularly to coordinate the planning, scheduling and performance of preventive and corrective maintenance on the Large Generating Facility and the Interconnection Facilities.

**10.4 Secondary Systems.** The Participating TO and Interconnection Customer shall cooperate with the other Parties in the inspection, maintenance, and testing of control or power circuits that operate below 600 volts, AC or DC, including, but not limited to, any hardware, control or protective devices, cables, conductors, electric raceways, secondary equipment panels, transducers, batteries, chargers, and voltage and current transformers that directly affect the operation of a Party's facilities and equipment which may reasonably be expected to impact the other Parties. Each Party shall provide advance notice to the other Parties before undertaking any work on such circuits, especially on electrical circuits involving circuit breaker trip and close contacts, current transformers, or potential transformers.

**10.5 Operating and Maintenance Expenses.** Subject to the provisions herein addressing the use of facilities by others, and except for operations and maintenance expenses associated with modifications made for providing interconnection or transmission service to a third party and such third party pays for such expenses, the Interconnection Customer shall be responsible for all

reasonable expenses including overheads, associated with: (1) owning, operating, maintaining, repairing, and replacing the Interconnection Customer's Interconnection Facilities; and (2) operation, maintenance, repair and replacement of the Participating TO's Interconnection Facilities

**Article 11. Performance Obligation**

**11.1 Interconnection Customer's Interconnection Facilities.** The Interconnection Customer shall design, procure, construct, install, own and/or control the Interconnection Customer's Interconnection Facilities described in Appendix A at its sole expense.

**11.2 Participating TO's Interconnection Facilities.** The Participating TO shall design, procure, construct, install, own and/or control the Participating TO's Interconnection Facilities described in Appendix A at the sole expense of the Interconnection Customer. Unless the Participating TO elects to fund the capital for the Participating TO's Interconnection Facilities, they shall be solely funded by the Interconnection Customer.

**11.3 Network Upgrades and Distribution Upgrades.** The Participating TO shall design, procure, construct, install, and own the Network Upgrades and Distribution Upgrades described in Appendix A. The Interconnection Customer shall be responsible for all costs related to Distribution Upgrades. Unless the Participating TO elects to fund the capital for the Distribution Upgrades and Network Upgrades, they shall be solely funded by the Interconnection Customer.

**11.4 Transmission Credits.** No later than thirty (30) days prior to the Commercial Operation Date, the Interconnection Customer may make a one-time election by written notice to the CAISO and the Participating TO to (a) receive Congestion Revenue Rights as defined in and as available under the CAISO Tariff at the time of the election in accordance with the CAISO Tariff, in lieu of a refund of the cost of Network Upgrades in accordance with Article 11.4.1, and/or (b) declare all or a part of a refund of the cost of Network Upgrades entitled to the Interconnection Customer in accordance with Article 11.4.1.

**11.4.1 Repayment of Amounts Advanced for Network Upgrades.** Upon the Commercial Operation Date, the Interconnection Customer shall be entitled to a repayment, equal to the total amount paid to the Participating TO for the cost of Network Upgrades. Such amount shall include any tax gross-up or other tax-related payments associated with Network Upgrades not refunded to the Interconnection Customer pursuant to Article 5.17.8 or otherwise, and shall be paid to the Interconnection Customer by the Participating TO on a dollar-for-dollar basis either through (1) direct payments made on a levelized basis over the five-year period commencing on the Commercial Operation Date; or (2) any alternative payment schedule that is mutually agreeable to the Interconnection Customer and Participating TO, provided that such amount is paid within five (5) years from the Commercial Operation Date. Notwithstanding the foregoing, if this LGIA terminates within five (5) years from the Commercial Operation Date, the Participating TO's obligation to pay refunds to the Interconnection Customer shall cease as of the date of termination. Any repayment shall include interest calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date of any payment for Network Upgrades through the date on which the Interconnection Customer receives a repayment of such payment. Interest shall continue to accrue on the repayment obligation so long as this LGIA is in effect. The Interconnection Customer may assign such repayment rights to any person.

If the Large Generating Facility fails to achieve commercial operation, but it or another Generating Facility is later constructed and makes use of the Network Upgrades, the Participating TO shall at that time reimburse Interconnection Customer for the amounts advanced for the Network Upgrades. Before any such reimbursement can occur, the Interconnection Customer, or the entity that ultimately constructs the Generating Facility, if different, is responsible for identifying the entity to which reimbursement must be made.

**11.4.2 Special Provisions for Affected Systems.** The Interconnection Customer shall enter into an agreement with the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid, as applicable, in accordance with the LGIP. Such agreement shall specify the terms governing payments to be made by the Interconnection Customer to the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid as well as the repayment by the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid. In no event shall the Participating TO be responsible for the repayment for any facilities that are not part of the Participating TO's Transmission System.

**11.4.3** Notwithstanding any other provision of this LGIA, nothing herein shall be construed as relinquishing or foreclosing any rights, including but not limited to firm transmission rights, capacity rights, Congestion Revenue Rights, or transmission credits, that the Interconnection Customer shall be entitled to, now or in the future under any other agreement or tariff as a result of, or otherwise associated with, the transmission capacity, if any, created by the Network Upgrades, including the right to obtain cash reimbursements or transmission credits for transmission service that is not associated with the Large Generating Facility.

**11.5 Provision of Security.** At least thirty (30) Calendar Days prior to the commencement of the procurement, installation, or construction of a discrete portion of a Participating TO's Interconnection Facilities, Network Upgrades, or Distribution Upgrades, the Interconnection Customer shall provide the Participating TO, at the Interconnection Customer's option, a guarantee, a surety bond, letter of credit or other form of security that is reasonably acceptable to the Participating TO and is consistent with the Uniform Commercial Code of the jurisdiction identified in Article 14.2.1. Such security for payment shall be in an amount sufficient to cover the costs for constructing, procuring and installing the applicable portion of the Participating TO's Interconnection Facilities, Network Upgrades, or Distribution Upgrades. Such security shall be reduced on a dollar-for-dollar basis for payments made to the Participating TO for these purposes.

In addition:

**11.5.1** The guarantee must be made by an entity that meets the creditworthiness requirements of the Participating TO, and contain terms and conditions that guarantee payment of any amount that may be due from the Interconnection Customer, up to an agreed-to maximum amount.

**11.5.2** The letter of credit must be issued by a financial institution reasonably acceptable to the Participating TO and must specify a reasonable expiration date.

**11.5.3** The surety bond must be issued by an insurer reasonably acceptable to the Participating TO and must specify a reasonable expiration date.

**11.6 Interconnection Customer Compensation.** If the CAISO requests or directs the Interconnection Customer to provide a service pursuant to Articles 9.6.3 (Payment for Reactive Power) or 13.5.1 of this LGIA, the CAISO shall compensate the Interconnection Customer in accordance with the CAISO Tariff.

**11.6.1 Interconnection Customer Compensation for Actions During Emergency Condition.** The CAISO shall compensate the Interconnection Customer in accordance with the CAISO Tariff for its provision of real and reactive power and other Emergency Condition services that the Interconnection Customer provides to support the CAISO Controlled Grid during an Emergency Condition in accordance with Article 11.6.

## Article 12. Invoice

**12.1 General.** The Participating TO shall submit to the Interconnection Customer, on a monthly basis, invoices of amounts due pursuant to this LGIA for the preceding month. Each invoice shall state the month to which the invoice applies and fully describe the services and equipment provided. The Parties may discharge mutual debts and payment obligations due and owing to each other on the same date through netting, in which case all amounts a Party owes to the other Party under this LGIA, including interest payments or credits, shall be netted so that only the net amount remaining due shall be paid by the owing Party. Notwithstanding the foregoing, any invoices between the CAISO and another Party shall be submitted and paid in accordance with the CAISO Tariff.

**12.2 Final Invoice.** As soon as reasonably practicable, but within twelve months after completion of the construction of the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades, the Participating TO shall provide an invoice of the final cost of the construction of the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades, and shall set forth such costs in sufficient detail to enable the Interconnection Customer to compare the actual costs with the estimates and to ascertain deviations, if any, from the cost estimates. The Participating TO shall refund to the Interconnection Customer any amount by which the actual payment by the Interconnection Customer for estimated costs exceeds the actual costs of construction within thirty (30) Calendar Days of the issuance of such final construction invoice; or, in the event the actual costs of construction exceed the Interconnection Customer's actual payment for estimated costs, then the Interconnection Customer shall pay to the Participating TO any amount by which the actual costs of construction exceed the actual payment by the Interconnection Customer for estimated costs within thirty (30) Calendar Days of the issuance of such final construction invoice.

**12.3 Payment.** Invoices shall be rendered to the Interconnection Customer at the address specified in Appendix F. The Interconnection Customer shall pay, or Participating TO shall refund, the amounts due within thirty (30) Calendar Days of the Interconnection Customer's receipt of the invoice. All payments shall be made in immediately available funds payable to the Interconnection Customer or Participating TO, or by wire transfer to a bank named and account designated by the invoicing Interconnection Customer or Participating TO. Payment of invoices by any Party will not constitute a waiver of any rights or claims any Party may have under this LGIA.

**12.4 Disputes.** In the event of a billing dispute between the Interconnection Customer and the Participating TO, the Participating TO and the CAISO shall continue to provide Interconnection Service under this LGIA as long as the Interconnection Customer: (i) continues to make all payments not in dispute; and (ii) pays to the Participating TO or into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If the Interconnection Customer fails to meet these two requirements for continuation of service, then the Participating TO may provide notice to the Interconnection Customer of a Default pursuant to Article 17. Within thirty (30) Calendar Days after the resolution of the dispute, the Party that owes money to the other Party shall pay the amount due with interest calculated in accordance with the methodology set forth in FERC's Regulations at 18 C.F.R. § 35.19a(a)(2)(iii). Notwithstanding the foregoing, any billing dispute between the CAISO and another Party shall be resolved in accordance with the provisions of Article 27 of this LGIA.

## Article 13. Emergencies

**13.1 [Reserved]**

**13.2 Obligations.** Each Party shall comply with the Emergency Condition procedures of the CAISO, NERC, the Applicable Reliability Council, Applicable Laws and Regulations, and any emergency procedures set forth in this LGIA.

**13.3 Notice.** The Participating TO or the CAISO shall notify the Interconnection Customer promptly when it becomes aware of an Emergency Condition that affects the Participating TO's Interconnection Facilities or Distribution System or the CAISO Controlled Grid, respectively, that may reasonably be expected to affect the Interconnection Customer's operation of the Large Generating Facility or the Interconnection Customer's Interconnection Facilities. The Interconnection Customer shall notify the Participating TO and the CAISO promptly when it becomes aware of an Emergency Condition that affects the Large Generating Facility or the Interconnection Customer's Interconnection Facilities that may reasonably be expected to affect the CAISO Controlled Grid or the Participating TO's Interconnection Facilities. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of the Interconnection Customer's or Participating TO's facilities and operations, its anticipated duration and the corrective action taken and/or to be taken. The initial notice shall be followed as soon as practicable with written notice, if requested by a Party, which may be provided by electronic mail or facsimile, or in the case of the CAISO may be publicly posted on the CAISO's internet web site.

**13.4 Immediate Action.** Unless, in the Interconnection Customer's reasonable judgment, immediate action is required, the Interconnection Customer shall obtain the consent of the CAISO and the Participating TO, such consent to not be unreasonably withheld, prior to performing any manual switching operations at the Large Generating Facility or the Interconnection Customer's Interconnection Facilities in response to an Emergency Condition declared by the Participating TO or CAISO or in response to any other emergency condition.

**13.5 CAISO and Participating TO Authority.**

**13.5.1 General.** The CAISO and Participating TO may take whatever actions or inactions, including issuance of dispatch instructions, with regard to the CAISO Controlled Grid or the Participating TO's Interconnection Facilities or Distribution System they deem necessary during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the CAISO Controlled Grid or the Participating TO's Interconnection Facilities or Distribution System, (iii) limit or prevent damage, and (iv) expedite restoration of service.

The Participating TO and the CAISO shall use Reasonable Efforts to minimize the effect of such actions or inactions on the Large Generating Facility or the Interconnection Customer's Interconnection Facilities. The Participating TO or the CAISO may, on the basis of technical considerations, require the Large Generating Facility to mitigate an Emergency Condition by taking actions necessary and limited in scope to remedy the Emergency Condition, including, but not limited to, directing the Interconnection Customer to shut-down, start-up, increase or decrease the real or reactive power output of the Large Generating Facility; implementing a reduction or disconnection pursuant to Article 13.5.2; directing the Interconnection Customer to assist with black start (if available) or restoration efforts; or altering the outage schedules of the Large Generating Facility and the Interconnection Customer's Interconnection Facilities. Interconnection Customer shall comply with all of the CAISO's Dispatch Instructions and Operating Instructions and Participating TO's dispatch instructions or Operating Instructions concerning Large Generating Facility real power and reactive power output within the manufacturer's design limitations of the Large Generating Facility's equipment that is in service and physically available for operation at the time, in compliance with Applicable Laws and Regulations.

**13.5.2 Reduction and Disconnection.** The Participating TO or the CAISO may reduce Interconnection Service or disconnect the Large Generating Facility or the Interconnection Customer's Interconnection Facilities when such reduction or disconnection is necessary under Good Utility Practice due to Emergency Conditions. These rights are separate and distinct from any right of curtailment of the CAISO pursuant to the CAISO Tariff. When the CAISO or Participating TO can schedule the reduction or disconnection in advance, the CAISO or Participating TO shall notify the Interconnection Customer of the reasons, timing and expected duration of the reduction or

disconnection. The CAISO or Participating TO shall coordinate with the Interconnection Customer using Good Utility Practice to schedule the reduction or disconnection during periods of least impact to the Interconnection Customer and the CAISO and Participating TO. Any reduction or disconnection shall continue only for so long as reasonably necessary under Good Utility Practice. The Parties shall cooperate with each other to restore the Large Generating Facility, the Interconnection Facilities, and the CAISO Controlled Grid to their normal operating state as soon as practicable consistent with Good Utility Practice.

**13.6 Interconnection Customer Authority.** Consistent with Good Utility Practice, this LGIA, and the CAISO Tariff, the Interconnection Customer may take actions or inactions with regard to the Large Generating Facility or the Interconnection Customer's Interconnection Facilities during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the Large Generating Facility or the Interconnection Customer's Interconnection Facilities, (iii) limit or prevent damage, and (iv) expedite restoration of service. Interconnection Customer shall use Reasonable Efforts to minimize the effect of such actions or inactions on the CAISO Controlled Grid and the Participating TO's Interconnection Facilities. The CAISO and Participating TO shall use Reasonable Efforts to assist Interconnection Customer in such actions.

**13.7 Limited Liability.** Except as otherwise provided in Article 11.6.1 of this LGIA, no Party shall be liable to any other Party for any action it takes in responding to an Emergency Condition so long as such action is made in good faith and is consistent with Good Utility Practice.

## Article 14. Regulatory Requirements

**14.1 Regulatory Requirements.** Each Party's obligations under this LGIA shall be subject to its receipt of any required approval or certificate from one or more Governmental Authorities in the form and substance satisfactory to the applying Party, or the Party making any required filings with, or providing notice to, such Governmental Authorities, and the expiration of any time period associated therewith. Each Party shall in good faith seek and use its Reasonable Efforts to obtain such other approvals. Nothing in this LGIA shall require the Interconnection Customer to take any action that could result in its inability to obtain, or its loss of, status or exemption under the Federal Power Act or the Public Utility Holding Company Act of 1935, as amended, or the Public Utility Regulatory Policies Act of 1978, or the Energy Policy Act of 2005.

**14.2 Governing Law.**

**14.2.1** The validity, interpretation and performance of this LGIA and each of its provisions shall be governed by the laws of the state where the Point of Interconnection is located, without regard to its conflicts of law principles.

**14.2.2** This LGIA is subject to all Applicable Laws and Regulations.

**14.2.3** Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, rules, or regulations of a Governmental Authority.

## Article 15. Notices

**15.1 General.** Unless otherwise provided in this LGIA, any notice, demand or request required or permitted to be given by a Party to another and any instrument required or permitted to be tendered or delivered by a Party in writing to another shall be effective when delivered and may be so given, tendered or delivered, by recognized national courier, or by depositing the same with the United States Postal Service with postage prepaid, for delivery by certified or registered mail, addressed to the Party, or personally delivered to the Party, at the address set out in Appendix F, Addresses for Delivery of Notices and Billings.

A Party must update the information in Appendix F as information changes. A Party may change the notice information in this LGIA by giving five (5) Business Days written notice prior to the effective date of the change. Such changes shall not constitute an amendment to this LGIA.

**15.2 Billings and Payments.** Billings and payments shall be sent to the addresses set out in Appendix F.

**15.3 Alternative Forms of Notice.** Any notice or request required or permitted to be given by a Party to another and not required by this LGIA to be given in writing may be so given by telephone, facsimile or e-mail to the telephone numbers and e-mail addresses set out in Appendix F.

**15.4 Operations and Maintenance Notice.** Each Party shall notify the other Parties in writing of the identity of the person(s) that it designates as the point(s) of contact with respect to the implementation of Articles 9 and 10.

## Article 16. Force Majeure

### 16.1 Force Majeure.

**16.1.1** Economic hardship is not considered a Force Majeure event.

**16.1.2** No Party shall be considered to be in Default with respect to any obligation hereunder, (including obligations under Article 4), other than the obligation to pay money when due, if prevented from fulfilling such obligation by Force Majeure. A Party unable to fulfill any obligation hereunder (other than an obligation to pay money when due) by reason of Force Majeure shall give notice and the full particulars of such Force Majeure to the other Party in writing or by telephone as soon as reasonably possible after the occurrence of the cause relied upon. Telephone notices given pursuant to this Article shall be confirmed in writing as soon as reasonably possible and shall specifically state full particulars of the Force Majeure, the time and date when the Force Majeure occurred and when the Force Majeure is reasonably expected to cease. The Party affected shall exercise due diligence to remove such disability with reasonable dispatch, but shall not be required to accede or agree to any provision not satisfactory to it in order to settle and terminate a strike or other labor disturbance.

## Article 17. Default

### 17.1 Default

**17.1.1 General.** No Default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of Force Majeure as defined in this LGIA or the result of an act or omission of the other Party. Upon a Breach, the affected non-Breaching Party(ies) shall give written notice of such Breach to the Breaching Party. Except as provided in Article 17.1.2, the Breaching Party shall have thirty (30) Calendar Days from receipt of the Default notice within which to cure such Breach; provided however, if such Breach is not capable of cure within thirty (30) Calendar Days, the Breaching Party shall commence such cure within thirty (30) Calendar Days after notice and continuously and diligently complete such cure within ninety (90) Calendar Days from receipt of the Default notice; and, if cured within such time, the Breach specified in such notice shall cease to exist.

**17.1.2 Right to Terminate.** If a Breach is not cured as provided in this Article, or if a Breach is not capable of being cured within the period provided for herein, the affected non-Breaching Party(ies) shall have the right to declare a Default and terminate this LGIA by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not such Party(ies) terminates this LGIA, to recover from the Breaching Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this Article will survive termination of this LGIA.

## Article 18. Indemnity, Consequential Damages, and Insurance

**18.1 Indemnity.** Each Party shall at all times indemnify, defend, and hold the other Parties harmless from, any and all Losses arising out of or resulting from another Party's action or inactions of its obligations under this LGIA on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the Indemnified Party.

**18.1.1 Indemnified Party.** If an Indemnified Party is entitled to indemnification under this Article 18 as a result of a claim by a third party, and the Indemnifying Party fails, after notice and reasonable opportunity to proceed under Article 18.1, to assume the defense of such claim, such Indemnified Party may at the expense of the Indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

**18.1.2 Indemnifying Party.** If an Indemnifying Party is obligated to indemnify and hold any Indemnified Party harmless under this Article 18, the amount owing to the Indemnified Party shall be the amount of such Indemnified Party's actual Loss, net of any insurance or other recovery.

**18.1.3 Indemnity Procedures.** Promptly after receipt by an Indemnified Party of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in Article 18.1 may apply, the Indemnified Party shall notify the Indemnifying Party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying Party.

The Indemnifying Party shall have the right to assume the defense thereof with counsel designated by such Indemnifying Party and reasonably satisfactory to the Indemnified Party. If the defendants in any such action include one or more Indemnified Parties and the Indemnifying Party and if the Indemnified Party reasonably concludes that there may be legal defenses available to it and/or other Indemnified Parties which are different from or additional to those available to the Indemnifying Party, the Indemnified Party shall have the right to select separate counsel to assert such legal defenses and to otherwise participate in the defense of such action on its own behalf. In such instances, the Indemnifying Party shall only be required to pay the fees and expenses of one additional attorney to represent an Indemnified Party or Indemnified Parties having such differing or additional legal defenses.

The Indemnified Party shall be entitled, at its expense, to participate in any such action, suit or proceeding, the defense of which has been assumed by the Indemnifying Party. Notwithstanding the foregoing, the Indemnifying Party (i) shall not be entitled to assume and control the defense of any such action, suit or proceedings if and to the extent that, in the opinion of the Indemnified Party and its counsel, such action, suit or proceeding involves the potential imposition of criminal liability on the Indemnified Party, or there exists a conflict or adversity of interest between the Indemnified Party and the Indemnifying Party, in such event the Indemnifying Party shall pay the reasonable expenses of the Indemnified Party, and (ii) shall not settle or consent to the entry of any judgment in any action, suit or proceeding without the consent of the Indemnified Party, which shall not be unreasonably withheld, conditioned or delayed.

**18.2 Consequential Damages.** Other than the liquidated damages heretofore described in Article 5.3, in no event shall any Party be liable under any provision of this LGIA for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to another Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

**18.3 Insurance.** Each Party shall, at its own expense, maintain in force throughout the period of this LGIA, and until released by the other Parties, the following minimum insurance coverages, with insurers rated no less than A- (with a minimum size rating of VII) by Bests' Insurance Guide and Key Ratings and authorized to do business in the state where the Point of Interconnection is located, except in the case of the CAISO, the State of California:

**18.3.1** Workers' Compensation and Employers' Liability Insurance providing statutory benefits in accordance with the laws and regulations of the state in which the Point of Interconnection is located, except in the case of the CAISO, the State of California.

**18.3.2** Commercial General Liability Insurance including coverage for premises and operations, bodily injury (including death), personal injury, property damage, products and completed operations coverage, coverage for explosion, collapse and underground hazards, independent contractors coverage, and (i) liability of Participating TO and the Interconnection Customer that would be imposed without the LGIA, or (ii) liability assumed by the Participating TO and the Interconnection Customer in a contract or agreement that is an "insured contract" under commercial general liability insurance policy. Such insurance shall include no cross liability exclusions or separation of insured clause endorsement exclusions, with minimum limits of One Million Dollars ($1,000,000) per occurrence/One Million Dollars ($1,000,000) aggregate.

**18.3.3** Business Automobile Liability Insurance for coverage of owned and non-owned and hired vehicles, trailers or semi-trailers designed for travel on public roads, with a minimum, combined single limit of One Million Dollars ($1,000,000) per occurrence for bodily injury, including death, and property damage.

**18.3.4** Excess Liability Insurance over and above the Employer's Liability Commercial General Liability and Business Automobile Liability Insurance coverage, with a minimum limit of Twenty Million Dollars ($20,000,000) per occurrence/Twenty Million Dollars ($20,000,000) aggregate.

**18.3.5** The Commercial General Liability Insurance, Business Automobile Insurance and Excess Liability Insurance policies shall include the other Parties, their parents, their subsidiaries, respective directors, officers, agents, servants and employees ("Other Party Group"), and the CAISO as additional insured. All policies shall contain provisions whereby the insurers waive all rights of subrogation in accordance with the provisions of this LGIA against the Other Party Group.

**18.3.6** The Commercial General Liability Insurance, Business Automobile Liability Insurance and Excess Liability Insurance policies shall contain provisions that specify that the policies are primary and non-contributory. Each Party shall be responsible for its respective deductibles or self-insured retentions.

**18.3.7** The Commercial General Liability Insurance, Business Automobile Liability Insurance and Excess Liability Insurance policies, if written on a Claims First Made Basis, shall be maintained in full force and effect for two (2) years after termination of this LGIA, which coverage may be in the form of extended reporting period coverage if agreed by the Parties.

**18.3.8** [Not Used.]

**18.3.9** Thirty (30) Calendar Days prior to the start of any work at the construction site related to Interconnection Facilities or Generating Facility under this LGIA, and as soon as practicable after the end of each fiscal year or at the renewal of the insurance policy and in any event within ninety (90) Calendar Days thereafter, the Participating TO and the Interconnection Customer shall provide a certificate of insurance for all insurance required in this LGIA, executed by each insurer or by an authorized representative of each insurer.

**18.3.10** Notwithstanding the foregoing, each Party may self-insure to meet the minimum insurance requirements of Articles 18.3.2 through 18.3.8 to the extent it maintains a self-insurance program; provided that, such Party's senior unsecured debt or issuer rating is BBB-, or better, as rated by Standard & Poor's and that its self-insurance program meets the minimum insurance requirements of Articles 18.3.2 through 18.3.8. For any period of time that a Party's senior unsecured debt rating and issuer rating are both unrated by Standard & Poor's or are both rated at less than BBB- by Standard & Poor's, such Party shall comply with the insurance requirements applicable to it under Articles 18.3.2 through 18.3.9. In the event that a Party is permitted to self-insure pursuant to this Article 18.3.10, it shall notify the other Parties that it meets the requirements to self-insure and that its self-insurance program meets the minimum insurance requirements in a manner consistent with that specified in Article 18.3.9.

**18.3.11** The Parties agree to report to each other in writing as soon as practical all accidents or occurrences resulting in injuries to any person, including death, and any property damage greater than $25,000, including within the scope of coverage of such insurance whether or not such coverage is sought.

## Article 19. Assignment

**19.1 Assignment.** This LGIA may be assigned by a Party only with the written consent of the other Parties; provided that a Party may assign this LGIA without the consent of the other Parties to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this LGIA; and provided further that the Interconnection Customer shall have the right to assign this LGIA, without the consent of the CAISO or Participating TO, for collateral security purposes to aid in providing financing for the Large Generating Facility, provided that the Interconnection Customer will promptly notify the CAISO and Participating TO of any such assignment. Any financing arrangement entered into by the Interconnection Customer pursuant to this Article will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify the CAISO and Participating TO of the date and particulars of any such exercise of assignment right(s), including providing the CAISO and Participating TO with proof that it meets the requirements of Articles 11.5 and 18.3. Any attempted assignment that violates this Article is void and ineffective. Any assignment under this LGIA shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

## Article 20. Severability

**20.1 Severability.** If any provision in this LGIA is finally determined to be invalid, void or unenforceable by any court or other Governmental Authority having jurisdiction, such determination shall not invalidate, void or make unenforceable any other provision, agreement or covenant of this LGIA; provided that if the Interconnection Customer (or any third party, but only if such third party is not acting at the direction of the Participating TO or CAISO) seeks and obtains such a final determination with respect to any provision of the Alternate Option (Article 5.1.2), or the Negotiated Option (Article 5.1.4), then none of the provisions of Article 5.1.2 or 5.1.4 shall thereafter have any force or effect and the Parties' rights and obligations shall be governed solely by the Standard Option (Article 5.1.1).

## Article 21. Comparability

**21.1 Comparability.** The Parties will comply with all applicable comparability and code of conduct laws, rules and regulations, as amended from time to time.

## Article 22. Confidentiality

**22.1 Confidentiality.** Confidential Information shall include, without limitation, all information relating to a Party's technology, research and development, business affairs, and pricing, and any information supplied by any of the Parties to the other Parties prior to the execution of this LGIA.

Information is Confidential Information only if it is clearly designated or marked in writing as confidential on the face of the document, or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Parties receiving the information that the information is confidential.

If requested by any Party, the other Parties shall provide in writing, the basis for asserting that the information referred to in this Article 22 warrants confidential treatment, and the requesting Party may disclose such writing to the appropriate Governmental Authority. Each Party shall be responsible for the costs associated with affording confidential treatment to its information.

**22.1.1 Term.** During the term of this LGIA, and for a period of three (3) years after the expiration or termination of this LGIA, except as otherwise provided in this Article 22, each Party shall hold in confidence and shall not disclose to any person Confidential Information.

**22.1.2 Scope.** Confidential Information shall not include information that the receiving Party can demonstrate: (1) is generally available to the public other than as a result of a disclosure by the receiving Party; (2) was in the lawful possession of the receiving Party on a non-confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a third party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the disclosing Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the disclosing Party; (5) is, or becomes, publicly known, through no wrongful act or omission of the receiving Party or Breach of this LGIA; or (6) is required, in accordance with Article 22.1.7 of this LGIA, Order of Disclosure, to be disclosed by any Governmental Authority or is otherwise required to be disclosed by law or subpoena, or is necessary in any legal proceeding establishing rights and obligations under this LGIA. Information designated as Confidential Information will no longer be deemed confidential if the Party that designated the information as confidential notifies the other Parties that it no longer is confidential.

**22.1.3 Release of Confidential Information.** No Party shall release or disclose Confidential Information to any other person, except to its employees, consultants, Affiliates (limited by the Standards of Conduct requirements set forth in Part 358 of FERC's Regulations, 18 C.F.R. 358), subcontractors, or to parties who may be or considering providing financing to or equity participation with the Interconnection Customer, or to potential purchasers or assignees of the Interconnection Customer, on a need-to-know basis in connection with this LGIA, unless such person has first been advised of the confidentiality provisions of this Article 22 and has agreed to comply with such provisions. Notwithstanding the foregoing, a Party providing Confidential Information to any person shall remain primarily responsible for any release of Confidential Information in contravention of this Article 22.

**22.1.4 Rights.** Each Party retains all rights, title, and interest in the Confidential Information that each Party discloses to the other Parties. The disclosure by each Party to the other Parties of Confidential Information shall not be deemed a waiver by a Party or any other person or entity of the right to protect the Confidential Information from public disclosure.

**22.1.5 No Warranties.** The mere fact that a Party has provided Confidential Information does not constitute a warranty or representation as to its accuracy or completeness. In addition, by supplying Confidential Information, no Party obligates itself to provide any particular information or Confidential Information to the other Parties nor to enter into any further agreements or

proceed with any other relationship or joint venture.

**22.1.6 Standard of Care.** Each Party shall use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from unauthorized disclosure, publication or dissemination. Each Party may use Confidential Information solely to fulfill its obligations to the other Parties under this LGIA or its regulatory requirements.

**22.1.7 Order of Disclosure.** If a court or a Government Authority or entity with the right, power, and apparent authority to do so requests or requires any Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party shall provide the other Parties with prompt notice of such request(s) or requirement(s) so that the other Parties may seek an appropriate protective order or waive compliance with the terms of this LGIA. Notwithstanding the absence of a protective order or waiver, the Party may disclose such Confidential Information which, in the opinion of its counsel, the Party is legally compelled to disclose. Each Party will use Reasonable Efforts to obtain reliable assurance that confidential treatment will be accorded any Confidential Information so furnished.

**22.1.8 Termination of Agreement.** Upon termination of this LGIA for any reason, each Party shall, within ten (10) Calendar Days of receipt of a written request from another Party, use Reasonable Efforts to destroy, erase, or delete (with such destruction, erasure, and deletion certified in writing to the other Party) or return to the other Party, without retaining copies thereof, any and all written or electronic Confidential Information received from the other Party.

**22.1.9 Remedies.** The Parties agree that monetary damages would be inadequate to compensate a Party for another Party's Breach of its obligations under this Article 22. Each Party accordingly agrees that the other Parties shall be entitled to equitable relief, by way of injunction or otherwise, if the first Party Breaches or threatens to Breach its obligations under this Article 22, which equitable relief shall be granted without bond or proof of damages, and the receiving Party shall not plead in defense that there would be an adequate remedy at law. Such remedy shall not be deemed an exclusive remedy for the Breach of this Article 22, but shall be in addition to all other remedies available at law or in equity. The Parties further acknowledge and agree that the covenants contained herein are necessary for the protection of legitimate business interests and are reasonable in scope. No Party, however, shall be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with this Article 22.

**22.1.10 Disclosure to FERC, its Staff, or a State.** Notwithstanding anything in this Article 22 to the contrary, and pursuant to 18 C.F.R. section 1b.20, if FERC or its staff, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to this LGIA, the Party shall provide the requested information to FERC or its staff, within the time provided for in the request for information. In providing the information to FERC or its staff, the Party must, consistent with 18 C.F.R. section 388.112, request that the information be treated as confidential and non-public by FERC and its staff and that the information be withheld from public disclosure. Parties are prohibited from notifying the other Parties to this LGIA prior to the release of the Confidential Information to FERC or its staff. The Party shall notify the other Parties to the LGIA when it is notified by FERC or its staff that a request to release Confidential Information has been received by FERC, at which time any of the Parties may respond before such information would be made public, pursuant to 18 C.F.R. section 388.112. Requests from a state regulatory body conducting a confidential investigation shall be treated in a similar manner if consistent with the applicable state rules and regulations.

**22.1.11** Subject to the exception in Article 22.1.10, Confidential Information shall not be disclosed by the other Parties to any person not employed or retained by the other Parties, except to the extent disclosure is (i) required by law; (ii) reasonably deemed by the disclosing Party to be required to be disclosed in connection with a dispute between or among the Parties, or the defense of litigation or dispute; (iii) otherwise permitted by consent of the other Parties, such consent not to be unreasonably withheld; or (iv) necessary to fulfill its obligations under this LGIA or as a transmission service provider or a Balancing Authority including disclosing the Confidential Information to an RTO or ISO or to a regional or national reliability organization. The Party asserting confidentiality shall notify the other Parties in writing of the information it claims is confidential. Prior to any disclosures of another Party's Confidential Information under this subparagraph, or if any third party or Governmental Authority makes any request or demand for any of the information described in this subparagraph, the disclosing Party agrees to promptly notify the other Party in writing and agrees to assert confidentiality and cooperate with the other Party in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order or other reasonable measures.

## Article 23. Environmental Releases

**23.1** Each Party shall notify the other Parties, first orally and then in writing, of the release of any Hazardous Substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Large Generating Facility or the Interconnection Facilities, each of which may reasonably be expected to affect the other Parties. The notifying Party shall: (i) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than twenty-four hours after such Party becomes aware of the occurrence; and (ii) promptly furnish to the other Parties copies of any publicly available reports filed with any Governmental Authorities addressing such events.

## Article 24. Information Requests

**24.1 Information Acquisition.** The Participating TO and the Interconnection Customer shall submit specific information regarding the electrical characteristics of their respective facilities to each other as described below and in accordance with Applicable Reliability Standards.

**24.2 Information Submission by Participating TO.** The initial information submission by the Participating TO shall occur no later than one hundred eighty (180) Calendar Days prior to Trial Operation and shall include the Participating TO's Transmission System information necessary to allow the Interconnection Customer to select equipment and meet any system protection and stability requirements, unless otherwise agreed to by the Participating TO and the Interconnection Customer. On a monthly basis the Participating TO shall provide the Interconnection Customer and the CAISO a status report on the construction and installation of the Participating TO's Interconnection Facilities and Network Upgrades, including, but not limited to, the following information: (1) progress to date; (2) a description of the activities since the last report; (3) a description of the action items for the next period; and (4) the delivery status of equipment ordered.

**24.3 Updated Information Submission by Interconnection Customer.** The updated information submission by the Interconnection Customer, including manufacturer information, shall occur no later than one hundred eighty (180) Calendar Days prior to the Trial Operation. The Interconnection Customer shall submit a completed copy of the Electric Generating Unit data requirements contained in Appendix 1 to the LGIP. It shall also include any additional information provided to the Participating TO and the CAISO for the Interconnection Studies. Information in this submission shall be the most current Electric Generating Unit design or expected performance data. Information submitted for stability models shall be compatible with the Participating TO and CAISO standard models. If there is no compatible model, the Interconnection Customer will work with a consultant mutually agreed to by the Parties to develop and supply a standard model and associated information.

If the Interconnection Customer's data is materially different from what was originally provided to the Participating TO and the CAISO for the Interconnection Studies, then the Participating TO and the CAISO will conduct appropriate studies pursuant to the LGIP to determine the impact on the Participating TO's Transmission System and affected portions of the CAISO Controlled Grid based on the actual data submitted pursuant to this Article 24.3. The Interconnection Customer shall not begin Trial Operation until such studies are completed and all other requirements of this LGIA are satisfied.

**24.4 Information Supplementation.** Prior to the Trial Operation date, the Parties shall supplement their information submissions described above in this Article 24 with any and all "as-built" Electric Generating Unit information or "as-tested" performance information that differs from the initial submissions or, alternatively, written confirmation that no such differences exist. The Interconnection Customer shall conduct tests on the Electric Generating Unit as required by Good Utility Practice such as an open circuit "step voltage" test on the Electric Generating Unit to verify proper operation of the Electric Generating Unit's automatic voltage regulator.

Unless otherwise agreed, the test conditions shall include: (1) Electric Generating Unit at synchronous speed; (2) automatic voltage regulator on and in voltage control mode; and (3) a five percent (5 percent) change in Electric Generating Unit terminal voltage initiated by a change in the voltage regulators reference voltage. The Interconnection Customer shall provide validated test recordings showing the responses of Electric Generating Unit terminal and field voltages. In the event that direct recordings of these voltages is impractical, recordings of other voltages or currents that mirror the response of the Electric Generating Unit's terminal or field voltage are acceptable if information necessary to translate these alternate quantities to actual Electric Generating Unit terminal or field voltages is provided. Electric Generating Unit testing shall be conducted and results provided to the Participating TO and the CAISO for each individual Electric Generating Unit in a station.

Subsequent to the Commercial Operation Date, the Interconnection Customer shall provide the Participating TO and the CAISO any information changes due to equipment replacement, repair, or adjustment. The Participating TO shall provide the Interconnection Customer any information changes due to equipment replacement, repair or adjustment in the directly connected substation or any adjacent Participating TO-owned substation that may affect the Interconnection Customer's Interconnection Facilities equipment ratings, protection or operating requirements. The Parties shall provide such information pursuant to Article 5.19.

## Article 25. Information Access and Audit Rights

**25.1 Information Access.** Each Party (the "disclosing Party") shall make available to the other Party information that is in the possession of the disclosing Party and is necessary in order for the other Party to: (i) verify the costs incurred by the disclosing Party for which the other Party is responsible under this LGIA; and (ii) carry out its obligations and responsibilities under this LGIA. The Parties shall not use such information for purposes other than those set forth in this Article 25.1 and to enforce their rights under this LGIA. Nothing in this Article 25 shall obligate the CAISO to make available to a Party any third party information in its possession or control if making such third party information available would violate a CAISO Tariff restriction on the use or disclosure of such third party information.

**25.2 Reporting of Non-Force Majeure Events.** Each Party (the "notifying Party") shall notify the other Parties when the notifying Party becomes aware of its inability to comply with the provisions of this LGIA for a reason other than a Force Majeure event. The Parties agree to cooperate with each other and provide necessary information regarding such inability to comply, including the date, duration, reason for the inability to comply, and corrective actions taken or planned to be taken with respect to such inability to comply. Notwithstanding the foregoing, notification, cooperation or information provided under this Article shall not entitle the Party receiving such notification to allege a cause for anticipatory breach of this LGIA.

**25.3 Audit Rights.** Subject to the requirements of confidentiality under Article 22 of this LGIA, the Parties' audit rights shall include audits of a Party's costs pertaining to such Party's performance or satisfaction of obligations owed to the other Party under this LGIA, calculation of invoiced amounts, the CAISO's efforts to allocate responsibility for the provision of reactive support to the CAISO Controlled Grid, the CAISO's efforts to allocate responsibility for interruption or reduction of generation on the CAISO Controlled Grid, and each such Party's actions in an Emergency Condition.

**25.3.1** The Interconnection Customer and the Participating TO shall each have the right, during normal business hours, and upon prior reasonable notice to the other Party, to audit at its own expense the other Party's accounts and records pertaining to either such Party's performance or either such Party's satisfaction of obligations owed to the other Party under this LGIA. Subject to Article 25.3.2, any audit authorized by this Article shall be performed at the offices where such accounts and records are maintained and shall be limited to those portions of such accounts and records that relate to each such Party's performance and satisfaction of obligations under this LGIA. Each such Party shall keep such accounts and records for a period equivalent to the audit rights periods described in Article 25.4.

**25.3.2** Notwithstanding anything to the contrary in Article 25.3, each Party's rights to audit the CAISO's accounts and records shall be as set forth in Section 22.1 of the CAISO Tariff.

**25.4 Audit Rights Periods.**

**25.4.1 Audit Rights Period for Construction-Related Accounts and Records.** Accounts and records related to the design, engineering, procurement, and construction of Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades constructed by the Participating TO shall be subject to audit for a period of twenty-four months following the Participating TO's issuance of a final invoice in accordance with Article 12.2. Accounts and records related to the design, engineering, procurement, and construction of Participating TO's Interconnection Facilities and/or Stand Alone Network Upgrades constructed by the Interconnection Customer shall be subject to audit and verification by the Participating TO and the CAISO for a period of twenty-four months following the Interconnection Customer's issuance of a final invoice in accordance with Article 5.2(8).

**25.4.2 Audit Rights Period for All Other Accounts and Records.** Accounts and records related to a Party's performance or satisfaction of all obligations under this LGIA other than those described in Article 25.4.1 shall be subject to audit as follows: (i) for an audit relating to cost obligations, the applicable audit rights period shall be twenty-four months after the auditing Party's receipt of an invoice giving rise to such cost obligations; and (ii) for an audit relating to all other obligations, the applicable audit rights period shall be twenty-four months after the event for which the audit is sought; provided that each Party's rights to audit the CAISO's accounts and records shall be as set forth in Section 22.1 of the CAISO Tariff.

**25.5 Audit Results.** If an audit by the Interconnection Customer or the Participating TO determines that an overpayment or an underpayment has occurred with respect to the other Party, a notice of such overpayment or underpayment shall be given to the other Party together with those records from the audit which supports such determination. The Party that is owed payment shall render an invoice to the other Party and such invoice shall be paid pursuant to Article 12 hereof.

**25.5.1** Notwithstanding anything to the contrary in Article 25.5, the Interconnection Customer's and Participating TO's rights to audit the CAISO's accounts and records shall be as set forth in Section 22.1 of the CAISO Tariff, and the CAISO's process for remedying an overpayment or underpayment shall be as set forth in the CAISO Tariff.

**Article 26. Subcontractors**

**26.1 General.** Nothing in this LGIA shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this LGIA; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this LGIA in providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

**26.2 Responsibility of Principal.** The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this LGIA. The hiring Party shall be fully responsible to the other Parties for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall the CAISO or Participating TO be liable for the actions or inactions of the Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under Article 5 of this LGIA. Any applicable obligation imposed by this LGIA upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

**26.3 No Limitation by Insurance.** The obligations under this Article 26 will not be limited in any way by any limitation of subcontractor's insurance.

**Article 27. Disputes**

All disputes arising out of or in connection with this LGIA whereby relief is sought by or from the CAISO shall be settled in accordance with the provisions of Article 13 of the CAISO Tariff, except that references to the CAISO Tariff in such Article 13 of the CAISO Tariff shall be read as references to this LGIA. Disputes arising out of or in connection with this LGIA not subject to provisions of Article 13 of the CAISO Tariff shall be resolved as follows:

**27.1 Submission.** In the event either Party has a dispute, or asserts a claim, that arises out of or in connection with this LGIA or its performance, such Party (the "disputing Party") shall provide the other Party with written notice of the dispute or claim ("Notice of Dispute"). Such dispute or claim shall be referred to a designated senior representative of each Party for resolution on an informal basis as promptly as practicable after receipt of the Notice of Dispute by the other Party. In the event the designated representatives are unable to resolve the claim or dispute through unassisted or assisted negotiations within thirty (30) Calendar Days of the other Party's receipt of the Notice of Dispute, such claim or dispute may, upon mutual agreement of the Parties, be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below. In the event the Parties do not agree to submit such claim or dispute to arbitration, each Party may exercise whatever rights and remedies it may have in equity or at law consistent with the terms of this LGIA.

**27.2 External Arbitration Procedures.** Any arbitration initiated under this LGIA shall be conducted before a single neutral arbitrator appointed by the Parties. If the Parties fail to agree upon a single arbitrator within ten (10) Calendar Days of the submission of the dispute to arbitration, each Party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty (20) Calendar Days select a third arbitrator to chair the arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the Parties an opportunity to be heard and, except as otherwise provided herein, shall conduct the arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("Arbitration Rules") and any applicable FERC regulations; provided, however, in the event of a conflict between the Arbitration Rules and the terms of this Article 27, the terms of this Article 27 shall prevail.

**27.3 Arbitration Decisions.** Unless otherwise agreed by the Parties, the arbitrator(s) shall render a decision within ninety (90) Calendar Days of appointment and shall notify the Parties in writing of such decision and the reasons therefor. The arbitrator(s) shall be authorized only to interpret and apply the provisions of this LGIA and shall have no power to modify or change any provision of this Agreement in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in the Federal Arbitration Act or the Administrative Dispute Resolution Act. The final decision of the arbitrator must also be filed with FERC if it affects jurisdictional rates, terms and conditions of service, Interconnection Facilities, or Network Upgrades.

**27.4 Costs.** Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable: (1) the cost of the arbitrator chosen by the Party to sit on the three member panel and one half of the cost of the third arbitrator chosen; or (2) one half the cost of the single arbitrator jointly chosen by the Parties.

## Article 28. Representations, Warranties, and Covenants

**28.1 General.** Each Party makes the following representations, warranties and covenants:

**28.1.1 Good Standing.** Such Party is duly organized, validly existing and in good standing under the laws of the state in which it is organized, formed, or incorporated, as applicable; that it is qualified to do business in the state or states in which the Large Generating Facility, Interconnection Facilities and Network Upgrades owned by such Party, as applicable, are located; and that it has the corporate power and authority to own its properties, to carry on its business as now being conducted and to enter into this LGIA and carry out the transactions contemplated hereby and perform and carry out all covenants and obligations on its part to be performed under and pursuant to this LGIA.

**28.1.2 Authority.** Such Party has the right, power and authority to enter into this LGIA, to become a Party hereto and to perform its obligations hereunder. This LGIA is a legal, valid and binding obligation of such Party, enforceable against such Party in accordance with its terms, except as the enforceability thereof may be limited by applicable bankruptcy, insolvency, reorganization or other similar laws affecting creditors' rights generally and by general equitable principles (regardless of whether enforceability is sought in a proceeding in equity or at law).

**28.1.3 No Conflict.** The execution, delivery and performance of this LGIA does not violate or conflict with the organizational or formation documents, or bylaws or operating agreement, of such Party, or any judgment, license, permit, order, material agreement or instrument applicable to or binding upon such Party or any of its assets.

**28.1.4 Consent and Approval.** Such Party has sought or obtained, or, in accordance with this LGIA will seek or obtain, each consent, approval, authorization, order, or acceptance by any Governmental Authority in connection with the execution, delivery and performance of this LGIA, and it will provide to any Governmental Authority notice of any actions under this LGIA that are required by Applicable Laws and Regulations.

## Article 29. [Reserved]

## Article 30. Miscellaneous

**30.1 Binding Effect.** This LGIA and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

**30.2 Conflicts.** In the event of a conflict between the body of this LGIA and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this LGIA shall prevail and be deemed the final intent of the Parties.

**30.3 Rules of Interpretation.** This LGIA, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this LGIA, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this LGIA), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any Applicable Laws and Regulations means such Applicable Laws and Regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article of this LGIA or such Appendix to this LGIA, or such Section to the LGIP or such Appendix to the LGIP, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this LGIA as a whole and not to any particular Article or other provision hereof or thereof; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".

**30.4 Entire Agreement.** This LGIA, including all Appendices and Schedules attached hereto, constitutes the entire agreement among the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between or among the Parties with respect to the subject matter of this LGIA. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this LGIA.

**30.5 No Third Party Beneficiaries.** This LGIA is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

**30.6 Waiver.** The failure of a Party to this LGIA to insist, on any occasion, upon strict performance of any provision of this LGIA will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this LGIA shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this LGIA. Termination or Default of this LGIA for any reason by the Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Participating TO. Any waiver of this LGIA shall, if requested, be provided in writing.

**30.7 Headings.** The descriptive headings of the various Articles of this LGIA have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this LGIA.

**30.8 Multiple Counterparts.** This LGIA may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

**30.9 Amendment.** The Parties may by mutual agreement amend this LGIA by a written instrument duly executed by all of the Parties. Such amendment shall become effective and a part of this

LGIA upon satisfaction of all Applicable Laws and Regulations.

**30.10 Modification by the Parties.** The Parties may by mutual agreement amend the Appendices to this LGIA by a written instrument duly executed by all of the Parties. Such amendment shall become effective and a part of this LGIA upon satisfaction of all Applicable Laws and Regulations.

**30.11 Reservation of Rights.** The CAISO and Participating TO shall each have the right to make a unilateral filing with FERC to modify this LGIA pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following Articles of this LGIA and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these Articles:

> Recitals, 1, 2.1, 2.2, 2.3, 2.4, 2.6, 3.1, 3.3, 4.1, 4.2, 4.3, 4.4, 5 preamble, 5.4, 5.7, 5.8, 5.9, 5.12, 5.13, 5.18, 5.19.1, 7.1, 7.2, 8, 9.1, 9.2, 9.3, 9.5, 9.6, 9.7, 9.8, 9.10, 10.3, 11.4, 12.1, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24.3, 24.4, 25.1, 25.2, 25.3 (excluding subparts), 25.4.2, 26, 28, 29, 30, Appendix D, Appendix F, and any other Article not reserved exclusively to the Participating TO or the CAISO below.

The Participating TO shall have the exclusive right to make a unilateral filing with FERC to modify this LGIA pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following Articles of this LGIA and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these Articles:

> 2.5 , 5.1, 5.2, 5.3, 5.5, 5.6, 5.10, 5.11, 5.14, 5.15, 5.16, 5.17, 5.19 (excluding 5.19.1), 6, 7.3, 9.4, 9.9, 10.1, 10.2, 10.4, 10.5, 11.1, 11.2, 11.3, 11.5, 12.2, 12.3, 12.4, 24.1, 24.2, 25.3.1, 25.4.1, 25.5 (excluding 25.5.1), 27 (excluding preamble), Appendix A, Appendix B, Appendix C, and Appendix E.

The CAISO shall have the exclusive right to make a unilateral filing with FERC to modify this LGIA pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following Articles of this LGIA and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these Articles:

> 3.2 , 4.5, 11.6, 25.3.2, 25.5.1, and 27 preamble.

The Interconnection Customer, the CAISO, and the Participating TO shall have the right to make a unilateral filing with FERC to modify this LGIA pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this LGIA shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**30.12 No Partnership.** This LGIA shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership among the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

**30.13 Joint and Several Obligations.** Except as otherwise provided in this LGIA, the obligations of the CAISO, the Participating TO, and the Interconnection Customer are several, and are neither joint nor joint and several.

**IN WITNESS WHEREOF,** the Parties have executed this LGIA in multiple originals, each of which shall constitute and be an original effective agreement among the Parties.

**[Insert name of Participating TO]**

By: _____

Title: _____

Date: _____

**California Independent System Operator Corporation**

By: _____

Title: _____

Date: _____

**[Insert name of Interconnection Customer]**

By: _____

Title: _____

Date: _____

**Appendices to LGIA**

| | |
|---|---|
| Appendix A | Interconnection Facilities, Network Upgrades and Distribution Upgrades |
| Appendix B | Milestones |
| Appendix C | Interconnection Details |
| Appendix D | Security Arrangements Details |
| Appendix E | Commercial Operation Date |
| Appendix F | Addresses for Delivery of Notices and Billings |
| Appendix G | [NOT USED] |
| Appendix H | Interconnection Requirements for a Wind Generating Plant |

**Appendix A to LGIA**

**Interconnection Facilities, Network, and Distribution Upgrades**

**1. Interconnection Facilities:**

**(a) [insert Interconnection Customer's Interconnection Facilities]:**

**(b) [insert Participating TO's Interconnection Facilities]:**

**2. Network Upgrades:**

**(a) [insert Stand Alone Network Upgrades]:**

**(b) [insert Other Network Upgrades]:**

**(i) [insert Participating TO's Reliability Network Upgrades]**

**(ii) [insert Participating TO's Delivery Network Upgrades]**

**3. Distribution Upgrades:**

**Appendix B to LGIA**

**Milestones**

**Appendix C to LGIA**

**Interconnection Details**

**Appendix D to LGIA**

**Security Arrangements Details**

Infrastructure security of CAISO Controlled Grid equipment and operations and control hardware and software is essential to ensure day-to-day CAISO Controlled Grid reliability and operational security. FERC will expect the CAISO, all Participating TOs, market participants, and Interconnection Customers interconnected to the CAISO Controlled Grid to comply with Applicable Reliability Criteria. All public utilities will be expected to meet basic standards for system infrastructure and operational security, including physical, operational, and cyber-security practices.

The Interconnection Customer shall meet the requirements for security implemented pursuant to the CAISO Tariff, including the CAISO's standards for information security posted on the CAISO's internet web site at the following internet address: http://www.caiso.com/pubinfo/info-security/index.html.

**Appendix E to LGIA**

**Commercial Operation Date**

This Appendix E is a part of the LGIA.

**[Date]**

**[CAISO Address]**

**[Participating TO Address]**

Re: _____ Electric Generating Unit

Dear _____:

On [Date] [Interconnection Customer] has completed Trial Operation of Unit No. ___. This letter confirms that [Interconnection Customer] commenced Commercial Operation of Unit No. ___ at the Electric Generating Unit, effective as of [Date plus one day].

Thank you.

**[Signature]**

**[Interconnection Customer Representative]**

**Appendix F to LGIA**

**Addresses for Delivery of Notices and Billings**

**Notices:**

**CAISO:**

[To be supplied.]

**Participating TO:**

[To be supplied.]

**Interconnection Customer:**

[To be supplied.]

**Billings and Payments:**

**Participating TO:**

[To be supplied.]

**Interconnection Customer:**

[To be supplied.]

**CAISO:**

[To be supplied.]

**Alternative Forms of Delivery of Notices (telephone, facsimile or e-mail):**

**CAISO:**

[To be supplied.]

**Participating TO:**

[To be supplied.]

**Interconnection Customer:**

[To be supplied.]

**Appendix G to LGIA**

**[Not Used]**

## Appendix H to LGIA

## INTERCONNECTION REQUIREMENTS FOR A WIND GENERATING PLANT

Appendix H sets forth requirements and provisions specific to a wind generating plant. All other requirements of this LGIA continue to apply to wind generating plant interconnections.

### A. Technical Standards Applicable to a Wind Generating Plant

#### i. Low Voltage Ride-Through (LVRT) Capability

A wind generating plant shall be able to remain online during voltage disturbances up to the time periods and associated voltage levels set forth in the standard below. The LVRT standard provides for a transition period standard and a post-transition period standard.

**Transition Period LVRT Standard**

The transition period standard applies to wind generating plants subject to FERC Order 661 that have either: (i) interconnection agreements signed and filed with FERC, filed with FERC in unexecuted form, or filed with FERC as non-conforming agreements between January 1, 2006 and December 31, 2006, with a scheduled In-Service Date no later than December 31, 2007, or (ii) wind generating turbines subject to a wind turbine procurement contract executed prior to December 31, 2005, for delivery through 2007.

1. Wind generating plants are required to remain in-service during three-phase faults with normal clearing (which is a time period of approximately 4 – 9 cycles) and single line to ground faults with delayed clearing, and subsequent post-fault voltage recovery to prefault voltage unless clearing the fault effectively disconnects the generator from the system. The clearing time requirement for a three-phase fault will be specific to the wind generating plant substation location, as determined by and documented by the Participating TO. The maximum clearing time the wind generating plant shall be required to withstand for a three-phase fault shall be 9 cycles at a voltage as low as 0.15 p.u., as measured at the high side of the wind generating plant step-up transformer (i.e. the transformer that steps the voltage up to the transmission interconnection voltage or "GSU"), after which, if the fault remains following the location-specific normal clearing time for three-phase faults, the wind generating plant may disconnect from the transmission system.

2. This requirement does not apply to faults that would occur between the wind generator terminals and the high side of the GSU or to faults that would result in a voltage lower than 0.15 per unit on the high side of the GSU serving the facility.

3. Wind generating plants may be tripped after the fault period if this action is intended as part of a Remedial Action Scheme.

4. Wind generating plants may meet the LVRT requirements of this standard by the performance of the generators or by installing additional equipment (e.g., Static VAr Compensator, etc.) within the wind generating plant or by a combination of generator performance and additional equipment.

5. Existing individual generator units that are, or have been, interconnected to the network at the same location at the effective date of the Appendix H LVRT Standard are exempt from meeting the Appendix H LVRT Standard for the remaining life of the existing generation equipment. Existing individual generator units that are replaced are required to meet the Appendix H LVRT Standard.

**Post-transition Period LVRT Standard**

All wind generating plants subject to FERC Order No. 661 and not covered by the transition period described above must meet the following requirements:

1. Wind generating plants are required to remain in-service during three-phase faults with normal clearing (which is a time period of approximately 4 – 9 cycles) and single line to ground faults with delayed clearing, and subsequent post-fault voltage recovery to prefault voltage unless clearing the fault effectively disconnects the generator from the system. The clearing time requirement for a three-phase fault will be specific to the wind generating plant substation location, as determined by and documented by the Participating TO. The maximum clearing time the wind generating plant shall be required to withstand for a three-phase fault shall be 9 cycles after which, if the fault remains following the location-specific normal clearing time for three-phase faults, the wind generating plant may disconnect from the CAISO Controlled Grid. A wind generating plant shall remain interconnected during such a fault on the CAISO Controlled Grid for a voltage level as low as zero volts, as measured at the high voltage side of the wind GSU.

2. This requirement does not apply to faults that would occur between the wind generator terminals and the high side of the GSU.

3. Wind generating plants may be tripped after the fault period if this action is intended as part of a Remedial Action Scheme.

4. Wind generating plants may meet the LVRT requirements of this standard by the performance of the generators or by installing additional equipment (e.g., Static VAr Compensator) within the wind generating plant or by a combination of generator performance and additional equipment.

5. Existing individual generator units that are, or have been, interconnected to the CAISO Controlled Grid at the same location at the effective date of the Appendix H LVRT Standard are exempt from meeting the Appendix H LVRT Standard for the remaining life of the existing generation equipment. Existing individual generator units that are replaced are required to meet the Appendix H LVRT Standard.

**ii. Power Factor Design Criteria (Reactive Power)**

A wind generating plant shall operate within a power factor within the range of 0.95 leading to 0.95 lagging, measured at the Point of Interconnection as defined in this LGIA in order to maintain a specified voltage schedule, if the Interconnection System Impact Study shows that such a requirement is necessary to ensure safety or reliability. The power factor range standard can be met by using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors, or a combination of the two, if agreed to by the Participating TO and CAISO. The Interconnection Customer shall not disable power factor equipment while the wind plant is in operation. Wind plants shall also be able to provide sufficient dynamic voltage support in lieu of the power system stabilizer and automatic voltage regulation at the generator excitation system if the Interconnection System Impact Study shows this to be required for system safety or reliability.

**iii. Supervisory Control and Data Acquisition (SCADA) Capability**

The wind plant shall provide SCADA capability to transmit data and receive instructions from the Participating TO and CAISO to protect system reliability. The Participating TO and CAISO and the wind plant Interconnection Customer shall determine what SCADA information is essential for the proposed wind plant, taking into account the size of the plant and its characteristics, location, and importance in maintaining generation resource adequacy and transmission system reliability in its area.

**Appendix W**

**Amendment 39 Interconnection Procedures**

**Interconnection Procedures in Effect Prior to July 1, 2005 ("Amendment 39 Procedures")**

## 1 Applicability.

These Amendment 39 Procedures are applicable to Small Generating Facilities interconnecting to the CAISO Controlled Grid in accordance with Section 1.3 of the SGIP in Appendix S and to Large Generating Facilities in accordance with Section 5.1 of the LGIP in Appendix U. The owner of a planned New Facility, or its designee, is referred to for purposes of this Appendix as a New Facility Operator.

## 2 Definitions.

### 2.1 Master Definitions Supplement.

Unless the context otherwise requires, any word or expression defined in the Master Definitions Supplement to the CAISO Tariff shall have the same meaning where used in this Appendix.

### 2.2 Special Definitions for this Appendix.

In this Appendix, the following words and expressions shall have the meanings set opposite them:

| | |
|---|---|
| **Completed Application Date** | For purposes of this Appendix, the date on which a New Facility Operator submits an Interconnection Application to the CAISO that satisfies the requirements of the CAISO Tariff and the TO Tariff of the Interconnecting PTO. |
| **Completed Interconnection Application** | An Interconnection Application that meets the information requirements as specified by the CAISO and posted on the CAISO Website. |
| **Data Adequacy Requirement** | Any applicable minimum data requirements of the state agency responsible for generation siting or of any Local Regulatory Authority. |
| **Delivery Upgrade** | The transmission facilities, other than Direct Assignment Facilities and Reliability Upgrades, necessary to relieve constraints on the CAISO Controlled Grid and to ensure the delivery of energy from a New Facility to Load. |
| **Designated Contact Person** | The person designated by each Participating TO to coordinate with the CAISO on the processing and completion of all Interconnection Applications. |
| **Direct Assignment Facility** | The transmission facilities necessary to physically and electrically interconnect a New Facility Operator to the CAISO Controlled Grid at the point of interconnection. |
| **Expedited Interconnection Agreement** | A contract between a party which has submitted a Request for Expedited Interconnection Procedures and an Interconnection PTO under which the CAISO and an Interconnecting PTO agree to process, on an expedited basis, the Interconnection |

| | |
|---|---|
| | Application of a New Facility Operator and which sets forth the terms, conditions, and cost responsibilities for such interconnection. |
| **Good Faith Deposit** | The deposit paid to the CAISO by a New Facility Operator with submission of its Interconnection Application in accordance with Section 3.2 of this Appendix, in an amount equal to $10,000, including any interest that accrues on the original amount, less any bank fees or other charges assessed on the escrow account. A New Facility Operator may satisfy its deposit obligation through any commercially available financial instrument determined to be satisfactory by the CAISO. |
| **Interconnecting PTO** | For purposes of this Appendix, the Participating TO that will supply the connection to the New Facility. |
| **Interconnection Application** | An application that requests interconnection of a New Facility to the CAISO Controlled Grid and that meets the information requirements as specified by the CAISO and posted on the CAISO Website. |
| **New Facility** | A planned or Existing Generating Unit that requests, pursuant to this Appendix, to interconnect or modify its interconnection to the CAISO Controlled Grid. |
| **New Facility License** | A license issued by a federal, state or Local Regulatory Authority that enables an entity to build and operate a Generating Unit. |
| **New Facility Operator** | The owner of a planned New Facility, or its designee. |
| **Planning Procedures** | Procedures governing the planning, expansion and reliable interconnection to the CAISO Controlled Grid that the CAISO may, from time to time, develop. |
| **Reliability Upgrade** | The transmission facilities, other than Direct Assignment Facilities, beyond the first point of interconnection necessary to interconnect a New Facility safely and reliably to the CAISO Controlled Grid, which would not have been necessary but for the interconnection of a New Facility, including network upgrades necessary to remedy short circuit or stability problems resulting from the interconnection of a New Facility to the CAISO Controlled Grid. Reliability Upgrades also include, consistent with WSCC practice, the facilities necessary to mitigate any adverse impact a New Facility's interconnection may have on a path's WSCC path rating. |
| **Request for Expedited Interconnection Procedures** | A written request, submitted pursuant to Section 3.1.1 of this Appendix, by which a New Facility Operator can request expedited processing of its Interconnection Application. |
| **System Impact Study** | An engineering study conducted to determine whether a New Facility Operator's request for interconnection to the CAISO Controlled Grid would require new transmission additions, upgrades or other mitigation measures. |

## 3 Interconnection Application.

Unless the New Facility Operator has submitted a Completed Interconnection Application to the CAISO prior to July 1, 2005, any New Facility Operators shall submit two (2) copies of a Completed Interconnection Application to the CAISO in the form specified by the CAISO. The CAISO will date stamp all copies of the Interconnection Application, retain one executed copy, and, within one (1) Business Day, send the other copy to the Designated Contact Person of the Interconnecting PTO. Within ten (10) Business Days after the Interconnecting PTO receives an Interconnection Application, the CAISO and the Interconnecting PTO shall determine whether the application is complete and the CAISO will notify the New Facility Operator that its Interconnection Application is complete; or, in the event that the CAISO, in consultation with the Interconnecting PTO, determines that the Interconnection Application is incomplete, the CAISO will notify the New Facility Operator of the deficiencies or omissions in its application.

## 3.1 Expedited Procedures For New Facilities.

A New Facility Operator may submit a Request for Expedited Interconnection Procedures in accordance with Section 3.1.1 of this Appendix. The CAISO will develop and post on the CAISO Website the Planning Procedures applicable to such expedited processing of Interconnection Applications.

### 3.1.1 Request for Expedited Interconnection Procedures.

(a) If it elects to expedite processing of its Completed Interconnection Application, a New Facility Operator shall submit a Request for Expedited Interconnection Procedures within 10 Business Days after receiving a copy of the System Impact Study for the proposed interconnection. The request should be submitted in writing to the CAISO and the Interconnecting PTO.

(b) Within ten (10) Business Days after receiving a Request for Expedited Interconnection Procedures, the CAISO and Interconnecting PTO shall provide to applicant the results of any studies required in addition to the System Impact Study, and shall tender an Expedited Interconnection Agreement that requires the applicant to compensate the Interconnecting PTO for all costs reasonably incurred pursuant to the terms of the CAISO Tariff and the Interconnecting PTO’s applicable TO Tariff for processing the Completed Interconnection Application and providing the requested interconnection.

(c) Concurrent with the provision, by the CAISO and the Interconnecting PTO, of the studies referenced in subsection b, above, the Interconnecting PTO and the CAISO shall provide to applicant their best estimate of the cost of any needed Direct Assignment Facilities and Reliability Upgrades, Delivery Upgrades, if requested by the New Facility Operator, and other costs that may be incurred in processing the Interconnection Application and providing the requested interconnection, however, unless otherwise agreed by the CAISO, and the Interconnecting PTO, and the applicant, such cost estimate shall not be binding and the New Facility Operator shall compensate the CAISO and the Interconnecting PTO for all actual interconnection costs reasonably incurred pursuant to the provisions of this Appendix and the Interconnecting PTO's TO Tariff.

(d) The New Facility Operator shall execute and return to the Interconnecting PTO, with a copy to the CAISO, such Expedited Interconnection Agreement within ten (10) Business Days of its receipt or the New Facility Operator's Interconnection Application will be deemed withdrawn. In that event, the New Facility Operator shall reimburse the CAISO and the Interconnecting PTO for all costs reasonably incurred in the processing of the Interconnection Application, including the Request for Expedited Interconnection.

**3.2 Good Faith Deposit.**

(a) Each New Facility Operator that submits an Interconnection Application will on the date of submission also provide a Good Faith Deposit to the CAISO. The CAISO shall hold the Good Faith Deposit in trust for each applicant in a separate, interest-bearing account.

(b) The CAISO shall refund the Good Faith Deposit, with accrued Interest, in the event that:

(i) The CAISO determines that the New Facility is not responsible for any interconnection costs, other than study costs; or

(ii) The applicant withdraws its Interconnection Application or its Interconnection Application is deemed withdrawn.

**3.3 Posting of Interconnection Applications and Non-disclosure.**

The CAISO will maintain on its OASIS site an updated list of all pending Interconnection Applications. As soon as practicable after the CAISO receives a Completed Interconnection Application, the CAISO will post the nearest substation, the capacity (MW) of the New Facility and the year the New Facility is proposed to begin operations. At the time it submits its Interconnection Application, a New Facility Operator may request in writing that the CAISO and Interconnecting PTO not publicly disclose the identity of such New Facility Operator. Upon such request, the CAISO and Interconnecting PTO will not disclose the identity of the applicant while its Interconnection Application is pending, unless disclosure is permitted under Section 20.1 of the CAISO Tariff or in the event that an applicant's identity becomes otherwise publicly known.

**4 Interconnection.**

**4.1 Detailed Planning Procedures.**

The provisions set forth in this Appendix shall govern the interconnection of New Facilities to the CAISO Controlled Grid, including the costs of such interconnection. The CAISO shall also maintain on the CAISO Website detailed Planning Procedures and interconnection standards for all such interconnections.

**4.2 Studies.**

(a) Except as provided in Section 4.2(d) of this Appendix, for each Completed Interconnection Application, the CAISO will direct the Interconnecting PTO to perform the required System Impact Study and Facility Study, and any additional studies the CAISO determines to be reasonably necessary.

(b) The Interconnecting PTO will complete or cause to be completed all studies directed by the CAISO within the timelines provided in this section. Any studies performed by the CAISO or by a third party at the direction of the CAISO shall also be completed within the timelines provided in this section.

(c) Each New Facility Operator shall pay the reasonable costs of all System Impact and Facility Studies performed by or at the direction of the CAISO or the Interconnecting PTO, and any additional studies the CAISO determines to be reasonably necessary in response to the Interconnection Application, including any iterative study costs required for other New Facility Operator's that have established a new queue position due to the New Facility Operator either withdrawing its Interconnection Application or because its queue position has been modified pursuant to the procedures in Section 4.4 of this Appendix. A New Facility Operator shall also pay the reasonable cost of Interconnecting PTO review of any System Impact Study or Facility Study that is performed by a New

Facility Operator or its designee pursuant to subsection (d).

(d) A New Facility Operator may perform its own System Impact Study and Facility Study, or contract with a third party to perform the System Impact Study and Facility Study, and shall so notify the CAISO and the Interconnecting PTO of this election at the time it submits its Interconnection Application. Any such study or studies performed by a New Facility Operator or third party must be completed within the timelines identified in Sections 4.2.1 and 4.2.2 of this Appendix. To the extent that the CAISO and Interconnecting PTO disagree on the adequacy of the New Facility Operator or third party-sponsored study, the CAISO will determine the adequacy of the study, subject to the CAISO's ADR Procedures. The CAISO and Interconnecting PTO shall complete their review of the New Facility Operator's study within thirty (30) calendar days of receipt of the completed study. The results of any study or studies performed by a New Facility Operator or third party must be approved by both the CAISO and the Interconnecting PTO.

### 4.2.1 System Impact Study Procedures.

Within ten (10) Business Days after receiving a Completed Interconnection Application by the Interconnecting PTO, the CAISO and the Interconnecting PTO will determine, on a non-discriminatory basis, whether a System Impact Study is required. The CAISO and the Interconnecting PTO will make such determination based on the CAISO Grid Planning Criteria and the transmission assessment practices outlined in the CAISO Planning Procedures posted on the CAISO Website. The CAISO and Interconnecting PTO will utilize, to the extent possible, existing transmission studies. The System Impact Study will identify whether any Direct Assignment Facilities and Reliability Upgrades are needed, as well as, if requested by the New Facility Operator, any Delivery Upgrades necessary to deliver a New Facility's full output over the CAISO Controlled Grid. The System Impact Study will also identify any adverse impact on Encumbrances existing as of the Completed Application Date.

If the CAISO and the Interconnecting PTO determine that a System Impact Study is necessary, the Interconnecting PTO shall within twenty (20) Business Days of receipt of Completed Interconnection Application, tender a System Impact Study Agreement that defines the scope, content, assumptions and terms of reference for such study, the estimated time required to complete it, and pursuant to which the applicant shall agree to reimburse the Interconnecting PTO for the reasonable actual costs of performing the required study. The New Facility Operator shall execute the System Impact Study Agreement and return it to the Interconnecting PTO within ten (10) Business Days, together with payment for the reasonable estimated cost, as provided by the Interconnecting PTO, of the System Impact Study. Alternatively, a New Facility Operator can request that the Interconnecting PTO proceed with the System Impact Study and abide by the terms, conditions, and cost assignment of the System Impact Study Agreement as determined through the CAISO ADR Procedures, provided that such request is accompanied by payment for the reasonable estimated cost, as provided by the Interconnecting PTO, of the System Impact Study. If a New Facility Operator elects neither to execute the System Impact Study Agreement nor to rely upon the CAISO ADR Procedures, such New Facility Operator's Completed Application will be deemed withdrawn. If the New Facility Operator's application is deemed withdrawn, the New Facility Operator will compensate the Interconnecting PTO for all reasonable costs incurred to that date in processing the Completed Interconnection Application.

The Interconnecting PTO will use due diligence to complete the System Impact Study within sixty (60) calendar days of receipt of payment and the System Impact Study Agreement or initiation of the CAISO ADR Procedures. If the Interconnecting PTO cannot complete the System Impact Study within sixty (60) calendar days, the Interconnecting PTO will notify the New Facility Operator, in writing, of the reason why additional time is required to complete the required study and the estimated completion date.

### 4.2.2 Facility Study Procedures.

If a System Impact Study indicates that additions or upgrades to the CAISO Controlled Grid are needed to satisfy a New Facility Operator's request for interconnection, the Interconnecting PTO shall, within fifteen (15) Business Days of the completion of the System Impact Study, tender to a New Facility Operator a Facility Study Agreement that defines the scope, content, assumptions and terms of reference for such study, the estimated time to complete the required study, and pursuant to which the applicant agrees to reimburse the Interconnecting PTO for the actual costs of performing the required Facility Study. The New Facility Operator shall execute the Facility Study Agreement and return it to the Interconnecting PTO within ten (10) Business Days, together with payment for the reasonable estimated cost, as provided by the Interconnecting PTO, of the Facility Study. Alternatively, a New Facility Operator may request that the Interconnecting PTO proceed with the Facility Study and abide by the terms, conditions, and cost assignment of the Facility Study Agreement ultimately determined through the CAISO ADR Procedures, provided that such request is accompanied by payment for the reasonable estimated cost, as provided by the Interconnecting PTO, of the Facility Study. If a New Facility Operator elects either to not execute the Facility Study Agreement or to rely upon the CAISO ADR Procedures, such New Facility Operator's Completed Application will be deemed withdrawn. If the New Facility Operator's application is deemed withdrawn, the New Facility Operator will compensate the Interconnecting PTO for all reasonable costs incurred to that date in processing the Completed Application.

The Interconnecting PTO will use due diligence to complete the Facility Study within sixty (60) calendar days of receipt of payment and the Facility Study Agreement or initiation of the CAISO ADR Procedures. If the Interconnecting PTO cannot complete the Facility Study within sixty (60) calendar days, the Interconnecting PTO will notify the New Facility Operator, in writing, of the reason why additional time is required to complete the required study and the estimated completion date.

A New Facility Operator shall be entitled to amend its Completed Interconnection Application once without losing its queue position. Such amendment shall occur on or before ten (10) Business Days following the Date the Interconnecting PTO tenders a Facility Study Agreement. Specifically, as an alternative to executing and returning a Facility Study Agreement, a New Facility Operator may submit an amendment to its Completed Interconnection Application to reflect a revised configuration for its New Facility. The amended Completed Interconnection Application shall be treated in accordance with Section 4.2.1 of this Appendix and the New Facility Operator's Completed Interconnection Application shall not be deemed withdrawn, and it shall maintain its exiting queue position, if (a) the amended Completed Interconnection Application is received by the Interconnecting PTO within ten (10) Business Days of the Interconnecting PTO's tender of a Facility Study Agreement; and (b) the New Facility Operator has not submitted a previous amendment to the Completed Interconnection Application. In the event a New Facility Operator amends its Completed Interconnection Application, it will be responsible for any additional study costs that result from that amendment, including costs associated with revisions to studies for other applicants holding later queue positions.

### 4.3 Execution of Interconnection Agreement.

Following completion of the Facility Study, a New Facility Operator proposing to interconnect a Large Generating Facility shall continue the interconnection process in accordance with Section 11.2 of the LGIP. Within ten (10) Business Days of receipt of a completed Facility Study, a New Facility Operator proposing to interconnect a Small Generating Facility shall request the Interconnecting PTO to provide to such applicant an Interconnection Agreement. The Interconnecting PTO shall provide an Interconnection Agreement to an applicant within thirty (30) Business Days of receipt of the request for an Interconnection Agreement. If the CAISO and Interconnecting PTO determine, pursuant to Sections 4.2.1 and 4.2.2 of this Appendix, that either:

(a) a New Facility Operator's Interconnection Application can be accommodated and that such New Facility Operator will not incur costs for Reliability Upgrades, the New Facility Operator shall execute the Interconnection Agreement within ten (10) Business Days of receipt of the Interconnection Agreement; or

(b) a New Facility Operator's Interconnection Application will necessitate Reliability Upgrades, the New Facility Operator shall execute the Interconnection Agreement within thirty (30) Business Days of receipt of the Interconnection Agreement or, if a New Facility Operator and the Interconnecting PTO are unable to agree on the rates, terms and conditions of the Interconnection Agreement, the New Facility Operator may request that the Interconnecting PTO file an unexecuted Interconnection Agreement at FERC. If a New Facility Operator does request that the Interconnecting PTO file an unexecuted Interconnection Agreement at FERC, the New Facility Operator shall agree to abide by the rates, terms and conditions of such Interconnection Agreement ultimately determined by FERC to be just and reasonable.

**4.4 Queuing.**

(a) The CAISO and Interconnecting PTO will process all Interconnection Applications based on the New Facility's Completed Application Date.

(b) The queue position for each New Facility that has submitted an Interconnection Application will be established according to the Completed Application Date and the New Facility's compliance with the milestones set forth in Section 4.4.1 of this Appendix.

(c) For any New Facility Operator that submitted a request to interconnect to a Interconnecting PTO prior to June 1, 2002 (the effective date of the Amendment 39 Procedures), such New Facility Operator's position in the queue will be based on its Completed Application Date as that term was defined in the Interconnecting PTOs TO Tariff in effect at the time the New Facility Operator submitted a request to interconnect to the Interconnecting PTO.

**4.4.1 Queuing Milestones.**

(a) To maintain its queue position, each New Facility Operator must timely comply with the requirements of the CAISO Tariff and the TO Tariff of the Interconnecting PTO and must, within six (6) months of its Completed Application Date, satisfy all applicable Data Adequacy Requirements of state and local siting and other regulatory authorities. Any New Facility Operator not subject to state siting requirements must satisfy the information requirements set forth in 18 C.F.R. § 2.20. The CAISO will permit a New Facility Operator to retain its queue position if such New Facility Operator requests an extension of the six (6)-month period at least five (5) Business Days prior to the expiration of such period. Such extension will be limited to one period of thirty (30) Business Days and additional extensions shall not be granted. A New Facility Operator that does not maintain its queue position, but later satisfies the Data Adequacy Requirements, or the requirements of 18 C.F.R. § 2.20 if applicable, will be placed in a queue position comparable to that of other New Facility Operators that have satisfied the Data Adequacy Requirements, or the requirements of 18 C.F.R. § 2.20, as of the same date. At that time, the CAISO and the Interconnecting PTO will determine whether a new System Impact Study must be performed based on the revised queue position of such New Facility Operator.

(b) Upon satisfaction of the Data Adequacy Requirements, or the requirements of 18 C.F.R. § 2.20 if applicable, each New Facility Operator, in order to maintain its queue position, must obtain a New Facility License within fifteen (15) months after satisfying the Data Adequacy Requirements. A New Facility Operator that does not obtain a New Facility

License within the allowed time and does not maintain its queue position, but later obtains a New Facility License, will be placed in a queue position comparable to other New Facility Operators that have satisfied comparable milestones as of that date.

(c) Any New Facility whose New Facility License or building permit expires or is rescinded will not maintain its queue position.

(d) A New Facility Operator that has submitted a dispute under Article 13 of the CAISO Tariff regarding any part of this Appendix may request that the presiding judge, arbitrator, or mediator of the dispute suspend its obligation to meet milestones in order to maintain its queue position. In the event such a suspension is granted, the New Facility Operator must satisfy the missed milestones specified in this Section 4.4.1 of this Appendix within thirty (30) calendar days of the date the decision on the dispute becomes final.

**4.5 Coordination of Critical Protective Systems.**

New Facility Operators shall coordinate with the CAISO, Participating TOs and UDCs to ensure that a New Facility Operator's Critical Protective Systems, including relay systems, are installed and maintained in order to function on a coordinated and complementary basis with CAISO Controlled Grid Critical Protective Systems and the protective systems of the Participating TOs and UDCs. The CAISO and Participating TOs will make available all information necessary for a New Facility Operator to determine whether its Critical Protective Systems are compatible with those of the CAISO, Participating TOs and UDCs. The CAISO and New Facility Operators shall also coordinate with entities that own, operate or control facilities outside of the CAISO Controlled Grid to ensure that a New Facility's Critical Protective Systems function on a coordinated and complementary basis with such entities Critical Protective Systems.

**5 Cost Responsibility of New Facility Operators.**

(a) Each New Facility Operator shall pay the costs of required studies in accordance with Section 4.2 of this Appendix and the costs identified in this Section 5. The CAISO and Interconnecting PTO will provide each New Facility Operator an estimate of its total cost responsibility under this Section. A New Facility Operator shall be responsible for the actual costs of all Direct Assignment Facilities and Reliability Upgrades necessitated by its Completed Interconnection Application. The Interconnecting PTO will provide each New Facility Operator a detailed record of the actual costs assessed to it under this Section. A New Facility Operator may request the Interconnecting PTO to provide any additional information reasonably necessary to audit the actual costs the New Facility Operator is assessed.

(b) The CAISO and Interconnecting PTO will process all Interconnection Applications, and determine the cost responsibility of each New Facility Operator based on the New Facility Operator's Completed Application Date or, if applicable, based on the queue position determined by the procedure described in Section 4.4.1(b) of this Appendix. The CAISO and Interconnecting PTO will process simultaneously all interconnection requests with the same Completed Application Date.

(c) Each New Facility Operator shall pay the costs of planning, installing, operating and maintaining the following facilities: (i) Direct Assignment Facilities, and, if applicable, (ii) Reliability Upgrades. In addition, each New Facility Operator shall implement all existing operating procedures necessary to safely and reliably connect the New Facility to the facilities of the Interconnecting PTO and to ensure the CAISO Controlled Grid's conformance with the CAISO Grid Planning Criteria, and shall bear all costs of implementing such operating procedures. The New Facility Operator shall be responsible for the costs of Reliability Upgrades only if the necessary facilities are not included in the CAISO Controlled Grid Transmission Expansion Plan approved as of the

New Facility Operator's Completed Application Date, or the date for the installation of a facility is advanced by the interconnection of the New Facility, in which case the New Facility Operator shall be responsible only for the incremental costs associated with the earlier installation of the facility.

(d) Each New Facility Operator may, at its own discretion, sponsor, pursuant to Section 24 of the CAISO Tariff, any Delivery Upgrades.

**5.1 Maintenance of Encumbrances.**

No New Facility shall adversely affect the ability of the Interconnecting PTO to honor its Encumbrances existing as of the time a New Facility submits its Interconnection Application to the CAISO. The Interconnecting PTO, in consultation with the CAISO, shall identify any such adverse effect on its Encumbrances in the System Impact Study performed under Section 4.2.1 of this Appendix. To the extent the Interconnecting PTO determines that the connection of the New Facility will have an adverse effect on Encumbrances, the New Facility Operator shall mitigate such adverse effect.

**5.2 Settlement of Interconnection Costs.**

Payment for Direct Assignment Facilities and Reliability Upgrades shall be made by the New Facility Operator to the Interconnecting PTO pursuant to the terms of payment set forth in the Interconnection Agreement between the parties.

**6 Energization.**

Neither the CAISO nor the Interconnecting PTO shall be obligated to energize, nor shall the New Facility Operator be entitled to have its interconnection to the CAISO Controlled Grid energized, unless and until an Interconnection Agreement has been executed, or filed at FERC pursuant to Section 4.3 of this Appendix, and becomes effective and such New Facility Operator has demonstrated to the CAISO's reasonable satisfaction that it has complied with all of the requirements of this Appendix.

**Appendix X**

**Approved Project Sponsor Agreement (APSA)**

**APPROVED PROJECT SPONSOR AGREEMENT (APSA)**

**BETWEEN**

**[APPROVED PROJECT SPONSOR]**

**AND**

**CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

**PROJECT:**

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**APPROVED PROJECT SPONSOR AGREEMENT**

**[APPROVED PROJECT SPONSOR]**

**CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

THIS APPROVED PROJECT SPONSOR AGREEMENT ("Agreement") is made and entered into this day of _____, 20___, between [the Approved Project Sponsor], organized and existing under the laws of the State of _____ ("Approved Project Sponsor"), and the California Independent System Operator Corporation, a California nonprofit public benefit corporation organized and existing under the laws of the State of California ("CAISO"). Approved Project Sponsor and the CAISO each may be referred to as a "Party" or collectively as the "Parties."

**RECITALS**

**WHEREAS,** the CAISO exercises Operational Control over the CAISO Controlled Grid; and

**WHEREAS,** the Approved Project Sponsor intends to construct, finance, and own the _____ _____ Project ("Project") consisting of transmission facilities identified in Appendix A to this Agreement; and

**WHEREAS,** if applicable, the Approved Project Sponsor will seek interconnection of the Project from the Interconnecting PTO or other entity in accordance with the requirements provided in this Agreement; and

**WHEREAS,** the Parties agree that the Approved Project Sponsor will enter into the Transmission Control Agreement to become a Participating Transmission Owner ("Participating TO"), if it is not already a Participating TO, effective upon energization of the Project, and will turn the Project over to the Operational Control of the CAISO; and

**WHEREAS,** the Parties recognize that the Approved Project Sponsor has certain rights and obligations related to the Project that arise prior to the date upon which the Approved Project Sponsor will place the facilities under the CAISO's Operational Control and, if not already a Participating TO, will become a Participating TO and which may remain in effect for a discrete period of time after the Approved Project Sponsor enters into the Transmission Control Agreement; and

**WHEREAS,** the Approved Project Sponsor and the CAISO thus have agreed to enter into this Agreement for the purpose of identifying rights and obligations associated with the Project that arise prior to the effective date of the Approved Project Sponsor's execution of the Transmission Control Agreement;

**NOW, THEREFORE,** in consideration of and subject to the mutual covenants contained herein, it is agreed:

**ARTICLE 1. DEFINITIONS**

When used in this Agreement, a term with initial capitalization shall have the meaning set forth in this Article 1 or the recitals, or if not defined in this Article 1 or the recitals, shall have the meaning specified in the Article in which it is used or in the CAISO Tariff, Appendix A.

**Applicable Laws and Regulations** shall mean all duly promulgated applicable federal, state, and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits, and other duly authorized actions of any Governmental Authority.

**Applicable Reliability Council** shall mean the Western Electricity Coordinating Council or its successor.

**Applicable Reliability Standards** shall mean the requirements and guidelines of NERC, the Applicable Reliability Council, and the Balancing Authority Area of the Interconnecting PTO's Transmission System to which the Project is directly connected, including requirements adopted pursuant to Section 215 of the Federal Power Act.

**Breach** shall mean the failure of a Party to perform or observe any material term or condition of this Agreement.

**Breaching Party** shall mean a Party that is in Breach of this Agreement.

**Confidential Information** shall mean any confidential, proprietary, or trade secret information of a plan, specification, pattern, procedure, design, device, list, concept, policy, or compilation relating to the present or planned business of a Party, which is designated as confidential by the Party supplying the information, whether conveyed orally, electronically, in writing, through inspection, or otherwise, subject to Article 19.

**Default** shall mean the failure of a Breaching Party to cure its Breach in accordance with Article 14 of this Agreement.

**Effective Date** shall mean the date on which this Agreement becomes effective as specified in Article 2.

**Environmental Law** shall mean Applicable Laws and Regulations relating to pollution or protection of the environment or natural resources.

**Federal Power Act** shall mean the Federal Power Act, as amended, 16 U.S.C. §§ 791a et seq.

**Force Majeure** shall mean any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, earthquake, or explosion, any order, regulation, or restriction imposed by governmental, military, or lawfully established civilian authorities, or any other cause beyond the reasonable control of the Parties that could not have been avoided through the exercise of Good Utility Practice. A Force Majeure event does not include (1) acts of negligence or intentional wrongdoing by the Party claiming Force Majeure; (2) economic conditions that render a Party's performance of this Agreement unprofitable or otherwise uneconomic; (3) economic hardship of either Party; or (4) failure or delay in granting of necessary permits for reasons not caused by Force Majeure.

**Governmental Authority** shall mean any federal, state, local, or other governmental, regulatory, or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the Approved Project Sponsor, the CAISO, or any Affiliate thereof.

**Hazardous Substances** shall mean any chemicals, materials, or substances defined as or included in the definition of "hazardous substances," "hazardous wastes," "hazardous materials," "hazardous constituents," "restricted hazardous materials," "extremely hazardous substances," "toxic substances," "radioactive substances," "contaminants," "pollutants," "toxic pollutants," or words of similar meaning and regulatory effect under any applicable Environmental Law, or any other chemical, material, or substance, exposure to which is prohibited, limited, or regulated by any applicable Environmental Law.

**Interconnecting PTO** shall mean any Participating TO, other than the Approved Project Sponsor, that owns or is building transmission facilities to which the Project will interconnect.

**Interconnection Handbook** shall mean a handbook, developed by the Interconnecting PTO and posted on the Interconnecting PTO's web site or otherwise made available by the Interconnecting PTO,

describing technical and operational requirements for controls and protection equipment for transmission connected to the Interconnecting PTO's portion of the CAISO Controlled Grid, as such handbook may be modified or superseded from time to time. Interconnecting PTO's standards contained in the Interconnection Handbook shall be deemed consistent with Good Utility Practice.

**Loss** shall mean any and all damages, losses, and claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties.

**Metering Equipment** shall mean all metering equipment installed or to be installed for measuring the Balancing Authority Area boundary pursuant to this Agreement at the metering points, including instrument transformers, MWh-meters, data acquisition equipment, transducers, remote terminal unit, communications equipment, phone lines, and fiber optics.

**Party or Parties** shall mean the CAISO, the Approved Project Sponsor, or the applicable combination of the above.

**Reasonable Efforts** shall mean, with respect to an action required to be attempted or taken by a Party under this Agreement, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

**System Protection Facilities** shall mean equipment, including necessary protection signal communications equipment, that protect (1) the Interconnecting PTO's Transmission System, Interconnecting PTO's Transmission Interconnection Facilities, CAISO Controlled Grid, and Affected Systems from faults or other electrical disturbances and (2) the Approved Project Sponsor's Transmission System from faults or other electrical system disturbances occurring on the CAISO Controlled Grid, Interconnecting PTO's Transmission Interconnection Facilities, and Affected Systems or on other delivery systems or other generating systems to which the CAISO Controlled Grid is directly connected.

**Transmission Interconnection Facilities** shall mean the Interconnecting PTO's or other entity's transmission facilities, including any modification, additions, or upgrades, that are necessary to physically and electrically interconnect the Project to the Interconnecting PTO's Transmission System.

**Transmission Interconnection Service** shall mean the service defined in Section 4.2 of this Agreement.

## ARTICLE 2. EFFECTIVE DATE, TERM, AND TERMINATION

**2.1 Effective Date.** This Agreement shall become effective upon execution by all Parties, subject to acceptance by FERC (if applicable). The CAISO shall promptly file this Agreement with FERC upon execution in accordance with Section 3.1, if required.

**2.2 Term of Agreement.** This Agreement shall remain in effect until termination consistent with Section 2.3.

**2.3 Agreement Termination.**

**2.3.1** Except for the obligations set forth in Sections 5.6, 5.10, 10.1.1, 10.3, and Article 15, this Agreement shall terminate when the Project has been turned over to CAISO Operational Control.

**2.3.2** A Party may terminate this Agreement in accordance with Section 5.8 or Article 14.

**2.3.3** Notwithstanding Sections 2.3.1 and 2.3.2, no termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such

termination and, if applicable, FERC has accepted the notice of termination.

## ARTICLE 3. REGULATORY FILINGS AND CAISO TARIFF COMPLIANCE

**3.1 Filing.** The CAISO shall file this Agreement (and any amendment hereto) with the appropriate Governmental Authority, if required. The Approved Project Sponsor may request that any information included in such filing be subject to the confidentiality provisions of Article 19. If the Approved Project Sponsor has executed this Agreement, or any amendment to this Agreement, the Approved Project Sponsor shall reasonably cooperate with the CAISO with respect to such filing and to provide any information reasonably requested by the CAISO needed to comply with applicable regulatory requirements.

**3.2 Agreement Subject to CAISO Tariff.** The Approved Project Sponsor shall comply with all applicable provisions of the CAISO Tariff.

**3.3 Relationship Between this Agreement and the CAISO Tariff.** If and to the extent a provision of this Agreement is inconsistent with the CAISO Tariff and dictates rights and obligations between the CAISO and the Approved Project Sponsor, the CAISO Tariff shall govern.

**3.4. Requirement to Become a Participating TO.** The Approved Project Sponsor agrees that the Project shall be placed under CAISO Operational Control upon completion of the Project. To the extent the Approved Project Sponsor is not already a Participating TO, the Approved Project Sponsor further agrees that it shall enter into the Transmission Control Agreement in sufficient time for its execution to become effective as of the date of energization of the Project and that it has met or shall meet all other CAISO Tariff requirements to become a Participating TO in accordance with Section 4.3 of the CAISO Tariff.

**3.5 Relationship Between this Agreement and the Transmission Control Agreement.** Once the Approved Project Sponsor has entered into the Transmission Control Agreement, if and to the extent a matter specifically addressed in this Agreement is inconsistent with the Transmission Control Agreement, the terms of the Transmission Control Agreement shall govern.

## ARTICLE 4. SCOPE OF SERVICE

**4.1 Transmission Facilities.** The Approved Project Sponsor shall build and connect to the CAISO Controlled Grid the Project identified in Appendix A.

**4.2 Transmission Interconnection Service.** Transmission Interconnection Service allows the Approved Project Sponsor to connect the Project to the facilities of an Interconnecting PTO or a transmission system that is not part of the CAISO Controlled Grid. Unless the Project connects solely to the facilities of the Approved Project Sponsor, the Approved Project Sponsor shall request Transmission Interconnection Service from the Interconnecting PTO or other entity according to the milestones set forth in Appendix B and shall comply with the Interconnecting PTO's or other entity's applicable transmission interconnection procedures. The Approved Project Sponsor must obtain a separate agreement for Transmission Interconnection Service from the Interconnecting PTO or any other entity to whose facilities the Project will interconnect. This separate agreement with each Interconnecting PTO or other entity must provide, at a minimum, for the Interconnecting PTO or other entity to take any procedural steps required in this Agreement with respect to the transmission interconnection, including Sections 5.3.4, 5.4.2, 5.4.3, 5.5.3, 5.6.2, 6.1, 8.1, and 9.2, and must identify the Transmission Interconnection Facilities that an Interconnecting PTO is responsible for, and must pay for in accordance with Section 24.14.2 of the CAISO Tariff. The CAISO may facilitate the coordination between the Approved Project Sponsor and the Interconnecting PTO contemplated by this Agreement.

**4.2.1** The Transmission Interconnection Service agreement shall require that the Interconnecting PTO or other entity providing Transmission Interconnection Service

provide to the CAISO, every ninety (90) calendar days until the Project is energized and under CAISO Operational Control, a Transmission Interconnection Facilities status report. Such status report shall include project schedule; permit and license status, including environmental, state, and local permits and licenses; right-of-way acquisition status, if required; land acquisition status, if required; design and engineering status; status of contracts for project work, including land, procurement, and staffing; construction status; testing status; events creating risks and obstacles to project completion; and project budget, including actuals, estimate to complete, and contingency. The format for the report shall be in accordance with the Business Practice Manual for the Transmission Planning Process.

**4.3 Approved Project Sponsor to Meet Requirements of the Interconnecting PTO's Interconnection Handbook.** If applicable, the Approved Project Sponsor shall comply with the Interconnecting PTO's Interconnection Handbook for the transmission interconnections.

**4.4 Performance Standards.** Each Party shall perform all of its obligations under this Agreement in accordance with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice. To the extent a Party is required to take or prevented from or limited in taking any action by such regulations and standards, such Party shall not be deemed to be in Breach of this Agreement for its lack of compliance therewith, and if such Party is the CAISO, then the CAISO shall have the authority to amend this Agreement unilaterally to eliminate the conflict with such regulations or standards and shall submit the amendment to FERC for approval, if applicable.

## ARTICLE 5. FACILITIES ENGINEERING, PROCUREMENT, AND CONSTRUCTION

**5.1 General.** The Approved Project Sponsor shall, at its expense, design, procure, construct, own, and install the Project, as set forth in Appendix A. The Approved Project Sponsor shall comply with all requirements of law and shall assume responsibility for the design, procurement, and construction of the Project using Good Utility Practice and the standards and specifications provided by the Interconnecting PTO or other entity, if applicable. The Project shall be based on the assumed accuracy and completeness of all technical information received by the CAISO from the Approved Project Sponsor and by the Approved Project Sponsor from any Interconnecting PTO or other entity providing Transmission Interconnection Service. Changes to the Project design described in this Agreement must be approved by the CAISO in accordance with Section 5.9 of this Agreement. Unless otherwise agreed by the Parties, the Approved Project Sponsor shall select the testing date and the energization date for the Project consistent with the Approved Project Sponsor's application approved by the CAISO, and such dates shall be set forth in Appendix B (Milestones).

**5.2 Information Exchange.** As soon as reasonably practicable after the Effective Date, the Approved Project Sponsor shall provide information to the CAISO regarding the design and compatibility of the Project and the Transmission Interconnection Facilities, and shall work diligently and in good faith to make any necessary design changes to the Project, subject to approval by the CAISO in accordance with Section 5.9. The Parties shall amend the description of the Project set forth in Appendix A to reflect any agreed changes to the Project.

**5.3 Initial Construction Plan and Reporting Requirements.** The Approved Project Sponsor shall keep the CAISO advised monthly as to the progress of the financing, procurement, and construction efforts with respect to the Project, via email or verbal discussion as agreed upon by the Parties, and in accordance with the timeframes specified herein.

**5.3.1** The Approved Project Sponsor shall provide the CAISO with the initial construction plan one hundred twenty (120) calendar days after the Approved Project Sponsor has been selected in accordance with Section 24.4.1 of the CAISO Tariff. The plan shall include: land acquisition and permits requirements, status, and schedule; materials procurement requirements, status, and schedule; construction financing status and schedule; and

Project contact information, if different than as identified in the selection process.

**5.3.2** Every ninety (90) calendar days after the initial construction plan is received until the Project is energized and under CAISO Operational Control, the Approved Project Sponsor shall provide the CAISO with a construction plan status report. Such status report shall include the Project schedule; permit and license status, including environmental, state, and local permits and licenses; right-of-way acquisition status; land acquisition status; design and engineering status; events that might affect the ability to meet design specifications; status of contracts for project work, including land, procurement, and staffing; Interconnecting PTO or other entity interconnection agreements; construction status; testing status; risks and obstacles to project completion; and Project budget status, including actuals, estimate to complete, and contingency. The format for the report shall be in accordance with the Business Practice Manual for the Transmission Planning Process.

**5.3.3** Pursuant to Section 24.6.1 of the CAISO Tariff, the CAISO will send Project status reports received in accordance with Section 5.3.2 to the applicable Interconnecting PTO and then the CAISO will hold a call with the Interconnecting PTO to review the status report, including completion date and items of concern.

**5.3.4** If, at any time, the Approved Project Sponsor determines, in consultation with the CAISO and Interconnecting PTO or other entity providing Transmission Interconnection Service, that the completion of the Interconnecting PTO's or other entity's Transmission Interconnection Facilities will not be required until after the specified energization date set forth in Appendix B (Milestones), the Approved Project Sponsor shall provide written notice to the Interconnecting PTO or other entity and to the CAISO of such later date upon which the completion of the Interconnecting PTO's or other entity's Transmission Interconnection Facilities will be required.

**5.4 Submission and Review of Project Specifications.**

**5.4.1** The Approved Project Sponsor shall submit specifications for major Project equipment and/or materials, including System Protection Facilities, to the CAISO and to the Interconnecting PTO or other entity providing Transmission Interconnection Service, for review and comment at least thirty (30) calendar days prior to the date on which the Approved Project Sponsor solicits offers to provide specific equipment or material to which the specifications apply or otherwise commences procurement. The Approved Project Sponsor shall provide the CAISO and the Interconnecting PTO or other entity the opportunity to review such specifications to ensure that the Project is compatible with the technical specifications, operational control, safety requirements, and any other applicable requirements of the CAISO and the Interconnecting PTO or other entity providing Transmission Interconnection Service, and to provide comment on such specifications within fifteen (15) calendar days after the submission. All specifications provided hereunder shall be deemed Confidential Information subject to the provisions of Article 19.

**5.4.2** The Approved Project Sponsor shall submit final specifications for major Project equipment and/or materials, including System Protection Facilities, if the specification differs from the specification submitted in accordance with Section 5.4.1, to the CAISO and to the Interconnecting PTO or other entity providing Transmission Interconnection Service, for review at least one hundred eighty (180) calendar days prior to the date that testing is scheduled to commence pursuant to Appendix B (Milestones). The Approved Project Sponsor shall submit to the CAISO and to the Interconnecting PTO or other entity providing Transmission Interconnection Service final specifications for review and comment at least ninety (90) calendar days prior to the date testing is scheduled to commence. If material and/or equipment is different from the original specification

submittal, the Approved Project Sponsor shall provide the CAISO and the Interconnecting PTO or other entity the opportunity to review such specifications to ensure that the Project is compatible with the technical specifications, operational control, safety requirements, and any other applicable requirements and to provide comments within thirty (30) calendar days after each submission. All specifications provided hereunder shall be deemed Confidential Information subject to the provisions of Article 19.

**5.4.3** Final specification review by the CAISO and by the Interconnecting PTO or other entity shall not be construed as confirming, endorsing, or providing a warranty as to the design, fitness, safety, durability, or reliability of the Project or the Interconnecting PTO's Transmission Interconnection Facilities. As described in Section 5.4.2, Approved Project Sponsor shall make such changes to the Project as may reasonably be required by the Interconnecting PTO, other entity, or the CAISO, in accordance with Good Utility Practice, to ensure that the Project is compatible with the technical specifications, Operational Control, and safety requirements of the Interconnecting PTO, other entity, or the CAISO.

**5.5 Construction Activities.**

**5.5.1** The Approved Project Sponsor shall commence construction of the Project as soon as practicable, consistent with the schedule set forth in Appendix B (Milestones), after the following additional conditions are satisfied:

**5.5.1.1** The Approved Project Sponsor has obtained appropriate Governmental Authority approval for any facilities requiring regulatory approval.

**5.5.1.2** The Approved Project Sponsor has obtained necessary permits, real property rights, and rights-of-way, to the extent required for the construction of the Project.

**5.5.2** At least thirty (30) calendar days prior to commencement of Project construction, the Approved Project Sponsor shall provide to the CAISO, for informational purposes, a construction schedule for the Interconnecting PTO's or other entity's Transmission Interconnection Facilities.

**5.5.3** At any time during construction, should any phase of the Project engineering, equipment procurement, or construction not meet the standards and specifications provided by the Interconnecting PTO or other entity, the Approved Project Sponsor shall be obligated to remedy deficiencies in that portion of the Project. The Approved Project Sponsor may seek approval from FERC to recover in its transmission revenue requirement just and reasonable costs associated with such remedy.

**5.5.4** The Approved Project Sponsor shall indemnify the CAISO for claims arising under this Agreement resulting from Project construction under the terms and procedures specified in Section 15.1 Indemnity, other than for losses arising from actions that are not within the control of the Approved Project Sponsor.

**5.5.5** If, during Project development, siting, design, engineering, construction, or testing, the Approved Project Sponsor decides to use a vendor, or any other Project team member, that is different than the vendor or team member specifically set forth in the Project Sponsor proposal submitted by the Approved Project Sponsor in accordance with the Business Practice Manual for the Transmission Planning Process, the Approved Project Sponsor shall notify the CAISO within ten (10) calendar days after the decision to make the change. Upon notification, the CAISO may take whatever action is necessary to ensure that the selected vendor or Project team member will at a minimum provide the same level of service that would have been provided by the vendor or Project team

member described in the Approved Project Sponsor's proposal.

**5.6 Final Project Design**

**5.6.1** As soon as reasonably practicable, but within twelve months after Project construction completion, the Approved Project Sponsor shall provide a summary of the final construction cost, which summary shall set forth sufficient detail to enable the CAISO to understand the Project costs, including a written explanation for the use of contingency and any cost overruns in excess of the cost estimate provided in Appendix E.

**5.6.2** The Project shall be designed and constructed in accordance with Good Utility Practice. Within one hundred twenty (120) calendar days after the Project has been turned over to the CAISO's Operational Control, unless the CAISO and Approved Project Sponsor agree on another mutually acceptable date, the Approved Project Sponsor shall deliver to the Interconnecting PTO or other entity and to the CAISO "as-built" drawings, information, and documents for the Project. This information shall include, as applicable: (i) a one-line diagram; (ii) a site plan drawing showing the Project, including plan and elevation drawings showing the layout of the Transmission Interconnection Facilities; (iii) a relay functional diagram, relaying AC and DC schematic wiring diagrams, and relay settings for all facilities associated with the Project; and (iv) the impedances, determined by factory tests, for the associated transformers. The Approved Project Sponsor shall provide the Interconnecting PTO or other entity and the CAISO specifications for the protection settings, transformer tap settings, and communications, if applicable. The Interconnecting PTO or other entity and the CAISO shall assess any deviations from the relay settings, machine specifications, and other specifications originally submitted by the Approved Project Sponsor pursuant to the appropriate provisions of this Agreement and the agreement between the Approved Project Sponsor and the Interconnecting PTO or other entity.

**5.6.3** The obligations under this Section 5.6, including Sections 5.6.1, 5.6.2, and 5.6.3, shall survive termination of this Agreement.

**5.7 Delay in Project.** If the CAISO receives notification from the Approved Project Sponsor that Project energization will be delayed beyond the date by which the CAISO found the Project to be needed, pursuant to Section 24.6.2 of the CAISO Tariff the CAISO shall issue a market notice to market participants stating that the Project is delayed. If applicable, the market notice shall also state that a plan is being developed to address potential NERC reliability standard violations as set forth in Section 24.6.3 of the CAISO Tariff, as well as any material concerns.

**5.7.1** The CAISO shall determine if there is a potential NERC violation, for either the CAISO or applicable Interconnecting PTO, arising from any Project energization delay and will determine if there are other material issues of concern as required in accordance with Section 24.6.3 of the CAISO Tariff. If there are potential violations or material issues, the CAISO, Approved Project Sponsor, and applicable Interconnecting PTO shall develop a plan to address the delay. The plan may include the CAISO directing the Interconnecting PTO to develop a mitigation plan.

**5.7.2** If violations or material issues cannot be promptly and adequately addressed, the CAISO will take action to resolve the issues, including determining if an alternative Project Sponsor is required.

**5.8 Delay in Approvals, Property Acquisition, or Construction.** If the timeline set forth in Appendix B is unreasonably delayed, the CAISO shall consult with the Approved Project Sponsor. After such consultation, should the CAISO determine that, for reasons other than a delay caused by the Interconnecting PTO, (i) the Approved Project Sponsor cannot secure necessary approvals or property rights, including fee title, right of way grant, and easement and

license rights, essential for construction of the Project, or (ii) the Approved Project Sponsor is otherwise unable to timely construct the Project, or (iii) an alternative Project Sponsor is necessary pursuant to Section 24.6.4 of the CAISO Tariff; or, alternatively, if the Approved Project Sponsor determines that it is unable to proceed with construction and so notifies the CAISO, the CAISO shall take such action, including termination of this Agreement, as it determines to be necessary and appropriate in accordance with Section 24.6.4 of the CAISO Tariff. If either Party determines that an alternative Project Sponsor should be selected consistent with Section 24.6.4 of the CAISO Tariff, the Approved Project Sponsor agrees to work in good faith with CAISO, the alternative Project Sponsor, and, if applicable, the Interconnecting PTO to transfer responsibility for the Project to the alternative Project Sponsor.

**5.9 Modification.**

**5.9.1** The Approved Project Sponsor may undertake modifications to its facilities only with the approval of the CAISO and subject to the provisions of this Agreement and the CAISO Tariff. If the Approved Project Sponsor plans to undertake a modification, it shall provide such information regarding such modification to the CAISO as the CAISO deems necessary to evaluate the potential impact of such modification prior to commencement of the work. Such information shall include information concerning the timing of such modification, any technical information, and cost impact. The Approved Project Sponsor shall provide the relevant drawings, plans, and specifications to the CAISO at least ninety (90) calendar days in advance of the commencement of the work or within such shorter period upon which the Parties may agree, which agreement shall not unreasonably be withheld, conditioned, or delayed. The CAISO shall determine if a modification is in accordance with the original Project criteria and intent and whether to approve the modification within thirty (30) calendar days after the Approved Project Sponsor's submission.

**5.9.2** Any additions, modifications, or replacements made to the Project's facilities shall be designed, constructed, and operated in accordance with this Agreement, Applicable Laws and Regulations, and Good Utility Practice.

**5.9.3** Any modifications to the Project's facilities ordered by a siting agency are not subject to CAISO approval. However, the Approved Project Sponsor is required to notify the CAISO within thirty (30) calendar days after the siting agency has issued an order directing Project modifications.

**5.10 Generator Interconnection Study Process.**

**5.10.1** The Approved Project Sponsor shall be responsible for completing any existing studies for generator interconnection to the Project that were in the Approved Project Sponsor's generation interconnection queue upon the Effective Date of this Agreement. The CAISO and any impacted Participating TO will perform studies regarding such requests as an Affected System.

**5.10.2** Any requests for generation interconnection to the Project submitted to the Approved Project Sponsor following the Effective Date of this Agreement shall be directed to the CAISO Interconnection Request process. The Approved Project Sponsor shall assume the functions of a Participating TO in accordance with Appendix DD of the CAISO Tariff, including performing Phase I, Phase II, and reassessment analysis for generator interconnection requests to the Project. The Approved Project Sponsor will be reimbursed the actual costs incurred for the analysis similar to the Participating TOs.

**5.10.3** Any Generator Interconnection Agreements for interconnection to the Project shall be executed consistent with the relevant terms and conditions of the CAISO Tariff.

**5.10.4** The obligations under this Section 5.10, including Sections 5.10.1, 5.10.2, 5.10.3, and 5.10.4 shall survive termination of this Agreement.

**5.11 Planning Authority.** The CAISO is the Planning Authority, as that term is defined by NERC, for the Project from the time it is identified in the CAISO's Transmission Planning Process and approved by the CAISO Governing Board, regardless of the status of Project construction or energization. As such, the Approved Project Sponsor shall be subject to the rights and obligations set forth in CAISO Tariff Section 24 that are applicable to Participating TOs as they pertain to the Project.

**5.12 Tax Status.** Each Party shall cooperate with the other to maintain the other Party's tax status. Nothing in this Agreement is intended to adversely affect the CAISO's or the Approved Project Sponsor's tax exempt status with respect to the issuance of bonds, including Local Furnishing Bonds, if any.

## ARTICLE 6. TESTING AND INSPECTION

**6.1 Testing and Modifications.** Prior to energizing the Project for testing, the Interconnecting PTO or other entity shall test the Interconnecting PTO's or other entity's Transmission Interconnection Facilities, and the Approved Project Sponsor shall test the Project to ensure their safe and reliable operation. All testing shall be coordinated and approved by the CAISO to ensure grid reliability. Similar testing may be required after initial operation. Each Party shall make any modifications to its facilities that are found to be necessary as a result of such testing. The Approved Project Sponsor shall not commence initial parallel operation of the Project until the Interconnecting PTO or other entity provides prior written approval to the CAISO and the Approved Project Sponsor.

**6.2 Right to Observe Testing.** The Approved Project Sponsor shall notify the CAISO at least fourteen (14) calendar days in advance of its performance of tests. The CAISO has the right, at its own expense, to observe such testing.

**6.3 Right to Inspect.** The CAISO shall have the right, but shall have no obligation, to (i) observe the Approved Project Sponsor's tests and/or inspection of any of its System Protection Facilities and other protective equipment; and (ii) review the settings of the Approved Project Sponsor's System Protection Facilities and other protective equipment at its expense. The CAISO may exercise these rights from time to time as it deems necessary upon reasonable notice to the Approved Project Sponsor. The exercise or non-exercise by CAISO of any such rights shall not be construed as an endorsement or confirmation of any element or condition of the Project or the System Protection Facilities or other protective equipment or the operation thereof, or as a warranty as to the fitness, safety, desirability, or reliability of same. Any information that CAISO obtains through the exercise of any of its rights under this Section 6.3 shall be deemed to be Confidential Information and treated pursuant to Article 19 of this Agreement.

## ARTICLE 7. METERING

(Only required if Balancing Authority Area boundary change)

**7.1 General.** The Approved Project Sponsor shall comply with any Applicable Reliability Standards and the Applicable Reliability Council requirements regarding metering. The Approved Project Sponsor and CAISO shall comply with the provisions of the CAISO Tariff regarding metering, including Section 10 of the CAISO Tariff. Power flows to and from the Project shall be measured at or, at the CAISO's option for its respective Metering Equipment, compensated to, the Scheduling Point. The CAISO shall provide metering quantities to the Approved Project Sponsor upon request in accordance with the CAISO Tariff by directly polling the CAISO's meter data acquisition system. The Approved Project Sponsor shall bear all reasonable documented costs associated with the purchase, installation, operation, testing, and maintenance of the Metering

Equipment.

## ARTICLE 8. COMMUNICATIONS

**8.1 Approved Project Sponsor Obligations.** The Approved Project Sponsor shall maintain satisfactory operating communications with the CAISO in accordance with the provisions of the CAISO Tariff and with the Interconnecting PTO's or other entity's dispatcher or such other representative designated by the Interconnecting PTO or other entity during synchronization, testing, and energization. The Approved Project Sponsor shall provide standard voice line, dedicated voice line, and facsimile communications at the Project's control room or central dispatch facility through use of either the public telephone system or a voice communications system that does not rely on the public telephone system. The Approved Project Sponsor shall also provide the dedicated data circuits necessary to provide Approved Project Sponsor data to the CAISO and Interconnecting PTO as set forth in Appendix C, Security Arrangements Details. The data circuits shall extend from the Project to the locations specified by the CAISO and Interconnecting PTO. Any required maintenance of such communications equipment shall be performed by the Approved Project Sponsor. Operational communications shall be activated and maintained under, but not be limited to, the following events: system paralleling or separation, scheduled and unscheduled shutdowns, and equipment clearances.

## ARTICLE 9. OPERATIONS

**9.1 General.** Each Party shall comply with Applicable Reliability Standards and the Applicable Reliability Council operating requirements. Each Party shall provide to the other Party all information that may reasonably be required by the other Party to comply with Applicable Laws and Regulations and Applicable Reliability Standards.

**9.2 CAISO Obligations.** The CAISO shall cause the Interconnecting PTO's transmission system to be operated and controlled in a safe and reliable manner during testing and synchronization and before the Approved Project Sponsor turns the Project over to CAISO Operational Control. The CAISO may provide operating instructions to the Approved Project Sponsor consistent with this Agreement and the Interconnecting PTO's and CAISO's operating protocols and procedures as they may change from time to time. The Interconnecting PTO and CAISO will consider changes to their operating protocols and procedures proposed by the Approved Project Sponsor.

**9.3 Approved Project Sponsor Obligations.** The Approved Project Sponsor shall at its own expense operate, maintain, and control the Project in a safe and reliable manner and in accordance with this Agreement in advance of turning over Operational Control to the CAISO. Appendix A, Project Details, sets forth applicable requirements of the CAISO Balancing Authority Area and may be modified by mutual agreement of the Parties to reflect changes to the requirements as they may change from time to time. The Approved Project Sponsor shall not energize the Project with the Interconnecting PTO's or other entity's transmission system until the Interconnecting PTO or other entity provides prior written approval.

**9.4 Start-Up and Synchronization.** The Parties shall establish agreed procedures for start-up, testing, and energization of the Project to the CAISO Controlled Grid prior to start-up of the Project. The Approved Project Sponsor shall be responsible for proper start-up and energization of the Project in compliance with the established procedures.

## ARTICLE 10. COST RECOVERY, BILLING, AND PAYMENT

**10.1 Transmission Revenue Requirement.** The Approved Project Sponsor may apply to FERC for a Transmission Revenue Requirement for transmission facilities not yet in operation, but approved under the transmission planning provisions of the CAISO Tariff, that will be Regional Transmission Facilities or Local Transmission Facilities when placed under the CAISO's Operational Control. If FERC approves such Transmission Revenue Requirement, the CAISO

shall incorporate the Transmission Revenue Requirement into the Regional Access Charge or Local Access Charge in accordance with the CAISO Tariff. The Approved Project Sponsor acknowledges and agrees with the cost estimates and the binding cost cap, or other binding cost containment measures, if applicable, set forth in Appendix E.

[Include the following clause if the Approved Project Sponsor agrees to a cost cap or other binding cost containment measures.]

**10.1.1** The Approved Project Sponsor agrees that it shall not seek, for recovery through its Transmission Revenue Requirement, higher costs than the maximum costs specified in, or determined in accordance with, any cost cap or other binding cost containment measures as specified in Appendix E except for costs incurred to comply with any additional specifications of the CAISO or Interconnecting PTO beyond the functional requirements for the transmission facility included in Appendix A to this agreement. The Approved Project Sponsor shall not seek recovery through its Transmission Revenue Requirement of any incentives or other costs that it has agreed to forego, as specified in Appendix E. The Approved Project Sponsor further agrees that the Transmission Control Agreement shall incorporate the Project cost cap or any other agreed-to binding cost containment measures agreed to or proposed by the Approved Project Sponsor. The provisions of this Section 10.1.1 shall survive termination of this Agreement.

**10.2 Application of CAISO Tariff.** The CAISO and Approved Project Sponsor shall comply with the billing and payment provisions set forth in the CAISO Tariff.

**10.3 Refund Obligation.** The Approved Project Sponsor, whether or not it is subject to FERC rate jurisdiction under Section 205 and Section 206 of the Federal Power Act, shall make all refunds, adjustments to its Transmission Revenue Requirement, and adjustments to its Approved Project Sponsor Tariff, and do all other things required to implement any FERC order related to the CAISO Tariff, including any FERC order the implementation of which necessitates the CAISO making payment adjustments or paying refunds to, or receiving prior period overpayments from, the Approved Project Sponsor. All such refunds and adjustments shall be made, and all other actions taken, in accordance with the CAISO Tariff, unless the applicable FERC order requires otherwise. These obligations under this Section 10.3 shall survive termination of this Agreement.

## ARTICLE 11. REGULATORY REQUIREMENTS AND GOVERNING LAWS

**11.1 Regulatory Requirements.** Each Party's obligations under this Agreement shall be subject to its receipt of any required approval or certificate from one or more Governmental Authorities in the form and substance satisfactory to the applying Party, or the Party making any required filings with, and compliance with the prior notice requirements of such Governmental Authorities. Each Party shall in good faith seek and use its Reasonable Efforts to obtain such other approvals. Nothing in this Agreement shall require the Approved Project Sponsor to take any action that could result in its inability to obtain, or its loss of, status or exemption under the Federal Power Act or the Public Utility Holding Company Act of 1935, as amended, or the Public Utility Regulatory Policies Act of 1978, or the Energy Policy Act of 2005.

**11.2 Governing Law.**

**11.2.1** The validity, interpretation and performance of this Agreement and each of its provisions shall be governed by the laws of the state of California, without regard to its conflicts of law principles.

**11.2.2** This Agreement is subject to all Applicable Laws and Regulations.

**11.2.3** Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest

any laws, orders, rules, or regulations of a Governmental Authority.

## ARTICLE 12. NOTICES

**12.1 General.** Unless otherwise provided in this Agreement, any notice, demand, or request required or permitted to be given by a Party to another and any instrument required or permitted to be tendered or delivered by a Party in writing to another shall be effective when delivered and may be so given, tendered, or delivered by (i) recognized national courier, (ii) depositing the same with the United States Postal Service with postage prepaid for delivery by certified or registered mail, addressed to the Party, or (iii) personal delivery to the Party, at the address set out in Appendix D, Addresses for Delivery of Notices and Billings.

A Party must update the information in Appendix D as information changes. A Party may change the notice information in this Agreement by giving five Business Days written notice prior to the effective date of the change. Such changes shall not constitute an amendment to this Agreement.

**12.2 Alternative Forms of Notice.** Any notice or request required or permitted to be given by a Party to another and not required by this Agreement to be given in writing may be given by telephone, facsimile, or e-mail to the telephone numbers and e-mail addresses set out in Appendix D.

**12.3** [Intentionally left blank.]

**12.4 Operations Notice.** Each Party shall notify the other Party in writing of the identity of the person that it designates as the point of contact with respect to the implementation of Article 9.

**12.5 Project Management.** If the Approved Project Sponsor desires to change the identified project management, including key personnel, the Approved Project Sponsor shall notify the CAISO in writing thirty (30) calendar days in advance for approval. Such approval shall not be unreasonably withheld.

**12.6 Notice of Regulatory Filings.** The Approved Project Sponsor will provide to the CAISO, Participating TOs (as listed on Appendix F to the Transmission Control Agreement), and other Approved Project Sponsors, a copy of all initial filings it submits in a FERC docket that affects the rates (including Transmission Revenue Requirement), terms, or conditions of service for the Project. The Approved Project Sponsor will provide such copy either via email or first-class U.S. mail on the same day it makes the filing with FERC; provided that if the copy is sent via U.S. mail, the requirement will be satisfied if the Approved Project Sponsor places the copy in the mail on the date of filing. The CAISO will post the contact information for Approved Project Sponsors on the CAISO website.

## ARTICLE 13. FORCE MAJEURE

**13.1 Force Majeure.**

**13.1.1** No Party shall be considered to be in Default with respect to any obligation hereunder if prevented from fulfilling such obligation by Force Majeure. A Party unable to fulfill any obligation by reason of Force Majeure shall give notice and the full particulars of such Force Majeure to the other Party in writing or by telephone as soon as reasonably possible after the occurrence of the cause relied upon. Telephone notices given pursuant to this Section shall be confirmed in writing as soon as reasonably possible and shall specifically state full particulars of the Force Majeure, the time and date when the Force Majeure occurred, and when the Force Majeure is reasonably expected to cease. The Party affected shall exercise due diligence to remove such disability with reasonable dispatch, but shall not be required to accede or agree to any provision not satisfactory to

it in order to settle and terminate a strike or other labor disturbance.

**13.1.2** If required, the Parties shall revise this Agreement, including Appendix B and Appendix E, following a Force Majeure event.

## ARTICLE 14. DEFAULT

**14.1. General.** No Default shall exist where failure to discharge an obligation, other than the payment of money, is the result of Force Majeure as defined in this Agreement or the result of an act or omission of the other Party. Upon a Breach, the affected non-Breaching Party shall give written notice of such Breach to the Breaching Party. The Breaching Party shall have thirty (30) calendar days from receipt of the Default notice within which to cure such Breach; provided however, if such Breach is not capable of cure within thirty (30) calendar days, the Breaching Party shall commence such cure within thirty (30) calendar days after notice and continuously and diligently complete such cure within ninety (90) calendar days from receipt of the Default notice; and, if cured within such time, the Breach specified in such notice shall cease to exist.

**14.2 Right to Terminate.** If a Breach is not cured as provided in this Article, or if a Breach is not capable of being cured within the period provided for herein, the affected non-Breaching Party shall have the right to declare a Default and terminate this Agreement by written notice at any time until cure occurs and be relieved of any further obligation hereunder and, whether or not such Party terminates this Agreement, to recover from the Breaching Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this Article shall survive termination of this Agreement.

**14.3 Notice to Financing Parties.** If, as contemplated by Section 16.1, the Approved Project Sponsor has provided notice to the CAISO of an assignment of this Agreement for collateral security purposes to aid in providing financing for the Project, then (a) if such notice of collateral assignment so indicates and contains notice information for the collateral assignee, the CAISO shall provide a copy to collateral assignee identified in such notice of any notice of Breach given by the CAISO to the Approved Project Sponsor and (b) such collateral assignee shall have the right, but no obligation, to effect cure of the Breach on behalf of the Approved Project Sponsor, and any performance of any obligations under this Agreement by such collateral assignee shall be accepted by the CAISO to the same extent as though the Approved Project Sponsor had directly performed such obligations.

## ARTICLE 15. INDEMNITY, CONSEQUENTIAL DAMAGES, AND INSURANCE

**15.1 Indemnity.** Each Party (the "Indemnifying Party") shall at all times indemnify, defend, and hold the other Party (the "Indemnified Party") harmless from any and all Losses arising out of or resulting from the Indemnifying Party's action or inactions of its obligations under this Agreement, except in cases of negligence or intentional wrongdoing by the Indemnified Party.

**15.1.1 Indemnified Party.** If the Indemnified Party is entitled to indemnification under this Article 15 as a result of a claim by a third party, and the Indemnifying Party fails, after notice and reasonable opportunity to proceed under Section 15.1 to assume the defense of such claim, such Indemnified Party may at the expense of the Indemnifying Party contest, settle, or consent to the entry of any judgment with respect to, or pay in full, such claim.

**15.1.2 Indemnifying Party.** If the Indemnifying Party is obligated to indemnify and hold the Indemnified Party harmless under this Article 15, the amount owing to the Indemnified Party shall be the amount of such Indemnified Party's actual Loss, net of any insurance or other recovery.

**15.1.3 Indemnity Procedures.** Promptly after receipt by the Indemnified Party of any claim or

notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in Section 15.1 may apply, the Indemnified Party shall notify the Indemnifying Party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the Indemnifying Party.

The Indemnifying Party shall have the right to assume the defense thereof with counsel designated by the Indemnifying Party and reasonably satisfactory to the Indemnified Party. If the defendants in any such action include the Indemnified Party and the Indemnifying Party and if the Indemnified Party reasonably concludes that there may be legal defenses available to it that are different from or additional to those available to the Indemnifying Party, the Indemnified Party shall have the right to select separate counsel to assert such legal defenses and to otherwise participate in the defense of such action on its own behalf. In such instances, the Indemnifying Party shall only be required to pay the fees and expenses of one additional attorney to represent an Indemnified Party having such differing or additional legal defenses.

The Indemnified Party shall be entitled, at its expense, to participate in any such action, suit, or proceeding, the defense of which has been assumed by the Indemnifying Party. Notwithstanding the foregoing, the Indemnifying Party (i) shall not be entitled to assume and control the defense of any such action, suit, or proceedings if and to the extent that, in the opinion of the Indemnified Party and its counsel, such action, suit, or proceeding involves the potential imposition of criminal liability on the Indemnified Party, or there exists a conflict or adversity of interest between the Indemnified Party and the Indemnifying Party, in which event the Indemnifying Party shall pay the reasonable expenses of the Indemnified Party, and (ii) shall not settle or consent to the entry of any judgment in any action, suit, or proceeding without the consent of the Indemnified Party, which shall not be unreasonably withheld, conditioned, or delayed.

**15.2 Consequential Damages.** In no event shall any Party be liable under any provision of this Agreement for any losses, damages, costs, or expenses for any special, indirect, incidental, consequential, or punitive damages, including loss of profit or revenue, loss of the use of equipment, cost of capital, or cost of temporary equipment or services, whether based in whole or in part in contract or in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to another Party under another agreement shall not be considered to be special, indirect, incidental, or consequential damages hereunder.

**15.3 Insurance.** The Approved Project Sponsor shall carry insurance for the Project in accordance with good utility practice.

**15.4 Continuity of Obligations.** The obligations and liability limitations under this Article 15 shall survive termination of the Agreement.

## ARTICLE 16. ASSIGNMENT

**16.1 Assignment.** With the exception of assignment for collateral security purposes in accordance with this Section and Section 14.3, this Agreement may be assigned by a Party only with the written consent of the other Party, which consent shall not be unreasonably withheld. The CAISO will not approve the assignment unless the assignee (i) meets the competitive solicitation qualification requirements set for in CAISO Tariff Section 24.5.3.1; (ii) agrees to honor the cost containment measures or cost caps specified in Appendix E, if applicable; (iii) agrees to meet the factors that the CAISO relied upon in selecting the Approved Project Sponsor; and (iv) assumes the rights and obligations contained in this Agreement; provided, however, that the Approved Project Sponsor shall have the right to assign this Agreement, without the consent of the CAISO, for collateral security purposes to aid in providing financing for the Project, provided that the

Approved Project Sponsor shall promptly notify the CAISO of any such assignment, including identification of the assignee and contact information. Any financing arrangement entered into by the Approved Project Sponsor pursuant to this Article shall provide that prior to or upon the exercise of the secured party's, trustee's, or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee, or mortgagee shall notify the CAISO of the date and particulars of any such exercise of assignment rights. Any attempted assignment that violates this Article is void and ineffective. Any assignment under this Agreement shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof.

## ARTICLE 17. SEVERABILITY

**17.1 Severability.** If any provision in this Agreement is finally determined to be invalid, void, or unenforceable by any court or other Governmental Authority having jurisdiction, such determination shall not invalidate, void, or make unenforceable any other provision, agreement, or covenant of this Agreement.

## ARTICLE 18. COMPARABILITY

**18.1 Comparability.** The Parties shall comply with all applicable comparability and code of conduct laws, rules, and regulations, as amended from time to time.

## ARTICLE 19. CONFIDENTIALITY

**19.1 Confidentiality.** Confidential Information shall include all information relating to a Party's technology, research and development, business affairs, and pricing, and any information supplied by a Party to the other Party prior to the execution of this Agreement.

Information is Confidential Information only if it is clearly designated or marked in writing as confidential on the face of the document, or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Party receiving the information that the information is confidential.

If requested by a Party, the other Party shall provide in writing the basis for asserting that the information referred to in this Article warrants confidential treatment, and the requesting Party may disclose such writing to the appropriate Governmental Authority. Each Party shall be responsible for the costs associated with affording confidential treatment to its information.

**19.1.1 Term.** During the term of this Agreement, and for a period of three (3) years after the expiration or termination of this Agreement, except as otherwise provided in this Article, each Party shall hold in confidence and shall not disclose Confidential Information to any person.

**19.1.2 Scope.** Confidential Information shall not include information that the receiving Party can demonstrate: (1) is generally available to the public other than as a result of a disclosure by the receiving Party; (2) was in the lawful possession of the receiving Party on a non-confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a third party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the disclosing Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the disclosing Party; (5) is, or becomes, publicly known through no wrongful act or omission of the receiving Party or Breach of this Agreement; or (6) is required, in accordance with Section 19.1.7 of this Agreement, Order of Disclosure, to be disclosed by any Governmental Authority or is otherwise required to be disclosed by law or subpoena, or is necessary in any legal proceeding establishing rights and obligations under this Agreement. Information designated as Confidential

Information shall no longer be deemed confidential if the Party that designated the information as confidential notifies the other Party that it no longer is confidential.

**19.1.3 Release of Confidential Information.** No Party shall release or disclose Confidential Information to any other person, except to its employees, consultants, Affiliates (limited by the Standards of Conduct requirements set forth in Part 358 of FERC's regulations, 18 C.F.R. Section 358), and subcontractors, or to parties who may be or considering providing financing to or equity participation with the Approved Project Sponsor, or to potential purchasers or assignees of the Approved Project Sponsor, on a need-to-know basis in connection with this Agreement, unless such person has first been advised of the confidentiality provisions of this Article and has agreed to comply with such provisions. Notwithstanding the foregoing, a Party providing Confidential Information to any person shall remain primarily responsible for any release of Confidential Information in contravention of this Article.

**19.1.4 Rights.** Each Party retains all rights, title, and interest in the Confidential Information that each Party discloses to the other Party. The disclosure by each Party to the other Party of Confidential Information shall not be deemed a waiver by a Party or any other person or entity of the right to protect the Confidential Information from public disclosure.

**19.1.5 No Warranties.** The mere fact that a Party has provided Confidential Information does not constitute a warranty or representation as to its accuracy or completeness. In addition, by supplying Confidential Information, no Party obligates itself to provide any particular information or Confidential Information to the other Party or to enter into any further agreements or proceed with any other relationship or joint venture.

**19.1.6 Standard of Care.** Each Party shall use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from unauthorized disclosure, publication, or dissemination. Each Party may use Confidential Information solely to fulfill its obligations to the other Party under this Agreement or its regulatory requirements.

**19.1.7 Order of Disclosure.** If a court or another Government Authority or entity with the right, power, and apparent authority to do so requests or requires any Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party shall provide the other Party with prompt notice of such request or requirement so that the other Party may seek an appropriate protective order or waive compliance with the terms of this Agreement. Notwithstanding the absence of a protective order or waiver, the Party may disclose such Confidential Information which, in the opinion of its counsel, the Party is legally compelled to disclose. Each Party shall use Reasonable Efforts to obtain reliable assurance that confidential treatment will be accorded any Confidential Information so furnished.

**19.1.8 Termination of Agreement.** Upon termination of this Agreement for any reason, each Party shall, within ten (10) calendar days after receipt of a written request from the other Party, use Reasonable Efforts to destroy, erase, or delete, with such destruction, erasure, and deletion certified in writing to the other Party, or return to the other Party, without retaining copies thereof, any and all written or electronic Confidential Information received from the other Party, unless subject to retention for litigation or regulatory purposes.

**19.1.9 Remedies.** The Parties agree that monetary damages would be inadequate to compensate a Party for another Party's Breach of its obligations under this Article. Each Party accordingly agrees that the other Party shall be entitled to equitable relief, by way of injunction or otherwise, if the first Party Breaches or threatens to Breach its obligations under this Article, which equitable relief shall be granted without bond or proof of

damages, and the receiving Party shall not plead in defense that there would be an adequate remedy at law. Such remedy shall not be deemed an exclusive remedy for the Breach of this Article, but shall be in addition to all other remedies available at law or in equity. The Parties further acknowledge and agree that the covenants contained herein are necessary for the protection of legitimate business interests and are reasonable in scope. No Party, however, shall be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with this Article.

**19.1.10 Disclosure to FERC, its Staff, or a State.** Notwithstanding anything in this Article to the contrary, and pursuant to 18 C.F.R. Section 1b.20, if FERC or its staff, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to this Agreement, the Party shall provide the requested information to FERC or its staff, within the time provided for in the request for information. In providing the information to FERC or its staff, the Party must, consistent with 18 C.F.R. Section 388.112, request that the information be treated as confidential and non-public by FERC and its staff and that the information be withheld from public disclosure. A Party is prohibited from notifying the other Party prior to the release of the Confidential Information to FERC or its staff. The Party shall notify the other Party when it is notified by FERC or its staff that a request to release Confidential Information has been received by FERC, at which time any of the Parties may respond before such information would be made public, pursuant to 18 C.F.R. Section 388.112. Requests from a state regulatory body conducting a confidential investigation shall be treated in a similar manner if consistent with the applicable state rules and regulations.

**19.1.11 Subject to the Exception in Section 19.1.10.** Subject to the exception in Section 19.1.10 and consistent with the provisions of Sections 19.1.3 and 19.1.7, Confidential Information shall not be disclosed by a Party to any person not employed or retained by that Party, except to the extent disclosure is (i) required by law; (ii) reasonably deemed by the disclosing Party to be required to be disclosed in connection with a dispute between the Parties, or the defense of litigation or dispute; (iii) otherwise permitted by consent of the other Party, such consent not to be unreasonably withheld; or (iv) necessary to fulfill its obligations under this Agreement or as a transmission service provider or a Balancing Authority including disclosing the Confidential Information to a regional or national reliability organization. The Party asserting confidentiality shall notify the other Party in writing of the information it claims is confidential. Prior to any disclosures of another Party's Confidential Information under this subparagraph, or if any third party or Governmental Authority makes any request or demand for any of the information described in this Section 19.1.11, the disclosing Party shall promptly notify the other Party in writing and shall assert confidentiality and cooperate with the other Party in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order, or other reasonable measures.

## ARTICLE 20. ENVIRONMENTAL RELEASES

**20.1** Each Party shall notify the other Party, first orally and then in writing, of the release of any Hazardous Substances, including hazardous wastes as defined by local, state, and federal law, any asbestos or lead abatement activities, or any type of remediation activities related to the Project or the Transmission Interconnection Facilities, each of which may reasonably be expected to affect the other Party. The notifying Party shall (i) provide the notice as soon as practicable, for an occurrence that may present an immediate risk to human health or the environment; (ii) make a good faith effort to provide the notice no later than twenty-four hours after such Party becomes aware of the occurrence for an event that may present an immediate risk to human health or the environment; and (iii) promptly furnish to the other Party information necessary for the designated Party to notify any Governmental Authorities of the event as required by law or Project-specific conditions. Copies of any publicly available reports shall be distributed to the other Party

regarding such events.

## ARTICLE 21. INFORMATION ACCESS AND AUDIT RIGHTS

**21.1 Information Access.** Each Party (the "disclosing Party") shall make available to the other Party information that is in the possession of the disclosing Party and is necessary in order for the other Party to (i) verify the costs incurred by the disclosing Party for which the other Party is responsible under this Agreement; and (ii) carry out its obligations and responsibilities under this Agreement. The Parties shall not use such information for purposes other than those set forth in this Section 21.1 and to enforce their rights under this Agreement. Nothing in this Article shall obligate the CAISO to make available to a Party any third party information in its possession or control if making such third party information available would violate a CAISO Tariff restriction on the use or disclosure of such third party information.

**21.2 Reporting of Non-Force Majeure Events.** Each Party (the "notifying Party") shall notify the other Party when the notifying Party becomes aware of its inability to comply with the provisions of this Agreement for a reason other than a Force Majeure event. The Parties agree to cooperate with each other and provide necessary information regarding such inability to comply, including the date, duration, reason for the inability to comply, and corrective actions taken or planned to be taken with respect to such inability to comply. Notwithstanding the foregoing, notification, cooperation, or information provided under this Section shall not entitle the Party receiving such notification to allege a cause for anticipatory breach of this Agreement.

**21.3 Audit Rights.** Subject to the requirements of confidentiality under Article 19 of this Agreement, the CAISO audit rights shall include the CAISO's right to audit the Approved Project Sponsor's costs pertaining to performance or satisfaction of obligations under this Agreement.

**21.3.1** The CAISO shall have the right, during normal business hours, and upon prior reasonable notice to the Approved Project Sponsor, to audit at its own expense the accounts and records pertaining to satisfaction of obligations under this Agreement. Subject to Section 21.3.2, any audit authorized by this Section 21.3 shall be performed at the offices where such accounts and records are maintained and shall be limited to those portions of such accounts and records that relate to performance and satisfaction of obligations under this Agreement. The Approved Project Sponsor shall keep such accounts and records for a period equivalent to the audit rights periods described in Section 21.4.

**21.3.2** Notwithstanding anything to the contrary in this Agreement, the Approved Project Sponsor's rights to audit the CAISO's accounts and records shall be as set forth in Section 22.1 of the CAISO Tariff.

**21.4 Audit Rights Period for Construction-Related Accounts and Records.** Accounts and records related to the design, engineering, procurement, and construction of Project constructed by the Approved Project Sponsor shall be subject to audit and verification by the CAISO for a period of twenty-four months following the issuance of a final cost summary in accordance with Section 5.6.1.

## ARTICLE 22. SUBCONTRACTORS

**22.1 General.** Subject to Section 5.5.5, nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this Agreement; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this Agreement in providing such services, and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

**22.2 Responsibility of Principal.** The creation of any subcontract relationship shall not relieve the

hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Party for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall the CAISO be liable for the actions or inactions of the Approved Project Sponsor or its subcontractors with respect to obligations of the Approved Project Sponsor under Article 4 of this Agreement. Any applicable obligation imposed by this Agreement upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

## ARTICLE 23. DISPUTES

**23.1 General.** All disputes arising out of or in connection with this Agreement whereby relief is sought by or from the CAISO shall be settled in accordance with the provisions of Section 13 of the CAISO Tariff, except that references to the CAISO Tariff in such Section 13 of the CAISO Tariff shall be read as references to this Agreement. Disputes arising out of or in connection with this Agreement not subject to provisions of Section 13 of the CAISO Tariff shall be resolved as follows:

**23.2 Submission.** In the event either Party has a dispute, or asserts a claim, that arises out of or in connection with this Agreement or its performance, such Party (the "disputing Party") shall provide the other Party with written notice of the dispute or claim ("Notice of Dispute"). Such dispute or claim shall be referred to a designated senior representative of each Party for resolution on an informal basis as promptly as practicable after receipt of the Notice of Dispute by the other Party. In the event the designated representatives are unable to resolve the claim or dispute through unassisted or assisted negotiations within thirty (30) calendar days after the other Party's receipt of the Notice of Dispute, such claim or dispute may, upon mutual agreement of the Parties, be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below. In the event the Parties do not agree to submit such claim or dispute to arbitration, each Party may exercise whatever rights and remedies it may have in equity or at law consistent with the terms of this Agreement.

**23.3 External Arbitration Procedures.** Any arbitration initiated under this Agreement shall be conducted before a single neutral arbitrator appointed by the Parties. If the Parties fail to agree upon a single arbitrator within ten (10) calendar days after the submission of the dispute to arbitration, each Party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty (20) calendar days select a third arbitrator to chair the arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration, except prior arbitration. The arbitrator shall provide each of the Parties an opportunity to be heard and, except as otherwise provided herein, shall conduct the arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("Arbitration Rules") and any applicable FERC regulations; provided, however, in the event of a conflict between the Arbitration Rules and the terms of this Article, the terms of this Article shall prevail.

**23.4 Arbitration Decisions.** Unless otherwise agreed by the Parties, the arbitrator shall render a decision within ninety (90) calendar days after appointment and shall notify the Parties in writing of such decision and the reasons therefor. The arbitrator shall be authorized only to interpret and apply the provisions of this Agreement and shall have no power to modify or change any provision of this Agreement in any manner. The decision of the arbitrator shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator may be appealed solely on the grounds that the conduct of the arbitrator, or the decision itself, violated the standards set forth in the Federal Arbitration Act or the Administrative Dispute Resolution Act. The final decision of the arbitrator must also be filed with, and approved by, FERC if it affects jurisdictional rates, terms, and conditions of service, Transmission Interconnection Facilities, or Network Upgrades.

**23.5 Costs.** Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable: (1) the cost of the arbitrator chosen by the Party to sit on the three member panel and one half of the cost of the third arbitrator chosen; or (2) one half the cost of the single arbitrator jointly chosen by the Parties.

## ARTICLE 24. REPRESENTATIONS, WARRANTIES, AND COVENANTS

**24.1 General.** Each Party makes the following representations, warranties, and covenants:

**24.1.1 Good Standing.** Such Party is duly organized, validly existing, and in good standing under the laws of the state in which it is organized, formed, or incorporated, as applicable; that it is qualified to do business in the state or states in which the Project and transmission facilities owned by such Party, as applicable, are located; and that it has the corporate power and authority to own its properties, to carry on its business as now being conducted, and to enter into this Agreement and carry out the transactions contemplated hereby and perform and carry out all covenants and obligations on its part to be performed under and pursuant to this Agreement.

**24.1.2 Authority.** Such Party has the right, power, and authority to enter into this Agreement, to become a Party hereto, and to perform its obligations hereunder. This Agreement is a legal, valid, and binding obligation of such Party, enforceable against such Party in accordance with its terms, except as the enforceability thereof may be limited by applicable bankruptcy, insolvency, reorganization, or other similar laws affecting creditors' rights generally and by general equitable principles, regardless of whether enforceability is sought in a proceeding in equity or at law.

**24.1.3 No Conflict.** The execution, delivery, and performance of this Agreement does not violate or conflict with the organizational or formation documents, or bylaws or operating agreement, of such Party, or any judgment, license, permit, order, material agreement, or instrument applicable to or binding upon such Party or any of its assets.

**24.1.4 Consent and Approval.** Such Party has sought or obtained, or, in accordance with this Agreement, will seek or obtain, each consent, approval, authorization, order, or acceptance by any Governmental Authority in connection with the execution, delivery, and performance of this Agreement, and it will provide to any Governmental Authority notice of any actions under this Agreement that are required by Applicable Laws and Regulations.

**24.1.5 Technical Specifications Accurate.** The technical specifications provided by the Approved Project Sponsor to the CAISO are accurate and complete.

## ARTICLE 25. MISCELLANEOUS

**25.1 Binding Effect.** This Agreement and the rights and obligations hereof shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

**25.2 Conflicts.** In the event of a conflict between the body of this Agreement and any attachment, appendices, or exhibits hereto, the terms and provisions of the body of this Agreement shall prevail and be deemed the final intent of the Parties.

**25.3 Rules of Interpretation.** This Agreement, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this Agreement, and reference to a person in a particular capacity excludes such person in any other capacity or

individually; (3) reference to any agreement, including this Agreement, document, instrument, or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any Applicable Laws and Regulations means such Applicable Laws and Regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section, or Appendix means such Article or Section of this Agreement or such Appendix to this Agreement, or such Section of the CAISO Tariff or such Appendix to the CAISO Tariff, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this Agreement as a whole and not to any particular Article, Section, or other provision hereof or thereof; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".

**25.4 Entire Agreement.** This Agreement, including all Appendices and Schedules attached hereto, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this Agreement.

**25.5 No Third Party Beneficiaries.** This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest, and, where permitted, their assigns.

**25.6 Waiver.** The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement shall not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, or duty of this Agreement. Termination or Default of this Agreement for any reason by the Approved Project Sponsor shall not constitute a waiver of the Approved Project Sponsor's legal rights to obtain an interconnection from the CAISO. Any waiver of any provision of this Agreement shall, if requested, be provided in writing.

**25.7 Headings.** The descriptive headings of the various Articles and Sections of this Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Agreement.

**25.8 Multiple Counterparts.** This Agreement may be executed in two or more counterparts, each of which is deemed an original but all of which constitute one and the same instrument.

**25.9 Amendment.** The Parties may by mutual agreement amend this Agreement by a written instrument duly executed by all of the Parties. Such amendment shall become effective and a part of this Agreement upon satisfaction of all Applicable Laws and Regulations.

**25.10 Modification by the Parties.** Except as described in Appendices B and E, the Parties may by mutual agreement amend the Appendices to this Agreement by a written instrument duly executed by all of the Parties. Such amendment shall become effective and a part of this Agreement upon satisfaction of all Applicable Laws and Regulations.

**25.11 Reservation of Rights.** The CAISO has the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to any rates, terms and conditions, charges, classifications of service, rule, or regulation. The Approved Project Sponsor shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to Section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations. Each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered.

**25.12 No Partnership.** This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power, or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, the other Party.

**25.13 Joint and Several Obligations.** Except as otherwise provided in this Agreement, the obligations of the CAISO and the Approved Project Sponsor are several, and are neither joint nor joint and several.

**IN WITNESS WHEREOF,** the Parties have executed this Agreement in multiple originals, each of which shall constitute and be an original effective agreement between the Parties.

**[Approved Project Sponsor]**

By: _____

Name: _____

Title: _____

Date: _____

**California Independent System Operator Corporation**

By: _____

Name: _____

Title: _____

Date: _____

**Appendices to Agreement**

Appendix A Project Details

Appendix B Milestones

Appendix C Security Arrangements Details

Appendix D Addresses for Delivery of Notices and Billings

Appendix E Approved Project Sponsor's Costs of Project

**Appendix A**

**Project Details**

1. **Description**

2. **Transmission Interconnection Facilities**

3. **Network Upgrades**

4. **Distribution Upgrades**

5. **Diagram of Project:**

6. **Project Team:**

**Milestones**

**1. Milestone Dates**

***[Example: The Milestones will be determined on a case-by-case basis.]***

| Item | Milestone | Responsible Party | Due Date [1/] |
|---|---|---|---|
| | **Submit Construction Plan in accordance with Section 5.3.1 of this Agreement** | **Approved Project Sponsor** | * |
| | **Submit request for Transmission Interconnection Service to the applicable Interconnecting PTO** | **Approved Project Sponsor** | |
| | **Commence development activities including commencement of regulatory approvals; acquisition of land; and permits** | **Approved Project Sponsor** | |
| | **Commence engineering design** | **Approved Project Sponsor** | |
| | **Submit Construction Plan Status Report in accordance with Section 5.3.2 of this Agreement** | **Approved Project Sponsor** | |
| | **Complete engineering design** | **Approved Project Sponsor** | |
| | **Submit Project specifications in accordance with Section 5.4.1 of this Agreement** | **Approved Project Sponsor** | |
| | **Provide comments on Project specifications in accordance with Section 5.4.1 of this Agreement** | **CAISO** | |
| | **Commence procurement including material and resources** | **Approved Project Sponsor** | |
| | **Complete permitting activities in accordance with Section 5.5.1.1 of this Agreement** | **Approved Project Sponsor** | |
| | **Complete procurement including material and resources** | **Approved Project Sponsor** | |
| | **Execute agreement with applicable Interconnecting PTO prior to commencement of construction** | **Approved Project Sponsor** | |
| | **Commence Construction** | **Approved Project Sponsor** | |
| | **Submit a Participating TO application for the Project to the CAISO in accordance with Section 4.3.1.1 of the CAISO Tariff** | **Approved Project Sponsor** | |
| | **Submit final Project specifications in accordance with Section 5.4.2 of this Agreement** | **Approved Project Sponsor** | |
| | **Provide comments on final Project specifications in accordance with Section 5.4.2 of this Agreement** | **CAISO** | |

| Item | Milestone | Responsible Party | Due Date [1/] |
|---|---|---|---|
| | **Commence Testing** | **Approved Project Sponsor** | |
| | **Energization Date** | **Approved Project Sponsor** | * |
| | **Complete Construction** | **Approved Project Sponsor** | |
| | **In accordance with Section 5.6.2 provide final "as-built" drawings, information and other documents** | **Approved Project Sponsor** | |
| | **In accordance with Section 5.6.1 provide final costs of the Project** | **Approved Project Sponsor** | |

1/ Dates in this Appendix B are good faith estimates and can be modified as follows:

* Change in milestone date requires an amendment to this Agreement pursuant to Section 25.10.

** Change in milestone date can be agreed to in writing by the representatives listed in Appendix D to this Agreement without further regulatory approval.

## Appendix C

## Security Arrangements Details

Infrastructure security of CAISO Controlled Grid equipment and operations and control hardware and software is essential to ensure day-to-day CAISO Controlled Grid reliability and operational security. FERC will expect the CAISO, and Approved Project Sponsor interconnected to the CAISO Controlled Grid to comply with Applicable Reliability Criteria. All public utilities will be expected to meet basic standards for system infrastructure and operational security, including physical, operational, and cyber-security practices.

The Approved Project Sponsor shall meet the requirements for security implemented pursuant to the CAISO Tariff, including the CAISO's standards for information security posted on the CAISO's internet web site at the following internet address: http://www.caiso.com/pubinfo/info-security/index.html.

**Appendix D**

**Addresses for Delivery of Notices and Billings**

**Notices:**

**Approved Project Sponsor:**

[Name]
[Address]

With a copy to:

[Name]
[Address]

Email:

**CAISO:**

California ISO
Attn: Infrastructure Contracts & Management
250 Outcropping Way
Folsom, CA 95630

QueueManagement@CAISO.com <mailto:QueueManagement@CAISO.com>

**Alternative Forms of Delivery of Notices (telephone, facsimile or e-mail):**

**Approved Project Sponsor:**

[Name]
[Address]
[Phone]

**CAISO:**

Deb Le Vine
dlevine@caiso.com <mailto:dlevine@caiso.com>
(916) 351-2144

***[Include if Approved Project Sponsor agrees to a cost cap.]***

## Appendix E

## Approved Project Sponsor's Costs of Project

The estimated cost components for the Project are as follows:

| **Transmission Line Costs** | |
|---|---|
| | |
| | |
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| | |
| | |
| | |
| | |
| | |
| | |
| **Total** | |
| | |

Approved Project Sponsor may adjust the amounts in each cost category as needed during the term of this Agreement provided the total Project cost does not exceed $xxx.

In accordance with Section 5.6.1, the Approved Project Sponsor shall provide a summary of the final cost of the construction of the Project as soon as reasonably practicable within twelve months of the completion of construction.

**Appendix Y GIP**

**For Interconnection Requests**

**Generator Interconnection Procedures (GIP)**

# Generator
# Interconnection Procedures (GIP)

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## Section 1 Objectives And Definitions

### 1.1 Objectives And Applicability

The objective of this GIP is to implement the requirements for both Small and Large Generating Facility interconnections to the CAISO Controlled Grid. This GIP applies to Interconnection Requests that are either: (i) assigned to a Queue Cluster, (ii) included in the Independent Study Process, or (iii) included in the Fast Track Process, pursuant to the terms of this CAISO Tariff for the performance of its Interconnection Studies.

### 1.2 Definitions

#### 1.2.1 Master Definitions Supplement.

Unless the context otherwise requires, any word or expression defined in the Master Definitions Supplement, Appendix A to the CAISO Tariff, shall have the same meaning where used in this GIP. References to GIP are to this Appendix Y.

#### 1.2.2 Special Definitions for this GIP.

In this GIP, the following words and expressions shall have the meanings set opposite them: "Confidential Information" shall mean any confidential, proprietary or trade secret information of a plan, specification, pattern, procedure, design, device, list, concept, policy or compilation relating to the present or planned business of a Party, which is designated as confidential by the Party supplying the information, whether conveyed orally, electronically, in writing, through inspection, or otherwise, subject to Section 13.1 of this GIP.

"Dispute Resolution" shall mean the procedure set forth in this GIP for resolution of a dispute between the Parties.

“Fast Track Process” shall mean the procedure for evaluating an Interconnection Request for a certified Small Generating Facility no larger than 5 MW that includes the GIP Section 5.3 screens, customer options meeting, and optional supplemental review.

"Force Majeure" shall mean any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure event does not include acts of negligence or intentional wrongdoing by the Party claiming Force Majeure.

"Governmental Authority" shall mean any federal, state, local or other governmental, regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the Interconnection Customer, CAISO, or Participating TO, or any Affiliate thereof.

“Independent Study Process” or “ISP” shall mean the procedure for evaluating an Interconnection Request for a Generating Facility independently of the process applicable to a Generating Facility assigned to a Queue Cluster or the Fast Track Process.

"Party" or "Parties" shall mean the CAISO, Participating TO(s), Interconnection Customer or the applicable combination of the above.

"Phased Generating Facility" shall mean a Generating Facility that is structured to be completed and to achieve Commercial Operation in two or more successive sequences that are specified in a GIA, such that each sequence comprises a portion of the total megawatt generation capacity of the entire Generating Facility.

"Reasonable Efforts" shall mean, with respect to an action required to be attempted or taken by a Party under the Generator Interconnection Procedures, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

"Roles and Responsibilities Agreement" shall mean the Agreement for the Allocation of Responsibilities with Regard to Generator Interconnection Procedures and Interconnection Study Agreements, a pro forma version of which is attached to this GIP.

## Section 2 Scope And Application

### 2.1 Application Of Generator Interconnection Procedures

Sections 2 through 13 of this GIP apply to processing an Interconnection Request pertaining to a Generating Facility that is either: (i) assigned to a Queue Cluster, (ii) included in the Independent Study Process, or (iii) included in the Fast Track Process, pursuant to the terms of this CAISO Tariff for the performance of its Interconnection Studies. Appendix 2 of this GIP sets forth exceptions to the provisions of this GIP that apply to processing an Interconnection Request pertaining to a Generating Facility that meets the criteria set forth in GIP Appendix 2.

### 2.2 Comparability

The CAISO shall receive, process, and analyze Interconnection Requests in a timely manner as set forth in this GIP. The CAISO will use the same Reasonable Efforts in processing and analyzing Interconnection Requests from all Interconnection Customers as set forth in this GIP, whether the Generating Facilities are owned by a Participating TO, its subsidiaries, or Affiliates or others.

### 2.3 Interconnection Base Case Data

For each Interconnection Study Cycle, the CAISO, in coordination with applicable Participating TO(s), shall publish updated Interconnection Base Case Data, including, as applicable, separate Interconnection Base Case Data for each Group Study to reflect system conditions particular to the Group Study, to a secured section of the CAISO Website: (1) prior to the Phase I Interconnection Study with the Generation reflected in valid Interconnection Requests submitted in the Cluster Application Windows for the Interconnection Study Cycle, as well as all Generation reflected in the Interconnection Requests in the Independent Study Process that entered the CAISO's interconnection queue prior to the creation of the Base Case, along with any associated transmission upgrades or additions; (2) after the Phase I Interconnection Study with the Generation reflected in valid Interconnection Requests submitted in the Cluster Application Window for the Interconnection Study Cycle, and the identified preliminary transmission upgrades or additions, as well as all Generation reflected in the Interconnection Requests in the Independent Study Process that entered the CAISO's interconnection queue prior to the creation of the Base Case, along with any associated transmission upgrades or additions; (3) prior to the Phase II Interconnection Study, including all remaining Generation from the Phase I Interconnection Study for the Interconnection Study Cycle, as well as all Generation reflected in the Interconnection Requests in the Independent Study Process that entered the CAISO's interconnection queue prior to the creation of the Base Case, along with any associated transmission upgrades or additions; and (4) after the Phase II Interconnection Study, including all remaining Generation from the applicable Phase I Interconnection Study and the identified transmission upgrades and additions for the

Interconnection Study Cycle, as well as all Generation reflected in the Interconnection Requests in the Independent Study Process that entered the CAISO's interconnection queue prior to the creation of the Base Case, along with any associated transmission upgrades or additions.

Interconnection Base Case Data shall include information subject to the confidentiality provisions in GIP Section 13.1.

The CAISO shall require current and former Interconnection Customers, Market Participants, and electric utility regulatory agencies within California to sign a CAISO confidentiality agreement and, where the current or former Interconnection Customer or Market Participant is not a member of WECC, or its successor, an appropriate form of agreement with WECC, or its successor, as necessary. All other entities or persons seeking Interconnection Base Case Data must satisfy the foregoing requirements as well as all requirements under 18 C.F.R. Section 388.113 for obtaining the release of Critical Energy Infrastructure Information (as that term is defined by FERC).

## 2.4 Interconnection Service And Studies

### 2.4.1 No Applicability to Transmission Service.

Nothing in this GIP shall constitute a request for transmission service or confer upon an Interconnection Customer any right to receive transmission service.

### 2.4.2 The Product.

Interconnection Service allows the Interconnection Customer to connect the Generating Facility to the CAISO Controlled Grid and be eligible to deliver the Generating Facility's output using the available capacity of the CAISO Controlled Grid. Interconnection Service does not in and of itself convey any right to deliver electricity to any specific customer or point of delivery or rights to any specific MW of available capacity on the CAISO Controlled Grid.

### 2.4.3 The Interconnection Studies.

For Interconnection Requests in a Queue Cluster, the Interconnection Studies consist of a Phase I Interconnection Study and a Phase II Interconnection Study. For Interconnection Requests processed under the Independent Study Process, the Interconnection Studies consist of a System Impact Study and a Facilities Study. The Interconnection Studies will include, but not be limited to, short circuit/fault duty, steady state (thermal and voltage) and stability analyses. The Interconnection Studies will identify direct Interconnection Facilities and required Reliability Network Upgrades necessary to mitigate thermal overloads and voltage violations, and address short circuit, stability, and reliability issues associated with the requested Interconnection Service.

The Phase I and Phase II Interconnection Studies for Queue Cluster Generating Facilities will also identify Delivery Network Upgrades for all Generating Facilities, including those being processed under the Independent Study Process, to allow the full output of a Generating Facility selecting Full Capacity Deliverability Status, the elected output of a Generating Facility seeking Partial Deliverability Status and, as applicable, the maximum allowed output of the interconnecting Generating Facility without one or more Delivery Network Upgrades in accordance with the On-Peak Deliverability Assessment and Off-Peak Deliverability Assessment set forth in GIP Section 6.5.2.

All cost estimates for Interconnection Facilities and Network Upgrades contained in Interconnection Studies will be set forth in the Interconnection Study report in present

dollar costs as well as time-adjusted dollar costs, adjusted to the estimated year of construction of the components being constructed.

## Section 3 Interconnection Requests

### 3.1 General

Pursuant to CAISO Tariff Section 25.1, an Interconnection Customer shall submit to the CAISO an Interconnection Request in the form of Appendix 1 to this GIP. The CAISO will forward a copy of the Interconnection Request to the applicable Participating TO within five (5) Business Days of receipt.

The Interconnection Customer shall submit a separate Interconnection Request for each site and may submit multiple Interconnection Requests for a single site. The Interconnection Customer must submit a deposit with each Interconnection Request even when more than one request is submitted for a single site. An Interconnection Request to evaluate one site at two different voltage levels shall be treated as two Interconnection Requests.

### 3.2 Roles And Responsibilities

(a) Each Interconnection Request will be subject to the direction and oversight of the CAISO. The CAISO will conduct or cause to be performed the required Interconnection Studies and any additional studies the CAISO determines to be reasonably necessary, and will direct the applicable Participating TO to perform portions of studies where the Participating TO has specific and non-transferable expertise or data and can conduct the studies more efficiently and cost effectively than the CAISO. The CAISO will coordinate with Affected System Operators in accordance with GIP Section 3.7.

(b) The CAISO will complete or cause to be completed all studies as required within the timelines provided in this GIP. Any portion of the studies performed at the direction of the CAISO by the Participating TOs or by a third party shall also be completed within timelines provided in this GIP.

(c) The CAISO has established a pro forma Roles and Responsibilities Agreement, attached hereto as Appendix 4 and incorporated herein by reference, for execution by the CAISO and the applicable Participating TOs.

(d) Each Interconnection Customer shall pay the actual costs of all Interconnection Studies, and any additional studies the CAISO determines to be reasonably necessary in response to the Interconnection Request. The CAISO shall reimburse the Participating TO for the actual cost of any portion of all Interconnection Studies that such Participating TO performs at the direction of the CAISO.

### 3.3 Timing for Submitting Interconnection Requests

#### 3.3.1 Timing for Submitting Interconnection Requests in Queue Cluster

Except for Interconnection Customers requesting processing under the Independent Study Process or Fast Track Process**,** Interconnection Requests must be submitted during a Cluster Application Window. There will be two Cluster Application Windows associated with each Interconnection Study Cycle. The first Cluster Application Window will open on October 15 and close on November 15 of the year prior to the year in which the Interconnection Studies are performed. The second Cluster Application Window will open on March 1 and close on March 31 of the year in which the Interconnection Studies are performed. In the event that any date set forth in this section is not a Business Day, then the applicable date shall be the next Business Day thereafter.

For the CAISO's fourth Queue Cluster, there will only be one Cluster Application Window, which will open on March 1, 2011 and close on March 31, 2011.

### 3.3.2 Timing for Submitting Interconnection Requests for Independent Study Process and Fast Track Process

Interconnection Customers may submit Interconnection Requests for processing under the Independent Study Process or the Fast Track Process at any time during the year.

### 3.4 [Not Used]

### 3.5 Processing of Interconnection Requests

### 3.5.1 Initiating an Interconnection Request.

To initiate an Interconnection Request, except as set forth in GIP Section 5, the Interconnection Customer must submit all of the following during a Cluster Application Window, or at any time during the year for proposed Generating Facilities applying for processing under the Independent Study Process:

(i) An Interconnection Study Deposit equal to $50,000 plus $1,000 per MW of electrical output of the Generating Facility, up to a maximum of $250,000. With respect to Interconnection Customers that have submitted Interconnection Requests: (1) if such customers, for whom the Phase I Interconnection Studies have not yet commenced, or are in the CAISO's third Queue Cluster, have posted an Interconnection Study Deposit that is less than the amount required by this section, such Interconnection Customers must post the difference between the amount posted and the amount required by this section within thirty (30) calendar days of a FERC order accepting this provision; (2) if such customers, for whom the Phase I Interconnection Studies have not yet commenced, or are in the CAISO's third Queue Cluster, have posted an Interconnection Study Deposit that is greater than the amount required by this section, such Interconnection Customers will receive a refund equal to the difference between the amount originally posted and the amount required under this section within thirty (30) calendar days of a FERC order accepting this provision.

(ii) A completed application in the form of GIP Appendix 1, including requested deliverability status, requested study process (either Queue Cluster or Independent Study Process), preferred Point of Interconnection and voltage level, and all other required technical data.

(iii) Demonstration of Site Exclusivity or, for Interconnection Requests in a Queue Cluster, a posting of a Site Exclusivity Deposit of $100,000 for a Small Generating Facility or $250,000 for a Large Generating Facility. The demonstration of Site Exclusivity, at a minimum, must be through the Commercial Operation Date of the new Generating Facility or increase in capacity of the existing Generating Facility.

#### 3.5.1.1 Use of Interconnection Study Deposit.

The CAISO shall deposit all Interconnection Study Deposits in an interest bearing account at a bank or financial institution designated by the CAISO. The Interconnection Study Deposit shall be applied to pay for prudent costs incurred by the CAISO, the Participating TOs, or third parties at the direction of the CAISO or Participating TOs, as applicable, to perform and administer the Interconnection Studies and to meet and

otherwise communicate with Interconnection Customers with respect to their Interconnection Requests.

Except for proposed Generating Facilities processed under the Fast Track Process set forth in Section 5 of this GIP, the Interconnection Study Deposits shall be refundable as follows:

(a) Should an Interconnection Request be withdrawn by the Interconnection Customer or be deemed withdrawn by the CAISO by written notice under GIP Section 3.8 on or before thirty (30) calendar days following the Scoping Meeting, the CAISO shall refund to the Interconnection Customer any portion of the Interconnection Customer's Interconnection Study Deposit, including interest earned at the rate provided for in the interest-bearing account from the date of deposit to the date of withdrawal, that exceed the costs the CAISO, Participating TOs, and third parties have incurred on the Interconnection Customer's behalf.

(b) Should an Interconnection Request made under GIP Section 3.5.1 be withdrawn by the Interconnection Customer or be deemed withdrawn by the CAISO by written notice under GIP Section 3.8 more than thirty (30) calendar days after the Scoping Meeting, but on or before thirty (30) calendar days following the Results Meeting (or the latest date permitted under this GIP for a Results Meeting if a customer elects not to have a Results Meeting) for the Phase I Interconnection Study or the System Impact Study for Generating Facilities processed under the Independent Study Process, the CAISO shall refund to the Interconnection Customer the difference between (i) the Interconnection Customer's Interconnection Study Deposit and (ii) the greater of the costs the CAISO and Participating TOs have incurred on the Interconnection Customer's behalf or one-half of the original Interconnection Study Deposit up to a maximum of $100,000, including interest earned at the rate provided for in the interest-bearing account from the date of deposit to the date of withdrawal.

(c) Should an Interconnection Request be withdrawn by the Interconnection Customer or be deemed withdrawn by the CAISO by written notice under GIP Section 3.8 at any time more than thirty (30) calendar days after the Results Meeting (or the latest date permitted under this GIP for a Results Meeting if a customer elects not to have a Results Meeting) for the Phase I Interconnection Study, or the System Impact Study for proposed Generating Facilities processed under the Independent Study Process, the Interconnection Study Deposit shall be non-refundable.

(d) Upon execution of a GIA by an Interconnection Customer, the CAISO and the applicable Participating TOs, or the approval by FERC of an unexecuted GIA, the CAISO shall refund to the Interconnection Customer any portion of the Interconnection Customer's Interconnection Study Deposit, including interest earned at the rate provided for in the interest-bearing account from the date of deposit to the date of withdrawal, that exceeds the costs the CAISO, Participating TOs, and third parties have incurred on the Interconnection Customer's behalf.

Notwithstanding the foregoing, an Interconnection Customer that withdraws or is deemed to have withdrawn its Interconnection Request during an Interconnection Study Cycle shall be obligated to pay to the CAISO all costs in excess of the Interconnection Study Deposit that have been prudently incurred or irrevocably have been committed to be incurred with respect to that Interconnection Request prior to withdrawal. The CAISO will reimburse the applicable Participating TO(s) or third parties, as applicable, for all work performed on behalf of the withdrawn Interconnection Request at the CAISO's direction.

The Interconnection Customer must pay all monies due before it is allowed to obtain any Interconnection Study data or results.

All non-refundable portions of the Interconnection Study Deposit that exceed the costs the CAISO, Participating TOs, or third parties have incurred on the Interconnection Customer's behalf, and any non-refundable interconnection study deposit funds that are received by the CAISO from a Participating TO, pursuant to a requirement in the Participating TO's wholesale distribution tariff for such funds to be distributed by the CAISO, shall be treated in accordance with Section 7.6 of Appendix DD to the CAISO Tariff.

**3.5.1.2 Obligation for Study Costs.**

Except as otherwise provided in GIP Section 3.5.1.1, the CAISO shall charge and the Interconnection Customer(s) shall pay the actual costs of the Interconnection Studies. Where an Interconnection Study is performed by means of a Group Study, the cost of the Group Study will be charged pro rata to each Interconnection Request assigned to the Group Study. The cost of Interconnection Studies performed for an individual Interconnection Request, not part of a Group Study, will be charged solely to the Interconnection Customer that submitted the Interconnection Request.

The Participating TO and any third parties performing work on the Interconnection Customer's behalf shall invoice the CAISO for such work, and the CAISO shall issue invoices for Interconnection Studies that shall include a detailed and itemized accounting of the cost of each Interconnection Study. The CAISO shall draw from the Interconnection Study Deposit any undisputed costs within thirty (30) calendar days of issuance of an invoice. Whenever the actual cost of performing the Interconnection Studies exceeds the Interconnection Study Deposit, the Interconnection Customer shall pay the undisputed difference in accordance with the CAISO issued invoice within thirty (30) calendar days. The CAISO shall not be obligated to continue to have any studies conducted unless the Interconnection Customer has paid all undisputed amounts in compliance herewith. In the event an Interconnection Study, or portions thereof, is performed by the CAISO, the Interconnection Customer shall pay only the costs of those activities performed by the Participating TO to adequately review or validate that Interconnection Study or portions thereof.

**3.5.1.3 Use of Site Exclusivity Deposit.**

The CAISO shall deposit all Site Exclusivity Deposits in an interest bearing account at a bank or financial institution designated by the CAISO. The Site Exclusivity Deposit shall be refundable to the Interconnection Customer at any time upon demonstration of Site Exclusivity or the Interconnection Request is withdrawn by the Interconnection Customer or deemed withdrawn by the CAISO by written notice under GIP Section 3.8. The refund of the Site Exclusivity Deposit shall include interest earned at the rate provided for in the interest-bearing account from the date of deposit to the date of withdrawal. The Site Exclusivity Deposit shall continue to be required after the Interconnection Customer either executes a GIA or requests the filing of an unexecuted GIA under GIP Section 11 if Site Exclusivity has not been demonstrated.

**3.5.1.4 Proposed Commercial Operation Date.**

The proposed Commercial Operation Date of the new Generating Facility or increase in capacity of the existing Generating Facility shall not exceed seven years from the date the Interconnection Request is received by the CAISO, unless the Interconnection Customer demonstrates, and the applicable Participating TO(s) and the CAISO agree, such agreement not to be unreasonably withheld, that engineering, permitting and

construction of the new Generating Facility or increase in capacity of the existing Generating Facility will take longer than the seven year period.

### 3.5.2 Validation of Interconnection Request.

#### 3.5.2.1 Acknowledgment of Interconnection Request.

The CAISO shall notify the Interconnection Customer within ten (10) Business Days of receipt of the Interconnection Request, which notice shall state whether the Interconnection Request is deemed complete, valid, and ready to be studied.

#### 3.5.2.2 Deficiencies in Interconnection Request.

An Interconnection Request will not be considered to be a valid request until the CAISO determines that the information contained in the Interconnection Request is complete and the Interconnection Customer has provided all items in satisfaction of GIP Section 3.5.1. If an Interconnection Request fails to meet the requirements set forth in GIP Section 3.5.1, the CAISO shall include in its notification to the Interconnection Customer under GIP Section 3.5.2.1 the reasons for such failure and that the Interconnection Request does not constitute a valid request. The Interconnection Customer shall provide the CAISO the additional requested information needed to constitute a valid request. Whenever additional requested information is provided by the Interconnection Customer, the CAISO shall notify the Interconnection Customer within five (5) Business Days of receipt of the additional requested information whether the Interconnection Request is valid. If the Interconnection Request continues to fail to meet the requirements set forth in GIP Section 3.5.1, the CAISO shall include in its notification to the Interconnection Customer the reasons for such failure. If an Interconnection Request has not been deemed valid, the Interconnection Customer must submit all information necessary to meet the requirements of GIP Section 3.5.1 no later than twenty (20) Business Days after the close of the applicable Cluster Application Window or ten (10) Business Days after the CAISO first provided notice that the Interconnection Request was not valid, whichever is later. Interconnection Requests that have not met the requirements of GIP Section 3.5.1 within twenty (20) Business Days after the close of the applicable Cluster Application Window or ten (10) Business Days after the CAISO first provided notice that the Interconnection Request was not valid, whichever is later, will be deemed invalid and will not be included in Interconnection Study Cycle or otherwise studied..

Interconnection Requests deemed invalid under this GIP Section 3.5.2.2 are not subject to GIP Section 3.8. Interconnection Customers with invalid Interconnection Request under this GIP Section 3.5.2.2 may seek relief under GIP Section 13.5 by so notifying the CAISO within two (2) Business Days of the notice of invalidity.

### 3.6 Internet Posting

The CAISO will maintain on the CAISO Website a list of all Interconnection Requests. The list will identify, for each Interconnection Request: (i) the maximum summer and winter megawatt electrical output; (ii) the location by county and state; (iii) the station or transmission line or lines where the interconnection will be made; (iv) the most recent projected Commercial Operation Date; (v) the status of the Interconnection Request, including whether it is active or withdrawn; (vi) the availability of any studies related to the Interconnection Request; (vii) the date of the Interconnection Request; (viii) the type of Generating Facility to be constructed (e.g., combined cycle, combustion turbine, wind turbine, and fuel type); (ix) requested deliverability status; and (x) project name.

Except in the case of an Affiliate, the list will not disclose the identity of the Interconnection Customer until the Interconnection Customer executes a GIA or requests

that the applicable Participating TO(s) and the CAISO file an unexecuted GIA with FERC. The CAISO shall post on the CAISO Website an advance notice whenever a Scoping Meeting will be held with an Affiliate of a Participating TO.

The CAISO shall post to the CAISO Website any deviations from the study timelines set forth herein. The CAISO shall further post to the secure CAISO Website portions of the Phase I Interconnection Study that do not contain customer-specific information following the final Results Meeting and portions of the Phase II Interconnection Study that do not contain customer-specific information no later than publication of the final Transmission Plan under CAISO Tariff Section 24.2.5.2 (such posted information to be placed on the secure CAISO Website to protect any Critical Energy Infrastructure Information contained therein). The CAISO shall post to the secure CAISO Website any documents or other materials posted pursuant to this GIP or a Business Practice Manual that contain Critical Energy Infrastructure Information.

### 3.7 Coordination With Affected Systems

The CAISO will notify the Affected System Operators that are potentially affected by the Interconnection Customer's Interconnection Request or Group Study within which the Interconnection Customer's Interconnection Request will be studied. The CAISO will coordinate the conduct of any studies required to determine the impact of the Interconnection Request on Affected Systems with Affected System Operators, to the extent possible, and, if possible, the CAISO will include those results (if available) in its applicable Interconnection Study within the time frame specified in this GIP. The CAISO will include such Affected System Operators in all meetings held with the Interconnection Customer as required by this GIP. The Interconnection Customer will cooperate with the CAISO in all matters related to the conduct of studies and the determination of modifications to Affected Systems, including signing separate study agreements with Affected System owners and paying for necessary studies. An entity which may be an Affected System shall cooperate with the CAISO in all matters related to the conduct of studies and the determination of modifications to Affected Systems.

### 3.8 Withdrawal

The Interconnection Customer may withdraw its Interconnection Request at any time by written notice of such withdrawal to the CAISO, and the CAISO will notify the applicable Participating TO(s) and Affected System Operators, if any, within three (3) Business Days of receipt of such a notice. In addition, after confirmation by the CAISO of a valid Interconnection Request under GIP Section 3.5.2, if the Interconnection Customer fails to adhere to all requirements of this GIP, except as provided in GIP Section 13.5 (Disputes), the CAISO shall deem the Interconnection Request to be withdrawn and shall provide written notice to the Interconnection Customer within five (5) Business Days of the deemed withdrawal and an explanation of the reasons for such deemed withdrawal. Upon receipt of such written notice, the Interconnection Customer shall have five (5) Business Days in which to respond with information or action that either cures the deficiency or supports its position that the deemed withdrawal was erroneous and notifies the CAISO of its intent to pursue Dispute Resolution.

Withdrawal shall result in the removal of the Interconnection Request from the Interconnection Study Cycle. If an Interconnection Customer disputes the withdrawal and removal from the Interconnection Study Cycle and has elected to pursue Dispute Resolution, the Interconnection Customer's Interconnection Request will not be considered in any ongoing Interconnection Study during the Dispute Resolution process.

In the event of such withdrawal, the CAISO, subject to the provisions of GIP Sections 13.1 and 3.5.1.1, shall provide, at the Interconnection Customer's request, all information

that the CAISO developed for any completed study conducted up to the date of withdrawal of the Interconnection Request.

### 3.9 Transferability Of Interconnection Request

An Interconnection Customer may transfer its Interconnection Request to another entity only if such entity acquires the specific Generating Facility identified in the Interconnection Request and the Point of Interconnection does not change.

### 3.10 Reductions in Generating Facility Capacity

#### 3.10.1 De Minimis Capacity Reductions

If the actual MW capacity of its Generating Facility is reduced by no more than the greater of five percent (5%) of its MW capacity or 10 MW, but by no more than twenty-five percent (25%) of the MW capacity of the Generating Facility, such a one-time reduction shall not constitute a breach of the Interconnection Customer's obligations under the CAISO Tariff or its Generator Interconnection Agreement. The MW capacity value of a Generating Facility for purposes of this section shall be established by reference to the capacity as set forth in the Interconnection Customer's currently applicable Generator Interconnection Agreement. No capacity reductions permitted under this section shall operate to diminish the Interconnection Customer's responsibility for any costs or other obligations set forth in its Generator Interconnection Agreement or the CAISO Tariff.

#### 3.10.2 [Not Used]

#### 3.10.3 Interaction with Executed Generator Interconnection Agreements

With respect to an Interconnection Customer with an executed Generator Interconnection Agreement derived from Appendix CC of the CAISO Tariff, Section 7.5.13 of Appendix DD to the CAISO Tariff shall apply in lieu of Article 5.19.4 of the Generator Interconnection Agreement and any Generating Facility capacity reduction permitted under Article 5.19.4 shall be performed in accordance with and be subject to Section 7.5.13 of Appendix DD.

### 3.11 Surplus Interconnection Service

Interconnection Customers may transfer Surplus Interconnection Service pursuant to Section 3.4 of Appendix DD.

## Section 4 Independent Study Process

The CAISO, in coordination with the applicable Participating TO(s), will study Interconnection Requests eligible for treatment under this Independent Study Process independently from other Interconnection Requests.

All provisions of this GIP will apply unless superseded by provisions in this GIP Section 4.

### 4.1 Criteria for Independent Study Process Eligibility

Any Interconnection Request that meets the following criteria will be processed under the Independent Study Process:

**4.1.1** The Interconnection Customer must provide, along with its Interconnection Request, an objective demonstration that inclusion in a Queue Cluster will not accommodate the desired Commercial Operation Date for the Generating Facility. As part of this demonstration, the Interconnection Customer must show that the desired Commercial Operation Date is physically and commercially achievable, by demonstrating at least two of the following:

(i) The Interconnection Customer has obtained, or has demonstrated the ability to obtain, all regulatory approvals and permits needed to complete construction in time to meet the Generating Facility's requested Commercial Operation Date.

(ii) The Interconnection Customer is able to provide, or has demonstrated the ability to obtain, a purchase order for generating equipment specific to the proposed Generating Facility, or a statement signed by an officer or authorized agent of the Interconnection Customer demonstrating that the Interconnection Customer has a commitment for the supply of its major generating equipment in time to meet the Commercial Operation Date through a purchase agreement to which the Interconnection Customer is a party.

(iii) The Interconnection Customer can provide reasonable evidence of adequate financing or other financial resources necessary to make the Interconnection Financial Security postings required in Sections 9.2 and 9.3 of this GIP.

**4.1.2** The Interconnection Customer must demonstrate Site Exclusivity.

**4.1.3** The proposed Generating Facility must be electrically independent of Interconnection Requests included in an existing Queue Cluster, pursuant to GIP Section 4.2, and, in addition, must be electrically independent of any other Generating Facility that is currently being studied under an earlier-queued Independent Study Process Interconnection Request.

**4.1.4** The CAISO will inform an Interconnection Customer whether it has satisfied the requirements set forth in Sections 4.1.1 and 4.1.2 of the GIP within fifteen (15) Business Days of receiving the Interconnection Request.

**4.1.5** The CAISO will inform an Interconnection Customer whether it has satisfied the requirement that it be electrically independent of other Interconnection Requests, pursuant to Section 4.2 of the GIP, within fifteen (15) Business Days of receiving the Interconnection Request.

**4.1.6** Any Interconnection Request that does not satisfy the criteria set forth in Sections 4.1.1, 4.1.2, and 4.1.3 of the GIP shall be deemed withdrawn, without prejudice to the Interconnection Customer submitting a request at a later date, unless the Interconnection Customer notifies the CAISO in writing within ten (10) Business Days that it wishes the CAISO to hold the Interconnection Request for inclusion in the next Queue Cluster, in which event the CAISO will do so.

### 4.2 Determination of Electrical Independence

Each Interconnection Request submitted under the Independent Study Process must pass both the flow impact test and the short circuit test set forth in this GIP Section 4.2 in order to qualify for the Independent Study Process. The available power flow and short circuit Base Cases that are being used for the most recent Queue Cluster will be used as the starting Base Cases for these tests.

#### 4.2.1 Flow Impact Test

An Interconnection Request shall have satisfied the requirements of this Section if it satisfies, alternatively, either the set of requirements set forth in GIP Section 4.2.1.1 or the set of requirements set forth in GIP Section 4.2.1.2.

4.2.1.1 Requirement Set Number One General Independent Study Requests:

the CAISO, in coordination with the applicable Participating TO(s), will perform the flow impact test for an Interconnection Request requesting to be processed under the Independent Study Process as follows:

(i) Identify the transmission facility closest, in terms of electrical distance, to the proposed Point of Interconnection of the Generating Facility being tested that will be electrically impacted, either as a result of Network Upgrades identified or reasonably expected to be needed by Generating Facilities currently being studied in a Queue Cluster, or as a result of Network Upgrades identified or reasonably expected to be needed by earlier queued Generating Facilities currently being studied through the Independent Study Process. If the current Queue Cluster studies or earlier queued Independent Study Process studies have not yet determined which transmission facilities electrically impacted by the Generating Facility being tested require Network Upgrades, and the CAISO cannot reasonably anticipate whether such transmission facilities will require Network Upgrades from other data, then the CAISO will wait to conduct the independence analysis under this section until sufficient information exists in order to make this determination.

(ii) The incremental power flow on the transmission facility identified in Section 4.2.1(i) that is caused by the Generating Facility being tested will be divided by the lesser of the Generating Facility's size or the transmission facility capacity. If the result is five percent (5%) or less, the Generating Facility shall pass the flow impact test. If the Generating Facility being tested is tested against the nearest transmission facility and that transmission facility has been impacted by a cluster that required an upgrade as a result of a contingency, then that contingency will be used when applying the flow impact test.

(iii) If the Generating Facility being tested under the flow impact test is reasonably expected to impact transmission facilities that were identified, per Section 4.2.1 (i), when testing one or more earlier queued Generating Facilities currently being studied through the Independent Study Process, then an additional aggregate power flow test shall be performed on these earlier identified transmission facilities. The aggregate power flow test shall require that the aggregated power flow of the Generating Facility being tested, plus the flow of all earlier queued Generating Facilities currently being studied under the Independent Study Process that were tested against the transmission facilities described in the previous sentence, must be five (5) percent or less of those transmission facilities' capacity.

However, even if the aggregate power flow on any transmission facility tested pursuant to this section (iii) is greater than five (5) percent of the transmission facility's capacity but the incremental power flow as a result of the Generating Facility being tested is one (1) percent or less than of

the transmission facility's capacity, the Generating Facility shall pass the test.

If the Generating Facility being tested is tested against the nearest transmission facility and that transmission facility has been impacted by a cluster that required an upgrade as a result of a contingency, then that contingency will be used when applying the flow impact test.

The Generating Facility being tested must pass both this aggregate test as well as the individual flow test described in Section 4.2.1 (ii), in no particular order.

**4.2.1.2** Requirement Set Number Two: for Requests for Independent Study of Behind-the-Meter Capacity Expansion of Generating Facilities

This GIP Section 4.2.1.2 applies to an Interconnection Request relating to a behind-the-meter capacity expansion of a Generating Facility. Such an Interconnection Request submitted under the Independent Study Process will satisfy the requirements of GIP Section 4.2.1 if it satisfies all of the following technical and business criteria:

(i) Technical criteria.

- The total nameplate capacity of the existing Generating Facility plus the incremental increase in capacity does not exceed in the aggregate one hundred twenty-five (125) percent of its previously studied capacity, and the incremental increase in capacity does not exceed, in the aggregate, one hundred (100) MW.

- The behind-the-meter capacity expansion shall not take place until after the original Generating Facility has achieved Commercial Operation and all Reliability Network Upgrades for the original Generating Facility have been placed in service. An Interconnection Request for a behind-the-meter capacity expansion may be submitted prior to the Commercial Operation Date of the original Generating Facility.

- The expanded capacity for the Generating Facility has been placed under a separate breaker (the expansion breaker) such that the expansion can be metered separately at all times. With the consent of the CAISO and the applicable Participating TO(s), the Interconnection Customer may make the Generating Facilities that will be tied to the expansion breaker a mixture of original and expanded facilities such that the total installed capacity behind the expansion breaker is equal to or greater than the planned amount of behind-the-meter capacity expansion.

- Unless specifically requested by the CAISO, the total output of the Generating Facility does not exceed its originally studied capacity at any time. The CAISO will have the authority to trip the expansion breaker if the total output of the Generating Facility exceeds the originally studied capacity.

- The processing of an Interconnection Request for behind-the-meter expansion under the Independent Study Process shall not result in any increase in the rated Generating Facility electrical output (MW

capacity) beyond the rating which pre-existed the Interconnection Request. Further, the processed Interconnection Request shall not operate as a basis under the CAISO Tariff to increase the Net Qualifying Capacity of the Generating Facility beyond the rating which pre-existed the Interconnection Request.

(ii) Business criteria.

- The Deliverability Status (Full Capacity, Partial Deliverability or Energy-Only) of the capacity expansion is the same as the Deliverability Status specified for the formally studied Generating Facility.
- The GIA is amended to reflect the revised operational features of the Generating Facility capacity expansion.
- The Interconnection Customer may at any time request that the CAISO convert the Interconnection Request for behind-the-meter expansion to an Independent Study Process Interconnection Request to evaluate an incremental increase in electrical output (MW generating capacity) for the existing Generating Facility. The Interconnection Customer must accompany such a conversion request with an appropriate Interconnection Study Deposit and agree to comply with other sections of GIP Section 4 applicable to an Independent Study Process Interconnection Request.

### 4.2.2 Short Circuit Test

If the short circuit contribution from the Generating Facility (existing or proposed) being tested at the transmission facility identified in GIP Section 4.2.1(i) is less than 100 amperes, the Generating Facility shall pass the short circuit test.

## 4.3 Scoping Meeting

Within five (5) Business Days after the CAISO notifies the Interconnection Customer that if the Generating Facility associated with its Interconnection Request has satisfied the independence test set forth in GIP Section 4.2, the CAISO shall establish a date agreeable to the Interconnection Customer and the applicable Participating TO(s) for the Scoping Meeting. With input from the Participating TO, the CAISO shall evaluate whether the Interconnection Request is at or near the boundary of an affected Participating TO(s)' service territory or of any other Affected System(s) so as to potentially affect such third parties, and, if such is the case, the CAISO shall invite the affected Participating TO(s) and/or Affected System Operator(s), in accordance with GIP Section 3.7, to the Scoping Meeting by informing such third parties, as soon as practicable, of the time and place of the scheduled Scoping Meeting.

The purpose of the Scoping Meeting shall be to discuss the Interconnection Request and review existing studies relevant to the Interconnection Request. The applicable Participating TO(s) and the CAISO will bring to the meeting, as reasonably necessary to accomplish its purpose, technical data, including, but not limited to, (i) general facility loadings, (ii) general instability issues, (iii) general short circuit issues, (iv) general voltage issues, and (v) general reliability issues. The Interconnection Customer will bring to the Scoping Meeting, in addition to the technical data in Attachment A to GIP Appendix 1, any system studies previously performed. The applicable Participating TO(s), the CAISO, and the Interconnection Customer will also bring to the meeting personnel and other resources as may be reasonably required to accomplish the purpose of the meeting

in the time allocated for the meeting. The CAISO shall prepare minutes from the meeting, and provide an opportunity for other attendees and the Interconnection Customer to confirm the accuracy thereof. The Scoping Meeting may be omitted by agreement of the Interconnection Customer, Participating TO, and the CAISO.

The CAISO shall, no later than five (5) Business Days after the Scoping Meeting (or agreement to forego such Scoping Meeting), provide the Interconnection Customer with a Independent Study Process Study Agreement (in the form set forth in Appendix 6 to the GIP), which shall contain an outline of the scope of the system impact and facilities studies and a non-binding good faith estimate of the cost to perform the studies. The Interconnection Customer shall return the executed Independent Study Process Study Agreement or request an extension of time for good cause within thirty (30) Business Days thereafter, or the Interconnection Request shall be deemed withdrawn.

**4.4 System Impact Study**

**4.4.1** The system impact study will consist of a short circuit analysis, a stability analysis, a power flow analysis, an assessment of the potential magnitude of financial impacts, if any, on Local Furnishing Bonds, and a proposed resolution, and any other studies that are deemed necessary.

**4.4.2** The system impact study shall state the assumptions upon which it is based, state the results of the analyses, and provide the requirement or potential impediments to providing the requested Interconnection Service, including a preliminary indication of the cost and length of time that would be necessary to correct any problems identified in those analyses and implement the Interconnection.

**4.4.3** The system impact study shall provide a list of Interconnection Facilities and Reliability Network Upgrades that are required as a result of the Interconnection Request along with a non-binding good faith estimate of cost responsibility and the amount of construction time required. The good faith estimate will be based on the Per Unit Costs as described in GIP Section 6.6.

**4.4.4** The system impact study will be completed and the results transmitted to the Interconnection Customer within ninety (90) calendar days after the execution of an Independent Study Process Study Agreement. The Interconnection Customer shall execute the agreement(s) and deliver them to the CAISO, and shall make its initial posting of Interconnection Financial Security, within thirty days (30) calendar days after being provided with the final system impact study report, in accordance with GIP Section 9.2, or its Interconnection Request shall be deemed withdrawn.

**4.4.5** If requested by the Interconnection Customer, a Results Meeting shall be held among the CAISO, the applicable Participating TO(s), and the Interconnection Customer to discuss the results of the system impact study report, including assigned cost responsibility. The CAISO shall prepare minutes from the meeting. Any such Results Meeting will be held within 20 Business Days of the date the system impact study report is provided to the Interconnection Customer.

**4.4.6** For Interconnection Requests under the Independent Study Process, the initial posting of Interconnection Financial Security described in GIP Section 9.2 will be based on the cost responsibility for Network Upgrades, and Participating TO's Interconnection Facilities set forth in the system impact study. If the system impact study is waived, then such posting will be based upon the cost responsibility set forth in the facilities study described in GIP Section 4.5.

### 4.5 Facilities Study

**4.5.1** The facilities study shall specify and estimate the cost of the equipment, engineering, procurement, and construction work (including overheads) needed to implement the conclusions of the system impact study, including, if applicable, the cost of remedial measures that address the financial impacts, if any, on Local Furnishing Bonds. The facilities study shall also identify (1) the electrical switching configuration of the equipment, including, without limitation, transformer, switchgear, meters, and other station equipment, (2) the nature and estimated cost of the Participating TO's Interconnection Facilities and upgrades necessary to accomplish the Interconnection, and (3) an estimate of the time required to complete the construction and installation of such facilities or for effecting remedial measures that address the financial impacts, if any, on Local Furnishing Bonds.

**4.5.2** The facilities study may be waived if the system impact study does not identify any Interconnection Facilities and Reliability Network Upgrades.

**4.5.3** The facilities study will be completed within ninety (90) calendar days after the Interconnection Customer posts Interconnection Financial Security in accordance with GIP Section 9.2 where Network Upgrades are identified. In cases where no Network Upgrades are identified and the required facilities are limited to Interconnection Facilities only, the facilities study will be completed within sixty (60) calendar days after the Interconnection Customer posts Interconnection Financial Security in Accordance with GIP Section 9.2.

**4.5.4** If requested by the Interconnection Customer within ten (10) Business Days of the date of the facilities study report, a Results Meeting shall be held among the CAISO, the applicable Participating TO(s), and the Interconnection Customer to discuss the results of the facilities study report, including assigned cost responsibility. The CAISO shall prepare minutes from the meeting. Any such Results Meeting will be held within twenty (20) Business Days of the date the facilities study report is provided to the Interconnection Customer.

**4.5.5** For Interconnection Requests under the Independent Study Process, the second posting and third postings of Interconnection Financial Security described in GIP Section 9.3 will be based on the cost responsibility for Network Upgrades and the Participating TO's Interconnection Facilities set forth in the facilities study.

### 4.6 Deliverability Assessment

Interconnection Customers under the Independent Study Process that requests Partial or Full Capacity Deliverability Status will have a Deliverability Assessment performed as part of the next scheduled Phase I and Phase II Interconnection Studies for Queue Clusters. If the Deliverability Assessment identifies any Delivery Network Upgrades that are triggered by the Interconnection Request, the Interconnection Customer will be responsible to pay its proportionate share of the costs of those Upgrades, pursuant to Sections 6 and 7 of this GIP. If the Generating Facility (or increase in capacity of an existing Generating Facility) achieves its Commercial Operation Date before the Deliverability Assessment is completed and any necessary Delivery Network Upgrades are in service, the proposed Generating Facility (or increase in capacity) will be treated as an Energy-Only Deliverability Status Generating Facility until such Delivery Network Upgrades are in service.

#### 4.6.1 Deliverability Transfers

Interconnection Customers may transfer Deliverability pursuant to Section 8.9.9 of Appendix DD to the CAISO Tariff.

### 4.7 Extensions of Commercial Operation Date

Extensions of the Commercial Operation Date for Interconnection Requests under the Independent Study Process will not be granted except for circumstances beyond the control of the Interconnection Customer.

## Section 5 Fast Track Process

### 5.1 Applicability and Initiation of Fast Track Process Request

Applicability to a proposed Generating Facility. An Interconnection Customer may request interconnection of a proposed Generating Facility to the CAISO Controlled Grid under the Fast Track Process if the Generating Facility is no larger than 5 MW and is requesting Energy-Only Deliverability Status and if the Interconnection Customer's proposed Generating Facility meets the codes, standards, and certification requirements of Appendices 9 and 10 of this GIP, or if the applicable Participating TO notifies the CAISO that it has reviewed the design for or tested the proposed Small Generating Facility and has determined that the proposed Generating Facility may interconnect consistent with Reliability Criteria and Good Utility Practice.

Applicability to an existing Generating Facility. If the Interconnection of an existing Generating Facility meets the qualifications for Interconnection under CAISO Tariff Section 25.1(d) or (e) but, at the same time, the Interconnection Customer also seeks to repower or reconfigure the existing Generating Facility in a manner that increases the gross generating capacity by not more than 5 MW, then the Interconnection Customer may request that the Fast Track Process be applied with respect to the repowering or reconfiguration of the existing Generating Facility that results in the incremental increase in MW.

Initiating the Fast Track Interconnection Request. To initiate an Interconnection Request under the Fast Track Process, the Interconnection Customer must provide the CAISO with:

(i) a completed Interconnection Request as set forth in Appendix 1 to the GIP;

(ii) a non-refundable processing fee of $500 and a study deposit of $1,000; and

(iii) a demonstration of Site Exclusivity. For the Fast Track Process, such demonstration may include documentation reasonably demonstrating a right to locate the Generating Facility on real estate or real property improvements owned, leased, or otherwise legally held by another.

The CAISO shall review and validate the Fast Track Process Interconnection Request pursuant to GIP Section 5.2.

All provisions of this GIP will apply unless superseded by provisions in this GIP Section 5.

### 5.2 Initial Review

Within fifteen (15) Business Days after the CAISO notifies the Interconnection Customer that the Interconnection Request is deemed complete, valid, and ready to be studied, the applicable Participating TO shall perform an initial review using the screens set forth in GIP Section 5.3 below, shall notify the Interconnection Customer of the results, and shall include with the notification copies of the analysis and data underlying the Participating TO's determinations under the screens.

## 5.3 Screens

**5.3.1** The proposed Generating Facility must pass the following screens to be eligible for Interconnection under this Fast Track Process:

**5.3.1.1** The proposed Generating Facility's Point of Interconnection must be on the CAISO Controlled Grid.

**5.3.1.2** For interconnection of a proposed Generating Facility to a radial transmission circuit, the aggregated generation on the circuit, including the proposed Generating Facility, shall not exceed 15 percent of the line section annual peak load as most recently measured at the substation. For purposes of this GIP Section 5.3.1.2, a line section shall be considered as that portion of a Participating TO's electric system connected to a customer bounded by automatic sectionalizing devices or the end of the transmission line.

**5.3.1.3** For interconnection of a proposed Generating Facility to the load side of spot network protectors, the proposed Generating Facility must utilize an inverter-based equipment package and, together with the aggregated other inverter-based generation, shall not exceed the smaller of 5 percent of a spot network's maximum load or 50 kW. For purposes of this GIP Section 5.3.1.3, a spot network shall be considered as a type of distribution system found in modern commercial buildings for the purpose of providing high reliability of service to a single retail customer.

**5.3.1.4** The proposed Generating Facility, in aggregation with other generation on the transmission circuit, shall not contribute more than 10 percent to the transmission circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed point of change of ownership.

**5.3.1.5** The proposed Generating Facility, in aggregate with other generation on the transmission circuit, shall not cause any transmission protective devices and equipment (including, but not limited to, substation breakers, fuse cutouts, and line reclosers), or Interconnection Customer equipment on the system to exceed 87.5 percent of the short circuit interrupting capability; nor shall the interconnection proposed for a circuit that already exceeds 87.5 percent of the short circuit interrupting capability.

**5.3.1.6** The Generating Facility, in aggregate with other generation interconnected to the transmission side of a substation transformer feeding the circuit where the Generating Facility proposes to interconnect shall not exceed 10 MW in an area where there are known, or posted, transient stability limitations to generating units located in the general electrical vicinity (*e.g.*, three or four transmission busses from the Point of Interconnection).

**5.3.2** If the proposed interconnection passes the screens and no Upgrades are reasonably anticipated, the Interconnection Request shall be approved. Within fifteen (15) Business Days thereafter, the Participating TO will provide the Interconnection Customer with a Small Generator Interconnection Agreement for execution.

**5.3.3** If the proposed interconnection fails the screens and no Upgrades are reasonably anticipated, but the CAISO and Participating TO determine that the Generating Facility may nevertheless be interconnected consistent with safety, reliability, and power quality standards under these procedures, the Participating TO shall, within fifteen (15) Business Days, provide the Interconnection Customer with a Small Generator Interconnection Agreement for execution.

**5.3.4** If the proposed interconnection passes the screens and Upgrades are reasonably anticipated, the CAISO and Participating TO shall provide the Interconnection Customer

with the opportunity to attend a customer options meeting as described in GIP Section 5.4.

### 5.4 Customer Options Meeting

If the CAISO and Participating TO determine the Interconnection Request cannot be approved without modifications at minimal cost; or a supplemental study or other additional studies or actions; or at significant cost to address safety, reliability, or power quality problems, within the five (5) Business Day period after the determination, the CAISO and Participating TO shall notify the Interconnection Customer and provide copies of all data and analyses underlying its conclusion. Within ten (10) Business Days of the CAISO and Participating TO's determination, the CAISO and Participating TO shall offer to convene a customer options meeting with the CAISO and Participating TO to review possible Interconnection Customer facility modifications or the screen analysis and related results, to determine what further steps are needed to permit the Small Generating Facility to be connected safely and reliably. At the time of notification of the CAISO and Participating TO's determination, or at the customer options meeting, the CAISO and Participating TO shall:

**5.4.1** Offer to perform facility modifications or modifications to the Participating TO's electric system (*e.g.*, changing meters, fuses, relay settings) and provide a non-binding good faith estimate of the limited cost to make such modifications to the Participating TO's electric system; or

**5.4.2** Offer to perform a supplemental review if the CAISO and Participating TO concludes that the supplemental review might determine that the Generating Facility could continue to qualify for interconnection pursuant to the Fast Track Process, and provide a non-binding good faith estimate of the costs of such review; or

**5.4.3** Obtain the Interconnection Customer's agreement to continue evaluating the Interconnection Request under the Independent Study Process or Cluster Study Process.

### 5.5 Supplemental Review

If the Interconnection Customer agrees to a supplemental review, the Interconnection Customer shall agree in writing within fifteen (15) Business Days of the offer, and submit a deposit for the estimated costs in an amount reasonably determined by the CAISO and Participating TO. The Interconnection Customer shall be responsible for the CAISO and Participating TO's actual costs for conducting the supplemental review. The Interconnection Customer must pay any review costs that exceed the deposit within twenty (20) Business Days of receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced costs, the CAISO and Participating TO will return such excess, without interest, within twenty (20) Business Days of the invoice.

**5.5.1** Within ten (10) Business Days following receipt of the deposit for a supplemental review, the CAISO and Participating TO will determine if the Small Generating Facility can be interconnected safely and reliably.

**5.5.1.1** If so, then, within fifteen (15) Business Days of such a determination, the Participating TO shall forward a Small Generator Interconnection Agreement to the Interconnection Customer for execution.

**5.5.1.2** If so, and Interconnection Customer facility modifications are required to allow the Generating Facility to be interconnected consistent with safety, reliability, and power quality standards, the Participating TO shall forward a Small Generator Interconnection Agreement to the Interconnection Customer for execution within fifteen (15) Business Days after confirmation that the Interconnection Customer has agreed to pay for the identified modifications to the Participating TO’s electric system.

**5.5.1.3** If so, and Upgrades to the Participating TO's electric system are required to allow the Small Generating Facility to be interconnected consistent with safety, reliability, and

power quality standards, the Participating TO shall forward a Small Generator Interconnection Agreement to the Interconnection Customer for execution within fifteen (15) Business Days that requires the Interconnection Customer to pay the costs of such system modifications prior to interconnection.

**5.5.2** If not, the Interconnection Request will be deemed withdrawn, without prejudice to the Interconnection Customer resubmitting its Interconnection Request for processing in either a Queue Cluster or under the Independent Study Process.

## Section 6 Interconnection Study Process for Queue Clusters

The provisions of this Section 6 of this GIP shall apply to all Interconnection Requests except those processed under the Independent Study Process as set forth in Section 4 of this GIP, the Fast Track Process as set forth in Section 5 of this GIP, or the 10 kW inverter process as set forth in Appendix 7 of this GIP.

### 6.1 Generator Interconnection Study Process Agreement

Within thirty (30) calendar days of the close of a Cluster Application Window, the CAISO shall provide to each Interconnection Customer with a valid Interconnection Request received during the Cluster Application Window a pro forma Generator Interconnection Study Process Agreement in the form set forth in Appendix 3 of this GIP. The pro forma Generator Interconnection Study Process Agreement shall specify that the Interconnection Customer is responsible for the actual cost of the Interconnection Studies, including reasonable administrative costs, and all requirements of this GIP. Within three (3) Business Days following the Scoping Meeting, the Interconnection Customer shall specify for inclusion in the attachment to the Generator Interconnection Study Process Agreement the Point of Interconnection for the Phase I Interconnection Study. Within ten (10) Business Days following the CAISO's receipt of such designation, the CAISO, in coordination with the applicable Participating TOs, shall provide to the Interconnection Customer a signed Generator Interconnection Study Process Agreement. The Interconnection Customer shall execute and deliver to the CAISO the Generator Interconnection Study Process Agreement no later than thirty (30) calendar days after the Scoping Meeting.

### 6.2 Scoping Meeting

Within five (5) Business Days after the CAISO notifies the Interconnection Customer of a Interconnection Request that is complete, valid, and ready for study, the CAISO shall establish a date agreeable to the Interconnection Customer and the applicable Participating TO(s) for the Scoping Meeting. All Scoping Meetings shall occur no later than sixty (60) calendar days after the close of a Cluster Application Window, unless otherwise mutually agreed upon by the Parties. The CAISO shall evaluate whether the Interconnection Request is at or near the boundary of an affected Participating TO(s) service territory or of any other Affected System(s) so as to potentially affect such third parties, and, in such case, the CAISO shall invite the affected Participating TO(s), and/or Affected System Operator(s) in accordance with GIP Section 3.7, to the Scoping Meeting by informing such third parties of the time and place of the scheduled Scoping Meeting as soon as practicable.

The purpose of the Scoping Meeting shall be to discuss reasonable Commercial Operation Dates and alternative interconnection options, to exchange information including any transmission data that would reasonably be expected to impact such interconnection options, to analyze such information and to determine the potential feasible Points of Interconnection and eliminate alternatives given resources and available information. The applicable Participating TO(s) and the CAISO will bring to the

meeting, as reasonably necessary to accomplish its purpose, the following: (a) such already available technical data, including, but not limited to, (i) general facility loadings, (ii) general instability issues, (iii) general short circuit issues, (iv) general voltage issues, and (v) general reliability issues, and (b) general information regarding the number, location, and capacity of other Interconnection Requests in the Interconnection Study Cycle that may potentially form a Group Study with the Interconnection Customer's Interconnection Request.

The Interconnection Customer will bring to the Scoping Meeting, in addition to the technical data in Attachment A to GIP Appendix 1, any system studies previously performed. The applicable Participating TO(s), the CAISO and the Interconnection Customer will also bring to the meeting personnel and other resources as may be reasonably required to accomplish the purpose of the meeting in the time allocated for the meeting. On the basis of the meeting, the Interconnection Customer shall designate its Point of Interconnection. The duration of the meeting shall be sufficient to accomplish its purpose.

The CAISO shall prepare minutes from the meeting, and provide the Interconnection Customer and the other attendees an opportunity to confirm the accuracy thereof, that will include, at a minimum, discussions among the applicable Participating TO(s) and the CAISO of the expected results and a good faith estimate of the costs for the Phase I Interconnection Study.

### 6.3 Grouping Interconnection Requests

At the CAISO's option, and in coordination with the applicable Participating TO(s), Interconnection Requests received during the two Cluster Application Windows for a particular year may be studied individually or in a Group Study for the purpose of conducting one or more of the analyses forming the Interconnection Studies. For each Interconnection Study within an Interconnection Study Cycle, the CAISO may develop one or more Group Studies. A Group Study will include, at the CAISO's sole judgment after coordination with the applicable Participating TO(s), Interconnection Requests that electrically affect one another with respect to the analysis being performed without regard to the nature of the underlying Interconnection Service. The CAISO may also, in its sole judgment after coordination with the applicable Participating TO(s), conduct an Interconnection Study for an Interconnection Request separately to the extent warranted by Good Utility Practice based upon the electrical remoteness of the proposed Generating Facility from other Generating Facilities with Interconnection Requests in the two Cluster Application Windows for a particular year.

An Interconnection Request's inclusion in a Group Study will not relieve the CAISO or Participating TO(s) from meeting the timelines for conducting the Phase I Interconnection Study provided in the GIP. Group Studies shall be conducted in such a manner to ensure the efficient implementation of the applicable regional transmission expansion plan in light of the transmission system's capabilities at the time of each study.

### 6.4 Scope and Purpose of Phase I Interconnection Study

The Phase I Interconnection Study shall (i) evaluate the impact of all Interconnection Requests received during the two Cluster Application Windows for a particular year on the CAISO Controlled Grid, (ii) preliminarily identify all Network Upgrades needed to address the impacts on the CAISO Controlled Grid of the Interconnection Requests, (iii) preliminarily identify for each Interconnection Request required Interconnection Facilities, (iv) assess the Point of Interconnection selected by each Interconnection Customer and potential alternatives to evaluate potential efficiencies in overall transmission upgrades costs, (v) establish the maximum cost responsibility for Network Upgrades assigned to each Interconnection Request in accordance with GIP Section 6.5, and (vi) provide a

good faith estimate of the cost of Interconnection Facilities for each Interconnection Request.

The Phase I Interconnection Study will consist of a short circuit analysis, a stability analysis to the extent the CAISO and applicable Participating TO(s) reasonably expect transient or voltage stability concerns, a power flow analysis, including off-peak analysis, and an On-Peak Deliverability Assessment and Off-Peak Deliverability Assessment (which will be for informational purposes only beginning with the Phase II Interconnection Study for Queue Clusters 3 and 4), as applicable, in accordance with GIP Section 6.5.2. The Phase I Interconnection Study will state for each Group Study or Interconnection Request studied individually (i) the assumptions upon which it is based, (ii) the results of the analyses, and (iii) the requirements or potential impediments to providing the requested Interconnection Service to all Interconnection Requests in a Group Study or to the Interconnection Request studied individually. The Phase I Interconnection Study will provide, without regard to the requested Commercial Operation Dates of the Interconnection Requests, a list of Network Upgrades to the CAISO Controlled Grid that are preliminarily identified as required as a result of the Interconnection Requests in a Group Study or as a result of any Interconnection Request studied individually and Participating TO's Interconnection Facilities associated with each Interconnection Request, and an estimate of any other financial impacts (i.e., on Local Furnishing Bonds).

### 6.5 Identification And Cost Allocation for Network Upgrades

#### 6.5.1 Reliability Network Upgrades.

The CAISO, in coordination with the applicable Participating TO(s), will perform short circuit and stability analyses for each Interconnection Request either individually or as part of a Group Study to preliminarily identify the Reliability Network Upgrades needed to interconnect the Generating Facilities to the CAISO Controlled Grid. The CAISO, in coordination with the applicable Participating TO(s), shall also perform power flow analyses, under a variety of system conditions, for each Interconnection Request either individually or as part of a Group Study to identify Reliability Criteria violations, including applicable thermal overloads, that must be mitigated by Reliability Network Upgrades.

The cost of all Reliability Network Upgrades identified in the Phase I Interconnection Study shall be estimated in accordance with GIP Section 6.6. The estimated costs of short circuit related Reliability Network Upgrades identified through a Group Study shall be assigned to all Interconnection Requests in that Group Study pro rata on the basis of the short circuit duty contribution of each Generating Facility. The estimated costs of all other Reliability Network Upgrades identified through a Group Study shall be assigned to all Interconnection Requests in that Group Study pro rata on the basis of the maximum megawatt electrical output of each proposed new Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request. The estimated costs of Reliability Network Upgrades identified as a result of an Interconnection Request studied separately shall be assigned solely to that Interconnection Request.

#### 6.5.2 Delivery Network Upgrades.

##### 6.5.2.1 The On-Peak Deliverability Assessment.

The CAISO, in coordination with the applicable Participating TO(s), shall perform an On-Peak Deliverability Assessment for Interconnection Customers selecting Full Capacity or Partial Deliverability Status in their Interconnection Requests. The On-Peak Deliverability Assessment shall determine the Interconnection Customer's Generating Facility's ability

to deliver its Energy to the CAISO Controlled Grid under peak load conditions, and identify preliminary Delivery Network Upgrades required to provide the Generating Facility with Full Capacity or Partial Deliverability Status. The preliminary Delivery Network Upgrades identified by the On-Peak Deliverability Assessment will be used to establish the maximum cost responsibility for Delivery Network Upgrades for each Interconnection Customer selecting Full Capacity or Partial Deliverability Status. Deliverability of a new Generating Facility will be assessed on the same basis as all other existing resources interconnected to the CAISO Controlled Grid.

The On-Peak Deliverability Assessment will identify the Network Upgrades that are required to enable the Generating Facility of each Interconnection Customer requesting Full Capacity or Partial Deliverability Status to meet the requirements for deliverability. Deliverability requires that the Generating Facility Capacity, or the portion of Generating Facility Capacity designated for Partial Deliverability, as set forth in the Interconnection Request, can be delivered to the aggregate of Load on the CAISO Controlled Grid, consistent with Reliability Criteria, under CAISO Controlled Grid peak load and Contingency conditions, and assuming the aggregate output of existing Generating Facilities with established Net Qualifying Capacity values and other Generating Facilities in the Interconnection Study Cycle seeking Full Capacity or Partial Deliverability Status identified within the On-Peak Deliverability Assessment based on the effect of Transmission Constraints.

The On-Peak Deliverability Assessment will further perform an analysis to estimate the MW of deliverable generation capacity for the individual or Group Study if the highest cost Delivery Network Upgrade component were removed from the preliminary Delivery Network Upgrade plan, or, at the CAISO's sole discretion, if any other identified Delivery Network Upgrade component(s) were removed from the preliminary Delivery Network Upgrade plan. This information is provided to allow Interconnection Customers to address at the Results Meeting potential modifications under GIP Section 6.9.2 or change the Interconnection Request's Full Capacity Deliverability Status for purposes of financing under GIP Section 12.3.1.

The methodology for the On-Peak Deliverability Assessment will be published on the CAISO Website or, when effective, included in a CAISO Business Practice Manual. The On-Peak Deliverability Assessment does not convey any right to deliver electricity to any specific customer or Delivery Point.

The cost of all Delivery Network Upgrades identified in the On-Peak Deliverability Assessment as part of a Phase I Interconnection Study shall be estimated in accordance with GIP Section 6.4. The estimated costs of Delivery Network Upgrades identified in the On-Peak Deliverability Assessment shall be assigned to all Interconnection Requests selecting Full Capacity or Partial Deliverability Status based on the flow impact of each such Generating Facility on the Delivery Network Upgrades as determined by the Generation distribution factor methodology set forth in the On-Peak Deliverability Assessment methodology.

**6.5.2.2 Off-Peak Deliverability Assessment.**

The CAISO, in coordination with the applicable Participating TO(s), shall perform an Off-Peak Deliverability Assessment to identify transmission upgrades in addition to those Delivery Network Upgrades identified in the On-Peak Deliverability Assessment, if any, for a Group Study or individual Phase I Interconnection Study that includes one or more Location Constrained Resource Interconnection Generators (LCRIG), where the fuel source or source of energy for the LCRIG substantially occurs during off-peak conditions. The transmission upgrades identified under this Section shall comprise those needed for the full maximum megawatt electrical output of each proposed new LCRIG or the amount

of megawatt increase in the generating capacity of each existing LCRIG as listed by the Interconnection Customer in its Interconnection Request, whether studied individually or as a Group Study, to be deliverable to the aggregate of Load on the CAISO Controlled Grid under the Generation dispatch conditions studied. The methodology for the Off-Peak Deliverability Assessment will be published on the CAISO Website or, if applicable, included in a CAISO Business Practice Manual.

Beginning with the Phase II Interconnection Study for Queue Clusters 3 and 4, the ISO will perform the Off-Peak Deliverability Assessment performed under this Section 6.5.2.2 for Interconnection Customer informational purposes only, and any Delivery Network Upgrades identified in the Off-Peak Deliverability Assessment as part of Phase I Interconnection Study shall be estimated in accordance with GIP Section 6.6. The estimated costs of Delivery Network Upgrades identified in the assessment will be referred to as "off peak deliverability transmission upgrades,' the description of such upgrades in any report will be conceptual in nature, and such transmission upgrades will not be included in a plan of service within the applicable Interconnection Study report.

The cost of all transmission upgrades identified in the Off-Peak Deliverability Assessment performed during the course of the Phase I Interconnection Study shall be estimated in accordance with GIP Section 6.6. However, because these transmission upgrades shall be conceptual in nature only (as of the Phase II Interconnection Study for Clusters 3 and 4), then, beginning with that study, the transmission upgrades identified in this Section 6.5.2.2 shall be treated as follows:

(i) these transmission upgrades will not be required for the proposed Generating Facility (or proposed increase in capacity) that is the subject to the Interconnection Request to achieve Full Capacity Deliverability Status;

(ii) the estimated costs for these transmission upgrades shall not be assigned to any Interconnection Customer in an Interconnection Study report, such costs shall not be considered in determining the cost responsibility or maximum cost responsibility of the Interconnection Customer for Network Upgrades under this GIP or in determining the Interconnection Financial Security than an Interconnection Customer must post under Section 9;

(iii) and the applicable Participating TO(s) shall not be responsible under this GIP for financing or constructing such transmission upgrades.

### 6.6 Use Of Per Unit Costs To Estimate Network Upgrade Costs

Each Participating TO, under the direction of the CAISO, shall publish per unit costs for facilities generally required to interconnect Generation to their respective systems.

These per unit costs shall reflect the anticipated cost of procuring and installing such facilities during the current Interconnection Study Cycle, and may vary among Participating TOs and within a Participating TO Service Territory based on geographic and other cost input differences, and should include an annual adjustment for the following ten (10) years to account for the anticipated timing of procurement to accommodate a potential range of Commercial Operation Dates of Interconnection Requests in the Interconnection Study Cycle. The per unit costs will be used to develop the cost of Reliability Network Upgrades, Delivery Network Upgrades and Participating TO's Interconnection Facilities under this GIP Section 6. Deviations from a Participating TO's benchmark per unit costs will be permitted if a reasonable explanation for the deviation is provided and there is no undue discrimination.

Prior to adoption and publication of final per unit costs for use in the Interconnection Study Cycle, the CAISO shall publish to the CAISO Website draft per unit costs, including non-confidential information regarding the bases therefore, hold a stakeholder meeting to address the draft per unit costs, and permit stakeholders to provide comments on the draft per unit costs. A schedule for the release and review of per unit costs is set forth in Appendix 5 of this GIP.

### 6.7 Effect of Phase I Study Cost Estimates

Until such time as the Phase II Interconnection Study report is issued to the Interconnection Customer, the costs assigned to Interconnection Customers for Network Upgrades under this Section 6 of the GIP shall establish the maximum value for the Interconnection Financial Security required from each Interconnection Customer under GIP Section 9 for such Network Upgrades, as well as the maximum value for each Interconnection Customer's total cost responsibility for Network Upgrades. As set forth in Section 9.5 of this GIP, after issuance of the Phase II Interconnection Study, the Interconnection Customer's Interconnection Financial Security obligations and maximum cost responsibility for Network Upgrades will be based on the lesser of the cost estimates set forth in the Phase I and Phase II Interconnection Studies, and is subject to subsequent adjustment pursuant to Section 7.4 of Appendix DD of the CAISO Tariff.

### 6.8 Phase I Interconnection Study Procedures

The CAISO shall coordinate the Phase I Interconnection Study with applicable Participating TO(s) pursuant to GIP Section 3.2 and any Affected System that is affected by the Interconnection Request pursuant to GIP Section 3.7. Existing studies shall be used to the extent practicable when conducting the Phase I Interconnection Study. The CAISO will coordinate Base Case development with the applicable Participating TOs to ensure the Base Cases are accurately developed. The CAISO shall use Reasonable Efforts to commence the Phase I Interconnection Study by June 1 of each year, and to complete and issue to Interconnection Customers the Phase I Interconnection Study report within one hundred thirty-four (134) days after the annual commencement of the Phase I Interconnection Study; however, each individual study or Group Studies may be completed prior to this maximum time where practicable based on factors, including, but not limited to, the number of Interconnection Requests in the two associated Cluster Application Windows, study complexity, and reasonable availability of subcontractors as provided under GIP Section 13.2. The CAISO will share applicable study results with the applicable Participating TO(s) for review and comment and will incorporate comments into the study report. The CAISO will issue a final Phase I Interconnection Study report to the Interconnection Customer. At the time of completion of the Phase I Interconnection Study, the CAISO may, at the Interconnection Customer’s request, determine whether the provisions of GIP Section 7.6 apply.

At any time the CAISO determines that it will not meet the required time frame for completing the Phase I Interconnection Study due to the large number of Interconnection Requests in the two associated Cluster Application Windows, study complexity, or unavailability of subcontractors on a reasonable basis to perform the study in the required time frame, the CAISO shall notify the Interconnection Customers as to the schedule status of the Phase I Interconnection Study and provide an estimated completion date with an explanation of the reasons why additional time is required.

Upon request, the CAISO shall provide the Interconnection Customer all supporting documentation, workpapers and relevant pre-Interconnection Request and post-Interconnection Request power flow, short circuit and stability databases for the Phase I

Interconnection Study, subject to confidentiality arrangements consistent with GIP Section 13.1.

### 6.9 Phase I Interconnection Study Results Meeting

Within thirty (30) calendar days of issuing the Phase I Interconnection Study report to the Interconnection Customer, the applicable Participating TO(s), the CAISO and the Interconnection Customer shall hold a Results Meeting to discuss the results of the Phase I Interconnection Study, including assigned cost responsibility. The CAISO shall prepare the minutes from the meetings, and provide the Interconnection Customer and the other attendees an opportunity to confirm the accuracy thereof.

Should the Interconnection Customer provide written comments on the final Phase I Interconnection Study report within ten (10) Business Days of receipt of the report, but in no event less than three (3) Business Days before the Results Meeting conducted to discuss the report, whichever is sooner, the ISO will address the written comments in the Phase I Interconnection Study Results Meeting. Should the Interconnection Customer provide comments at any later time (up to the time of the Results Meeting), then such comments shall be considered informal inquiries to which the CAISO will provide informal, informational responses at the Results Meeting, to the extent possible.

The Interconnection Customer may submit, in writing, additional comments on the final Phase I Interconnection Study report up to (3) Business Days following the Results Meeting. Based on any discussion at the Results Meeting and any comments received, the CAISO (in consultation with the applicable Participating TO(s)) will determine, in accordance with Section 6.10 of this GIP, whether it is necessary to follow the final Phase I Interconnection Study report with a revised study report or an addendum. I The CAISO will issue any such revised report or addendum to the Interconnection Customer no later than fifteen (15) Business Days following the Results Meeting.

#### 6.9.1 Commercial Operation Date.

At the Results Meeting, the Interconnection Customer shall provide a schedule outlining key milestones including environmental survey start date, expected environmental permitting submittal date, expected procurement date of project equipment, back-feed date for project construction, and expected project construction date. This will assist the parties in determining if Commercial Operation Dates are reasonable. If major Interconnection Customer's Interconnection Facilities for the Generating Facility have been identified in the Phase I Interconnection Study, such as telecommunications equipment to support a possible Remedial Action Scheme, distribution feeders to support back feed, new substation, and/or expanded substation work, permitting and material procurement lead times may result in the need to alter the proposed Commercial Operation Date. The Parties may agree to a new Commercial Operation Date. In addition, where an Interconnection Customer intends to establish Commercial Operation separately for different Electric Generating Units or project phases at its Generating Facility, it may only do so in accordance with an implementation plan agreed to in advance by the CAISO and Participating TO, which agreement shall not be unreasonably withheld. Where the parties cannot agree, the Commercial Operation Date determined reasonable by the CAISO, in coordination with the applicable Participating TO(s), will be used for the Phase II Interconnection Study where the changed Commercial Operation Date is needed to accommodate the anticipated completion, assuming Reasonable Efforts by the applicable Participating TO(s), of necessary Reliability Network Upgrades and/or Participating TO's Interconnection Facilities, pending the outcome of any relief sought by the Interconnection Customer under GIP Section 13.5. The Interconnection Customer must notify the CAISO within five (5) Business Days following the Results Meeting that it is initiating dispute procedures under GIP Section 13.5.

### 6.9.2 Modifications.

**6.9.2.1** At any time during the course of the Interconnection Studies, the Interconnection Customer, the applicable Participating TO(s), or the CAISO may identify changes to the planned interconnection that may improve the costs and benefits (including reliability) of the interconnection, and the ability of the proposed change to accommodate the Interconnection Request. To the extent the identified changes are acceptable to the applicable Participating TO(s), the CAISO, and Interconnection Customer, such acceptance not to be unreasonably withheld, the CAISO shall modify the Point of Interconnection and/or configuration in accordance with such changes without altering the Interconnection Request's eligibility for participating in Interconnection Studies.

**6.9.2.2** At the Phase I Interconnection Study Results Meeting, the Interconnection Customer should be prepared to discuss any desired modifications to the Interconnection Request. After the issuance of the final Phase I Interconnection Study, but no later than five (5) Business Days following the Phase I Interconnection Study Results Meeting, the Interconnection Customer shall submit to the CAISO, in writing, modifications to any information provided in the Interconnection Request. The CAISO will forward the Interconnection Customer's modification to the applicable Participating TO(s) within one (1) Business Day of receipt.

Modifications permitted under this Section 6.9.2 shall include specifically: (a) a decrease in the electrical output (MW) of the proposed project; (b) modifying the technical parameters associated with the Generating Facility technology or the Generating Facility step-up transformer impedance characteristics; and (c) modifying the interconnection configuration.

For any modification other than these, the Interconnection Customer must first request that the CAISO evaluate whether such modification is a Material Modification. In response to the Interconnection Customer's request, the CAISO, in coordination with the affected Participating TO(s) and, if applicable, any Affected System Operator, shall evaluate the proposed modifications prior to making them and the CAISO shall inform the Interconnection Customer in writing of whether the modifications would constitute a Material Modification. The CAISO may engage the services of the applicable Participating TO to assess the modification. Costs incurred by the Participating TO and CAISO (if any) shall be borne by the party making the request under Section 6.9.2, and such costs shall be included in any CAISO invoice for modification assessment activities. Any change to the Point of Interconnection, except for that specified by the CAISO in an Interconnection Study or otherwise allowed under this GIP Section 6.9.2, shall constitute a Material Modification. The Interconnection Customer may then withdraw the proposed modification or proceed with a new Interconnection Request for such modification.

The Interconnection Customer shall remain eligible for the Phase II Interconnection Study if the modifications are in accordance with this GIP Section 6.9.2.

**6.9.2.3** The Interconnection Customer shall provide the CAISO a $10,000 deposit for the modification assessment at the time the request is submitted. Except as provided below, any modification assessment will be concluded, and a response provided to the Interconnection Customer in writing, within forty-five (45) calendar days from the date the CAISO receives all of the following: the Interconnection Customer's written notice to modify the project, technical data required to assess the request and payment of the $10,000 deposit. If the modification assessment cannot be completed within that time period, the CAISO shall notify the Interconnection Customer and provide an estimated completion date with an explanation of the reasons why additional time is required.

The Interconnection Customer will be responsible for the actual costs incurred by the CAISO and applicable Participating TO(s) in conducting the modification assessment. If the actual costs of the modification assessment are less than the deposit provided by the Interconnection Customer, the Interconnection Customer will be refunded the balance. If the actual costs of the modification assessment are greater than the deposit provided by the Interconnection Customer, the Interconnection Customer shall pay the balance within 30 days of being invoiced. The CAISO shall coordinate the modification request with the Participating TO(s). The Participating TO(s) shall invoice the CAISO for any assessment work within seventy-five (75) calendar days of completion of the assessment, and, within thirty (30) days thereafter, the CAISO shall issue an invoice or refund to the Interconnection Customer, as applicable, based upon such submitted Participating TO invoices and the CAISO's own costs for the assessment.

The CAISO will publish cost data regarding modification assessments in accordance with the terms set forth in a Business Practice Manual.

Notwithstanding any other provision, all refunds pursuant to this Appendix Y will be processed in accordance with the CAISO's generally accepted accounting practices, including monthly batched deposit refund disbursements. Any CAISO deadline will be tolled to the extent the Interconnection Customer has not provided the CAISO with the appropriate documents to facilitate the Interconnection Customer's refund, or if the Interconnection Customer has any outstanding invoice balance due to the CAISO on another project owned by the same Interconnection Customer.

**6.9.2.4** Notwithstanding any other provisions in this GIP or the Interconnection Customer's GIA, the Interconnection Customer may not modify its fuel type, including through the addition or replacement of Generating Units, by more than the greater of five percent (5%) of its capacity or 10 MW (but by no more than twenty-five percent (25%) of its capacity), where:

(a) the Interconnection Customer has exceeded seven (7) years from the date the CAISO received its Interconnection Request without achieving its Commercial Operation Date;

(b) the Interconnection Customer's current Commercial Operation Date exceeds seven (7) years from the date the CAISO received its Interconnection Request; or

(c) the change in fuel type will require the Interconnection Customer's Commercial Operation Date to exceed seven (7) years from the date the CAISO received its Interconnection Request.

**6.9.2.5** In addition to the options provided in this GIP, an Interconnection Customer may convert to Energy Only, Partial Capacity Deliverability Status, or a lower fraction of Partial Capacity Deliverability Status after the completion of its Phase II Interconnection Study. This conversion will become effective through the reassessment process described in Section 7.4 of Appendix DD to the CAISO tariff. Interconnection Customers that become Energy Only after their Phase II Interconnection Study may not reduce their cost responsibility or Interconnection Financial Security for any assigned Delivery Network Upgrades as a result of converting to Energy Only unless the CAISO and Participating TO(s) determine that the Interconnection Customer's assigned Delivery Network Upgrade(s) is no longer needed for current Interconnection Customers.

**6.9.2.6** Interconnection Customers may request Permissible Technology Advancements pursuant to Section 6.7.2.4 of Appendix DD.

**6.9.3 Confirmation of Deliverability Status**

Within five (5) Business Days following the Phase I Interconnection Study Results Meeting, the Interconnection Customer shall submit to the CAISO the completed form of Appendix B (Data Form To Be Provided by the Interconnection Customer Prior to Commencement of the Phase II Interconnection Study) to the Generator Interconnection Study Process Agreement, and within such Appendix B, the Interconnection Customer shall either (i) confirm the desired deliverability status that the Interconnection Customer had previously designated in the completed form of Appendix A to the Generator Interconnection Study Process Agreement (Assumptions Used in Conducting the Phase I Interconnection Study) or (ii) change the status of desired deliverability as follows:

(a) from Full Capacity Deliverability Status to Energy-Only Deliverability Status;

(b) from Full Capacity Deliverability Status to Partial Deliverability Status with a specified Partial Deliverability level in MW;

(c) from Partial Deliverability Status to Energy-Only Deliverability Status; or

(d) reduce the level of Partial Deliverability Status in MW.

### 6.9.4 Determination of Impact of Modifications Decreasing Generating Capacity Output or Deliverability Status Reductions on Calculation of Initial Financial Security Posting

After receiving from the Interconnection Customer any modification elections involving decreases in electrical output (MW) of the Generating Facility and/or changes (*i.e.*, reductions) in deliverability status as permitted in Section 6.9.3 above, the CAISO, in coordination with the applicable Participating TO(s), will determine, based on best engineering judgment, whether such modifications will eliminate the need for any Delivery Network Upgrades and/or Reliability Network Upgrades identified in the Phase I Interconnection Study report. The CAISO and applicable Participating TO(s) will not conduct any re-studies in making this determination.

If the CAISO and applicable Participating TO(s) should determine that one or more Delivery Network Upgrades identified in the Phase I Interconnection Study are no longer needed, then, solely for purposes of calculating the amount of the Interconnection Customer's initial Financial Security Posting under Section 9.2, such Delivery Network Upgrade(s) will be considered to be removed from the plan of service described in the Interconnection Customer's Phase I Interconnection Study report and the cost estimates for such upgrades shall not be included in the calculation of Interconnection Financial Security in Section 9.2. The CAISO will inform in a timely manner any Interconnection Customers so affected, and provide the Interconnection Customers with written notice of the revised initial Interconnection Financial Security posting amounts. No determination under this Section 6.9.4 shall affect either (i) the timing for the initial Interconnection Financial Security posting or (ii) the maximum value for the Interconnection Customer's total cost responsibility for Network Upgrades established by the Phase I Interconnection Study report.

### 6.9.5 Commercial Viability Criteria for Retention of Deliverability beyond Seven Years in Queue

The CAISO's agreement to modifications requested pursuant to Section 6.9.2.3 for an Interconnection Customer with a Commercial Operation Date that has exceeded or will exceed seven (7) years from the date the Interconnection Request is received by the CAISO with retention of Full Capacity Deliverability Status or Partial Capacity Deliverability Status will be predicated upon the Interconnection Customer's ability to meet and maintain the following commercial viability criteria:

a) Providing proof of having, at a minimum, applied for the necessary governmental permits or authorizations, and that the permitting authority has deemed such documentation as data adequate for the authority to initiate its review process;

b) Providing proof of having an executed and regulator-approved power purchase agreement. Power purchase agreements must have the point of interconnection, capacity, fuel type, technology, and site location in common with the Interconnection Customer and GIA;

c) Demonstrating Site Exclusivity for 100% of the property necessary to construct the facility through the Commercial Operation Date requested in the modification request. A Site Exclusivity Deposit does not satisfy this criterion;

d) Having an executed Generator Interconnection Agreement ("GIA"); and

e) Being in good standing with the GIA such that neither the Participating TO nor the CAISO has provided a Notice of Breach that has not been cured and the Interconnection Customer has not commenced sufficient curative actions.

Interconnection Customers that satisfied these commercial viability criteria before November 27, 2018 on the basis of balance-sheet or binding financing may continue to do so in their annual review. The CAISO will not consider the addition of energy storage; changes to the type, number, or manufacturer of inverters; or insubstantial changes to the Generating Facility as modifications under this Section. Interconnection Customers may request such modifications pursuant to this GIP.

If the Interconnection Customer fails to meet all of the commercial viability criteria but informs the CAISO that it intends to proceed with the modified Commercial Operation Date, the Generating Facility's Deliverability Status will become Energy-Only Deliverability Status. Interconnection Customers that become Energy Only for failure to meet these criteria may not reduce their cost responsibility or Interconnection Financial Security for any assigned Delivery Network Upgrades as a result of converting to Energy Only unless the CAISO and Participating TO(s) determine that the Interconnection Customer's assigned Delivery Network Upgrade(s) is no longer needed for current Interconnection Customers.

If an Interconnection Customer satisfies all the commercial viability criteria except criterion (b), the CAISO will postpone converting the Generating Facility to Energy-Only Deliverability Status for one year from the day the Interconnection Customer submits the modification request, or eight years after the CAISO received the Interconnection Request, whichever occurs later. Interconnection Customers exercising this provision must continue to meet all other commercial viability criteria.

If an Interconnection Customer has declared Commercial Operation for a portion of a Generating Facility, or one or more Phases of a Phased Generating Facility, the CAISO will not convert to Energy-Only the portion of the Generating Facility that is in service and operating in the CAISO markets. Instead, the portion of the Generating Facility that has not been developed will be converted to Energy-Only Deliverability Status, resulting in Partial Capacity Deliverability Status for the Generating Facility. However, where the Generating Facility has multiple Resource IDs for the Generating Facility, each Resource ID will have its own Deliverability Status independent from

the Generating Facility. Any individual Resource ID may have Full Capacity Deliverability Status where the Generating Facility as a whole would have Partial Capacity Deliverability Status. If the Generating Facility downsizes pursuant to Section 7.5 of Appendix DD to the CAISO Tariff to the amount in service and operating in the CAISO markets, it will revert to Full Capacity Deliverability Status.

#### 6.9.5.1 Annual Review

For Interconnection Customers extending their Commercial Operation Date beyond the seven-year threshold and retaining Full Capacity Deliverability Status or Partial Capacity Deliverability Status pursuant to Section 6.9.5, the CAISO will perform an annual review of commercial viability. If any Interconnection Customer fails to maintain its level of commercial viability, the Deliverability Status of the Generating Facility corresponding to the Interconnection Request will convert to Energy-Only Deliverability Status.

### 6.9.6 Alignment with Power Purchase Agreements

An Interconnection Customer with an executed GIA and an executed, regulator-approved power purchase agreement may request to automatically extend the GIA Commercial Operation Date to align with its power purchase agreement for that Generating Facility, including any extension or amendment. Interconnection Customers requesting alignment must provide a copy of the power purchase agreement and evidence of regulatory approval. Requests to align the Commercial Operation Date with power purchase agreements are not exempt from the commercial viability criteria provisions in Section 6.9.5, where applicable.

## 6.10 Revisions and Addenda to Final Interconnection Study Reports

### 6.10.1 Substantial Error or Omissions; Revised Study Report

Should the CAISO discover, through written comments submitted by an Interconnection Customer or otherwise, that a final Phase I or Phase II Interconnection Study Report (which can mean a final Phase I or Phase II Interconnection Study Report for cluster studies or a final System Impact or Facilities report for the Independent Study Process) contains a substantial error or omission, the CAISO will cause a revised final report to be issued to the Interconnection Customer. A substantial error or omission shall mean an error or omission that results in one or more of the following:

(i) understatement or overstatement of the Interconnection Customer's cost responsibility for either Network Upgrades or Participating TO Interconnection Facilities by more than five (5) percent or one million dollars ($1,000,000), whichever is greater; or

(ii) results in a delay to the schedule by which the Interconnection Customer can achieve Commercial Operation, based on the results of the final Interconnection Study, by more than one year.

A dispute over the plan of service by an Interconnection Customer shall not be considered a substantial error or omission unless the Interconnection Customer demonstrates that the plan of service was based on an invalid or erroneous study assumption that meets the criteria set forth above.

### 6.10.2 Other Errors or Omissions; Addendum

If an error or omission in an Interconnection Study report (for either the cluster process or Independent Study Process) is not a substantial error or omission, the CAISO shall not issue a

revised final Interconnection Study report, although the error or omission may result in an adjustment of the corresponding Interconnection Financial Security. Rather, the CAISO shall document such error or omission and make any appropriate correction by issuing an addendum to the final report.
The CAISO and applicable Participating TO shall also incorporate, as needed, any corrected information pertinent to the terms or conditions of the GIA in the draft GIA provided to an Interconnection Customer pursuant to Section 11 of this GIP.

### 6.10.3 Only Substantial Errors or Omissions Adjust Posting Dates

Unless the error or omission is a substantial error resulting in the issuance of a revised final Interconnection Study report, the correction of an error or omission shall not operate to delay any deadline for posting Interconnection Financial Security set forth in Section 9 of this GIP. In the case of a substantial error or omission resulting in the issuance of a revised final Phase I or Phase II Interconnection Study report, the deadline for posting Interconnection Financial Security shall be extended as set forth in GIP Section 9. In addition to issuing a revised final report, the CAISO will promptly notify the Interconnection Customer of any revised posting amount and extended due date occasioned by a substantial error or omission.

An Interconnection Customer's dispute of a CAISO determination that an error or omission in a final Study report does not constitute substantial error shall not operate to change the amount of Interconnection Financial Security that the Interconnection Customer must post or to postpone the applicable deadline for the Interconnection Customer to post Interconnection Financial Security. In case of such a dispute, the Interconnection Customer shall post the amount of Interconnection Financial Security in accordance with Section 9 of this GIP, subject to refund in the event that the Interconnection Customer prevails in the dispute.

## Section 7 Phase II Interconnection Study for Queue Clusters

The provisions of this Section 7 of this GIP shall apply to all Interconnection Requests except those processed under the Independent Study Process, as set forth in Section 4 of this GIP, the Fast Track Process, as set forth in Section 5 of this GIP, or the 10 kW inverter process as set forth in Appendix 7 of this GIP.

### 7.1 Scope Of Phase II Interconnection Study

The CAISO, in coordination with the applicable Participating TO(s), will conduct a Phase The CAISO, in coordination with the applicable Participating TO(s), will conduct a Phase II Interconnection Study that will incorporate eligible Interconnection Requests from the previous two Phase I Interconnection Studies. Beginning with Queue Cluster 5, the Phase II Interconnection Study will incorporate eligible Interconnection Requests from the previous Phase I Interconnection Study. The Phase II Interconnection Study shall (i) update, as necessary, analyses performed in the Phase I Interconnection Studies to account for the withdrawal of Interconnection Requests, (ii) identify final Reliability Network Upgrades needed in order to achieve Commercial Operation status for the Generating Facilities, (iii) assign responsibility for financing the identified final Reliability Network Upgrades, (iv) identify, following coordination with the CAISO's Transmission Planning Process, final Delivery Network Upgrades needed to interconnect those Generating Facilities selecting Full Capacity Deliverability Status, (v) assign responsibility for financing Delivery Network Upgrades needed to interconnect those Generating Facilities selecting Full Capacity Deliverability Status, (vi) identify for each Interconnection Request final Point of Interconnection and Participating TO's Interconnection Facilities, (vii) provide a +/-20% estimate for each Interconnection Request of the final Participating TO's Interconnection Facilities, (viii) optimize in-service timing requirements based on operational studies in order to maximize achievement of the Commercial Operation Dates of the Generating

Facilities, and (ix) if it is determined that the Delivery Network Upgrades cannot be completed by the Interconnection Customer's identified Commercial Operation Date, provide that operating procedures necessary to allow the Generating Facility to interconnect as an energy-only resource, on an interim-only basis, will be developed and utilized until the Delivery Network Upgrades for the Generating Facility are completed and placed into service.

With respect to the foregoing items, the Phase II Interconnection Study shall specify and estimate the cost of the equipment, engineering, procurement and construction work, including the financial impacts (i.e., on Local Furnishing Bonds), if any, and schedule for effecting remedial measures that address such financial impacts, needed on the CAISO Controlled Grid to implement the conclusions of the updated Phase II Interconnection Study technical analyses in accordance with Good Utility Practice to physically and electrically connect the Interconnection Customer's Interconnection Facilities to the CAISO Controlled Grid. The Phase II Interconnection Study shall also identify the electrical switching configuration of the connection equipment, including, without limitation: the transformer, switchgear, meters, and other station equipment; the nature and estimated cost of any Participating TO's Interconnection Facilities and Network Upgrades necessary to accomplish the interconnection; and an estimate of the time required to complete the construction and installation of such facilities.

The CAISO will perform an operational partial and interim Deliverability Assessment (operational Deliverability Assessment) as part of the Phase II Interconnection Study. The operational Deliverability Assessment will be performed for each applicable queue cluster study group for each applicable study year through the prior year before all of the required Delivery Network Upgrades are in-service. The CAISO will consider operational Deliverability Assessment results stated for the first year in the pertinent annual Net Qualifying Capacity process that the CAISO performs for the next Resource Adequacy Compliance Year. The study results for any other years studied in operational Deliverability Assessment will be advisory and provided to the Interconnection Customer for its use only and for informational purposes only.

The CAISO will publish the methodology under which the CAISO will perform the operational deliverability assessment on the CAISO Website or within a Business Practice Manual.

### 7.2 Phase II Study Coordinated To Transmission Planning Process

The CAISO shall coordinate the Phase II Interconnection Studies with the CAISO's Transmission Planning Process under CAISO Tariff Section 24. This coordination shall include, but not be limited to:

(i) consistency, to the maximum extent applicable under Good Utility Practice, between the Interconnection Base Case Data used for performance of the Phase II Interconnection Studies and the Unified Planning Assumptions developed for the Transmission Planning Process, including, but not limited to, data relating to Demand data, network topology, and generation resources;

(ii) consideration of any conceptual transmission plan(s) developed, but not rejected, in the current or former Transmission Planning Processes intended to access generation development areas as a means to satisfy the Network Upgrade requirements to interconnect Generating Facilities included in the Phase II Interconnection Study;

(iii) performance of sensitivities within the Transmission Planning Process, including cases considering Generating Facilities included in the Phase II Interconnection Study(ies) to the extent possible, to optimize transmission upgrades developed in the current Transmission Planning Process to achieve System Reliability, economic efficiency, and satisfy the Network Upgrade requirements to interconnect Generating Facilities included in the Phase II Interconnection Study;

(iv) consideration of future generation development potential in transmission upgrade designs pursuant to criteria developed as part of the Unified Planning Assumptions; and

(v) consideration of phased development and option value of transmission projects to address uncertainty.

Network Upgrades, apart from detail engineering and final cost determinations, identified in any Phase II Interconnection Study or as part of the Transmission Planning Process that must receive CAISO Governing Board approval under Section 24 of the CAISO Tariff may be subject to Section 24.2.5.2 of the CAISO Tariff.

Generation projects entering the Phase II Interconnection Study will also be considered in the Unified Planning Assumptions, as appropriate. Transmission projects proposed through the Phase II Interconnection Study that require CAISO Governing Board approval will be integrated into the stakeholder process under the Transmission Planning Process.

### 7.3 Financing of Reliability Network Upgrades

The responsibility to finance final Reliability Network Upgrades identified in the Phase II Interconnection Study of an Interconnection Request studied separately shall be assigned solely to that Interconnection Request up to the cost assignment for Reliability Network Upgrades under GIP Section 6.5.1. The responsibility to finance final short circuit related Reliability Network Upgrades identified through a Group Study in the Phase II Interconnection Study shall be assigned to all Interconnection Requests in that Group Study pro rata on the basis of short circuit duty contribution of each Generating Facility up to the cost assignment for Reliability Network Upgrades under GIP Section 6.5.1. The responsibility to finance all other final Reliability Network Upgrades identified through a Group Study in the Phase II Interconnection Study shall be assigned to all Interconnection Requests in that Group Study pro rata on the basis of the maximum megawatt electrical output of each proposed new Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request up to the cost assignment for Reliability Network Upgrades under GIP Section 6.5.1.

### 7.4 Financing of Delivery Network Upgrades

The responsibility to finance all Delivery Network Upgrades identified in the On-Peak Deliverability Assessment and Off-Peak Deliverability Assessment as part of Phase II Interconnection Study shall be assigned to all Interconnection Requests selecting Full Capacity or Partial Deliverability Status based on the flow impact of each such Generating Facility on each Delivery Network Upgrade as determined by the Generation distribution factor methodology set forth in the On-Peak and Off-Peak Deliverability Assessment methodologies. The financing responsibility shall be up to, but no greater than, the cost assignment for Delivery Network Upgrades for each Interconnection Request under GIP Sections 6.5.2.1 and 6.5.2.2.

Beginning with the Phase II Interconnection Study for Clusters 3 and 4, any transmission upgrades identified in the Off-Peak Deliverability Assessment as part of the Phase II Interconnection Study, and the estimated costs thereof, shall be conceptual in nature only, and therefore, commencing with that study, the estimated costs of transmission upgrades identified in the Off-Peak Deliverability Assessment shall not be assigned to any Interconnection Customers in an Interconnection Study report, such costs shall not be considered in determining the cost responsibility or maximum cost responsibility of the Interconnection Customer for Network Upgrades under this GIP, and the applicable Participating TO(s) shall not be responsible under this GIP for financing or constructing such transmission upgrades.

### 7.5 Phase II Interconnection Study Procedures

The CAISO shall coordinate the Phase II Interconnection Study with applicable Participating TO(s) and any Affected System that is affected by the Interconnection Request pursuant to GIP Section 3.7. Existing studies shall be used to the extent practicable when conducting the Phase II Interconnection Study. The CAISO will coordinate Base Case development with the applicable Participating TOs to ensure the Base Cases are accurately developed. The CAISO shall use Reasonable Efforts to commence the Phase II Interconnection Study by January 15 of each year, and to complete and issue to Interconnection Customers the Phase II Interconnection Study report within one hundred ninety-six (196) calendar days after the annual commencement of the Phase II Interconnection Study. The CAISO will share applicable study results with the applicable Participating TO(s), for review and comment, and will incorporate comments into the study report. The CAISO will issue a final Phase II Interconnection Study report to the Interconnection Customer.

At the request of the Interconnection Customer or at any time the CAISO determines that it will not meet the required time frame for completing the Phase II Interconnection Study, the CAISO shall notify the Interconnection Customer as to the schedule status of the Phase II Interconnection Study and provide an estimated completion date with an explanation of the reasons why additional time is required.

Upon request, the CAISO shall provide the Interconnection Customer all supporting documentation, workpapers and relevant pre-Interconnection Request and post-Interconnection Request power flow, short circuit and stability databases for the Phase II Interconnection Study, subject to confidentiality arrangements consistent with GIP Section 13.1.

### 7.6 Accelerated Phase II Interconnection Study Process

The Phase II Interconnection Study shall be completed within one hundred fifty (150) calendar days following the posting of the initial Interconnection Financial Security under GIP Section 9 where the Interconnection Request meets the following criteria: (i) the Interconnection Request was not grouped with any other Interconnection Requests during the Phase I Interconnection Study or was identified as interconnecting to a point of available transmission during the Phase I Interconnection Study, and (ii) the Interconnection Customer is able to demonstrate that the general Phase II Interconnection Study timeline under GIP Section 7.5 is not sufficient to accommodate the Commercial Operation Date of the Large Generating Facility.

In addition to the above criteria, the CAISO may apply to FERC in coordination with the Interconnection Customer for a waiver of the timelines in this GIP to meet the schedule required by an order, ruling, or regulation of the Governor of the State of California, the CPUC, or the CEC.

### 7.7 Results Meeting With The CAISO And Applicable PTO(s)

Within thirty (30) calendar days of providing the final Phase II Interconnection Study report to the Interconnection Customer, the applicable Participating TO(s), the CAISO and the Interconnection Customer shall meet to discuss the results of the Phase II Interconnection Study, including selection of the final Commercial Operation Date.

Should the Interconnection Customer provide written comments on the final Phase II Interconnection Study report within ten (10) Business Days of receipt of the report, but in no case less than three (3) Business Days before the Results Meeting, whichever is sooner, then the ISO will address the written comments in the Phase II Interconnection Study Results Meeting. Should the Interconnection Customer provide comments at any later time (up to the time of the Results Meeting), then such comments shall be considered informal inquiries to which the CAISO will provide informal, informational responses at the Results Meeting, to the extent possible.

The Interconnection Customer may submit, in writing, additional comments on the final Phase II Interconnection Study report up to three (3) Business Days following the Results Meeting. Based on any discussion at the Results Meeting and any comments received, the CAISO (in consultation with the applicable Participating TO(s)) will determine, in accordance with Section 6.10 of this GIP, whether it is necessary to follow the final Phase II Interconnection Study Report with a revised study report or an addendum to the report. The CAISO will issue any such revised report or addendum no later than fifteen (15) Business Days following the Results Meeting.

## Section 8 Additional Deliverability Assessment Options

### 8.1 One-Time Full Capacity Deliverability Option

A Large Generating Facility previously studied as Energy-Only Deliverability Status under the CAISO Tariff, or a Small Generating Facility studied under the provisions of Appendix S of the CAISO Tariff, will have a one-time option to be studied for Full Capacity Deliverability Status.

### 8.2 [Not Used]

### 8.3 PTO Tariff Option for Full Capacity Deliverability Status

To the extent that a Participating TO's tariff provides the option for customers taking interconnection service under the Participating TO's tariff to obtain Full Capacity Deliverability Status, the CAISO will, in coordination with the applicable Participating TO, perform the necessary deliverability studies to determine the deliverability of customers electing such option. The CAISO shall execute any necessary agreements for reimbursement of study costs it incurs and to assure cost attribution for any Network Upgrades relating to any deliverability status conferred to such customers under the Participating TO's tariff.

### 8.4 Deliverability from Non-Participating TOs

This process applies to Generating Facilities that interconnect to the transmission facilities of a Non-Participating TO located within the CAISO Balancing Authority Area that wish to obtain Full Capacity Deliverability Status under the CAISO Tariff. Such Generating Facilities will be eligible to be studied by the CAISO for Full Capacity Deliverability Status pursuant to the following provisions:

(a) The Generating Facility seeking Full Capacity Deliverability Status under the CAISO Tariff must submit a request to the CAISO to study it for such Status. Such study request will be in the form of the CAISO's pro forma Interconnection Request, must include the Generating Facility's intended Point of Delivery to the CAISO Controlled Grid, and must be submitted during a Cluster Application Window. The Generating Facility will be required to satisfy the same study deposit and Interconnection Financial Security posting requirements as an Interconnection Customer, but will not be considered an Interconnection Customer under the CAISO Tariff.

(b) The Non-Participating TO that serves as the interconnection provider to the Generating Facility must treat the CAISO as an Affected System in the interconnection study process for the Generating Facility.

(c) As part of the Non-Participating TO's interconnection study process, the CAISO, in its sole discretion and on a case-by-case basis, will determine the adequacy of transmission on the Non-Participating TO's system for the Generating Facility to be deemed fully deliverable to the elected Point of Delivery to the CAISO Controlled Grid. Only those proposed Generating Facilities (or proposed

increases in Generating Facility capacity) for which the CAISO has determined there is adequate transmission capacity on the Non-Participating TO system to provide full deliverability to the applicable Point of Delivery will be eligible to be assessed for Full Capacity Deliverability Status under the CAISO Tariff.

(d) If the Generating Facility is eligible for study for Full Capacity Deliverability Status, the CAISO will include the Generating Facility in the Interconnection Study process for the Queue Cluster associated with the Cluster Application Window in which the Generating Facility has submitted its study request. The Point of Delivery with the CAISO will be treated as the Point of Interconnection for purposes of including the Generating Facility in a Group Study with any applicable CAISO Interconnection Customers in the relevant Queue Cluster. Pursuant to the Queue Cluster Interconnection Study process, as set forth in this GIP, the Generating Facility will be allocated its share of any applicable Delivery Network Upgrades.

(e) The CAISO, Participating TO, and Interconnection Customer will execute any necessary agreements for reimbursement of study costs incurred it to assure cost attribution for any Network Upgrades relating to any deliverability status conferred to each such interconnection customer under the Non-Participating TO's tariff.

(f) The Non-Participating TO's interconnection customer will receive repayment of funds posted for the construction of the Delivery Network Upgrades on the CAISO Controlled Grid in the same manner as CAISO Interconnection Customers, as specified in GIP Section 12.3.2.

## Section 9 Interconnection Financial Security

### 9.1 Types of Interconnection Financial Security

The Interconnection Financial Security posted by an Interconnection Customer may be any combination of the following types of Interconnection Financial Security provided in favor of the applicable Participating TO(s):

(a) an irrevocable and unconditional letter of credit issued by a bank or financial institution that has a credit rating of A or better by Standard and Poors or A2 or better by Moody's;

(b) an irrevocable and unconditional surety bond issued by an insurance company that has a credit rating of A or better by Standard and Poors or A2 or better by Moody's;

(c) an unconditional and irrevocable guaranty issued by a company has a credit rating of A or better by Standard and Poors or A2 or better by Moody's;

(d) a cash deposit standing to the credit of the applicable Participating TO(s) in an interest-bearing escrow account maintained at a bank or financial institution that is reasonably acceptable to the applicable Participating TO(s);

(e) a certificate of deposit in the name of the applicable Participating TO(s) issued by a bank or financial institution that has a credit rating of A or better by Standard and Poors or A2 or better by Moody's; or

(f) a payment bond certificate in the name of the applicable Participating TO(s) issued by a bank or financial institution that has a credit rating of A or better by Standard and Poors or A2 or better by Moody's.

Interconnection Financial Security instruments as listed above shall be in such form as the CAISO and applicable Participating TO(s) may reasonably require from time to time by notice to Interconnection Customers or in such other form as has been evaluated and approved as reasonably acceptable by the CAISO and applicable Participating TO(s).

The CAISO shall publish and maintain standardized forms related to the types of Interconnection Financial Security listed above on the CAISO Website. The CAISO shall require the use of standardized forms of Interconnection Financial Security to the greatest extent possible. If at any time the guarantor of the Interconnection Financial Security fails to maintain the credit rating required by this GIP Section 9.1, the Interconnection Customer shall provide to the applicable Participating TO(s) replacement Interconnection Financial Security meeting the requirements of this GIP Section 9.1 within five (5) Business Days of the change in credit rating.

Interest on a cash deposit standing to the credit of the applicable Participating TO(s) in an interest-bearing escrow account under subpart (d) of this GIP Section 9.1 will accrue to the Interconnection Customer's benefit and will be added to the Interconnection Customer's account on a monthly basis.

## 9.2 Initial Posting Of Interconnection Financial Security

**9.2.1** The Interconnection Customer shall post, with notice to the CAISO, two separate Interconnection Financial Security instruments: (i) a posting relating to the Network Upgrades; (ii) a posting relating to the Participating TO's Interconnection Facilities.

Interconnection Customers owned by Participating Transmission Owners are not required to post Interconnection Financial Security to themselves. Notwithstanding this exemption, Interconnection Customers owned by Participating Transmission Owners (i) must post Interconnection Financial Security required for Network Upgrades or Participating TO's Interconnection Facilities on other Participating Transmission Owner's systems where required for interconnection; and (ii) must remit to the CAISO an amount equal to any non-fundable portion of the Interconnection Financial Security that would have been forfeited upon withdrawal or termination absent this exemption pursuant to Section 7.6 of Appendix DD to the CAISO tariff and Section 9.4 of this GIP.

**9.2.2** Timing of Postings. The postings set forth in this GIP Section 9.2 shall be made on or before ninety (90) calendar days after issuance of the final Phase I Interconnection Study report for Interconnection Customers in a Queue Cluster, or on or before sixty (60) calendar days after the CAISO provides the results of the System Impact Study for Interconnection Customers in the Independent Study Process.

Revised Cluster Study Reports. If the CAISO revises a final Phase I Interconnection Study report pursuant to GIP Section 6.10, the initial postings set forth in this GIP Section 9.2 will be due from the Interconnection Customer by the later of ninety (90) calendar days after issuance of the original final Phase I Interconnection Study Report or forty (40) calendar days after issuance of the revised final Phase I Interconnection Study Report.

Revised Independent Study Track Reports. If the CAISO revises a final System Impact Study report pursuant to GIP Section 6.10, the initial postings set forth in this GIP Section 9.2 will be due from the Interconnection Customer by the later of ninety (90) calendar days after issuance of the original final System Impact report or thirty (30) calendar days after issuance of the revised System Impact Study report.

**9.2.3** Posting Amount for Network Upgrades.

Each Interconnection Customer for a Small Generating Facility assigned to a Queue Cluster and each Interconnection Customer for a Small Generating Facility in the Independent Study Process shall post an Interconnection Financial Security instrument in an amount equal to the lesser of fifteen percent (15%) of the total cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study or System Impact Study for Network Upgrades or (ii) $20,000 per megawatt of electrical output of the Small Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, but in no event less than $50,000.

Each Interconnection Customer for a Large Generating Facility assigned to a Queue Cluster and each Interconnection Customer for a Large Generating Facility in the Independent Study Process shall post an Interconnection Financial Security instrument in an amount equal to the lesser of (i) fifteen percent (15%) of the total cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study or System Impact Study for Network Upgrades, (ii) $20,000 per megawatt of electrical output of the Large Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, or (iii) $7,500,000, but in no event less than $500,000.

Notwithstanding the foregoing, if the costs of the estimated Network Upgrades are less than the minimum posting amounts set forth above, the posting amount required will be equal to the estimated Network Upgrade amount.

In addition, if an Interconnection Customer switches its status from Full Capacity Deliverability Status to Energy-Only Deliverability Status within five (5) Business Days following the Phase I Interconnection Study Results Meeting, as permitted in Section 7.1 of this GIP, the required Interconnection Financial Security for Network Upgrades shall, for purposes of this section, be additionally capped at an amount no greater than the total cost responsibility assigned to the Interconnection Customer in the Phase I Interconnection Study for Reliability Network Upgrades.

**9.2.4** Posting Amount for Participating TO's Interconnection Facilities.

**9.2.4.1 For Small Generating Facilities.** Each Interconnection Customer for a Small Generating Facility assigned to a Queue Cluster and each Interconnection Customer for a Small Generating Facility in the Independent Study Process shall post an Interconnection Financial Security instrument in an amount equal to the lesser of (i) fifteen (15) percent of the total cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study or System Impact Study for Participating TO's Interconnection Facilities or (ii) $20,000 per megawatt of electrical output of the Small Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, but in no event less than $50,000.

**9.2.4.2 For Large Generating Facilities.** Each Interconnection Customer for a Large Generating Facility assigned to a Queue Cluster and each Interconnection Customer for a Large Generating Facility in the Independent Study Process shall post an Interconnection Financial Security instrument in an amount equal to the lesser of (i) fifteen (15) percent of the total cost responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study or System Impact Study for Participating TO's Interconnection Facilities, (ii) $20,000 per megawatt of electrical output of the Large Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, or (iii) $7,500,000, but in no event less than $500,000.

**9.2.4.3 Cost Estimates Less than Minimum Posting Amounts**. If the costs of the estimated Participating TO Interconnection Facilities for either a Small Generating Facility or Large Generating Facility are less than the minimum posting amounts that would apply under Sections 9.2.4.1 or 9.2.4.2, then the posting amount required will be equal to the estimated Participating TO Interconnection Facilities amount.

**9.2.5** Consequences for Failure to Post. The failure by an Interconnection Customer to timely post the Interconnection Financial Security required by this GIP Section 9.2 shall result in the Interconnection Request being deemed withdrawn and subject to GIP Section 3.8. The Interconnection Customer shall provide the CAISO and the Participating TO with written notice that it has posted the required Interconnection Financial Security no later than the applicable final day for posting.

**9.2.6** Effect of Decrease in Output on Initial Posting Requirement. If an Interconnection Customer decreases the electrical output of its facility after the completion of the Phase I Interconnection Study, pursuant to Section 6.9.2, and the CAISO, in consultation with the applicable Participating TO(s), is able to reasonably determine, prior to the date for initial posting of Interconnection Financial Security, that as a result of such decrease (solely or in combination with other modifications made by Interconnection Customers in the same Study Group) some of the Network Upgrades and/or Participating TO Interconnection Facilities identified in the Phase I Interconnection Study will no longer be required, then the calculation of the initial posting of Interconnection Financial Security will not include those Network Upgrades and/or Participating TO Interconnection Facilities. Such determination will be made based on the CAISO's best engineering judgment and will not include any re-studies.

**9.3 Additional Posting Of Interconnection Financial Security**

**9.3.1 Second Posting of Interconnection Financial Security.**

9.3.1.1 The Interconnection Customer shall make second postings, with notice to the CAISO, of two separate Interconnection Financial Security instruments: (i) a second posting relating to the Network Upgrades; except to the extent that the provisions of GIP Section 9.3.3 apply; (ii) a second posting relating to the Participating TO's Interconnection Facilities.

9.3.1.2 Timing of Posting. The postings in this GIP Section 9.3.1 shall be made on or before one hundred eighty (180) calendar days after issuance of the final Phase II Interconnection Study report for Interconnection Customers in a Queue Cluster, or on or before one hundred twenty (120) calendar days after the CAISO provides the results of the Facilities Study for Interconnection Customers in the Independent Study. However, if the CAISO revises a final Phase II Interconnection Study report pursuant to GIP Section 6.10, the postings set forth in this GIP Section 9.3.1.2 will be due from the Interconnection Customer by the later of one hundred-eighty (180) calendar days after issuance of the original final Phase II Interconnection Study report or sixty (60) calendar days after issuance of the revised final Phase II Interconnection Study report. If the CAISO revises the final Facilities Study report pursuant to GIP Section 6.1, the postings set forth in this Section 9.2 will be due by the later of one hundred-twenty (120) calendar days after the issuance of the original final Facilities Study report or thirty (30) calendar days from the issuance of the revised Facilities Study report.

Each Interconnection Customer for a Small Generating Facility assigned to a Queue Cluster and each Interconnection Customer for a Small Generating Facility in the Independent Study Process shall post an Interconnection Financial Security instrument such that the total Interconnection Financial Security posted by the Interconnection Customer for Network Upgrades equals the lesser of (i) $1 million or (ii) thirty (30) percent of the total cost responsibility assigned to the Interconnection Customer for Network Upgrades in either the final Phase I Interconnection Study, final Phase II

Interconnection Study, System Impact Study, or Facilities Study, whichever is lower, except to the extent that the provisions of GIP Section 9.3.3 apply. In no event shall the total amount posted be less than $100,000.

Each Interconnection Customer for a Large Generating Facility assigned to a Queue Cluster and each Interconnection Customer for a Large Generating Facility in the Independent Study Process shall post an Interconnection Financial Security instrument such that the total Interconnection Financial Security posted by the Interconnection Customer for Network Upgrades equals the lesser of (i) $15 million or (ii) thirty (30) percent of the total cost responsibility assigned to the Interconnection Customer for Network Upgrades in either the final Phase I Interconnection Study, final Phase II Interconnection Study, System Impact Study, or Facilities Study, whichever is lower, except to the extent that the provisions of GIP Section 9.3.3 apply. In no event shall the total amount posted be less than $500,000.

Notwithstanding the foregoing, if the costs of the estimated Network Upgrades are less than the minimum posting amounts set forth above, the posting amount required will be equal to the estimated Network Upgrade amount.

9.3.1.3 Posting Amount for Participating TO's Interconnection Facilities.

Each Interconnection Customer for a Small Generating Facility assigned to a Queue Cluster and each Interconnection Customer for a Small Generating Facility in the Independent Study Process shall post an Interconnection Financial Security instrument such that the total Interconnection Financial Security posted by the Interconnection Customer for Participating TO Interconnection Facilities equals the lesser of (i) $1 million or (ii) thirty (30) percent of the total cost responsibility assigned to the Interconnection Customer for Network Upgrades in either the final Phase I Interconnection Study, final Phase II Interconnection Study, System Impact Study, or Facilities Study, whichever is lower. In no event shall the total amount posted be less than $100,000.

Each Interconnection Customer for a Large Generating Facility assigned to a Queue Cluster and each Interconnection Customer for a Large Generating Facility in the Independent Study Process shall post an Interconnection Financial Security instrument such that the total Interconnection Financial Security posted by the Interconnection Customer for Participating TO Interconnection Facilities equals the lesser of (i) $15 million or (ii) thirty (30) percent of the total cost responsibility assigned to the Interconnection Customer for Participating TO Interconnection Facilities in either the final Phase I Interconnection Study, final Phase II Interconnection Study, System Impact Study, or Facilities Study, whichever is lower. In no event shall the total amount posted be less than $500,000.

Notwithstanding the foregoing, if the costs of the estimated Participating TO Interconnection Facilities are less than the minimum posting amounts set forth above, the posting amount required will be equal to the estimated Participating TO Interconnection Facilities amount.

9.3.1.4 Early Commencement of Construction Activities. If the start date for Construction Activities of Network Upgrades or Participating TO's Interconnection Facilities on behalf of the Interconnection Customer is prior to one hundred eighty (180) calendar days after issuance of the final Phase II Interconnection Study report for Interconnection Customers in a Queue Cluster or prior to one hundred twenty (120) calendar days after issuance of the final Facilities Study report for Interconnection Customers in the Independent Study Process, that start date must be set forth in the Interconnection Customer's GIA, and the Interconnection Customer shall make its second posting of Interconnection Financial Security pursuant to GIP Section 9.3.2 rather than GIP Section 9.3.1.

9.3.1.5 Consequences for Failure to Post The failure by an Interconnection Customer to timely post the Interconnection Financial Security required by this GIP Section 9.3.1 shall constitute grounds for termination of the GIA pursuant to LGIA Article 2.3 or SGIA Article 3.3, whichever is applicable.

**9.3.2 Third Posting of Interconnection Financial Security.**

On or before the start of Construction Activities for Network Upgrades or Participating TO's Interconnection Facilities on behalf of the Interconnection Customer, whichever is earlier, the Interconnection Customer shall modify the two separate Interconnection Financial Security instruments posted pursuant to GIP Section 9.3.1 as follows. With respect to the Interconnection Financial Security Instrument for Network Upgrades, the Interconnection Customer shall modify this Instrument so that it equals one hundred (100) percent of the total cost responsibility assigned to the Interconnection Customer for Network Upgrades in either the final Phase I Interconnection Study or Phase II Interconnection Study for Interconnection Customers in a Queue Cluster, or the final System Impact Study, or Facilities Study for Interconnection Customers in the Independent Study Process, whichever is lower, except to the extent that the provisions of GIP Section 9.3.3 apply. With respect to the Interconnection Financial Security Instrument for Participating TO Interconnection Facilities, the Interconnection Customer shall modify this instrument so that it equals one hundred (100) percent of the total cost responsibility assigned to the Interconnection Customer for Participating TO Interconnection Facilities in the final Phase II Interconnection Study for Interconnection Customers in a Queue Cluster, or the final Facilities Study for Interconnection Customers in the Independent Study Process.

If an Interconnection Customer's Network Upgrades and/or Interconnection Facilities are separated into two or more specific components and/or can be separated into two or more separate and discrete phases of construction and the Participating TO is able to identify and separate the costs of the identified discrete components and/or phases of construction, then the Participating TO, the CAISO, and the Interconnection Customer may negotiate, as part of the Generator Interconnection Agreement, a division of the third Interconnection Financial Security posting into discrete Interconnection Financial Security amounts and may establish discrete milestone dates (however, outside dates must be included) for posting the amounts corresponding to each component and/or phase of construction related to the Network Upgrades and/or Interconnection Facilities described in the Generator Interconnection Agreement.

The failure by an Interconnection Customer to timely post the Interconnection Financial Security required by this GIP Section 9.3.2 shall constitute grounds for termination of the GIA pursuant to LGIA Article 2.3 or SGIA Article 3.3, whichever is applicable.

**9.3.3 Offsets for Network Upgrades Which Participating TOs Elect to Up- Front Fund.**

To the extent that the Participating TO unequivocally commits (subject to conditions set forth or to be set forth in a GIA)to up-front fund Network Upgrades for which an Interconnection Customer has been assigned cost responsibility, the Interconnection Customer will be relieved of the obligation to make the second and third postings of Interconnection Financial Security for such Network Upgrades. The Interconnection Customer will remain obligated to make the second and third postings of Interconnection Financial Security for that portion of its assigned Network Upgrades that the Participating TO does not unequivocally (subject to conditions set forth or to be set forth in a GIA) commit to up-front fund.

As a prerequisite for the Participating TO up-front funding commitment to relieve the Interconnection Customer of its posting requirements for the related Network Upgrades, the up-front funding commitment must be conditional upon the Interconnection Customer's meeting milestones for Interconnection Customer development and construction of the Generating Facility

as set forth in Appendix B to the LGIA or Attachment 4 to the SGIA, as applicable. Such Interconnection Customer milestones will include, with respect to the proposed Generating Facility or an identified phase of such facility as identified in the LGIA, such events as the securing of Site Exclusivity, posting of Financial Security under GIP Section 9 for the Interconnection Customer's cost responsibility for Network Upgrades (exclusive of up-front funded amounts) and for the Participating TO's Interconnection Facilities, securing of necessary permits, licenses, and/or property rights required for the construction, selection of applicable engineering, procurement and construction contractors, securing of necessary financing, and such other commercially reasonable milestones as the Participating TO, CAISO, and Interconnection Customer shall consent and agree to (such consent shall not be unreasonably withheld).

If the Participating TO withdraws its contractual commitment to up-front fund the Network Upgrades the Interconnection Customer will be required to post Interconnection Financial Security covering the Network Upgrades for which the Participating TO is withdrawing its up-front funding, within thirty (30) days of the Participating TO's notice to the Interconnection Customer that the up-front funding is being withdrawn.

If the Interconnection Customer's obligation to make the second posting of Interconnection Financial Security arises before the Generator Interconnection Agreement is executed by all parties to that agreement, the Interconnection Customer will be provided an additional thirty (30) days to post any Interconnection Financial Security related to Participating TO up-front funded Network Upgrades. The Interconnection Customer will continue to engage in good faith efforts to complete the negotiation of the Generator Interconnection Agreement during the additional thirty (30) day period. If the Generator Interconnection Agreement is not executed by all parties to that agreement within the additional thirty (30) day period, the Interconnection Customer will then be required to post the remaining Interconnection Financial Security, subject to refund.

If, after execution of the Generator Interconnection Agreement by all parties to that agreement, the Participating TO has made an up-front Network Upgrade funding commitment that is conditioned on a request for abandoned plant approval pending before FERC, the obligation to post the Interconnection Financial Security for Network Upgrades related to the Participating TO up-front funding commitment will be suspended during the pendency of the request before FERC. If FERC issues an order denying the request for abandoned plant approval, the obligation to post the Interconnection Financial Security for Network Upgrades will immediately be reinstated, and the Interconnection Customer will be required to post the Interconnection Financial Security within forty-five (45) days of the issuance of the FERC order unless the parties to the Generator Interconnection Agreement renegotiate that agreement within the forty-five (45) day period to provide for alternative timeframes or methods for funding the posting. Such a renegotiated Generator Interconnection Agreement will be deemed to be conforming to a FERC-accepted standard form of Generator Interconnection Agreement only if it extends the time period for posting the Interconnection Financial Security to a date no later than seventy-five (75) days after the FERC order denying abandoned plant approval was issued or provides for continued Participating TO up-front funding of the Network Upgrades. If the parties to the Generator Interconnection Agreement are unable to renegotiate and execute the Generator Interconnection Agreement within the forty-five (45) day period, the Interconnection Customer must post the Interconnection Financial Security before the close of such time period.

### 9.4 Effect Of Withdrawal or Termination On Financial Security

Withdrawal of an Interconnection Request or termination of a GIA shall allow the applicable Participating TO(s) to liquidate the Interconnection Financial Security, or balance thereof, posted by the Interconnection Customer for Network Upgrades at the time of withdrawal. To the extent the amount of the liquidated Interconnection Financial Security plus capital, if any, separately provided by the Interconnection Customer to satisfy its obligation to finance Network Upgrades in

accordance with GIP Section 12.3 exceeds the total cost responsibility for Network Upgrades assigned to the Interconnection Customer by the final Phase I or Phase II Interconnection Study, whichever is lower, or in the governing study for the Independent Study Process, the applicable Participating TO(s) shall remit to the Interconnection Customer the excess amount.

Withdrawal of an Interconnection Request or termination of a GIA shall result in the release to the Interconnection Customer of any Interconnection Financial Security posted by the Interconnection Customer for Participating TO's Interconnection Facilities, except with respect to any amounts necessary to pay for costs incurred or irrevocably committed by the applicable Participating TO(s) on behalf of the Interconnection Customer for the Participating TO's Interconnection Facilities and for which the applicable Participating TO(s) has not been reimbursed.

**9.4.1 [Not Used]**

**9.4.2 Schedule for Determining Non-Refundable Portion of the Interconnection Financial Security for Network Upgrades.**

**9.4.2.1 Up to One Hundred Eighty Days After Final Phase II Interconnection Study Report For Queue Cluster Generating Facilities or up to One Hundred Twenty Days After Final Facilities Study Report for Independent Study Process Generating Facilities.**

If, at any time after the initial posting of the Interconnection Financial Security for Network Upgrades under GIP Section 9.2 and on or before one hundred eighty (180) calendar days after the date of issuance of the final Phase II Interconnection Study report for Interconnection Customers in a Queue Cluster, or on or before one hundred twenty (120) days after the date of issuance of the results of the Facilities Study for Interconnection Customers in the Independent Study Process, the Interconnection Customer withdraws the Interconnection Request or terminates the GIA, as applicable, the applicable Participating TO(s) shall liquidate the Interconnection Financial Security for Network Upgrades under GIP Section 9.2 and reimburse the Interconnection Customer in an amount of (i) any posted amount less fifty (50) percent of the value of the posted Interconnection Financial Security for Network Upgrades (with a maximum of $10,000 per requested and approved megawatt value of the Generating Facility Capacity at the time of withdrawal being retained by the Participating TO(s)), or, (ii) if the Interconnection Financial Security has been drawn down to finance Pre-Construction Activities for Network Upgrades on behalf of the Interconnection Customer, the lesser of the remaining balance of the Interconnection Financial Security or the amount calculated under (i) above. If the Interconnection Customer has separately provided capital apart from the Interconnection Financial Security to finance Pre-Construction Activities for Network Upgrades, the applicable Participating TO(s) will credit the capital provided as if drawn from the Interconnection Financial Security and apply (ii) above.

**9.4.2.2 Between One Hundred Eighty-One Days After Final Phase II Interconnection Study Report or Facilities Study Results and the Commencement of Construction Activities.**

If, at any time between one hundred eighty-one (181) calendar days after the date of issuance of the final Phase II Interconnection Study report for Interconnection Customers in a Queue Cluster, or the date of issuance of the final Facilities Study Report for Interconnection Customers in the Independent Study Process, and the commencement of Construction Activities for either Network Upgrades or Participating TO's Interconnection Facilities, the Interconnection Customer withdraws the Interconnection Request or terminates the GIA, as applicable, the applicable Participating TO(s) shall liquidate the Interconnection Financial Security for Network Upgrades under GIP Section 9.3 and reimburse the Interconnection Customer in an amount of (i) any posted amounts less fifty percent (50%) of the value of the posted Interconnection Financial Security for Network Upgrades (with a maximum of $20,000 per requested and approved megawatt value of the Generating Facility Capacity at the time of withdrawal being retained by the Participating TO(s)), or, (ii) if the Interconnection Financial Security has been drawn down to

finance Pre-Construction Activities for Network Upgrades on behalf of the Interconnection Customer, the lesser of the remaining balance of the Interconnection Financial Security or the amount calculated under (i) above. If the Interconnection Customer has separately provided capital apart from the Interconnection Financial Security to finance Pre-Construction Activities for Network Upgrades, the applicable Participating TO(s) will credit the capital provided as if drawn from the Interconnection Financial Security and apply (ii) above.

**9.4.2.3 [Not Used]**

**9.4.2.4 Special Treatment Based on Failure to Obtain Necessary Permit or Authorization from Governmental Authority.**

If, at any time after the posting requirement under GIP Section 9.3, the Interconnection Customer withdraws the Interconnection Request or terminates the GIA, as applicable, and the Delivery Network Upgrades to be financed by the Interconnection Customer under GIP Section 7.3 are also to be financed by one or more other Interconnection Customers, then GIP Section 9.4.2.1 shall apply, except that the Interconnection Customer shall not be reimbursed for its share of any actual costs incurred or irrevocably committed by the applicable Participating TO(s) for Construction Activities.

**9.4.2.5 After Commencement of Construction Activities.**

Except as otherwise provided in GIP Section 9.4.2.4, once Construction Activities on Network Upgrades on behalf of the Interconnection Customer commence, any withdrawal of the Interconnection Request or termination of the GIA by the Interconnection Customer will be treated in accordance with this GIP Section 9.4.

**9.4.2.6 Notification to CAISO and Accounting by Applicable Participating TO(s).**

The applicable Participating TO(s) shall notify the CAISO within one (1) Business Day of liquidating any Interconnection Financial Security. Within twenty (20) calendar days of any liquidating event, the applicable Participating TO(s) shall provide the CAISO and Interconnection Customer with an accounting of the disposition of the proceeds of the liquidated Interconnection Financial Security and remit to the CAISO all proceeds not otherwise reimbursed to the Interconnection Customer or applied to costs incurred or irrevocably committed by the applicable Participating TO(s) on behalf of the Interconnection Customer in accordance with this GIP Section 9.4.

All non-refundable portions of the Interconnection Financial Security remitted to the CAISO in accordance with this GIP Section 9.4, and any non-refundable interconnection financial security funds that are received by the CAISO from a Participating TO pursuant to a requirement in the Participating TO's wholesale distribution tariff for such funds to be distributed by the CAISO, shall be treated in accordance with Section 7.6 of Appendix DD to the CAISO Tariff.

**9.5 Maximum Cost Responsibility For Interconnection Customers**

For Interconnection Customers in a Queue Cluster, after the CAISO issues the Phase II Interconnection Study report to the Interconnection Customer, the maximum value for the Financial Security required of each Interconnection Customer and the maximum cost responsibility of each Interconnection Customer for Network Upgrades shall be established by the lesser of the costs for Network Upgrades assigned to the Interconnection Customer in the final Phase I Interconnection Study report or the final Phase II Interconnection Study report.

For Interconnection Customers in the Independent Study Process, the maximum value for the Interconnection Customer's Financial Security and the maximum cost responsibility for Network

Upgrades shall be established by the lesser of the costs for Network Upgrades assigned to the Interconnection Customer in the final System Impact Study report or final Facilities Study report.

An Interconnection Customer's maximum cost responsibility for Network Upgrades shall be subject to further adjustment based on the results of the annual reassessment process, as set forth in Section 7.4 of Appendix DD to the CAISO Tariff.

**Section 10 Engineering & Procurement ("E&P") Agreement**

Prior to executing a GIA, an Interconnection Customer may, in order to advance the implementation of its interconnection, request and the applicable Participating TO(s) shall offer the Interconnection Customer, an E&P Agreement that authorizes the applicable Participating TO(s) to begin engineering and procurement of long lead-time items necessary for the establishment of the interconnection. However, the applicable Participating TO(s) shall not be obligated to offer an E&P Agreement if the Interconnection Customer is in Dispute Resolution as a result of an allegation that the Interconnection Customer has failed to meet any milestones or comply with any prerequisites specified in other parts of the GIP. The E&P Agreement is an optional procedure. The E&P Agreement shall provide for the Interconnection Customer to pay the cost of all activities authorized by the Interconnection Customer and to make advance payments or provide other satisfactory security for such costs.

The Interconnection Customer shall pay the cost of such authorized activities and any cancellation costs for equipment that is already ordered for its interconnection, which cannot be mitigated as hereafter described, whether or not such items or equipment later become unnecessary. If the Interconnection Customer withdraws its application for interconnection or either Party terminates the E&P Agreement, to the extent the equipment ordered can be canceled under reasonable terms, the Interconnection Customer shall be obligated to pay the associated cancellation costs. To the extent that the equipment cannot be reasonably canceled, the applicable Participating TO(s) may elect: (i) to take title to the equipment, in which event the applicable Participating TO(s) shall refund the Interconnection Customer any amounts paid by Interconnection Customer for such equipment and shall pay the cost of delivery of such equipment, or (ii) to transfer title to and deliver such equipment to the Interconnection Customer, in which event the Interconnection Customer shall pay any unpaid balance and cost of delivery of such equipment.

**Section 11 Generator Interconnection Agreement (GIA)**

**11.1 Tender**

**11.1.1** Within thirty (30) Calendar Days after the CAISO provides the final Phase II Interconnection Study report, or the Facilities Study report (or System Impact Study report if the Facilities Study is waived) to the Interconnection Customer, the applicable Participating TO(s) and the CAISO shall tender a draft GIA, together with draft appendices. The draft GIA shall be in the form of the FERC-approved form of GIA set forth in CAISO Tariff Appendix T or Appendix CC, as applicable. The Interconnection Customer shall provide written comments, or notification of no comments, to the draft appendices to the applicable Participating TO(s) and the CAISO within (30) calendar days of receipt.

**11.1.2** Consistent with GIP Sections 13.3 and 11.1.1, when the transmission system of a Participating TO, in which the Point of Interconnection is not located, is affected, such Participating TO shall tender a separate agreement, in the form of the GIA, as appropriately modified.

**11.2 Negotiation**

Notwithstanding GIP Section 11.1, at the request of the Interconnection Customer, the applicable Participating TO(s) and CAISO shall begin negotiations with the Interconnection Customer concerning the appendices to the GIA at any time after the CAISO provides the Interconnection

Customer with the final Phase II Interconnection Study report. The applicable Participating TO(s) and CAISO and the Interconnection Customer shall negotiate concerning any disputed provisions of the appendices to the draft GIA for not more than one hundred-twenty (120) calendar days after the CAISO provides the Interconnection Customer with the final Phase II Interconnection Study report, or the Facilities Study report (or System Impact Study report if the Facilities Study is waived). If the Interconnection Customer determines that negotiations are at an impasse, it may request termination of the negotiations at any time after tender of the draft GIA pursuant to GIP Section 11.1 and request submission of the unexecuted GIA with FERC or initiate Dispute Resolution procedures pursuant to GIP Section 13.5. If the Interconnection Customer requests termination of the negotiations, but, within one hundred twenty (120) calendar days after issuance of the final Phase II Interconnection Study report, fails to request either the filing of the unexecuted GIA or initiate Dispute Resolution, it shall be deemed to have withdrawn its Interconnection Request. Unless otherwise agreed by the Parties, if the Interconnection Customer has not executed and returned the GIA, requested filing of an unexecuted GIA, or initiated Dispute Resolution procedures pursuant to GIP Section 13.5 within one hundred-twenty (120) calendar days after issuance of the final Phase II Interconnection Study report, it shall be deemed to have withdrawn its Interconnection Request. The CAISO shall provide to the Interconnection Customer a final GIA within ten (10) Business Days after the completion of the negotiation process and receipt of all requested information.

### 11.3 Execution And Filing

The Interconnection Customer shall either: (i) execute the appropriate number of originals of the tendered GIA as specified in the directions provided by the CAISO and return them to the CAISO, as directed, for completion of the execution process; or (ii) request in writing that the applicable Participating TO(s) and CAISO file with FERC a GIA in unexecuted form. The GIA shall be considered executed as of the date that all three Parties have signed the GIA. As soon as practicable, but not later than ten (10) Business Days after receiving either the executed originals of the tendered GIA (if it does not conform with a FERC-approved standard form of interconnection agreement) or the request to file an unexecuted GIA, the applicable Participating TO(s) and CAISO shall file the GIA with FERC, as necessary, together with an explanation of any matters as to which the Interconnection Customer and the applicable Participating TO(s) or CAISO disagree and support for the costs that the applicable Participating TO(s) propose to charge to the Interconnection Customer under the GIA. An unexecuted GIA should contain terms and conditions deemed appropriate by the applicable Participating TO(s) and CAISO for the Interconnection Request. If the Parties agree to proceed with design, procurement, and construction of facilities and upgrades under the agreed-upon terms of the unexecuted GIA, they may proceed pending FERC action.

### 11.4 Commencement Of Interconnection Activities

If the Interconnection Customer executes the final GIA, the applicable Participating TO(s), CAISO and the Interconnection Customer shall perform their respective obligations in accordance with the terms of the GIA, subject to modification by FERC. Upon submission of an unexecuted GIA, the Interconnection Customer, applicable Participating TO(s) and CAISO may proceed to comply with the unexecuted GIA, pending FERC action.

### 11.5 Interconnection Customer To Meet PTO Handbook Requirements

The Interconnection Customer's Interconnection Facilities shall be designed, constructed, operated and maintained in accordance with the applicable Participating TO's Interconnection Handbook.

## Section 12 PTO's Interconnection Facilities And Network Upgrades

### 12.1 Schedule

The applicable Participating TO(s) and the Interconnection Customer shall negotiate in good faith concerning a schedule for the construction of the applicable Participating TO's Interconnection Facilities and the Network Upgrades.

### 12.2 Construction Sequencing

### 12.2.1 General

In general, the sequence of construction of Stand Alone Network Upgrades or other Network Upgrades for a single Interconnection Request, or Network Upgrades identified for the interconnection of Generating Facilities associated with multiple Interconnection Requests, shall be determined, to the maximum extent practical, in a manner that accommodates the proposed Commercial Operation Date set forth in the GIA of the Interconnection Customer(s) associated with the Stand Alone Network Upgrades or other Network Upgrades.

### 12.2.2 Construction of Network Upgrades that are or were an Obligation of an Entity other than the Interconnection Customer

The applicable Participating TO(s) shall be responsible for financing and constructing any Network Upgrades necessary to support the interconnection of the Generating Facility of an Interconnection Customer with a GIA under this GIP, whenever either:

(i) the Network Upgrades were included in the Interconnection Base Case Data for a Phase II Interconnection Study on the basis that they were Network Upgrades associated with Generating Facilities of Interconnection Customers that have an executed GIA (or its equivalent predecessor agreement) or unexecuted GIA (or its equivalent predecessor agreement) filed with FERC, but the Network Upgrades will not otherwise be completed because such GIA or equivalent predecessor agreement was subsequently terminated or the Interconnection Request has otherwise been withdrawn; or

(ii) the Network Upgrades were included in the Interconnection Base Case Data for a Phase II Interconnection Study on the basis that they were Network Upgrades associated with Generating Facilities of Interconnection Customers that have an executed GIA (or its equivalent predecessor agreement) or unexecuted GIA (or its equivalent predecessor agreement) filed with FERC, but the Network Upgrades will not otherwise be completed in time to support the Interconnection Customer's In-Service Date because construction has not commenced in accordance with the terms of such GIA (or its equivalent predecessor agreement).

The obligation under this GIP Section 12.2.2 arises only after the CAISO, in coordination with the applicable Participating TO(s), determines that the Network Upgrades remain needed to support the interconnection of the Interconnection Customer's Generating Facility notwithstanding, as applicable, the absence or delay of the Generating Facility that is contractually, or was previously contractually, associated with the Network Upgrades.

Further, to the extent the timing of such Network Upgrades was not accounted for in determining a reasonable Commercial Operation Date among the CAISO, applicable Participating TO(s), and the Interconnection Customer as part of the Phase II Interconnection Study, the applicable Participating TO(s) will use Reasonable Efforts to ensure that the construction of such Network Upgrades can accommodate the Interconnection Customer's proposed Commercial Operation Date. If, despite Reasonable Efforts, it is anticipated that the Network Upgrades cannot be constructed in time to accommodate the Interconnection Customer's proposed Commercial

Operation Date, the Interconnection Customer may commit to pay the applicable Participating TO(s) any costs associated with expediting construction of the Network Upgrades to meet the original proposed Commercial Operation Date. The expediting costs under this GIP Section 12.2.2 shall be in addition to the Interconnection Customer's cost responsibility assigned under GIP Section 6.5.

To the extent that this Section operates to impose upon the applicable Participating TO(s) cost responsibility for financing or construct Network Upgrades (which cost responsibility was previously assigned to Interconnection Customer(s) under GIP Section 7.3 and 7.4) in excess of what is covered by the Interconnection Financial Security posted by such Interconnection Customers, the Participating TO(s) shall be presumed to be eligible, subject to prudency and any other applicable review by FERC, to include such costs in its TRR(s).

### 12.2.3 Advancing Construction of Network Upgrades that are Part of the CAISO's Transmission Plan

An Interconnection Customer with a GIA, in order to maintain its In-Service Date as specified in the GIA, may request that the CAISO and applicable Participating TO(s) advance to the extent necessary the completion of Network Upgrades that: (i) are necessary to support such In-Service Date and (ii) would otherwise not be completed, pursuant to an approved CAISO Transmission Plan covering the PTO Service Territory of the applicable Participating TO(s), in time to support such In-Service Date. Upon such request, the applicable Participating TO(s) will use Reasonable Efforts to advance the construction of such Network Upgrades to accommodate such request; provided that the Interconnection Customer commits to pay the applicable Participating TO(s) any associated expediting costs. The Interconnection Customer shall be entitled to refunds, if any, in accordance with this GIP and the GIA, for any expediting costs paid.

## 12.3 Network Upgrades

### 12.3.1 Initial Funding

Unless the applicable Participating TO(s) elects to fund the full capital for identified Reliability and Delivery Network Upgrades, they shall be funded by the Interconnection Customer(s) either by means of drawing down the Interconnection Financial Security or by the provision of additional capital, at each Interconnection Customer's election, up to a maximum amount no greater than that established by the cost responsibility assigned to each Interconnection Customer(s) under GIP Sections 7.3 and 7.4.

Where the applicable Participating TO(s) does not elect to fund the full capital for specific Reliability and Delivery Network Upgrades, the applicable Participating TO(s) shall be responsible for funding any capital costs for the Reliability and Delivery Network Upgrades that exceed the total cost responsibility assigned to the Interconnection Customer(s) under GIP Sections 7.3 and 7.4.

(a) Where the funding responsibility for any Reliability Network Upgrade or Delivery Network Upgrade has been assigned to a single Interconnection Customer in accordance with this GIP, and the applicable Participating TO(s) has elected not to fund the full capital of the Reliability Network Upgrade or Delivery Network Upgrade, the applicable Participating TO(s) shall invoice the Interconnection Customer under LGIA Article 12.1 or SGIA Article 6.1, whichever is applicable, up to a maximum amount no greater than that established by the cost responsibility assigned to each Interconnection Customer(s) under GIP Sections 7.3 and 7.4 for the Reliability Network Upgrade or Delivery Network Upgrade, respectively.

(b) Where the funding responsibility for a Reliability Network Upgrade has been assigned to more than one Interconnection Customer in accordance with this GIP, and the applicable

Participating TO(s) has elected not to fund the full capital of the Reliability Network Upgrade, the applicable Participating TO(s) shall invoice each Interconnection Customer under LGIA Article 12.1 or SGIA Article 6.1, whichever is applicable, for such Reliability Network Upgrade based on the ratio of the maximum megawatt electrical output of each new Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed the Generating Facility's Interconnection Request to the aggregate maximum megawatt electrical output of all such new Generating Facilities and increases in the generating capacity of existing Generating Facilities assigned responsibility for such Reliability Network Upgrade. Each Interconnection Customer may be invoiced up to a maximum amount no greater than that established by the cost responsibility assigned to that Interconnection Customer under GIP Section 7.3.

(c) Where the funding responsibility for a Delivery Network Upgrade has been assigned to more than one Interconnection Customer in accordance with this GIP, and the applicable Participating TO(s) has elected not to fund the full capital of the Delivery Network Upgrade, the applicable Participating TO(s) shall invoice each Interconnection Customer under LGIA Article 12.1 or SGIA Article 6.1, whichever is applicable, for such Delivery Network Upgrade based on the percentage flow impact of each assigned Generating Facility on each Delivery Network Upgrade as determined by the Generation distribution factor methodology used in the On-Peak and Off-Peak Deliverability Assessments performed in the Phase II Interconnection Study. Each Interconnection Customer may be invoiced up to a maximum amount no greater than that established by the cost responsibility assigned to that Interconnection Customer under GIP Section 7.4.

To the extent that this Section operates to impose upon the applicable Participating TO(s) cost responsibility for financing and constructing Network Upgrades (which were previously assigned to Interconnection Customer(s) under GIP Section 7.3 and/or 7.4), in excess of the what is covered by the Interconnection Financial Security posted by such Interconnection Customer(s)), the Participating TO(s) shall be presumed to be eligible, subject to prudency review and any other applicable review by FERC, to include such costs in its TRR(s).

Any permissible extension of the Commercial Operation Date of a Generating Facility will not alter the Interconnection Customer's obligation to finance Network Upgrades where the Network Upgrades are required to meet the earlier Commercial Operation Date(s) of other Generating Facilities that have also been assigned cost responsibility for the Network Upgrades.

### 12.3.2 Repayment of Amounts Advanced for Network Upgrades and Refund of Interconnection Financial Security

#### 12.3.2.1 Repayment of Amounts Advanced Regarding Non-Phased Generating Facilities

Upon the Commercial Operation Date of a Generating Facility that is not a Phased Generating Facility, unless the Interconnection Customer has provided written notice to the CAISO that it is declining all or part of such repayment, the Interconnection Customer shall be entitled to a repayment for the Interconnection Customer's contribution to the cost of Network Upgrades in accordance with its cost responsibility assigned under GIP Sections 7.3 and 7.4. Such amount shall be paid to the Interconnection Customer by the applicable Participating TO(s) on a dollar-for-dollar basis either through (1) direct payments made on a levelized basis over the five-year period commencing on the Generating Facility's Commercial Operation Date; or (2) any alternative payment schedule that is mutually agreeable to the Interconnection Customer and Participating TO, provided that such amount is paid within five (5) years of the Commercial Operation Date.

Instead of direct payments, the Interconnection Customer may elect to receive Merchant Transmission Congestion Revenue Rights (CRRs) in accordance with the CAISO Tariff Section 36.11 associated with the Network Upgrades, or portions thereof that were funded by the Interconnection Customer. Such CRRs would take effect upon the Commercial Operation Date of the Generating Facility in accordance with the GIA.

**12.3.2.2 Repayment of Amounts Advanced Regarding Phased Generating Facilities**

Upon the Commercial Operation Date of each phase of a Phased Generating Facility, unless the Interconnection Customer has provided written notice to the CAISO that it is declining all or part of such repayment, the Interconnection Customer shall be entitled to a repayment for the Interconnection Customer's contribution to the cost of Network Upgrades for that completed phase in accordance with the Interconnection Customer's cost responsibility assigned for the phase under GIP Sections 7.3 and 7.4 if all of the following conditions are satisfied:

(a) The Generating Facility is capable of being constructed in phases;

(b) The Generating Facility is specified in the GIA as being constructed in phases;

(c) The completed phase corresponds to one of the phases specified in the GIA;

(d) The phase has achieved Commercial Operation and the Interconnection Customer has tendered notice of the same pursuant to the GIA;

(e) All parties to the GIA have confirmed that the completed phase meets the requirements set forth in the GIA and any other operating, metering, and interconnection requirements to permit generation output of the entire capacity of the completed phase as specified in the GIA;

(f) The Network Upgrades necessary for the completed phase to meet the desired level of deliverability are in service; and

(g) The Interconnection Customer has posted one hundred (100) percent of the Interconnection Financial Security required for the Network Upgrades for all the phases of the Generating Facility (or if less than one hundred (100) percent has been posted, then all required Interconnection Financial Security instruments to the date of commencement of repayment).

Upon satisfaction of these conditions (a) through (g), the Interconnection Customer shall be entitled to receive a partial repayment of its financed cost responsibility in an amount equal to the percentage of the Generating Facility declared to be in Commercial Operation multiplied by the cost of the Network Upgrades associated with the completed phase. The Interconnection Customer shall be entitled to repayment in this manner for each completed phase until the entire Generating Facility is completed.

A reduction in the electrical output (MW capacity) of the Generating Facility pursuant to the CAISO Tariff shall not diminish the Interconnection Customer's right to repayment pursuant to this GIP Section 12.3.2.2. If the GIA includes a partial termination provision and the partial termination right has been exercised with regard to a phase that has not been built, then the Interconnection Customer's eligibility for repayment under this Section as to the remaining phases shall not be diminished. If the Interconnection Customer completes one or more phases and then defaults on the GIA, the Participating TO and the CAISO shall be entitled to offset any losses or damages resulting from the default against any repayments made for Network Upgrades related to the completed phases provided that the party seeking to exercise the offset has complied

with any requirements which may be required to apply the stream of payments utilized to make the repayment to the Interconnection Customer as an offset.

Any repayment amount for completion of a phase shall include any tax gross-up or other tax-related payments associated with the Network Upgrades not refunded to the Interconnection Customer, and shall be paid to the Interconnection Customer by the applicable Participating TO(s) on a dollar-for-dollar basis either through (1) direct payments made on a levelized basis over the five-year period commencing on the date by the requirements of items (a) through (g) above have been fulfilled,; or (2) any alternative payment schedule that associates the completion of Network Upgrades with the completion of particular phases and that is mutually agreeable to the Interconnection Customer and Participating TO.

Instead of direct payments, the Interconnection Customer may elect to receive Merchant Transmission Congestion Revenue Rights (CRRs) in accordance with the CAISO Tariff Section 36.11 associated with the Network Upgrades for each phase, or portions thereof that were funded by the Interconnection Customer. Such CRRs would take effect upon the Commercial Operation Date of the phase in accordance with the GIA.

#### 12.3.2.3 Interest Payments and Assignment Rights

Any phased or non-phased repayment pursuant to this GIP Section 12.3.2 shall include interest calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date of any payment for Network Upgrades through the date on which the Interconnection Customer receives a repayment of such payment. The Interconnection Customer may assign such repayment rights to any person.

### 12.4 Special Provisions For Affected Systems, Other Affected PTOs

The Interconnection Customer shall enter into an agreement with the owner of the Affected System and/or other affected Participating TO(s), as applicable. The agreement shall specify the terms governing payments to be made by the Interconnection Customer to the owner of the Affected System and/or other affected Participating TO(s) as well as the repayment by the owner of the Affected System and/or other affected Participating TO(s). If the affected entity is another Participating TO, the initial form of agreement will be the GIA, as appropriately modified.

Any repayment by the owner of the Affected System shall be in accordance with FERC Order No. 2003-B (109 FERC ¶ 61,287).

## Section 13 Miscellaneous

### 13.1 Confidentiality

Confidential Information shall include, without limitation, all information relating to a Party's technology, research and development, business affairs, and pricing.

Information is Confidential Information only if it is clearly designated or marked in writing as confidential on the face of the document, or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Parties receiving the information that the information is confidential.

If requested by any Party, the other Parties shall provide in writing, the basis for asserting that the information referred to in this Section warrants confidential treatment, and the requesting Party may disclose such writing to the appropriate Governmental Authority. Each Party shall be responsible for the costs associated with affording confidential treatment to its information.

The confidentiality provisions of this GIP are limited to information provided pursuant to this GIP.

### 13.1.1 Scope

Confidential Information shall not include information that the receiving Party can demonstrate: (1) is generally available to the public other than as a result of a disclosure by the receiving Party; (2) was in the lawful possession of the receiving Party on a non-confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a third party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the disclosing Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the disclosing Party; (5) is, or becomes, publicly known, through no wrongful act or omission of the receiving Party or breach of the GIA; or (6) is required, in accordance with GIP Section 13.1.6, Order of Disclosure, to be disclosed by any Governmental Authority or is otherwise required to be disclosed by law or subpoena, or is necessary in any legal proceeding establishing rights and obligations under the GIP. Information designated as Confidential Information will no longer be deemed confidential if the Party that designated the information as confidential notifies the other Parties that it no longer is confidential.

### 13.1.2 Release of Confidential Information

No Party shall release or disclose Confidential Information to any other person, except to its employees, consultants, Affiliates (limited by FERC's Standards of Conduct requirements set forth in Part 358 of FERC's Regulations, 18 C.F.R. Part 358), or to parties who may be or considering providing financing to or equity participation with the Interconnection Customer, or to potential purchasers or assignees of the Interconnection Customer, on a need-to-know basis in connection with these procedures, unless such person has first been advised of the confidentiality provisions of this GIP Section 13.1 and has agreed to comply with such provisions. Notwithstanding the foregoing, a Party providing Confidential Information to any person shall remain primarily responsible for any release of Confidential Information in contravention of this GIP Section 13.1.

### 13.1.3 Rights

Each Party retains all rights, title, and interest in the Confidential Information that each Party discloses to the other Parties. The disclosure by each Party to the other Parties of Confidential Information shall not be deemed a waiver by a Party or any other person or entity of the right to protect the Confidential Information from public disclosure.

### 13.1.4 No Warranties

By providing Confidential Information, no Party makes any warranties or representations as to its accuracy or completeness. In addition, by supplying Confidential Information, no Party obligates itself to provide any particular information or Confidential Information to the other Parties nor to enter into any further agreements or proceed with any other relationship or joint venture.

### 13.1.5 Standard of Care

Each Party shall use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from unauthorized disclosure, publication or dissemination. Each Party may use Confidential Information solely to fulfill its obligations to the other Parties under these procedures or its regulatory requirements.

### 13.1.6 Order of Disclosure

If a court or a Government Authority or entity with the right, power, and apparent authority to do so requests or requires any Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party shall provide the other Parties with prompt notice of such request(s) or requirement(s) so that the other Parties may seek an appropriate protective order or waive compliance with the terms of the GIP. Notwithstanding the absence of a protective order or waiver, the Party may disclose such Confidential Information which, in the opinion of its counsel, the Party is legally compelled to disclose. Each Party will use Reasonable Efforts to obtain reliable assurance that confidential treatment will be accorded any Confidential Information so furnished.

**13.1.7 Remedies**

Monetary damages are inadequate to compensate a Party for another Party's breach of its obligations under this GIP Section 13.1. Each Party accordingly agrees that the other Parties shall be entitled to equitable relief, by way of injunction or otherwise, if the first Party breaches or threatens to breach its obligations under this GIP Section 13.1, which equitable relief shall be granted without bond or proof of damages, and the receiving Party shall not plead in defense that there would be an adequate remedy at law. Such remedy shall not be deemed an exclusive remedy for the breach of this GIP Section 13.1, but shall be in addition to all other remedies available at law or in equity. Further, the covenants contained herein are necessary for the protection of legitimate business interests and are reasonable in scope. No Party, however, shall be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with this GIP Section 13.1.

**13.1.8 Disclosure to FERC, its Staff, or a State**

Notwithstanding anything in this GIP Section 13.1 to the contrary, and pursuant to 18 C.F.R. section 1b.20, if FERC or its staff, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to the GIP, the Party shall provide the requested information to FERC or its staff, within the time provided for in the request for information. In providing the information to FERC or its staff, the Party must, consistent with 18 C.F.R. Section 388.112, request that the information be treated as confidential and non-public by FERC and its staff and that the information be withheld from public disclosure. Parties are prohibited from notifying the other Parties prior to the release of the Confidential Information to FERC or its staff. The Party shall notify the other applicable Parties when it is notified by FERC or its staff that a request to release Confidential Information has been received by FERC, at which time any of the Parties may respond before such information would be made public, pursuant to 18 C.F.R. Section 388.112. Requests from a state regulatory body conducting a confidential investigation shall be treated in a similar manner, consistent with applicable state rules and regulations.

**13.1.9** Subject to the exception in GIP Section 13.1.8, any Confidential Information shall not be disclosed by the other Parties to any person not employed or retained by the other Parties, except to the extent disclosure is (i) required by law; (ii) reasonably deemed by the disclosing Party to be required to be disclosed in connection with a dispute between or among the Parties, or the defense of litigation or dispute; (iii) otherwise permitted by consent of the other Parties, such consent not to be unreasonably withheld; or (iv) necessary to fulfill its obligations under this GIP or as a transmission service provider or a Balancing Authority including disclosing the Confidential Information to an RTO or ISO or to a subregional, regional or national reliability organization or planning group. The Party asserting confidentiality shall notify the other Parties in writing of the information it claims is confidential. Prior to any disclosures of another Party's Confidential Information under this subparagraph, or if any third party or Governmental Authority makes any request or demand for any of the information described in this subparagraph, the disclosing Party agrees to promptly notify the other Party in writing and agrees to assert confidentiality and cooperate with the other Party in seeking to protect the Confidential

Information from public disclosure by confidentiality agreement, protective order or other reasonable measures.

**13.1.10** This provision shall not apply to any information that was or is hereafter in the public domain (except as a result of a breach of this provision).

**13.1.11** The Participating TO or CAISO shall, at the Interconnection Customer's election, destroy, in a confidential manner, or return the Confidential Information provided at the time of Confidential Information is no longer needed.

### 13.2 Delegation Of Responsibility

The CAISO and the Participating TOs may use the services of subcontractors as deemed appropriate to perform their obligations under this GIP. The applicable Participating TO or CAISO shall remain primarily liable to the Interconnection Customer for the performance of its respective subcontractors and compliance with its obligations of this GIP. The subcontractor shall keep all information provided confidential and shall use such information solely for the performance of such obligation for which it was provided and no other purpose.

### 13.3 [Not Used]

### 13.4 [Not Used]

### 13.5 Disputes

If an Interconnection Customer disputes withdrawal of its Interconnection Request under GIP Section 3.8, the CAISO will forward any information regarding the disputed withdrawal received under GIP Section 3.8 within one (1) Business Day to the GIP Executive Dispute Committee, consisting of the Vice President responsible for administration of this GIP, the CAISO Vice President responsible for customer affairs, and an additional Vice President. The GIP Executive Dispute Committee shall have five (5) Business Days to determine whether or not to restore the Interconnection Request. If the GIP Executive Dispute Committee concludes that the Interconnection Request should have been withdrawn, the Interconnection Customer may seek relief in accordance with the CAISO ADR Procedures.

All disputes, other than those arising from GIP Section 3.8, arising out of or in connection with this GIP whereby relief is sought by or from the CAISO shall be settled in accordance with the CAISO ADR Procedures.

Disputes arising out of or in connection with this GIP not subject to the CAISO ADR Procedures shall be resolved as follows:

#### 13.5.1 Submission

In the event either Party has a dispute, or asserts a claim, that arises out of or in connection with the GIA, the GIP, or their performance, such Party (the "disputing Party") shall provide the other Party with written notice of the dispute or claim ("Notice of Dispute"). Such dispute or claim shall be referred to a designated senior representative of each Party for resolution on an informal basis as promptly as practicable after receipt of the Notice of Dispute by the other Party. In the event the designated representatives are unable to resolve the claim or dispute through unassisted or assisted negotiations within thirty (30) calendar days of the other Party's receipt of the Notice of Dispute, such claim or dispute may, upon mutual agreement of the Parties, be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below. In the event the Parties do not agree to submit such claim or dispute to arbitration, each Party may exercise whatever rights and remedies it may have in equity or at law consistent with the terms of the GIA and GIP.

#### 13.5.2 External Arbitration Procedures

Any arbitration initiated under these procedures shall be conducted before a single neutral arbitrator appointed by the Parties. If the Parties fail to agree upon a single arbitrator within ten (10) calendar days of the submission of the dispute to arbitration, each Party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty (20) calendar days select a third arbitrator to chair the arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the Parties an opportunity to be heard and, except as otherwise provided herein, shall conduct the arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("Arbitration Rules") and any applicable FERC regulations or RTO rules; provided, however, in the event of a conflict between the Arbitration Rules and the terms of this GIP Section 13.5, the terms of this GIP Section 13.5 shall prevail.

### 13.5.3 Arbitration Decisions

Unless otherwise agreed by the Parties, the arbitrator(s) shall render a decision within ninety (90) calendar days of appointment and shall notify the Parties in writing of such decision and the reasons therefor. The arbitrator(s) shall be authorized only to interpret and apply the provisions of the GIA and GIP and shall have no power to modify or change any provision of the GIA and GIP in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in the Federal Arbitration Act or the Administrative Dispute Resolution Act. The final decision of the arbitrator must also be filed with FERC if it affects jurisdictional rates, terms and conditions of service, Interconnection Facilities, or Network Upgrades.

### 13.5.4 Costs

Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable: (1) the cost of the arbitrator chosen by the Party to sit on the three member panel and one half of the cost of the third arbitrator chosen; or (2) one half the cost of the single arbitrator jointly chosen by the Parties.

## 13.6 Local Furnishing Bonds

### 13.6.1 Participating TOs That Own Facilities Financed by Local Furnishing Bonds

This provision is applicable only to a Participating TO that has financed facilities for the local furnishing of electric energy with Local Furnishing Bonds. Notwithstanding any other provisions of this GIP, the Participating TO and the CAISO shall not be required to provide Interconnection Service to the Interconnection Customer pursuant to this GIP and the GIA if the provision of such Interconnection Service would jeopardize the tax-exempt status of any Local Furnishing Bond(s) issued for the benefit of the Participating TO.

### 13.6.2 Alternative Procedures for Requesting Interconnection Service

If a Participating TO determines that the provision of Interconnection Service requested by the Interconnection Customer would jeopardize the tax-exempt status of any Local Furnishing Bond(s) issued for the benefit of the Participating TO, it shall advise the Interconnection Customer and the CAISO within (30) calendar days of receipt of the Interconnection Request.

The Interconnection Customer thereafter may renew its request for the same interconnection Service by tendering an application under Section 211 of the Federal Power Act, in which case

the Participating TO, within ten (10) calendar days of receiving a copy of the Section 211 application, will waive its rights to a request for service under Section 213(a) of the Federal Power Act and to the issuance of a proposed order under Section 212(c) of the Federal Power Act, and the CAISO and Participating TO shall provide the requested Interconnection Service pursuant to the terms and conditions set forth in this GIP and the GIA.

### 13.7 Change In CAISO Operational Control

If the CAISO no longer has control of the portion of the CAISO Controlled Grid at the Point of Interconnection during the period when an Interconnection Request is pending, the CAISO shall transfer to the applicable former Participating TO or successor entity which has ownership of the Point of Interconnection any amount of the deposit or payment with interest thereon that exceeds the cost that it incurred to evaluate the request for interconnection. Any difference between such net deposit amount and the costs that the former Participating TO or successor entity incurs to evaluate the request for interconnection shall be paid by or refunded to the Interconnection Customer, as appropriate. The CAISO shall coordinate with the applicable former Participating TO or successor entity which has ownership of the Point of Interconnection to complete any Interconnection Study, as appropriate, that the CAISO has begun but has not completed. If the Participating TO has tendered a draft GIA to the Interconnection Customer but the Interconnection Customer has neither executed the GIA nor requested the filing of an unexecuted GIA with FERC, unless otherwise provided, the Interconnection Customer must complete negotiations with the applicable former Participating TO or successor entity which has the ownership of the Point of Interconnection.

## Appendix 1 Interconnection Request
## INTERCONNECTION REQUEST

Provide three copies of this completed form pursuant to Section 7 of this GIP Appendix 1 below.

1. The undersigned Interconnection Customer submits this request to interconnect its Generating Facility with the CAISO Controlled Grid pursuant to the CAISO Tariff (check one):
   _____ Fast Track Process.
   _____ Independent Study Process.
   _____ Queue Cluster process.
   _____ One-Time Deliverability Assessment pursuant to GIP Section 8.1.
   _____ Annual Deliverability Assessment pursuant to GIP Section 8.
2. This Interconnection Request is for (check one):
   _____ A proposed new Generating Facility.
   _____ An increase in the generating capacity or a Material Modification to an existing Generating Facility.

3. Requested Deliverability Status is for (check one):
   _ Full Capacity (For Independent Study Process and Queue Cluster Process only)
   (Note – Deliverability analysis for Independent Study Process is conducted with the next annual Cluster Study – See GIP Section 4.6)
   _ Partial Deliverability for __ MW of electrical output (For Independent Study Process and Queue Cluster Process only)
   _ Energy Only

4. The Interconnection Customer provides the following information:

   a. Address or location, including the county, of the proposed new Generating Facility site or, in the case of an existing Generating Facility, the name and specific location, including the county, of the existing Generating Facility;

   Project Name:_____

   Project Location:
   Street Address:_____
   City, State:_____
   County:_____
   Zip Code:_____
   GPS Coordinates:_____

   b. Maximum net megawatt electrical output (as defined by section 2.c of Attachment A to this appendix) of the proposed new Generating Facility or the amount of net megawatt increase in the generating capacity of an existing Generating Facility;

   Maximum net megawatt electrical output (MW):_____ or
   Net Megawatt increase (MW): _____

   c. Type of project (i.e., gas turbine, hydro, wind, etc.) and general description of the equipment configuration (if more than 1 type is chosen include net MW for each);

| | |
|---|---|
| ___ Cogeneration | ____ (MW) |
| ___ Reciprocating Engine | ____ (MW) |
| ___ Biomass | ____ (MW) |
| ___ Steam Turbine | ____ (MW) |
| ___ Gas Turbine | ____ (MW) |
| ___ Wind | ____ (MW) |
| ___ Hydro | ____ (MW) |
| ___ Photovoltaic | ____ (MW) |
| ___ Combined Cycle | ____ (MW) |

___Other (please describe):

General description of the equipment configuration (e.g. number, size, type, etc):

d. Proposed In-Service Date (first date transmission is needed to the facility), Trial Operation date and Commercial Operation Date by day, month, and year and term of service (dates must be sequential); _____

Proposed Trial Operation Date: _____
Proposed Commercial Operation Date: _____
Proposed Term of Service (years): _____

e. Name, address, telephone number, and e-mail address of the Interconnection Customer's contact person (primary person who will be contacted);

Name: _____
Title: _____
Company Name: _____
Street Address:_____
City, State: _____
Zip Code: _____
Phone Number:_____
Fax Number: _____
Email Address:_____
DUNS Number:

f. Approximate location of the proposed Point of Interconnection (i.e., specify transmission facility interconnection point name, voltage level, and the location of interconnection);

_____

g. Interconnection Customer data (set forth in Attachment A)

**The Interconnection Customer shall provide to the CAISO the technical data called for in GIP Appendix 1, Attachment A. Three (3) copies are required.**

5. Applicable deposit amount as specified in the GIP made payable to California ISO. Send check to CAISO (see section 7 for details) along with the:
Appendix 1 to GIP (Interconnection Request) for processing.
Attachment A to Appendix 1 (Interconnection Request Generating Facility Data).

6. Evidence of Site Exclusivity as specified in the GIP and name(s), address(es) and contact information of site owner(s) (check one):

____ Is attached to this Interconnection Request
____ Deposit in lieu of Site Exclusivity attached, Site Exclusivity will be provided at a later date in accordance with this GIP

7. This Interconnection Request shall be submitted to the CAISO representative indicated below:

New Resource Interconnection
California ISO
P.O. Box 639014
Folsom, CA 95763-9014

Overnight address: 250 Outcropping Way, Folsom, CA 95630

8. Representative of the Interconnection Customer to contact:

[To be completed by the Interconnection Customer]
Name:_____
Title: _____
Company Name:_____
Street Address: _____
City, State: _____
Zip Code: _____
Phone Number: _____
Fax Number: _____
Email Address: _____

9. This Interconnection Request is submitted by:

Legal name of the Interconnection Customer:

By (signature):_____

Name (type or print):_____

Title:_____

Date:_____

**Attachment A Generating Facility Data**
**To GIP Appendix 1**
**Interconnection Request**

**GENERATING FACILITY DATA**

Provide three copies of this completed form pursuant to Section 7 of GIP Appendix 1.

1. **Provide two original prints and one reproducible copy (no larger than 36" x 24") of the following:**

   A. Site drawing to scale, showing generator location and Point of Interconnection with the CAISO Controlled Grid.
   B. Single-line diagram showing applicable equipment such as generating units, step-up transformers, auxiliary transformers, switches/disconnects of the proposed interconnection, including the required protection devices and circuit breakers. For wind and photovoltaic generator plants, the one line diagram should include the distribution lines connecting the various groups of generating units, the generator capacitor banks, the step up transformers, the distribution lines, and the substation transformers and capacitor banks at the Point of Interconnection with the CAISO Controlled Grid.

**2. Generating Facility Information**

A. Total Generating Facility rated output (MW): _____
B. Generating Facility auxiliary Load (MW): _____
C. Project net capacity (A-B)(MW): _____
D. Standby Load when Generating Facility is off-line (MW): _____
E. Number of Generating Units: _____
(Please repeat the following items for each generator)
F. Individual generator rated output (MW for each unit): _____
G. Manufacturer: _____
H. Year Manufactured: _____
I. Nominal Terminal Voltage (kV): _____
J. Rated Power Factor (%): _____
K. Type (Induction, Synchronous, D.C. with Inverter): _____
L. Phase (three phase or single phase): _____
M. Connection (Delta, Grounded WYE, Ungrounded WYE, impedance grounded): _____
N. Generator Voltage Regulation Range (+/- %): _____
O. Generator Power Factor Regulation Range: _____
P. For combined cycle plants, specify the plant net output capacity (MW) for an outage of the steam turbine or an outage of a single combustion turbine_____

**3. Synchronous Generator – General Information:**
(Please repeat the following for each generator model)

A. Rated Generator speed (rpm):_____
B. Rated MVA: _____
C. Rated Generator Power Factor: _____
D. Generator Efficiency at Rated Load (%): _____
E. Moment of Inertia (including prime mover): _____
F. Inertia Time Constant (on machine base) H: _____ sec or MJ/MVA
G. SCR (Short-Circuit Ratio - the ratio of the field current required for rated open-circuit voltage to the field current required for rated short-circuit current): _____
H. Please attach generator reactive capability curves.

I. Rated Hydrogen Cooling Pressure in psig (Steam Units only): _____
J. Please attach a plot of generator terminal voltage versus field current that shows the air gap line, the open-circuit saturation curve, and the saturation curve at full load and rated power factor.

**4. Excitation System Information**
(Please repeat the following for each generator model)

A. Indicate the Manufacturer _____ and Type _____of excitation system used for the generator. For exciter type, please choose from 1 to 9 below or describe the specific excitation system.
(1) Rotating DC commutator exciter with continuously acting regulator. The regulator power source is independent of the generator terminal voltage and current.
(2) Rotating DC commentator exciter with continuously acting regulator. The regulator power source is bus fed from the generator terminal voltage.
(3) Rotating DC commutator exciter with non-continuously acting regulator (i.e., regulator adjustments are made in discrete increments).
(4) Rotating AC Alternator Exciter with non-controlled (diode) rectifiers. The regulator power source is independent of the generator terminal voltage and current (not bus-fed).
(5) Rotating AC Alternator Exciter with controlled (thyristor) rectifiers. The regulator power source is fed from the exciter output voltage.
(6) Rotating AC Alternator Exciter with controlled (thyristor) rectifiers.
(7) Static Exciter with controlled (thyristor) rectifiers. The regulator power source is bus-fed from the generator terminal voltage.
(8) Static Exciter with controlled (thyristor) rectifiers. The regulator power source is bus-fed from a combination of generator terminal voltage and current (compound-source controlled rectifiers system.
(9) Other (specify):_____
B. Attach a copy of the block diagram of the excitation system from its instruction manual. The diagram should show the input, output, and all feedback loops of the excitation system.
C. Excitation system response ratio (ASA): _____
D. Full load rated exciter output voltage: _____
E. Maximum exciter output voltage (ceiling voltage): _____
F. Other comments regarding the excitation system?
_____
_____
_____

**5. Power System Stabilizer Information**
(Please repeat the following for each generator model. All new generators are required to install PSS unless an exemption has been obtained from WECC. Such an exemption can be obtained for units that do not have suitable excitation systems.)

A. Manufacturer: _____
B. Is the PSS digital or analog? _____
C. Note the input signal source for the PSS?
_____ Bus frequency _____ Shaft speed _____ Bus Voltage
_____ Other (specify source)
D. Please attach a copy of a block diagram of the PSS from the PSS Instruction Manual and the correspondence between dial settings and the time constants or PSS gain.
E: Other comments regarding the PSS?
_____

_____
_____

**6. Turbine-Governor Information**
(Please repeat the following for each generator model)

Please complete Part A for steam, gas or combined-cycle turbines, Part B for hydro turbines, and Part C for both.

A. Steam, gas or combined-cycle turbines:

(1) List type of unit (Steam, Gas, or Combined-cycle):_____
(2) If steam or combined-cycle, does the turbine system have a reheat process (i.e., both high and low pressure turbines)? _____
(3) If steam with reheat process, or if combined-cycle, indicate in the space provided, the percent of full load power produced by each turbine:
Low pressure turbine or gas turbine:_____%
High pressure turbine or steam turbine:_____%

B. Hydro turbines:

(1) Turbine efficiency at rated load: _____%
(2) Length of penstock: _____ft
(3) Average cross-sectional area of the penstock: _____ft2
(4) Typical maximum head (vertical distance from the bottom of the penstock, at the gate, to the water level): _____ft
(5) Is the water supply run-of-the-river or reservoir: _____
(6) Water flow rate at the typical maximum head: _____ft3/sec
(7) Average energy rate: _____kW-hrs/acre-ft
(8) Estimated yearly energy production: _____kW-hrs

C. Complete this section for each machine, independent of the turbine type.

(1) Turbine manufacturer: _____
(2) Maximum turbine power output: _____MW
(3) Minimum turbine power output (while on line): _____MW
(4) Governor information:
(a) Droop setting (speed regulation): _____
(b) Is the governor mechanical-hydraulic or electro-hydraulic (Electro-hydraulic governors have an electronic speed sensor and transducer.)? _____
(c) Other comments regarding the turbine governor system?
_____
_____
_____
_____

**7. Induction Generator Data:**

A. Rated Generator Power Factor at rated load: _____
B. Moment of Inertia (including prime mover): _____
C. Do you wish reclose blocking? Yes ___, No ___
Note: Sufficient capacitance may be on the line now, or in the future, and the generator may self-excite unexpectedly.

**7a Wind Generators**

Number of generators to be interconnected pursuant to this Interconnection Request: _____
Average Site Elevation: _____ Single Phase _____ Three Phase_____

Field Volts: _____
Field Amperes: _____
Motoring Power (MW): _____
Neutral Grounding Resistor (If Applicable): _____
I22t or K (Heating Time Constant): _____
Rotor Resistance: _____
Stator Resistance: _____
Stator Reactance: _____
Rotor Reactance: _____
Magnetizing Reactance: _____
Short Circuit Reactance: _____
Exciting Current: _____
Temperature Rise: _____
Frame Size: _____
Design Letter: _____
Reactive Power Required In Vars (No Load):_____
Reactive Power Required In Vars (Full Load):_____
Total Rotating Inertia, H: _____ Per Unit on 100 MVA Base

Note: A completed General Electric Company Power Systems Load Flow (PSLF) data sheet must be supplied with the Interconnection Request. If other data sheets are more appropriate to the proposed device then they shall be provided and discussed at Scoping Meeting.

**8. Generator Short Circuit Data**

For each generator model, provide the following reactances expressed in p.u. on the generator base:

- X"1 – positive sequence subtransient reactance: _____p.u**
- X2 – negative sequence reactance: _____p.u**
- X0 – zero sequence reactance: _____

Generator Grounding (select 1 for each model):

A. _____ Solidly grounded
B. _____ Grounded through an impedance
(Impedance value in p.u on generator base. R: _____p.u.
X: _____p.u.)
C. _____ Ungrounded

**9. Step-Up Transformer Data**

For each step-up transformer, fill out the data form provided in Table 1.

**10. Interconnection Facilities Line Data**

There is no need to provide data for new lines that are to be planned by the Participating TO. However, for transmission lines that are to be planned by the generation developer, please provide the following information:

Nominal Voltage: _____kV
Line Length: _____miles

Line termination Points: _____
Conductor Type: _____ Size: _____
If bundled. Number per phase: _____, Bundle spacing: _____in.
Phase Configuration. Vertical: _____, Horizontal: _____
Phase Spacing: A-B: _____ft., B-C: _____ft., C-A: _____ft.
Distance of lowest conductor to Ground at full load and 40 C: ____°_____ft
Ground Wire Type: _____ Size: _____ Distance to Ground: _____ft
Attach Tower Configuration Diagram
Summer line ratings in amperes (normal and emergency) _____
Positive Sequence Resistance ( R ): _____ p.u.** (for entire line length)
Positive Sequence Reactance: ( X ): _____ p.u**(for entire line length)
Zero Sequence Resistance ( R0 ): _____ p.u.** (for entire line length)
Zero Sequence Reactance: ( X0 ): _____ p.u** (for entire line length)
Line Charging (B/2): _____ p.u**
** On 100-MVA and nominal line voltage (kV) Base

**10a. For Wind/photovoltaic plants, provide collector System Equivalence Impedance Data Provide values for each equivalence collector circuit at all voltage levels.**

Nominal Voltage: _____
Summer line ratings in amperes (normal and emergency) _____
Positive Sequence Resistance (R1):_____ p.u. ** (for entire line length of each collector circuit)
Positive Sequence Reactance: (X1):_____ p.u** (for entire line length of each collector circuit)
Zero Sequence Resistance (R0):_____ p.u. ** (for entire line length of each collector circuit)
Zero Sequence Reactance: (X0):_____ p.u** (for entire line length of each collector circuit)
Line Charging (B/2): _____ p.u** (for entire line length of each collector circuit)
** On 100-MVA and nominal line voltage (kV) Base

**11. Inverter-Based Machines**

Number of inverters to be interconnected pursuant to this Interconnection Request:_____

Inverter manufacturer, model name, number, and version:
_____

List of adjustable set points for the protective equipment or software:
_____

Max design fault contribution current:

Harmonics Characteristics:

Start-up requirements:

Note: A completed General Electric Company Power Systems Load Flow (PSLF) data sheet must be supplied with the Interconnection Request. If other data sheets are more appropriate to the proposed device then they shall be provided and discussed at Scoping Meeting.

**12. Load Flow and Dynamic Models:**

**Provide load flow model for the generating plant and its interconnection facilities in GE PSLF *.epc format, including new buses, generators, transformers, interconnection facilities. An**

**equivalent model is required for the plant with generation collector systems. This data should reflect the technical data provided in this Attachment A.**

For each generator, governor, exciter and power system stabilizer, select the appropriate dynamic model from the General Electric PSLF Program Manual and provide the required input data. **Include any user written *.p EPCL files to simulate inverter based plants' dynamic responses (typically needed for inverter based PV/wind plants). Provide a completed *.dyd file that contains the information specified in this section.**

If you require assistance in developing the models, we suggest you contact General Electric. Accurate models are important to obtain accurate study results. Costs associated with any changes in facility requirements that are due to differences between model data provided by the generation developer and the actual generator test data, may be the responsibility of the generation developer.

TABLE 1

TRANSFORMER DATA
**(Provide for each level of transformation)**

UNIT_____

NUMBER OF TRANSFORMERS_____ PHASE _____

| RATING | H Winding | X Winding | Y Winding |
|---|---|---|---|
| Rated MVA | _____ | _____ | _____ |
| Connection (Delta, Wye, Gnd.) | _____ | _____ | _____ |
| Cooling Type (OA,OA/FA, etc) : | _____ | _____ | _____ |
| Temperature Rise Rating | _____ | _____ | _____ |
| Rated Voltage | _____ | _____ | _____ |
| BIL | _____ | _____ | _____ |
| Available Taps (% of rating) | _____ | _____ | _____ |
| Load Tap Changer? (Y or N) | _____ | _____ | _____ |
| Tap Settings | _____ | _____ | _____ |
| IMPEDANCE | H-X | H-Y | X-Y |
| Percent | _____ | _____ | _____ |
| MVA Base | _____ | _____ | _____ |
| Tested Taps | _____ | _____ | _____ |
| WINDING RESISTANCE | H | X | Y |
| Ohms | _____ | _____ | _____ |

CURRENT TRANSFORMER RATIOS

H_____ X_____ Y_____ N_____

Percent exciting current at 100 % Voltage; _____ 110% Voltage_____

Supply copy of nameplate and manufacture's test report when available

# Appendix 2 GIP Relating To The LGIP Transition Cluster
## Large Generator Interconnection Procedures (LGIP) Relating to the Transition Cluster

### Section 1. Objective, Applicability and Definitions

### 1.1 Objective and Applicability

The objective of this Appendix 2 to the Generator Interconnection Procedures (GIP) is to implement the requirements for interconnecting to the CAISO Controlled Grid those Generating Facilities assigned to the LGIP Transition Cluster. All Interconnection Requests assigned to the LGIP Transition Cluster shall be deemed to have been assigned to a Queue Cluster Window for purposes of GIP Section 1.1 and therefore all provisions of the GIP apply to Generating Facilities included in the LGIP Transition Cluster, except as set forth herein.

### 1.2 Definitions

#### 1.2.1 Master Definitions Supplement and Other General Definition Rules

Unless the context otherwise requires, any word or expression defined in the Master Definitions Supplement, Appendix A to the CAISO Tariff, shall have the same meaning where used in this Appendix 2 to the GIP. Further, unless the context otherwise requires, any word or expression defined in GIP Section 1.2 shall have the same meaning where used in this Appendix 2 to the GIP. References to GIP in this Appendix 2 are to Appendix Y of the CAISO Tariff.

#### 1.2.2 Special Definitions for this GIP Appendix 2

In this Appendix 2 to the GIP, the following words and expressions shall have the meanings set opposite them:

"Serial Study Group" shall mean the collection of valid Interconnection Requests with an assigned Queue Position on or before June 1, 2008 studied in accordance with the interconnection procedures set forth in the version of the GIP set forth in CAISO Tariff Appendix U as permitted by the decision of FERC in Docket No. ER08-960-000.

"LGIP Transition Cluster" shall mean the collection of valid Interconnection Requests with an assigned Queue Position on or before June 1, 2008 that were not included as part of the Serial Study Group by the decision of FERC in Docket No. ER08-960-000.

"LGIP Transition Cluster Interconnection Study Deposit" shall mean, for each Interconnection Request in the LGIP Transition Cluster other than those subject to Section 3.2 of this Appendix 2 to the GIP, the difference between (i) $250,000 and (ii) the total amount the Interconnection Customer has been charged for Interconnection Studies performed under an Interconnection Feasibility Study Agreement, Interconnection System Impact Study Agreement, or Interconnection Facilities Study Agreement plus the balance of any remaining deposit provided under an Interconnection Feasibility Study Agreement, Interconnection System Impact Study Agreement, or Interconnection Facilities Study Agreement. For an Interconnection Request subject to Section 3.2 of this Appendix 2 to the GIP, the amount of the LGIP Transition Cluster Interconnection Study Deposit shall be the difference between (i) $100,000 and (ii) the total amount the Interconnection Customer has been charged for Interconnection Studies performed under an Interconnection Feasibility Study Agreement, Interconnection System Impact Study Agreement, or Interconnection Facilities Study Agreement plus the balance of any remaining deposit provided under an Interconnection Feasibility Study Agreement, Interconnection System Impact Study Agreement, or Interconnection Facilities Study Agreement.

## 2. Queue Position

The Queue Position of any Interconnection Request included in the LGIP Transition Cluster shall be deemed to be lower than that of any Interconnection Request included in the Serial Study Group for purposes of performing Interconnection Studies for Large Generating Facilities whose Interconnection Requests are in the Serial Study Group.

## 3. Requirements to Remain in the LGIP Transition Cluster

### 3.1 General Requirements for Large Generating Facilities

An Interconnection Request deemed to be included in the LGIP Transition Cluster in accordance with the decision of FERC in Docket No. ER08-960-000 will be deemed to have been withdrawn from the LGIP Transition Cluster unless the Interconnection Customer provides, within sixty (60) calendar days from the effective date of this Appendix 2 to the GIP, all of the following: (i) a LGIP Transition Cluster Interconnection Study Deposit, (ii) a statement of the requested deliverability status, (iii) a preferred Point of Interconnection and voltage level and all other technical data required by the GIP, if not already submitted to the CAISO, and (iv) demonstration of Site Exclusivity or a posting of a Site Exclusivity Deposit of $250,000. The demonstration of Site Exclusivity must be, at a minimum, through the anticipated Commercial Operation Date of the new Large Generating Facility or increase in capacity of the existing Generating Facility.

Section 3.8 of the GIP shall not apply to a failure to satisfy the requirements of this Section 3.1 of this Appendix 2 to the GIP.

### 3.2 Special Requirements for Certain Small and Existing Large Generating Facilities

An Interconnection Customer with an Interconnection Request in the LGIP Transition Cluster relating to (a) a Small Generating Facility seeking a Deliverability Assessment or (b) a Generating Facility, subject to the GIP in accordance with CAISO Tariff Section 25.1.1, that has achieved Commercial Operation prior to the date of the Interconnection Request, and is seeking to increase the capacity of the Generating Facility by less than 20 MW, will be deemed to have withdrawn its Interconnection Request from the LGIP Transition Cluster unless it provides, within sixty (60) calendar days from the effective date of this Appendix 2 to the GIP, all of the following: (i) a LGIP Transition Cluster Interconnection Study Deposit, (ii) a statement of the requested deliverability status, (iii) a preferred Point of Interconnection and voltage level and all other technical data required by the GIP, if not already submitted to the CAISO, and (iv) demonstration of Site Exclusivity or a posting of a Site Exclusivity Deposit of $250,000. The demonstration of Site Exclusivity, at a minimum, must be through the Commercial Operation Date of the new Large Generating Facility or increase in capacity of the existing Generating Facility.

Section 3.8 of the GIP shall not apply to a failure to satisfy the requirements of this Section 3.2 of this Appendix 2 to the GIP.

### 3.3 Communication of LGIP Transition Cluster Interconnection Study Deposit Amount

The CAISO shall provide each Interconnection Customer with the amount of its LGIP Transition Cluster Interconnection Study Deposit within five (5) Business Days after the effective date of this Appendix 2 to the GIP.

### 3.4 Use of the LGIP Transition Cluster Interconnection Study Deposit

The CAISO shall deposit all LGIP Transition Cluster Interconnection Study Deposits in an interest bearing account at a bank or financial institution designated by the CAISO. The LGIP Transition Cluster Interconnection Study Deposit shall be applied to pay for prudent costs incurred by the

CAISO, the Participating TOs, or third parties at the direction of the CAISO or Participating TOs, as applicable, to perform and administer the Interconnection Studies. The LGIP Transition Cluster Interconnection Study Deposit is not refundable.

Upon execution of a GIA by an Interconnection Customer, the CAISO and the applicable Participating TO(s), or the approval by FERC of an unexecuted GIA, the CAISO shall refund to the Interconnection Customer any portion of the Interconnection Customer's LGIP Transition Cluster Interconnection Study Deposit, including interest earned at the rate provided for in the interest-bearing account from the date of deposit to the date of withdrawal, that exceed the costs the CAISO, Participating TOs, or third parties have incurred on the Interconnection Customer's behalf.

Notwithstanding the foregoing, an Interconnection Customer that withdraws or is deemed to have withdrawn its Interconnection Request during an Interconnection Study Cycle shall be obligated to pay to the CAISO all costs in excess of the LGIP Transition Cluster Interconnection Study Deposit that have been prudently incurred or irrevocably have been committed to be incurred with respect to that Interconnection Request prior to withdrawal. The CAISO will reimburse the applicable Participating TO(s) or third parties, as applicable, for all work performed associated with the Interconnection Request at the CAISO's direction. The Interconnection Customer must pay all monies due before it is allowed to obtain any Interconnection Study data or results.

All non-refundable portions of the LGIP Transition Cluster Interconnection Study Deposit that exceed the costs the CAISO, Participating TOs, or third parties have incurred on the Interconnection Customer's behalf shall be treated in accordance with CAISO Tariff Section 37.9.4

### 3.5 Obligation for Study Costs

The CAISO shall charge and the Interconnection Customer shall pay the actual costs of the Interconnection Studies. The CAISO shall issue invoices for Interconnection Studies that shall include a detailed and itemized accounting of the cost of each Interconnection Study. The CAISO shall draw from the LGIP Transition Cluster Interconnection Study Deposit any undisputed costs within thirty (30) calendar days after issuance of an invoice therefor. Whenever the actual cost of performing the Interconnection Studies exceeds the LGIP Transition Cluster Interconnection Study Deposit, the Interconnection Customer shall pay the undisputed difference in accordance with the CAISO issued invoice within thirty (30) calendar days. The CAISO shall not be obligated to continue to have any studies conducted unless the Interconnection Customer has paid all undisputed amounts in compliance herewith. In the event an Interconnection Study is performed by the CAISO, the Interconnection Customer shall pay only the costs of those activities performed by the Participating TO to adequately review or validate that Interconnection Study.

## 4. Phase I Interconnection Study

### 4.1 Grouping Interconnection Requests and Base Cases

Interconnection Requests in the LGIP Transition Cluster shall be grouped in accordance with GIP Section 6.1. Rather than Generation submitted during a Queue Cluster Window, the Interconnection Base Case Data for the LGIP Transition Cluster shall reflect the Generation from those Interconnection Requests that satisfy the requirements of Sections 3.1 and 3.2 of this Appendix 2 to the GIP.

### 4.2 Schedule

The Phase I Interconnection Study, as described in GIP Section 6, including the grouping and Interconnection Base Case Data development, for the LGIP Transition Cluster shall commence no later than December 1, 2008 or sixty (60) calendar days after the effective date of this

Appendix 2 to the GIP, whichever is later. Results of the Phase I Interconnection Study shall be provided to the Interconnection Customer within two hundred forty (240) calendar days after commencement under this Section.

### 4.3 Results Meeting

Within sixty (60) calendar days after providing the Phase I Interconnection Study report to the Interconnection Customer, the applicable Participating TO(s), the CAISO and the Interconnection Customer shall meet to discuss the results of the Phase I Interconnection Study, including assigned cost responsibility.

#### 4.3.1 Modifications

Proposed modifications to the Interconnection Request shall be evaluated as set forth in GIP Section 6.7.2, except that for projects in the LGIP Transition Cluster (i) the modifications permitted under this Section shall also include: (d) an increase in the MW value above the Generating Facility Capacity set forth in the Interconnection Request, not to exceed thirty percent (30%) of the original amount (i.e. not to exceed 130% of the Generation Facility Capacity set forth in the original Interconnection Request); and (e) a change in the requested deliverability status set forth in the Interconnection Request from Energy Only to full capacity, and (ii) any modifications requested for projects in the LGIP Transition Cluster must be made within five (5) business days of the effective date of this tariff sheet.

To the extent that modifications made by one or more Interconnection Customers for either of the reasons specified in this Section 4.3.1 causes the need for additional upgrades within the applicable LGIP Transition Cluster study group beyond those identified in the Phase I Interconnection Study, the responsibility for financing such incremental upgrades shall be assigned solely to those Interconnection Customers making such modifications, pro rata in accordance with applicable provisions of the LGIP and this Appendix 2.

### 4.4 Cost Allocation Methods for Reliability Network Upgrades in Phase I Interconnection Study

The estimated costs for Reliability Network Upgrades identified in the Phase I Interconnection Study for the LGIP Transition Cluster shall be allocated as set forth in GIP Section 6.3.1, except that the estimated costs of short circuit related Reliability Network Upgrades identified through the Phase I Interconnection Study shall be assigned to all Interconnection Requests in that Study pro rata on the basis of the maximum megawatt electrical output of each proposed new Large Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request.

## 5. Phase II Interconnection Study

### 5.1 Phase II Interconnection Study Procedures

The Phase II Interconnection Study, as described in GIP Section 7, for the LGIP Transition Cluster shall commence no later than one hundred twenty (120) calendar days after issuance of the Phase I Interconnection Study report. Results of the Phase II Interconnection Study shall be provided to the Interconnection Customer within three hundred thirty (330) calendar days after commencement under this Section.

### 5.2 Coordination of the Phase II Interconnection Study with the Transmission Planning Process

As part of the Uniform Planning Assumptions and Study Plan developed under Section 24 of the CAISO Tariff during calendar year 2009, the CAISO shall include technical analyses intended to identify, at a minimum, conceptual transmission upgrades that may access proposed Large Generating Facilities included in the LGIP Transition Cluster that are located in Energy Resource Areas.

### 5.3 Financing of Reliability Network Upgrades Identified in Phase II Interconnection Study

The responsibility for financing final Reliability Network Upgrades identified in the Phase II Interconnection Study for the LGIP Transition Cluster shall be determined as set forth in GIP Section 7.3, except that the responsibility for financing final short circuit related Reliability Network Upgrades identified in the Phase II Interconnection Study shall be assigned to all Interconnection Requests in that Study pro rata on the basis of the maximum megawatt electrical output of each proposed new Large Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, up to the cost assignment for Reliability Network Upgrades under GIP Section 6.3.1 and Section 4.4 of this Appendix 2.

## 6. Interconnection Financial Security

The provisions of GIP Section 9 shall apply to the LGIP Transition Cluster, except that (i) the initial posting of Interconnection Financial Security under GIP Section 9.2 in Appendix Y shall be required on or before the later of ten (10) business days after the effective date of this tariff sheet or one hundred twenty (120) calendar days after issuance of the Phase I Interconnection Study report, but in no event earlier than November 30, 2009 or later than December 18, 2009; and (ii) any Interconnection Customer who has been permitted a modification for either of the reasons specified in Section 4.3.1 of this Appendix 2 shall make its first posting of Interconnection Financial Security for Network Upgrades pursuant to GIP Section 9.2 in an amount equal to the lesser of $20,000 per megawatt of electrical output of the Large Generating Facility, including any modifications thereto, or $7,500,000, but in no event less than $500,000, and shall make its second and third postings of Interconnection Financial Security for Network Upgrades pursuant to GIP Section 9.3 based on the total cost responsibility assigned to the Interconnection Customer for Network Upgrades in the Phase II Interconnection Study.

## Appendix 3

## GENERATOR INTERCONNECTION STUDY PROCESS AGREEMENT FOR QUEUE CLUSTERS

THIS AGREEMENT is made and entered into this day of , 20 by and between _____ , a organized and existing under the laws of the State of , ("Interconnection Customer") and the California Independent System Operator Corporation, a California nonprofit public benefit corporation existing under the laws of the State of California, ("CAISO"). The Interconnection Customer and the CAISO each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

WHEREAS, the Interconnection Customer is proposing to develop a Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by the Interconnection Customer dated _____; and

WHEREAS, the Interconnection Customer desires to interconnect the Generating Facility with the CAISO Controlled Grid pursuant to the Queue Cluster process; and

WHEREAS, the Interconnection Customer has requested the CAISO to conduct or cause to be performed Interconnection Studies to assess the system impact of interconnecting the Generating Facility to the CAISO Controlled Grid and to specify and estimate the cost of the equipment, engineering, procurement and construction work needed on the Participating TO's electric system in accordance with Good Utility Practice to physically and electrically connect the Generating Facility to the CAISO Controlled Grid;

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein the Parties agree as follows:

1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in the CAISO's FERC-approved Generation Interconnection Procedures in CAISO Tariff Appendix Y ("GIP") or the Master Definitions Supplement, Appendix A to the CAISO Tariff, as applicable.

2.0 The Interconnection Customer elects and the CAISO shall conduct or cause to be performed Interconnection Studies, including any accelerated Interconnection Study, consistent with the GIP in accordance with the CAISO Tariff.

3.0 The scope of the Interconnection Studies shall be subject to the assumptions set forth in Appendices A and B to this Agreement.

4.0 The Interconnection Studies will be based upon the technical information provided by the Interconnection Customer in the Interconnection Request, as may be modified as the result of the Scoping Meeting, subject to any modifications in accordance with Section 6.9.2 of the GIP and modifications to the proposed Commercial Operation Date of the Generating Facility permitted by the GIP. The CAISO reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Interconnection Studies. If the Interconnection Customer modifies its designated Point of Interconnection, Interconnection Request, or the technical information provided therein is modified, the Interconnection Studies may be modified as specified in the GIP.

5.0 The Interconnection Study report for each Interconnection Study shall provide the information specified in the GIP.

6.0 The Interconnection Customer shall provide an Interconnection Study Deposit, a Site Exclusivity Deposit, if applicable, and other Interconnection Financial Security for the performance of the Interconnection Studies in accordance with the provisions of Sections 3.5.1 and 9 of the GIP.

Following the issuance of an Interconnection Study report, the CAISO shall charge and the Interconnection Customer shall pay its share of the actual costs of the Interconnection Study pursuant to Section 3.5.1 of the GIP.

Any difference between the deposits made toward the Interconnection Study process and associated administrative costs, including any accelerated studies, and the actual cost of the Interconnection Studies and associated administrative costs shall be paid by or refunded to the Interconnection Customer, in the appropriate allocation, in accordance with Section 3.5.1 of the GIP.

7.0 Pursuant to Section 3.7 of the GIP, the CAISO will coordinate the conduct of any studies required to determine the impact of the Interconnection Request on Affected Systems. The CAISO may provide a copy of the Phase I Interconnection Study results to an Affected System Operator and the Western Electricity Coordinating Council. Requests for review and input from Affected System Operators or the Western Electricity Coordinating Council may arrive at any time prior to interconnection.

8.0 Substantial portions of technical data and assumptions used to perform the Phase I Interconnection Study, such as system conditions, existing and planned generation, and unit modeling, may change after the CAISO provides the Interconnection Study results to the Interconnection Customer. Interconnection Study results will reflect available data at the time the CAISO provides the Phase I Interconnection Study report to the Interconnection Customer. The CAISO shall not be responsible for any additional costs, including, without limitation, costs of new or additional facilities, system upgrades, or schedule changes, that may be incurred by the Interconnection Customer as a result of changes in such data and assumptions.

9.0 **[NOT USED]**

10.0 The CAISO shall maintain records and accounts of all costs incurred in performing the Interconnection Study in sufficient detail to allow verification of all costs incurred, including associated overheads. The Interconnection Customer shall have the right, upon reasonable notice, within a reasonable time at the CAISO's offices and at its own expense, to audit the CAISO's records as necessary and as appropriate in order to verify costs incurred by the CAISO. Any audit requested by the Interconnection Customer shall be completed, and written notice of any audit dispute provided to the CAISO representative, within one hundred eighty (180) calendar days following receipt by the Interconnection Customer of the CAISO's notification of the final costs of the Interconnection Study.

11.0 In accordance with Section 3.8 of the GIP, the Interconnection Customer may withdraw its Interconnection Request at any time by written notice to the CAISO. Upon receipt of such notice, this Agreement shall terminate, subject to the requirements of Section 3.5.1 and 13.1 of the GIP.

12.0 Pursuant to Section 6.1 of the GIP, this Agreement shall become effective upon the date the fully executed Agreement is received by the CAISO. If the CAISO does not receive the fully executed Agreement and deposit or other Interconnection Financial Security

pursuant to Section 3.5.1 of the GIP, then the Interconnection Request will be deemed withdrawn upon the Interconnection Customer's receipt of written notice by the CAISO pursuant to Section 3.8 of the GIP.

13.0 Miscellaneous.

13.1 Dispute Resolution. Any dispute, or assertion of a claim, arising out of or in connection with this Agreement, shall be resolved in accordance with Section 13.5 of the GIP.

13.2 Confidentiality. Confidential Information shall be treated in accordance with Section 13.1 of the GIP.

13.3 Binding Effect. This Agreement and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

13.4 Conflicts. In the event of a conflict between the body of this Agreement and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this Agreement shall prevail and be deemed the final intent of the Parties.

13.5 Rules of Interpretation. This Agreement, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this Agreement, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this Agreement), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any applicable laws and regulations means such applicable laws and regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article or Section of this Agreement or such Appendix to this Agreement, or such Section of the GIP or such Appendix to the GIP, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this Agreement as a whole and not to any particular Article, Section, or other provision hereof or thereof; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".

13.6 Entire Agreement. This Agreement, including all Appendices and Schedules attached hereto, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this Agreement.

13.7 No Third Party Beneficiaries. This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

13.8 Waiver. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Agreement. Termination or default of this Agreement for any reason by the Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Participating TO or CAISO. Any waiver of this Agreement shall, if requested, be provided in writing.

Any waivers at any time by any Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

13.9 Headings. The descriptive headings of the various Articles and Sections of this Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Agreement.

13.10 Multiple Counterparts. This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

13.11 Amendment. The Parties may by mutual agreement amend this Agreement by a written instrument duly executed by both of the Parties.

13.12 Modification by the Parties. The Parties may by mutual agreement amend the Appendices to this Agreement by a written instrument duly executed by both of the Parties. Such amendment shall become effective and a part of this Agreement upon satisfaction of all applicable laws and regulations.

13.13 Reservation of Rights. The CAISO shall have the right to make a unilateral filing with FERC to modify this Agreement with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

13.14 No Partnership. This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

13.15 Assignment. This Agreement may be assigned by a Party only with the written consent of the other Party; provided that a Party may assign this Agreement without the consent

of the other Party to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement; and provided further that the Interconnection Customer shall have the right to assign this Agreement, without the consent of the other Party, for collateral security purposes to aid in providing financing for the Generating Facility, provided that the Interconnection Customer will require any secured party, trustee or mortgagee to notify the other Party of any such assignment. Any financing arrangement entered into by the Interconnection Customer pursuant to this Section will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify the other Party of the date and particulars of any such exercise of assignment right(s). Any attempted assignment that violates this Section is void and ineffective. Any assignment under this Agreement shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

IN WITNESS THEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**California Independent System Operator Corporation**

By: _____

Printed Name: _____

Title: _____

Date: _____

**[Insert name of the Interconnection Customer]**

By: _____

Printed Name: _____

Title: _____

Date: _____

**Appendix A**

**Assumptions In Phase I Interconnection Study**
**Generator Interconnection**
**Study Process Agreement for Queue Clusters**

**ASSUMPTIONS USED IN CONDUCTING THE PHASE I INTERCONNECTION STUDY**

The Phase I Interconnection Study will be based upon the information set forth in the Interconnection Request and agreed upon in the Scoping Meeting held on , subject to any modifications in accordance with Section 6.9.2 of the GIP, and the following assumptions:

Designation of Point of Interconnection and configuration to be studied.

Deliverability status requested

(____ Full Capacity,
_____Partial Deliverability for _____ MW or
_____Energy only)

NOTICE: YOUR CHOICE OF DELIVERABILITY STATUS CAN AFFECT YOUR ABILITY TO QUALIFY YOUR GENERATING FACILITY AS A RESOURCE ADEQUACY RESOURCE OR AFFECT YOUR TRANSACTIONS FOR SALE OF POWER. PLEASE GIVE CONSIDERATION TO YOUR CHOICE OF DELIVERABILITY STATUS

**Appendix B**

**Data Form, Pre-Phase II Interconnection Study**
**Generator Interconnection**
**Study Process Agreement for Queue Clusters**

**DATA FORM TO BE PROVIDED BY THE INTERCONNECTION CUSTOMER PRIOR TO COMMENCEMENT OF THE PHASE II INTERCONNECTION STUDY**

Generating Facility size (MW): _____

Provide two copies of this completed form and other required plans and diagrams in accordance with Section 7.1 of the GIP.

Provide location plan and one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

One set of metering is required for each generation connection to the new bus or existing CAISO Controlled Grid station. Number of generation connections: _____

On the one line indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)

On the one line indicate the location of auxiliary power. (Minimum load on CT/PT)

Will an alternate source of auxiliary power be available during CT/PT maintenance? _____ Yes _____ No

Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation? Yes No
(Please indicate on one line).

What type of control system or PLC will be located at the Interconnection Customer's Generating Facility?
_____
_____

What protocol does the control system or PLC use?
_____
_____

Please provide a 7.5-minute quadrangle of the site. Sketch the plant, station, transmission line, and property line.

Physical dimensions of the proposed interconnection station:

Bus length from generation to interconnection station:

Line length from interconnection station to the Participating TO's transmission line.

Tower number observed in the field. (Painted on tower leg)*

Number of third party easements required for transmission lines*:

* To be completed in coordination with the Participating TO or CAISO.

Is the Generating Facility in the Participating TO's service area?

Yes No

Local service provider for auxiliary and other power: _____

Please provide proposed schedule dates:

Environmental survey start: _____

Environmental impact report submittal: _____

Procurement of project equipment: _____

Begin Construction Date: _____

Generator step-up transformer Date: _____
receives back feed power

Generation Testing Date:_____

Commercial Operation Date: _____

Level of Deliverability: Choose one of the following:

_____Energy Only

_____Full Capacity

## Appendix 4

### Agreement for Allocating GIP and Study Responsibilities

### AGREEMENT FOR THE ALLOCATION OF RESPONSIBILITIES WITH REGARD TO GENERATOR INTERCONNECTION PROCEDURES AND INTERCONNECTION STUDY AGREEMENTS

This Agreement for the Allocation of Responsibilities With Regard to Generator Interconnection Procedures and Interconnection Study Agreements ("Agreement"), dated _____ , is entered into between the California Independent System Operator Corporation ("CAISO") and [NAME OF PTO] _____ ("PTO"). The CAISO and PTO are jointly referred to as the "Parties" and individually, as a "Party."

WHEREAS, this Agreement will ensure an independent assessment of new Generating Facility impacts on the CAISO Controlled Grid and take advantage of the respective expertise of the Parties to facilitate efficient and cost effective Interconnection Study procedures in a manner consistent with the Federal Energy Regulatory Commission's ("FERC") July 1, 2005 Order (112 FERC ¶ 61,009), FERC's August 26, 2005 Order (112 FERC ¶ 61,231), and prior FERC Orders recognizing that Order No. 2003 did not allocate responsibilities between transmission owners and transmission providers for the provision of Interconnection Service and suggesting those parties enter into an agreement to allocate those responsibilities. Southwest Power Pool, Inc., 106 FERC ¶ 61,254 (2004).

NOW THEREFORE, in view of the respective responsibilities assigned to the Parties and the foregoing FERC orders, and the provisions of the CAISO's Generator Interconnection Procedures set forth in CAISO Tariff Appendix Y ("GIP"), the CAISO and PTO agree to the following allocation of responsibilities for a centralized Interconnection Study process under the direction and oversight of the CAISO:

**1. DEFINITIONS**

Unless otherwise defined herein, all capitalized terms shall have the meaning set forth in the CAISO Tariff.

**2. TERM OF AGREEMENT**

This Agreement shall become effective upon the date specified in the first paragraph above and shall remain in effect until (1) terminated by all Parties in writing, or (2) with respect to the PTO, upon the termination of that entity's status as a PTO pursuant to the Transmission Control Agreement, as amended from time to time.

**3. PROVISIONS FOR ALLOCATION OF RESPONSIBILITIES BETWEEN CAISO AND PTO**

**3.1** Interconnection Service: The Parties acknowledge that, as the transmission provider, the CAISO is responsible for reliably operating the transmission grid. The Parties also recognize that while the CAISO is a transmission provider under the CAISO Tariff, the CAISO does not own any transmission facilities, and the PTO owns, constructs, and maintains the facilities to which Generating Facilities are to be interconnected, and that the PTO may construct or modify facilities to allow the interconnection. While the Parties recognize that the CAISO will be responsible for conducting or causing to be performed Interconnection Studies and similar studies, the PTO will participate in these studies and conduct certain portions of studies, under the direction and oversight of, and approval by, the CAISO, as provided in this Agreement. The CAISO shall not enter into any Interconnection Study agreement with an Interconnection Customer that is contrary to these rights.

**3.2 [INTENTIONALLY LEFT BLANK]**

**3.3 Transmission Owners' Right to Participation in Studies, Committees and Meetings:**

**3.3.1** In the event that an Interconnection Customer proposes to interconnect a Generating Facility with the PTO's facilities, or the PTO is an owner of an affected system, the PTO shall have the right to participate in any Interconnection Study or any other study conducted in connection with such request for Interconnection Service. "Participate" in this Section 3.3.1 means physically perform any study or portion thereof in connection with an Interconnection Request, under the direction and oversight of, and approval by, the CAISO pursuant to Section 3.4 of this Agreement; provide or receive input, data or other information regarding any study or portion thereof consistent with Section 3.4 of this Agreement; and, when any study or portion thereof in connection with an Interconnection Request is physically performed by an entity other than the PTO, perform activities necessary to adequately review or validate, as appropriate, any results of the study or portions thereof and provide recommendations.

**3.3.2** In the event that an Interconnection Customer proposes to interconnect a Generating Facility with the PTO's facilities, or the PTO is an owner of an affected system, the PTO shall have the right to participate in all meetings expressly established pursuant to the CAISO GIP. As appropriate, the PTO may participate in all other material or substantive communications in connection with an Interconnection Request.

**3.4** Interconnection Study Responsibility Allocation: In complying with its responsibility for conducting or causing to be performed Interconnection Studies, the CAISO will assign responsibility for performance of portions of the Interconnection Studies to the PTO, under the direction and oversight of, and approval by, the CAISO, as set forth in Attachment A, except as specifically qualified as follows:

**3.4.1** For any tasks specifically assigned to the PTO pursuant to Attachment A or otherwise mutually agreed upon by the CAISO and the PTO, the CAISO reserves the right, on a case-by-case basis, to perform or reassign to a mutually agreed upon and pre-qualified contractor such task only where: (a) the quality and accuracy of prior PTO Interconnection Study work product resulting from assigned tasks has been deemed deficient by the CAISO, the CAISO has notified the PTO pursuant to the notice provision of Section 4.16 of this Agreement in writing of the deficiency, and the deficiency has not been cured pursuant to Section 3.4.2 of this Agreement; (b) the timeliness of PTO Interconnection Study work product has been deemed deficient, and either (i) the CAISO has not been notified of the reasons and actions taken to address the timeliness of the work, or (ii) if notified, the stated reasons and actions taken are insufficient or unjustifiable and the PTO has not cured the deficiency pursuant to Section 3.4.2 of this Agreement; (c) the PTO has failed, in a mutually agreed upon timeframe, to provide the CAISO with information or data related to an Interconnection Request despite a written request by the CAISO, pursuant to Section 3.5 hereof, to do so, and such data is the responsibility of the PTO to provide to the CAISO, subject to Section 4.3 of this Agreement; (d) the PTO advises the CAISO in writing that it does not have the resources to adequately or timely perform the task according to the applicable timelines set forth in Attachment A; or (e) the estimated cost of the PTO performing the task has been determined in writing by the CAISO to significantly exceed the cost of the CAISO or mutually agreed upon contractor performing the task, inclusive of the costs that will be incurred by the PTO in exercising its review rights of the results of

any such tasks performed by such third party(ies). If the CAISO deviates from the assignments set forth in Attachment A based on the foregoing factors, the CAISO will provide the PTO with a written explanation for the deviation and any associated reassignments of work. The PTO may contest the deviation pursuant to the Dispute Resolution procedures set forth in Section 4.1 of this Agreement.

Task(s) may only be reassigned in accordance with this Section 3.4.1 where the PTO has been deemed to be deficient in relation to that (those) particular task(s).

**3.4.2 Cure for reassigned Interconnection Study work**
The CAISO shall not reassign task(s) without the opportunity to cure, as specified in Section 3.4.1 of this Agreement. The following actions will serve to cure the deficiencies and result in restoring the assignment(s) as provided in Attachment A:

(a) The CAISO and PTO shall negotiate in good faith and agree to a corrective action plan proposed by the PTO, including a reasonably adequate cure period, and the corrective action plan is satisfactorily implemented.

(b) The CAISO determines the deficiency is cured without an action plan.

**3.4.3** Assessment of prior PTO Interconnection Study work shall only be based on work conducted under the process that becomes effective concurrent with the effective date of this Agreement. Further, assessment of prior PTO Interconnection Study work shall be based on work conducted no earlier than the eighteen (18) month period prior to the date of the CAISO notice of deviation from assignments set forth in Attachment A to this Agreement.

**3.5** Information Exchange: The PTO shall provide the CAISO, subject to confidentiality requirements in Section 4.3 of this Agreement, with any documentation or data requested by the CAISO reasonably necessary to permit the CAISO to perform, review, validate and approve any Interconnection Study, or portion thereof, performed by the PTO. The CAISO shall provide the PTO with any documentation or data requested by the PTO, subject to confidentiality requirements in Section 4.3 of this Agreement, reasonably necessary to perform, review, and validate any Interconnection Study, or portion thereof.

**3.6** Consistency with Provisions for Centralized Interconnection Study Process: The CAISO and PTO have determined that the processes and allocation of responsibilities in Section 3.4 of this Agreement ensure that impacts to the CAISO Controlled Grid are independently assessed and that the assignment of responsibilities minimizes handoffs, takes advantage of non-transferable skills, and promotes the efficiency and cost-effectiveness of the centralized Interconnection Study processes, consistent with GIP Section 3.2.

**3.7** Re-Studies: If any re-studies are required, the CAISO will confer with the PTO as to the need for a re-study. The CAISO will make the final determination regarding the need for a re-study, subject to dispute resolution procedures.

**3.8** Use of Contractors: Nothing in this Agreement shall prevent either the CAISO or the PTO from using qualified, mutually agreed upon third party contractors to meet that Party's rights or obligations under this Agreement or the GIP. To promote the efficiency of the process, the CAISO and PTO will collaborate to identify a list of the mutually agreed to qualified contractors available to the Parties.

**3.9** Performance Standards: Each Party shall perform all of its obligations under the GIP, this Agreement, and any FERC approved Interconnection Study procedures that may be

adopted by the CAISO to implement the GIP or this Agreement in accordance with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice.

**3.10** Recovery of Costs: In accordance with Section 3.5.1 of the GIP, the PTO shall recover all actual costs from the CAISO incurred in performing Interconnection Studies or portions thereof assigned to it by the CAISO, including all costs incurred in exercising its right to review, and make recommendations on, Interconnection Studies or portions thereof performed by the CAISO and/or contractors under Section 3.8 of this Agreement.

## 4 GENERAL TERMS AND CONDITIONS

**4.1** Dispute Resolution: In the event any dispute regarding the terms, conditions, and performance of this Agreement is not settled informally, the Parties shall follow the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff.

**4.2** Liability: No Party to this Agreement shall be liable to any other Party for any direct, indirect, special, incidental or consequential losses, damages, claims, liabilities, costs or expenses (including attorneys fees and court costs) arising from the performance or non-performance of its obligations under this Agreement regardless of the cause (including intentional action, willful action, gross or ordinary negligence, or force majeure); provided, however, that a Party may seek equitable or other non-monetary relief as may be necessary to enforce this Agreement and that damages for which a Party may be liable to another Party under another agreement will not be considered damages under this Agreement.

**4.3** Confidentiality: Confidential Information shall be treated in accordance with Section 13.1 of the GIP.

**4.4** Binding Effect: This Agreement and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

**4.5** Conflicts: In the event of a conflict between the body of this Agreement and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this Agreement shall prevail and be deemed the final intent of the Parties.

**4.6** Rules of Interpretation: This Agreement, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this Agreement, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this Agreement), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any applicable laws and regulations means such applicable laws and regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section, Attachment, or Appendix means such Article or Section of this Agreement or such Attachment or Appendix to this Agreement, or such Section of the GIP or such Appendix to the GIP, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this Agreement as a whole and not to any particular Article or Section; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of

time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".

**4.7** Entire Agreement: This Agreement, including all Attachments hereto, constitutes the entire agreement among the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, among the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants, which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this Agreement.

**4.8** No Third Party Beneficiaries: This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

**4.9** Waiver: The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party. Any waiver at any time by a Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Agreement. Any waiver of this Agreement shall, if requested, be provided in writing. Any waivers at any time by any Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**4.10** Headings: The descriptive headings of the various Articles and Sections of this Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Agreement.

**4.11** Multiple Counterparts: This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

**4.12** Modification by the Parties: The Parties may amend this Agreement and any Appendices to this Agreement only (1) by mutual agreement of the Parties by a written instrument duly executed by the Parties, subject to FERC approval or (2) upon the issuance of a FERC order, pursuant to Section 206 of the Federal Power Act. It is the Parties' intent that FERC's right to change any provision of this Agreement shall be limited to the maximum extent permissible by law and that any such change, if permissible, shall be in accordance with the Mobile-Sierra public interest standard applicable to fixed rate agreements. United Gas Pipe Line Co. v. Mobile Gas Service Corp., 350 U.S. 332 (1956). Such amendment shall become effective and a part of this Agreement upon satisfaction of all applicable laws and regulations. Notwithstanding the foregoing, Attachment B (Notices) may be modified as set forth in Section 4.15 of this Agreement, and the CAISO and the PTO may from time to time mutually agree to deviate from Attachment A in accordance with the provisions of this Agreement, however, such deviation shall be subject to Section 4.9 of this Agreement and not considered a course of dealing.

**4.13** No Partnership: This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall

have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

**4.14** Assignment: This Agreement may be assigned by a Party only with the written consent of the other Parties; provided that a Party may assign this Agreement without the consent of the other Parties to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement. Any attempted assignment that violates this Article is void and ineffective. Any assignment under this Agreement shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

**4.15** Notices: Any notice, demand, or request provided in this Agreement, or served, given, or made in connection with it, will be in writing and deemed properly served, given, or made if delivered in person, transmitted by facsimile, or sent by United States mail, postage prepaid, to the persons specified in Attachment B hereto unless otherwise provided in this Agreement. Any Party may at any time, by notice to all other Parties, change the designation or address of the person specified in Attachment B as the person who receives notices pursuant to this Agreement.

IN WITNESS WHEREOF, the Parties have executed this Agreement in multiple originals, each of which shall constitute and be an original effective agreement among the Parties.

**California Independent System Operator Corporation**

By:_____

Printed Name:_____

Title:_____

Date:_____

**[NAME OF PTO]**

By:_____

Printed Name:_____

Title:_____

Date:_____

## ATTACHMENT A

## INTERCONNECTION STUDY RESPONSIBILITY ALLOCATION

Description of Generator Interconnection Process: Roles and Responsibilities of CAISO and PTOs.

Purpose: This Attachment A to the "AGREEMENT FOR THE ALLOCATION OF RESPONSIBILITIES WITH REGARD TO GENERATOR INTERCONNECTION PROCEDURES AND INTERCONNECTION STUDY AGREEMENTS" serves as further clarification of the roles and responsibilities of the parties to this Agreement. The CAISO will assign responsibility for performance of portions of the Interconnection Studies to the relevant PTOs, under the direction and oversight of, and approval by, the CAISO, as set forth in this Attachment A. This document serves as a general overview of only the roles and responsibilities as between the CAISO and PTOs. This Agreement does not include the process steps, involvement or obligations of the Interconnection Customer (IC). This Agreement is not inclusive of all procedures necessary to comply with all provisions of the GIA, GIP and Generator Interconnection Study Process Agreement for Queue Clusters.

**Interconnection Request (IR) Process**

1. CAISO forwards the IR to the PTO within three (3) Business Days (BD) of receipt of IR from Interconnection Customer (IC)
2. PTO(s) provides any feed back regarding IR to CAISO within 3 BD
3. CAISO distributes draft Scoping Meeting minutes for review within 5 BD of Scoping Meeting.
4. PTO(s) provide any comments to the Scoping Meeting minutes within 2 BD of receipt of draft Scoping Meeting minutes.
5. CAISO issues the final Scoping Meeting minutes within 3 BD of receipt of comments.

**Phase I Interconnection Study Timeline**

| Line | Phase I Cluster Study | Typical Calendar Days | Timeline (Days) |
|---|---|---|---|
| 1 | CAISO and PTOs develop initial Generating Facility groups for initial Dispatch assumptions and cost allocation purposes (except for thermal overload and short circuit mitigation). | 1 | 1 |
| 2 | PTOs develop draft Base Cases, each representing all Generating Facilities in the queue cluster, and deliver to CAISO. | 15 | 2-16 |
| 3 | PTO develops preferred and alternative, if applicable, direct interconnection plans, including the need for an Interconnection Grid Substation (IGS). | 15 | 2-16 |
| 4 | PTO develops draft contingency lists. | 15 | 2-16 |
| 5 | CAISO reviews and approves Base Cases and direct interconnection plans and merges them together, as needed.<br>PTOs update off-peak Base Cases.<br><br>CAISO reviews and approves contingency lists. PTO needs time to consider CAISO proposed changes. | 5 | 17-21 |
| 6 | CAISO provides Deliverability Assessment results identifying constrained facilities, using summer peak and off-peak Base Cases, and prepares results summary and may propose mitigation plans for PTO | 15 | 22-36 |

| | | | |
|---|---|---|---|
| | review. | | |
| 7 | At the CAISO's direction, the PTO performs the off-peak Load Flow, and summer peak and off-peak Post Transient and Stability analyses and identifies mitigation solutions, as appropriate, and submits draft study results to CAISO for review and direction. | 15 | 22-36 |
| 8 | PTO develops mitigation plans for summer peak and off-peak or supplements CAISO proposed mitigation plans for consideration, as appropriate, and submits to CAISO for review and direction | 15 | 37-51 |
| 9 | CAISO retests Deliverability Assessment results with proposed Delivery Network Upgrades. PTO reviews and comments on retest results. | 5 | 52-56 |
| 10 | CAISO develops shift factors for cost allocation purposes of all Network Upgrades associated with mitigating thermal overloads. | 5 | 57-61 |
| **Short Circuit Duty** | | | |
| 11 | CAISO coordinates with other potentially affected facility owners[1]. | n/a | n/a |
| 12 | CAISO directs PTO to develop Base Case and run short circuit analysis. | 10 | 57-66 |
| 13 | PTO performs facilities review. (Note: possibly for feedback into the power flow studies and PTO mitigation plans.) | 10 | 67-76 |
| 14 | PTO prepares draft study results and submits to the CAISO for review and direction. | 3 | 77-79 |
| **Facility cost estimates and schedules** | | | |
| 15 | At the CAISO's direction, PTO(s) prepares cost estimates and schedules for the direct assignment facilities and Network Upgrades identified in the power flow, short circuit duty, post transient, and stability studies. | 78 | 22-99 |
| **Final Report** | | | |
| 16 | At the CAISO's direction, PTO(s) prepares draft report for impacts in its service territory. | 83 | 22-104 |
| 17 | CAISO compiles all results into a draft report that covers grid impacts, as appropriate. CAISO reviews integrated draft report and submits comments, recommendations and direction to the PTO. | 10 | 105-114 |
| 18 | PTO incorporates CAISO's directions, conclusions and recommendations. If CAISO conclusions and recommendations conflict with PTO conclusions, then CAISO and PTO must coordinate to resolve conflicts. Any remaining conflicts must be noted in the final report. | 10 | 115-124 |
| 19 | PTO submits final draft report to the CAISO. The CAISO will finalize the report and tender the CAISO approved report to the ICs. | | |
| **Final Study Report** | | | |
| 20 | CAISO provides final approved report to ICs, PTO, and any applicable Affected Systems. | 10 | 125-134 |

[footnote 1: In accordance with the WECC Short Circuit Duty Procedure]

**Phase II Interconnection Study Process****

**All Interconnection Studies will be under the direction and oversight of, and approval by, the CAISO and may involve more than one PTO.

| Line | Standard Project Refinement and Facilities Study | Typical Calendar Days | Timeline (Days) |
|---|---|---|---|
| 21 | PTOs update Base Cases from Phase I Interconnection Study line 5 to remove projects that have withdrawn. | 10 | 1-10 |
| 22 | CAISO reviews and approves Base Cases. | 5 | 11-15 |
| 23 | CAISO and PTOs update studies performed in Phase I lines 6-14 using Base Cases from line 22. Additional alternatives may be considered to address future generation development potential, meet load serving capability, and economic benefit objectives, and phased development and option value of transmission projects to address uncertainty. | 75 | 16-90 |
| 23.1 | Large Network Upgrades will be further evaluated within the Phase 2 transmission study process as set forth in Appendix 24 of the CAISO Tariff. The large Network Upgrades either (a) consist of new transmission lines requiring new rights of way, are 200 kV or above, and have capital costs of $50 million or greater, or (b) are 500 kV substation facilities that have capital costs of $50 million or greater. | | |
| 24 | PTOs develop draft off-peak and summer peak operating year Base Cases as appropriate where each case includes all Generating Facilities in Phase II Interconnection Study having the same operating date and deliver to CAISO. | 30 | 61-90 |
| 25 | CAISO reviews and approves cases from line 24. | | |
| 26 | At the CAISO's direction, the PTOs perform operational studies using cases from line 25 to determine Network Upgrade requirements for each study year and identify any special operational requirements to connect projects in the year of study. | 30 | 91-120 |
| 27 | At the CAISO's direction, the PTOs perform additional operational studies to identify the optimal approach for building out the overall plan of service on a segmented (i.e. building block) basis acknowledging that portions of the overall plan of service may be staged in segments over time. | 10 | 121-130 |
| **Final Plan of Service Report Including Facility Costs and Schedules** | | | |
| 28 | At the CAISO's direction, PTO(s) prepares draft plan of service report. At the CAISO's direction, PTO(s) to prepare detailed cost estimates and schedules for the direct assignment facilities and Network Upgrades identified in the overall plan of service and including individual segments. | 75 | 91-165 |
| 29 | CAISO reviews draft plan of service report and submits comments, recommendations and direction to | 10 | 166-175 |

| | | | |
|---|---|---|---|
| | the PTO. | | |
| 30 | PTO incorporates CAISO directions, conclusions and recommendations. If CAISO conclusions and recommendations conflict with PTO conclusions, then CAISO and PTO must coordinate to resolve conflicts. Any remaining conflicts must be noted in the final report. | 21 | 176-196 |
| 31 | PTO submits final draft report to the CAISO. The CAISO will finalize the report. | | |
| | | | |
| | | | |

**ATTACHMENT B**

**CONTACTS FOR NOTICES**

**[Section 4.15]**

**California ISO**

Manager, Transmission Engineering
250 Outcropping Way
Folsom, CA 95630
Phone: 916.351.2104
Fax: 916.351.2264

**[NAME OF PTO]**

[Address of PTO]

## Appendix 5 Schedule for Release and Review of Per Unit Costs

**SCHEDULE FOR RELEASE AND REVIEW OF PER UNIT COSTS**

| Line | Schedule for the Release and Review of Per Unit Costs | Anticipated Calendar Date(s) |
|---|---|---|
| • | | |
| • | | |
| • | | |
| • | | |
| • | | |
| • | | |
| • | | |
| • | | |
| • | | |
| • | | |
| | | |
| | **Annual Review, Update, and Posting of Per Unit Costs** | |
| • | PTOs to review and update their per unit costs. | October – mid-January |
| • | PTOs to provide their updated per unit costs to the CAISO for CAISO review and posting to the CAISO Website. | Mid-January |
| • | CAISO to review and post the PTO per unit costs to the CAISO Website for stakeholder review. | Third week of January |
| • | Provide two weeks for stakeholders to review the posted per unit costs. | Last week of January and first week of February |
| • | CAISO to schedule and conduct a one-day stakeholder meeting in February to discuss the posted per unit costs with stakeholders. | Second week of February |
| • | Provide two weeks following the scheduled stakeholder meeting for stakeholders to provide comments to the CAISO. | Last two weeks of February |
| • | Provide two weeks for CAISO and PTOs to review and address stakeholder comments. | First two weeks of March |
| • | Provide three weeks following the stakeholder meeting for PTOs to review, update as needed, and finalize their per unit costs. | First three weeks of March |
| • | PTOs to provide their final per unit costs to the CAISO for posting to the CAISO Website. | End of third week of March |
| • | CAISO to review and post the PTOs' final per unit costs to the CAISO Website. | Fourth week of March |
| • | Final per unit costs are posted and available for use to estimate the costs of Network Upgrades and Interconnection Facilities. | Last week of March to first of April |

## Appendix 6
## GENERATOR INTERCONNECTION STUDY PROCESS AGREEMENT FOR INDEPENDENT STUDY PROCESS

THIS AGREEMENT is made and entered into this day of , 20 by and between _____ , a organized and existing under the laws of the State of , ("Interconnection Customer") and the California Independent System Operator Corporation, a California nonprofit public benefit corporation existing under the laws of the State of California, ("CAISO"). The Interconnection Customer and the CAISO each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

WHEREAS, the Interconnection Customer is proposing to develop a Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by the Interconnection Customer dated _____; and

WHEREAS, the Interconnection Customer desires to interconnect the Generating Facility with the CAISO Controlled Grid pursuant to the Independent Study Process; and

WHEREAS, the Interconnection Customer has requested the CAISO to conduct or cause to be performed Interconnection Studies to assess the system impact of interconnecting the Generating Facility to the CAISO Controlled Grid and to specify and estimate the cost of the equipment, engineering, procurement and construction work needed on the Participating TO's electric system in accordance with Good Utility Practice to physically and electrically connect the Generating Facility to the CAISO Controlled Grid;

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein the Parties agree as follows:

1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in the CAISO's FERC-approved Generation Interconnection Procedures in CAISO Tariff Appendix Y ("GIP") or the Master Definitions Supplement, Appendix A to the CAISO Tariff, as applicable.

2.0 The Interconnection Customer elects and the CAISO shall conduct or cause to be performed Interconnection Studies consistent with the GIP in accordance with the CAISO Tariff.

3.0 The scope of the applicable Interconnection Studies shall be subject to the assumptions set forth in Appendices A and B to this Agreement.

4.0 The Interconnection Studies will be based upon the technical information provided by the Interconnection Customer in the Interconnection Request, as may be modified as the result of the Scoping Meeting, subject to any modifications in accordance with Section 6.9.2 of the GIP and modifications to the proposed Commercial Operation Date of the Generating Facility permitted by the GIP. The CAISO reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Interconnection Studies. If the Interconnection Customer modifies its designated Point of Interconnection, Interconnection Request, or the technical information provided therein is modified, the Interconnection Studies may be modified as specified in the GIP.

5.0 The Interconnection Study report for each Interconnection Study shall provide the information specified in the GIP.

6.0 The Interconnection Customer shall provide an Interconnection Study Deposit and other Interconnection Financial Security for the performance of the Interconnection Studies in accordance with the provisions of Sections 3.5.1 and 9 of the GIP.

Following the issuance of an Interconnection Study report, the CAISO shall charge and the Interconnection Customer shall pay its share of the actual costs of the Interconnection Study pursuant to Section 3.5.1 of the GIP.

Any difference between the deposits made toward the Interconnection Study process and associated administrative costs, including any accelerated studies, and the actual cost of the Interconnection Studies and associated administrative costs shall be paid by or refunded to the Interconnection Customer, in the appropriate allocation, in accordance with Section 3.5.1 of the GIP.

7.0 Pursuant to Section 3.7 of the GIP, the CAISO will coordinate the conduct of any studies required to determine the impact of the Interconnection Request on Affected Systems. The CAISO may provide a copy of the System Impact Study results to an Affected System Operator and the Western Electricity Coordinating Council. Requests for review and input from Affected System Operators or the Western Electricity Coordinating Council may arrive at any time prior to interconnection.

8.0 Substantial portions of technical data and assumptions used to perform the System Impact Study, such as system conditions, existing and planned generation, and unit modeling, may change after the CAISO provides the Interconnection Study results to the Interconnection Customer. Interconnection Study results will reflect available data at the time the CAISO provides the System Impact Study report to the Interconnection Customer. The CAISO shall not be responsible for any additional costs, including, without limitation, costs of new or additional facilities, system upgrades, or schedule changes, that may be incurred by the Interconnection Customer as a result of changes in such data and assumptions.

9.0 The CAISO shall maintain records and accounts of all costs incurred in performing the Interconnection Study in sufficient detail to allow verification of all costs incurred, including associated overheads. The Interconnection Customer shall have the right, upon reasonable notice, within a reasonable time at the CAISO's offices and at its own expense, to audit the CAISO's records as necessary and as appropriate in order to verify costs incurred by the CAISO. Any audit requested by the Interconnection Customer shall be completed, and written notice of any audit dispute provided to the CAISO representative, within one hundred eighty (180) calendar days following receipt by the Interconnection Customer of the CAISO's notification of the final costs of the Interconnection Study.

10.0 In accordance with Section 3.8 of the GIP, the Interconnection Customer may withdraw its Interconnection Request at any time by written notice to the CAISO. Upon receipt of such notice, this Agreement shall terminate, subject to the requirements of Sections 3.5.1 and 13.1 of the GIP.

11.0 This Agreement shall become effective upon the date the fully executed Agreement is received by the CAISO. If the CAISO does not receive the fully executed Agreement and deposit or other Interconnection Financial Security pursuant to Section 3.5.1 of the GIP, then the Interconnection Request will be deemed withdrawn upon the Interconnection Customer's receipt of written notice by the CAISO pursuant to Section 3.8 of the GIP.

12.0 Miscellaneous.

12.1 Dispute Resolution. Any dispute, or assertion of a claim, arising out of or in connection with this Agreement, shall be resolved in accordance with Section 13.5 of the GIP.

12.2 Confidentiality. Confidential Information shall be treated in accordance with Section 13.1 of the GIP.

12.3 Binding Effect. This Agreement and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

12.4 Conflicts. In the event of a conflict between the body of this Agreement and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this Agreement shall prevail and be deemed the final intent of the Parties.

12.5 Rules of Interpretation. This Agreement, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this Agreement, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this Agreement), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any applicable laws and regulations means such applicable laws and regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article or Section of this Agreement or such Appendix to this Agreement, or such Section of the GIP or such Appendix to the GIP, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this Agreement as a whole and not to any particular Article, Section, or other provision hereof or thereof; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".

12.6 Entire Agreement. This Agreement, including all Appendices and Schedules attached hereto, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this Agreement.

12.7 No Third Party Beneficiaries. This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

12.8 Waiver. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Agreement. Termination or default of this Agreement for any reason by the Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Participating TO or CAISO. Any waiver of this Agreement shall, if requested, be provided in writing.

Any waivers at any time by any Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

12.9 Headings. The descriptive headings of the various Articles and Sections of this Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Agreement.

12.10 Multiple Counterparts. This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

12.11 Amendment. The Parties may by mutual agreement amend this Agreement by a written instrument duly executed by both of the Parties.

12.12 Modification by the Parties. The Parties may by mutual agreement amend the Appendices to this Agreement by a written instrument duly executed by both of the Parties. Such amendment shall become effective and a part of this Agreement upon satisfaction of all applicable laws and regulations.

12.13 Reservation of Rights. The CAISO shall have the right to make a unilateral filing with FERC to modify this Agreement with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

12.14 No Partnership. This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

12.15 Assignment. This Agreement may be assigned by a Party only with the written consent of the other Party; provided that a Party may assign this Agreement without the consent of the other Party to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement; and provided further that the Interconnection Customer shall have the right to assign this Agreement, without the consent of the other

Party, for collateral security purposes to aid in providing financing for the Generating Facility, provided that the Interconnection Customer will require any secured party, trustee or mortgagee to notify the other Party of any such assignment. Any financing arrangement entered into by the Interconnection Customer pursuant to this Section will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify the other Party of the date and particulars of any such exercise of assignment right(s). Any attempted assignment that violates this Section is void and ineffective. Any assignment under this Agreement shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

IN WITNESS THEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**California Independent System Operator Corporation**

By: _____

Printed Name: _____

Title: _____

Date: _____

**[Insert name of the Interconnection Customer]**

By: _____

Printed Name: _____

Title: _____

Date: _____

**Appendix A**

**Generator Interconnection**
**Study Process Agreement for Independent Study Process**

**ASSUMPTIONS USED IN CONDUCTING THE SYSTEM IMPACT STUDY**

The System Impact Study will be based upon the information set forth in the Interconnection Request and agreed upon in the Scoping Meeting held on , subject to any modifications in accordance with Section 6.9.2 of the GIP, and the following assumptions:

Designation of Point of Interconnection and configuration to be studied.

Deliverability Status requested (Full Capacity, Partial Deliverability, or Energy-Only)

**Appendix B Data Form, Pre-Facilities Study**
**Generator Interconnection**
**Study Process Agreement for Independent Study Process**

**DATA FORM TO BE PROVIDED BY THE INTERCONNECTION CUSTOMER PRIOR TO COMMENCEMENT OF THE FACILITIES STUDY**

Generating Facility size (MW): _____

Provide two copies of this completed form and other required plans and diagrams in accordance with Section 4.5 of the GIP.

Provide location plan and one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

One set of metering is required for each generation connection to the new bus or existing CAISO Controlled Grid station. Number of generation connections: _____

On the one line indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)

On the one line indicate the location of auxiliary power. (Minimum load on CT/PT)

Will an alternate source of auxiliary power be available during CT/PT maintenance? Yes _____ No

Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation? Yes No
(Please indicate on one line).

What type of control system or PLC will be located at the Interconnection Customer's Generating Facility?
_____
_____

What protocol does the control system or PLC use?
_____
_____

Please provide a 7.5-minute quadrangle of the site. Sketch the plant, station, transmission line, and property line.

Physical dimensions of the proposed interconnection station:

Bus length from generation to interconnection station:

Line length from interconnection station to the Participating TO's transmission line.

Tower number observed in the field. (Painted on tower leg)*

Number of third party easements required for transmission lines*:

* To be completed in coordination with the Participating TO or CAISO.

Is the Generating Facility in the Participating TO's service area?

Yes No

Local service provider for auxiliary and other power: _____

Please provide proposed schedule dates:

Environmental survey start: _____

Environmental impact report submittal: _____

Procurement of project equipment: _____

Begin Construction Date: _____

Generator step-up transformer Date: _____
receives back feed power

Generation Testing Date:_____

Commercial Operation Date: _____

Level of Deliverability Status: Choose one of the following:

_____Energy-Only

_____Full Capacity

## Appendix 7

## Application, Procedures & Terms for 10kW Interverter Process

### Application, Procedures, and Terms and Conditions for Interconnecting a Certified Inverter-Based Small Generating Facility No Larger than 10 kW ("10 kW Inverter Process")

1.0 The Interconnection Customer ("Customer") completes the Interconnection Request ("Application") and submits it to the Participating TO ("Company").

2.0 The Company acknowledges to the Customer receipt of the Application within three Business Days of receipt.

3.0 The Company evaluates the Application for completeness and notifies the Customer within ten Business Days of receipt that the Application is or is not complete and, if not, advises what material is missing.

4.0 The Company verifies that the Small Generating Facility can be interconnected safely and reliably using the screens contained in the Fast Track Process in the Generator Interconnection Procedures (GIP). The Company has 15 Business Days to complete this process. Unless the Company determines and demonstrates that the Small Generating Facility cannot be interconnected safely and reliably, the Company approves the Application and returns it to the Customer. Note to Customer: Please check with the Company before submitting the Application if disconnection equipment is required.

5.0 After installation, the Customer returns the Certificate of Completion to the Company. Prior to parallel operation, the Company may inspect the Small Generating Facility for compliance with standards which may include a witness test, and may schedule appropriate metering replacement, if necessary.

6.0 The Company notifies the Customer in writing that interconnection of the Small Generating Facility is authorized. If the witness test is not satisfactory, the Company has the right to disconnect the Small Generating Facility. The Customer has no right to operate in parallel until a witness test has been performed, or previously waived on the Application. The Company is obligated to complete this witness test within ten Business Days of the receipt of the Certificate of Completion. If the Company does not inspect within ten Business Days or by mutual agreement of the Parties, the witness test is deemed waived.

7.0 Contact Information – The Customer must provide the contact information for the legal applicant (i.e., the Interconnection Customer). If another entity is responsible for interfacing with the Company, that contact information must be provided on the Application.

8.0 Ownership Information – Enter the legal names of the owner(s) of the Small Generating Facility. Include the percentage ownership (if any) by any utility or public utility holding company, or by any entity owned by either.

9.0 UL1741 Listed – This standard ("Inverters, Converters, and Controllers for Use in Independent Power Systems") addresses the electrical interconnection design of various forms of generating equipment. Many manufacturers submit their equipment to a Nationally Recognized Testing Laboratory (NRTL) that verifies compliance with UL1741. This "listing" is then marked on the equipment and supporting documentation.

**Application for Interconnecting a Certified Inverter-Based Small Generating Facility No Larger than 10kW**

This Application is considered complete when it provides all applicable and correct information required below. Additional information to evaluate the Application may be required.

Processing Fee
A non-refundable processing fee of $100 must accompany this Application.

Interconnection Customer
Name: _____
Contact Person: _____
Address: _____
City:_____State:_____Zip_____:
Telephone (Day): _____(Evening):_____
Fax:_____ E-Mail Address:_____

Contact (if different from Interconnection Customer)
Name: _____
Address: _____
City:_____State:_____Zip:_____
Telephone (Day):_____(Evening):_____
Fax:_____ __E-Mail Address:_____

Owner of the facility (include % ownership by any electric utility):_____

Small Generating Facility Information
Location (if different from above): _____
Electric Service Company: _____
Account Number: _____
Inverter Manufacturer:_ _____ Model_____
Nameplate Rating: _____ (kW) _____ (kVA) _____ (AC Volts)_____
Single Phase _____ Three Phase_____
System Design Capacity: _____ (kW) _____ (kVA)_____
Prime Mover: Photovoltaic Reciprocating Engine Fuel Cell
Turbine Other _____
Energy Source: Solar Wind Hydro Diesel Natural Gas
Fuel Oil Other (describe) _____
Is the equipment UL1741 Listed? _____Yes_____ No _____
If Yes, attach manufacturer's cut-sheet showing UL1741 listing

Estimated Installation Date: _____Estimated In-Service Date: _____

The 10 kW Inverter Process is available only for inverter-based Small Generating Facilities no larger than 10 kW that meet the codes, standards, and certification requirements of Appendices 9 and 10 of the Generator Interconnection Procedures (GIP), or the Participating TO has reviewed the design or tested the proposed Small Generating Facility and is satisfied that it is safe to operate.

List components of the Small Generating Facility equipment package that are currently certified:

| | Equipment Type | Certifying Entity |
|---|---|---|
| 1. | _____ | _____ |
| 2. | _____ | _____ |
| 3. | _____ | _____ |
| 4. | _____ | _____ |
| 5. | _____ | _____ |

Interconnection Customer Signature

I hereby certify that, to the best of my knowledge, the information provided in this Application is true. I agree to abide by the Terms and Conditions for Interconnecting an Inverter-Based Small Generating Facility No Larger than 10kW and return the Certificate of Completion when the Small Generating Facility has been installed.

Signed: _____

Title: _____ Date: _____

Contingent Approval to Interconnect the Small Generating Facility

(For Company use only)

Interconnection of the Small Generating Facility is approved contingent upon the Terms and Conditions for Interconnecting an Inverter-Based Small Generating Facility No Larger than 10kW and return of the Certificate of Completion.

Company Signature: _____

Title: _____ Date: _____

Application ID number: _____

Company waives inspection/witness test? Yes___ No___

**Small Generating Facility Certificate of Completion**

Is the Small Generating Facility owner-installed? Yes_____ No _____

Interconnection Customer: _____

Contact Person: _____

Address: _____

Location of the Small Generating Facility (if different from above):

_____

City: _____ State: _____Zip Code: _____

Telephone (Day): _____ (Evening): _____

Fax: _____ E-Mail Address: _____

Electrician:

Name: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Day): _____ (Evening): _____

Fax: _____ E-Mail Address: _____

License number: _____

Date Approval to Install Facility granted by the Company: _____

Application ID number: _____

Inspection:

The Small Generating Facility has been installed and inspected in compliance with the local

building/electrical code of _____

Signed (Local electrical wiring inspector, or attach signed electrical inspection):

_____

Print Name: _____

Date: _____

As a condition of interconnection, you are required to send/fax a copy of this form along with a copy of the signed electrical permit to (insert Company information below):

Name: _____

Company: _____

Address:_____

City _____State _____ZIP: _____

Fax: _____

Approval to Energize the Small Generating Facility (For Company use only)
Energizing the Small Generating Facility is approved contingent upon the Terms and Conditions for Interconnecting an Inverter-Based Small Generating Facility No Larger than 10kW

Company Signature: _____

Title: _____ Date: _____

**Terms and Conditions for Interconnecting an Inverter-Based Small Generating Facility No Larger than 10kW**

## 1.0 Construction of the Facility

The Interconnection Customer (the "Customer") may proceed to construct (including operational testing not to exceed two hours) the Small Generating Facility when the Participating TO (the "Company") approves the Interconnection Request (the "Application") and returns it to the Customer.

## 2.0 Interconnection and Operation

The Customer may operate Small Generating Facility and interconnect with the Company's electric system once all of the following have occurred:

2.1 Upon completing construction, the Customer will cause the Small Generating Facility to be inspected or otherwise certified by the appropriate local electrical wiring inspector with jurisdiction, and

2.2 The Customer returns the Certificate of Completion to the Company, and

2.3 The Company has either:

2.3.1 Completed its inspection of the Small Generating Facility to ensure that all equipment has been appropriately installed and that all electrical connections have been made in accordance with applicable codes. All inspections must be conducted by the Company, at its own expense, within ten Business Days after receipt of the Certificate of Completion and shall take place at a time agreeable to the Parties. The Company shall provide a written statement that the Small Generating Facility has passed inspection or shall notify the Customer of what steps it must take to pass inspection as soon as practicable after the inspection takes place; or

2.3.2 If the Company does not schedule an inspection of the Small Generating Facility within ten business days after receiving the Certificate of Completion, the witness test is deemed waived (unless the Parties agree otherwise); or

2.3.3 The Company waives the right to inspect the Small Generating Facility.

2.4 The Company has the right to disconnect the Small Generating Facility in the event of improper installation or failure to return the Certificate of Completion.

2.5 Revenue quality metering equipment must be installed and tested in accordance with applicable ANSI standards.

**3.0 Safe Operations and Maintenance**

The Customer shall be fully responsible to operate, maintain, and repair the Small Generating Facility as required to ensure that it complies at all times with the interconnection standards to which it has been certified.

**4.0 Access**

The Company shall have access to the disconnect switch (if the disconnect switch is required) and metering equipment of the Small Generating Facility at all times. The Company shall provide reasonable notice to the Customer when possible prior to using its right of access.

**5.0 Disconnection**

The Company may temporarily disconnect the Small Generating Facility upon the following conditions:

5.1 For scheduled outages upon reasonable notice.

5.2 For unscheduled outages or emergency conditions.

5.3 If the Small Generating Facility does not operate in the manner consistent with these Terms and Conditions.

5.4 The Company shall inform the Customer in advance of any scheduled disconnection, or as is reasonable after an unscheduled disconnection.

**6.0 Indemnification**

The Parties shall at all times indemnify, defend, and save the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or inactions of its obligations under this agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

**7.0 Insurance**

The Parties each agree to maintain commercially reasonable amounts of insurance.

**8.0 Limitation of Liability**

Each party’s liability to the other party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney’s fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either party be liable to the other party for any indirect, incidental, special,

consequential, or punitive damages of any kind whatsoever, except as allowed under paragraph 6.0.

## 9.0 Termination

The agreement to operate in parallel may be terminated under the following conditions:

9.1 By the Customer

By providing written notice to the Company.

9.2 By the Company

If the Small Generating Facility fails to operate for any consecutive 12-month period or the Customer fails to remedy a violation of these Terms and Conditions.

9.3 Permanent Disconnection

In the event this Agreement is terminated, the Company shall have the right to disconnect its facilities or direct the Customer to disconnect its Small Generating Facility.

9.4 Survival Rights

This Agreement shall continue in effect after termination to the extent necessary to allow or require either Party to fulfill rights or obligations that arose under the Agreement.

## 10.0 Assignment/Transfer of Ownership of the Facility

This Agreement shall survive the transfer of ownership of the Small Generating Facility to a new owner when the new owner agrees in writing to comply with the terms of this Agreement and so notifies the Company.

# Appendix 8
# Transition of Existing SGIP Interconnection Requests to the GIP

## Generator Interconnection Procedures (GIP)
## Relating to the SGIP Serial Study Group and SGIP Transition Cluster

### Section 1. Objective, Applicability and Definitions

#### 1.1 Objective and Applicability

The objective of this Appendix 8 to the Generator Interconnection Procedures (GIP) is to implement the requirements for interconnecting to the CAISO Controlled Grid those Generating Facilities assigned to the SGIP Serial Study Group or SGIP Transition Cluster.

#### 1.2 Definitions

#### 1.2.1 Master Definitions Supplement and Other General Definition Rules

Unless the context otherwise requires, any word or expression defined in the Master Definitions Supplement, Appendix A to the CAISO Tariff, shall have the same meaning where used in this Appendix 8 to the GIP. Further, unless the context otherwise requires, any word or expression defined in GIP Section 1.2 shall have the same meaning where used in this Appendix 8 to the GIP. References to the GIP in this Appendix 8 are to Appendix Y of the CAISO Tariff.

#### 1.2.2 Special Definitions for this GIP Appendix 8

In this Appendix 8 to the GIP, the following words and expressions shall have the meanings set opposite them:

"SGIP Serial Study Group" shall mean those Interconnection Customers with valid Interconnection Requests submitted pursuant to Appendix S of the CAISO Tariff prior to December 18, 2010 and who have executed System Impact Study or Facilities Study Agreements that provide for the completion of such studies by December 18, 2010.

"SGIP Transition Cluster" shall mean those Interconnection Customers with valid Interconnection Requests submitted pursuant to Appendix S of the CAISO Tariff prior to December 18 , 2010 and which have not executed System Impact Study or Facilities Study Agreements that provide for the completion of such studies by December 18, 2010.

### 2. Transition of Projects in SGIP Serial Study Group

**2.1** An Interconnection Request deemed to be included in the SGIP Serial Study Group that wishes to be studied as an Energy-Only Deliverability Status Generating Facility shall not be required to conform to the provisions of Appendix Y of the CAISO Tariff. Rather, such Interconnection Requests will continue to be processed per the procedures set forth in Appendix S to the CAISO Tariff, unless they specifically indicate, in writing, within five (5) Business Days from the effective date of this Appendix 8 to the GIP, that they wish to be included in either the SGIP Transition Cluster, studied for Full Capacity Deliverability Status, or, if eligible, studied under the Independent Study Process set forth in Section 4 of Appendix Y.

**2.2** An Interconnection Request deemed to be included in the SGIP Serial Study Group that wishes to be studied as a Full Capacity Deliverability Status Generating Facility will

continue to be processed per the procedures set forth in Appendix S to the CAISO Tariff for Energy-Only Deliverability Status, with a Full Capacity Delivery Status Deliverability Assessment to be performed as part of the next Interconnection Study Cycle following the completion of the serial portion of the Generating Facility's studies pursuant to Appendix S. Interconnection Customers electing this one-time option will be required to post a study deposit in the amount set forth in Section 3.5.1 of this GIP, less any study deposit amounts already paid and any study deposit reasonably anticipated to be paid.

## 3. Transition of Generating Facilities in SGIP Transition Cluster

**3.1** An Interconnection Request deemed to be included in the SGIP Transition Cluster (including those Generating Facilities defined as part of the SGIP Serial Study Group who choose to be processed in the SGIP Transition Cluster) that wishes to be studied as an Energy-Only Deliverability Status Generating Facility shall be processed per the procedures set forth in Appendix Y to the CAISO Tariff and studied as part of the Phase II Interconnection Study for the CAISO's first and second Queue Clusters, which is scheduled to begin on January 1, 2011 and be completed on July 31, 2011. Alternatively, Interconnection Requests deemed to be included in the SGIP Transition Cluster may, by indicating in writing within five (5) Business Days from the effective date of this Appendix 8 to the GIP, elect to be studied for Full Capacity Deliverability Status, or, if eligible, as part of the Independent Study Process set forth in Section 4 of Appendix Y.

**3.2** An Interconnection Request deemed to be included in the SGIP Transition Cluster that wishes to be studied as a Full Capacity Deliverability Status Generating Facility shall be studied for Energy-Only Deliverability Status as part of the Phase II Interconnection Study for the CAISO's first and second Queue Clusters, with a Full Capacity Deliverability Status Deliverability Assessment to be performed as part of the CAISO's fourth Queue Cluster, which is scheduled to begin on June 1, 2011.

**3.3** An Interconnection Customer in the SGIP Transition Cluster must post, within thirty (30) calendar days of the effective date of this Appendix 8, all of the following: (i) an Interconnection Study Deposit equal to the amount set forth in Section 3.5.1 of Appendix Y, if it has not done so already; and (ii) a demonstration of Site Exclusivity, if it has not done so already. An Interconnection Customer that does not satisfy these posting requirements will be withdrawn from the SGIP Transition Cluster. An Interconnection Customer who withdraws from the SGIP Transition Cluster will be refunded the entire amount of its Interconnection Study Deposit upon withdrawal, less any amounts that the CAISO and Participating TO(s) have incurred in performing studies on the Interconnection Customer's behalf.

**3.4** At the conclusion of the Phase II Interconnection Study for the CAISO's first and second Queue Clusters, each Interconnection Customer remaining in the SGIP Transition Cluster shall receive a Phase II Interconnection Study report, which will indicate each Interconnection Customer's allocated share of costs for Interconnection Facilities and Reliability Network Upgrades. If the Interconnection Customer wishes to continue in the queue, the Interconnection Customer must sign and execute a Small Generator Interconnection Agreement within ninety (90) calendar days of receiving the final report and post the required Interconnection Financial Security as set forth in Section 9.3 of Appendix Y.

## Appendix 9 Certification Codes and Standards

IEEE1547 Standard for Interconnecting Distributed Resources with Electric Power Systems (including use of IEEE 1547.1 testing protocols to establish conformity)

UL 1741 Inverters, Converters, and Controllers for Use in Independent Power Systems

IEEE Std 929-2000 IEEE Recommended Practice for Utility Interface of Photovoltaic (PV) Systems

NFPA 70 (2002), National Electrical Code

IEEE Std C37.90.1-1989 (R1994), IEEE Standard Surge Withstand Capability (SWC) Tests for Protective Relays and Relay Systems

IEEE Std C37.90.2 (1995), IEEE Standard Withstand Capability of Relay Systems to Radiated Electromagnetic Interference from Transceivers

IEEE Std C37.108-1989 (R2002), IEEE Guide for the Protection of Network Transformers

IEEE Std C57.12.44-2000, IEEE Standard Requirements for Secondary Network Protectors

IEEE Std C62.41.2-2002, IEEE Recommended Practice on Characterization of Surges in Low Voltage (1000V and Less) AC Power Circuits

IEEE Std C62.45-1992 (R2002), IEEE Recommended Practice on Surge Testing for Equipment Connected to Low-Voltage (1000V and Less) AC Power Circuits

ANSI C84.1-1995 Electric Power Systems and Equipment – Voltage Ratings (60 Hertz)

IEEE Std 100-2000, IEEE Standard Dictionary of Electrical and Electronic Terms

NEMA MG 1-1998, Motors and Small Resources, Revision 3

IEEE Std 519-1992, IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems

NEMA MG 1-2003 (Rev 2004), Motors and Generators, Revision 1

## Appendix 10

## Certification of Small Generator Equipment Packages

1.0 Small Generating Facility equipment proposed for use separately or packaged with other equipment in an interconnection system shall be considered certified for interconnected operation if (1) it has been tested in accordance with industry standards for continuous utility interactive operation in compliance with the appropriate codes and standards referenced below by any Nationally Recognized Testing Laboratory (NRTL) recognized by the United States Occupational Safety and Health Administration to test and certify interconnection equipment pursuant to the relevant codes and standards listed in GIP Appendix 9, (2) it has been labeled and is publicly listed by such NRTL at the time of the interconnection application, and (3) such NRTL makes readily available for verification all test standards and procedures it utilized in performing such equipment certification, and, with consumer approval, the test data itself. The NRTL may make such information available on its website and by encouraging such information to be included in the manufacturer's literature accompanying the equipment.

2.0 The Interconnection Customer must verify that the intended use of the equipment falls within the use or uses for which the equipment was tested, labeled, and listed by the NRTL.

3.0 Certified equipment shall not require further type-test review, testing, or additional equipment to meet the requirements of this interconnection procedure; however, nothing herein shall preclude the need for an on-site commissioning test by the parties to the interconnection nor follow-up production testing by the NRTL.

4.0 If the certified equipment package includes only interface components (switchgear, inverters, or other interface devices), then an Interconnection Customer must show that the generator or other electric source being utilized with the equipment package is compatible with the equipment package and is consistent with the testing and listing specified for this type of interconnection equipment.

5.0 Provided the generator or electric source, when combined with the equipment package, is within the range of capabilities for which it was tested by the NRTL, and does not violate the interface components' labeling and listing performed by the NRTL, no further design review, testing or additional equipment on the customer side of the point of common coupling shall be required to meet the requirements of this interconnection procedure.

6.0 An equipment package does not include equipment provided by the utility.

7.0 Any equipment package approved and listed in a state by that state's regulatory body for interconnected operation in that state prior to the effective date of these small generator interconnection procedures shall be considered certified under these procedures for use in that state.

**Appendix Z LGIA For Interconnection Requests Process Under the GIP**

**LARGE GENERATOR INTERCONNECTION AGREEMENT (LGIA)**

**[INTERCONNECTION CUSTOMER]**

**[PARTICIPATING TO]**

**CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

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**LARGE GENERATOR INTERCONNECTION AGREEMENT**

**[INTERCONNECTION CUSTOMER]**

**[PARTICIPATING TO]**

**CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

THIS LARGE GENERATOR INTERCONNECTION AGREEMENT ("LGIA") is made and entered into this ____ day of _____ 20___, by and among _____, a _____ organized and existing under the laws of the State/Commonwealth of _____ ("Interconnection Customer" with a Large Generating Facility), _____, a corporation organized and existing under the laws of the State of California ("Participating TO"), and California Independent System Operator Corporation, a California nonprofit public benefit corporation organized and existing under the laws of the State of California ("CAISO"). Interconnection Customer, Participating TO, and CAISO each may be referred to as a "Party" or collectively as the "Parties."

**RECITALS**

WHEREAS, CAISO exercises Operational Control over the CAISO Controlled Grid; and

WHEREAS, the Participating TO owns, operates, and maintains the Participating TO's Transmission System; and

WHEREAS, Interconnection Customer intends to own, lease and/or control and operate the Generating Facility identified as a Large Generating Facility in Appendix C to this LGIA; and

WHEREAS, Interconnection Customer, Participating TO, and CAISO have agreed to enter into this LGIA for the purpose of interconnecting the Large Generating Facility with the Participating TO's Transmission System;

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein, it is agreed:

When used in this LGIA, terms with initial capitalization that are not defined in Article 1 shall have the meanings specified in the Article in which they are used.

**Article 1. Definitions**

**Adverse System Impact** shall mean the negative effects due to technical or operational limits on conductors or equipment being exceeded that may compromise the safety and reliability of the electric system.

**Affected System** shall mean an electric system other than the CAISO Controlled Grid that may be affected by the proposed interconnection, including the Participating TO's electric system that is not part of the CAISO Controlled Grid.

**Affiliate** shall mean, with respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

**Applicable Laws** and Regulations shall mean all duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.

**Applicable Reliability Council** shall mean the Western Electricity Coordinating Council or its successor.

**Applicable Reliability Standards** shall mean the requirements and guidelines of NERC, the Applicable Reliability Council, and the Balancing Authority Area of the Participating TO's Transmission System to which the Generating Facility is directly connected, including requirements adopted pursuant to Section 215 of the Federal Power Act.

**Balancing Authority** shall mean the responsible entity that integrates resource plans ahead of time, maintains load-interchange-generation balance within a Balancing Authority Area, and supports Interconnection frequency in real time.

**Balancing Authority Area** shall mean the collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.

**Base Case** shall mean the base case power flow, short circuit, and stability data bases used for the Interconnection Studies.

**Breach** shall mean the failure of a Party to perform or observe any material term or condition of this LGIA.

**Breaching Party** shall mean a Party that is in Breach of this LGIA.

**Business Day** shall mean Monday through Friday, excluding federal holidays and the day after Thanksgiving Day.

**CAISO Controlled Grid** shall mean the system of transmission lines and associated facilities of the parties to the Transmission Control Agreement that have been placed under the CAISO's Operational Control.

**CAISO Tariff** shall mean the CAISO's tariff, as filed with FERC, and as amended or supplemented from time to time, or any successor tariff.

**Calendar Day** shall mean any day including Saturday, Sunday or a federal holiday.

**Commercial Operation** shall mean the status of an Electric Generating Unit or project phase at a Generating Facility that has commenced generating electricity for sale, excluding electricity generated during Trial Operation.

**Commercial Operation** Date of an Electric Generating Unit or project phase shall mean the date on which the Electric Generating Unit or project phase at the Generating Facility commences Commercial Operation as agreed to by the applicable Participating TO, the CAISO, and the Interconnection Customer pursuant to Appendix E to this LGIA, and in accordance with the implementation plan agreed to by the Participating TO and the CAISO for multiple individual Electric Generating Units or project phases at a Generating Facility where an Interconnection Customer intends to establish separate Commercial Operation Dates for those Electric Generating Units or project phases.

**Confidential Information** shall mean any confidential, proprietary or trade secret information of a plan, specification, pattern, procedure, design, device, list, concept, policy or compilation relating to the present or planned business of a Party, which is designated as confidential by the Party supplying the

information, whether conveyed orally, electronically, in writing, through inspection, or otherwise, subject to Article 22.1.2.

**Default** shall mean the failure of a Breaching Party to cure its Breach in accordance with Article 17 of this LGIA.

**Distribution System** shall mean those non-CAISO-controlled transmission and distribution facilities owned by the Participating TO.

**Distribution Upgrades** shall mean the additions, modifications, and upgrades to the Participating TO's Distribution System. Distribution Upgrades do not include Interconnection Facilities.

**Effective Date** shall mean the date on which this LGIA becomes effective upon execution by all Parties subject to acceptance by FERC, or if filed unexecuted, upon the date specified by FERC.

**Electric Generating Unit** shall mean an individual electric generator and its associated plant and apparatus whose electrical output is capable of being separately identified and metered.

**Emergency Condition** shall mean a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (2) that, in the case of the CAISO, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the CAISO Controlled Grid or the electric systems of others to which the CAISO Controlled Grid is directly connected; (3) that, in the case of the Participating TO, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Participating TO's Transmission System, Participating TO's Interconnection Facilities, Distribution System, or the electric systems of others to which the Participating TO's electric system is directly connected; or (4) that, in the case of the Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Generating Facility or Interconnection Customer's Interconnection Facilities. System restoration and black start shall be considered Emergency Conditions; provided, that Interconnection Customer is not obligated by this LGIA to possess black start capability.

**Environmental Law** shall mean Applicable Laws or Regulations relating to pollution or protection of the environment or natural resources.

**Federal Power Act** shall mean the Federal Power Act, as amended, 16 U.S.C. §§ 791a et seq.

**FERC** shall mean the Federal Energy Regulatory Commission or its successor.

**Force Majeure** shall mean any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure event does not include acts of negligence or intentional wrongdoing by the Party claiming Force Majeure.

**Generating Facility** shall mean the Interconnection Customer's Electric Generating Unit(s) used for the production of electricity identified in the Interconnection Customer's Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

**Generating Facility Capacity** shall mean the net capacity of the Generating Facility and the aggregate net capacity of the Generating Facility where it includes multiple energy production devices.

**Generator Interconnection Procedures (GIP)** shall mean the CAISO protocol that sets forth the interconnection procedures applicable to an Interconnection Request pertaining to a Large Generating Facility that is included in CAISO Tariff Appendix Y.

**Generator Interconnection Study Process Agreement** shall mean the agreement between the Interconnection Customer and the CAISO for the conduct of the Interconnection Studies.

**Good Utility Practice** shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be any one of a number of the optimum practices, methods, or acts to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

**Governmental Authority** shall mean any federal, state, local or other governmental, regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the Interconnection Customer, CAISO, Participating TO, or any Affiliate thereof.

**Governing Independent Study Process Interconnection Studies** shall mean the engineering study(ies) conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), that evaluates the impact of the proposed interconnection on the safety and reliability of the Participating TO's Transmission System and, if applicable, an Affected System, which shall consist primarily of a Facilities Study as described in Section 4.5 of the Generation Interconnection Procedures or a System Impact Study as described in Section 4.4 of the Generation Interconnection Procedures.

**Hazardous Substances** shall mean any chemicals, materials or substances defined as or included in the definition of "hazardous substances," "hazardous wastes," "hazardous materials," "hazardous constituents," "restricted hazardous materials," "extremely hazardous substances," "toxic substances," "radioactive substances," "contaminants," "pollutants," "toxic pollutants" or words of similar meaning and regulatory effect under any applicable Environmental Law, or any other chemical, material or substance, exposure to which is prohibited, limited or regulated by any applicable Environmental Law.

**Initial Synchronization Date** shall mean the date upon which an Electric Generating Unit is initially synchronized and upon which Trial Operation begins.

**In-Service Date** shall mean the date upon which the Interconnection Customer reasonably expects it will be ready to begin use of the Participating TO's Interconnection Facilities to obtain back feed power.

**Interconnection Customer's Interconnection Facilities** shall mean all facilities and equipment, as identified in Appendix A of this LGIA, that are located between the Generating Facility and the Point of Change of Ownership, including any modification, addition, or upgrades to such facilities and equipment necessary to physically and electrically interconnect the Generating Facility to the Participating TO's Transmission System. Interconnection Customer's Interconnection Facilities are sole use facilities.

**Interconnection Facilities** shall mean the Participating TO's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Generating Facility to the Participating TO's Transmission System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

**Interconnection Financial Security** shall mean any of the financial instruments listed in Section 9.1 of the GIP that are posted by an Interconnection Customer.

**Interconnection Handbook** shall mean a handbook, developed by the Participating TO and posted on the Participating TO's web site or otherwise made available by the Participating TO, describing technical and operational requirements for wholesale generators and loads connected to the Participating TO's portion of the CAISO Controlled Grid, as such handbook may be modified or superseded from time to time. Participating TO's standards contained in the Interconnection Handbook shall be deemed consistent with Good Utility Practice and Applicable Reliability Standards. In the event of a conflict between the terms of this LGIA and the terms of the Participating TO's Interconnection Handbook, the terms in this LGIA shall apply.

**Interconnection Request** shall mean a request, in the form of Appendix 1 to the Generator Interconnection Procedures, in accordance with the CAISO Tariff.

**Interconnection Service** shall mean the service provided by the Participating TO and CAISO associated with interconnecting the Interconnection Customer's Generating Facility to the Participating TO's Transmission System and enabling the CAISO Controlled Grid to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of this LGIA, the Participating TO's Transmission Owner Tariff, and the CAISO Tariff.

**Interconnection Study** shall mean

(i) For Interconnection Requests processed under the Cluster Study Process described in the Generation Interconnection Procedures. either of the following studies: the Phase I Interconnection Study or the Phase II Interconnection Study conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), pursuant to the Generator Interconnection Procedures;

(ii) For Interconnection Requests processed under the Independent Study Process described in the Generation Interconnection Procedures, the governing study(ies) conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), pursuant to the Generation Interconnection Procedures, which shall consist primarily of a Facilities Study as described in Section 4.5 of the GIP or a System Impact Study as described in Section 4.4 of the GIP.

**IRS** shall mean the Internal Revenue Service.

**Large Generating Facility** shall mean a Generating Facility having a Generating Facility Capacity of more than 20 MW.

**Loss** shall mean any and all damages, losses, and claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties.

**Material Modification** shall mean those modifications that have a material impact on the cost or timing of any Interconnection Request or any other valid interconnection request with a later queue priority date.

**Metering Equipment** shall mean all metering equipment installed or to be installed for measuring the output of the Generating Facility pursuant to this LGIA at the metering points, including but not limited to instrument transformers, MWh-meters, data acquisition equipment, transducers, remote terminal unit, communications equipment, phone lines, and fiber optics.

**NERC** shall mean the North American Electric Reliability Corporation or its successor organization.

**Net Scheduled PGA** shall mean a Net Scheduled Participating Generator Agreement specifying the special provisions for the operating relationship between a Net Scheduled Generating Unit and the CAISO, a pro forma version of which is set forth in Appendix B.3 of the CAISO Tariff.

**Network Upgrades** shall be Participating TO's Delivery Network Upgrades and Participating TO's Reliability Network Upgrades.

**Operational Control** shall mean the rights of the CAISO under the Transmission Control Agreement and the CAISO Tariff to direct the parties to the Transmission Control Agreement how to operate their transmission lines and facilities and other electric plant affecting the reliability of those lines and facilities for the purpose of affording comparable non-discriminatory transmission access and meeting applicable reliability criteria.

**Participating TO's Delivery Network Upgrades** shall mean the additions, modifications, and upgrades to the Participating TO's Transmission System at or beyond the Point of Interconnection, other than Reliability Network Upgrades, identified in the Interconnection Studies, as identified in Appendix A, to relieve constraints on the CAISO Controlled Grid.

**Participating TO's Interconnection Facilities** shall mean all facilities and equipment owned, controlled or operated by the Participating TO from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to this LGIA, including any modifications, additions or upgrades to such facilities and equipment. Participating TO's Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

**Participating TO's Reliability Network Upgrades** shall mean the additions, modifications, and upgrades to the Participating TO's Transmission System at or beyond the Point of Interconnection, identified in the Interconnection Studies, as identified in Appendix A, necessary to interconnect the Large Generating Facility safely and reliably to the Participating TO's Transmission System, which would not have been necessary but for the interconnection of the Large Generating Facility, including additions, modifications, and upgrades necessary to remedy short circuit or stability problems resulting from the interconnection of the Large Generating Facility to the Participating TO's Transmission System. Participating TO's Reliability Network Upgrades also include, consistent with Applicable Reliability Standards and Applicable Reliability Council practice, the Participating TO's facilities necessary to mitigate any adverse impact the Large Generating Facility's interconnection may have on a path's Applicable Reliability Council rating. Participating TO's Reliability Network Upgrades do not include any Participating TO's Delivery Network Upgrades.

**Participating TO's Transmission System** shall mean the facilities owned and operated by the Participating TO and that have been placed under the CAISO's Operational Control, which facilities form part of the CAISO Controlled Grid.

**Party or Parties** shall mean the Participating TO, CAISO, Interconnection Customer or the applicable combination of the above.

**Phase I Interconnection Study** shall mean the engineering study conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), that evaluates the impact of the proposed interconnection on the safety and reliability of the Participating TO's Transmission System and, if applicable, an Affected System. The study shall identify and detail the system impacts that would result if the Generating Facility(ies) were interconnected without identified project modifications or system modifications, as provided in the On-Peak Deliverability Assessment (as defined in the CAISO Tariff), and other potential impacts, including but not limited to those identified in the Scoping Meeting as described in the Large Generator Interconnection Procedures. The study will also identify the approximate total costs, based on per unit costs, of mitigating these impacts, along with an equitable allocation of those costs to Interconnection Customers for their individual Generating Facilities.

**Phase II Interconnection Study** shall mean an engineering and operational study conducted or caused to be performed by the CAISO once per calendar year, in coordination with the applicable Participating TO(s), to determine the Point of Interconnection and a list of facilities (including the Participating TO's Interconnection Facilities, Network Upgrades, Distribution Upgrades, and Stand Alone Network Upgrades), the cost of those facilities, and the time required to interconnect the Generating Facility(ies) with the Participating TO's Transmission System.

**Point of Change of Ownership** shall mean the point, as set forth in Appendix A to this LGIA, where the Interconnection Customer's Interconnection Facilities connect to the Participating TO's Interconnection Facilities.

**Point of Interconnection** shall mean the point, as set forth in Appendix A to this LGIA, where the Interconnection Facilities connect to the Participating TO's Transmission System.

**Qualifying Facility** shall mean a qualifying cogeneration facility or qualifying small power production facility, as defined in the Code of Federal Regulations, Title 18, Part 292 (18 C.F.R. §292).

**Reasonable Efforts** shall mean, with respect to an action required to be attempted or taken by a Party under this LGIA, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

**Scoping Meeting** shall mean the meeting among representatives of the Interconnection Customer, the Participating TO(s), other Affected Systems, and the CAISO conducted for the purpose of discussing alternative interconnection options, to exchange information including any transmission data and earlier study evaluations that would be reasonably expected to impact such interconnection options, to analyze such information, and to determine the potential feasible Points of Interconnection.

**Stand Alone Network** Upgrades shall mean Network Upgrades that the Interconnection Customer may construct without affecting day-to-day operations of the CAISO Controlled Grid or Affected Systems during their construction. The Participating TO, the CAISO, and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to this LGIA.

**System Protection Facilities** shall mean the equipment, including necessary protection signal communications equipment, that protects (1) the Participating TO's Transmission System, Participating TO's Interconnection Facilities, CAISO Controlled Grid, and Affected Systems from faults or other electrical disturbances occurring at the Generating Facility and (2) the Generating Facility from faults or other electrical system disturbances occurring on the CAISO Controlled Grid, Participating TO's Interconnection Facilities, and Affected Systems or on other delivery systems or other generating systems to which the CAISO Controlled Grid is directly connected.

**Transmission Control Agreement** shall mean CAISO FERC Electric Tariff No. 7.

**Trial Operation** shall mean the period during which the Interconnection Customer is engaged in on-site test operations and commissioning of an Electric Generating Unit prior to Commercial Operation.

## Article 2. Effective Date, Term And Termination

**2.1 Effective Date.** This LGIA shall become effective upon execution by all Parties subject to acceptance by FERC (if applicable), or if filed unexecuted, upon the date specified by FERC. The CAISO and Participating TO shall promptly file this LGIA with FERC upon execution in accordance with Article 3.1, if required.

**2.2 Term of Agreement.** Subject to the provisions of Article 2.3, this LGIA shall remain in effect for a period of ____ years from the Effective Date (Term Specified in Individual Agreements to be ten (10) years or such other longer period as the Interconnection Customer may request) and shall be automatically renewed for each successive one-year period thereafter.

**2.3 Termination Procedures.**

**2.3.1 Written Notice.** This LGIA may be terminated by the Interconnection Customer after giving the CAISO and the Participating TO ninety (90) Calendar Days advance written notice, or by the CAISO and the Participating TO notifying FERC after the Generating Facility permanently ceases Commercial Operation.

**2.3.2 Default.** A Party may terminate this LGIA in accordance with Article 17.

**2.3.3 Suspension of Work.** This LGIA may be deemed terminated in accordance with Article 5.16.

**2.3.4** Notwithstanding Articles 2.3.1, 2.3.2, and 2.3.3, no termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination, including the filing with FERC of a notice of termination of this LGIA (if applicable), which notice has been accepted for filing by FERC, and the Interconnection Customer has fulfilled its termination cost obligations under Article 2.4.

**2.4 Termination Costs.** Immediately upon the other Parties' receipt of a notice of the termination of this LGIA pursuant to Article 2.3 above, the CAISO and the Participating TO will determine the total cost responsibility of the Interconnection Customer. If, as of the date of the other Parties' receipt of the notice of termination, the Interconnection Customer has not already paid its share of Network Upgrade costs, as set forth in Appendix G to this LGIA, the Participating TO will liquidate the Interconnection Customer's Interconnection Financial Security associated with its cost responsibility for Network Upgrades, in accordance with Section 9.4 of the GIP.

The Interconnection Customer will also be responsible for all costs incurred or irrevocably committed to be incurred in association with the construction of the Participating TO's Interconnection Facilities (including any cancellation costs relating to orders or contracts for Interconnection Facilities and equipment) and other such expenses, including any Distribution Upgrades for which the Participating TO or CAISO has incurred expenses or has irrevocably committed to incur expenses and has not been reimbursed by the Interconnection Customer, as of the date of the other Parties' receipt of the notice of termination, subject to the limitations set forth in this Article 2.4. Nothing in this Article 2.4 shall limit the Parties' rights under Article 17. If, as of the date of the other Parties' receipt of the notice of termination, the Interconnection Customer has not already reimbursed the Participating TO and the CAISO for costs incurred to construct the Participating TO's Interconnection Facilities, the Participating TO will liquidate the Interconnection Customer's Interconnection Financial Security associated with the construction of the Participating TO's Interconnection Facilities, in accordance with Section 9.4 of the GIP. If the amount of the Interconnection Financial Security liquidated by the Participating TO under this Article 2.4 is insufficient to compensate the CAISO and the Participating TO for actual costs associated with the construction of the Participating TO's Interconnection Facilities contemplated in this Article, any additional amounts will be the responsibility of the Interconnection Customer,

subject to the provisions of Section 9.4 of the GIP. Any such additional amounts due from the Interconnection Customer beyond the amounts covered by its Interconnection Financial Security will be due to the Participating TO immediately upon termination of this LGIA in accordance with Section 9.4 of the GIP.

If the amount of the Interconnection Financial Security exceeds the Interconnection Customer's cost responsibility under Section 9.4 of the GIP, any excess amount will be released to the Interconnection Customer in accordance with Section 9.4 of the GIP.

**2.4.1** Notwithstanding the foregoing, in the event of termination by a Party, all Parties shall use commercially Reasonable Efforts to mitigate the costs, damages and charges arising as a consequence of termination. With respect to any portion of the Participating TO's Interconnection Facilities that have not yet been constructed or installed, the Participating TO shall to the extent possible and with the Interconnection Customer's authorization cancel any pending orders of, or return, any materials or equipment for, or contracts for construction of, such facilities; provided that in the event the Interconnection Customer elects not to authorize such cancellation, the Interconnection Customer shall assume all payment obligations with respect to such materials, equipment, and contracts, and the Participating TO shall deliver such material and equipment, and, if necessary, assign such contracts, to the Interconnection Customer as soon as practicable, at the Interconnection Customer's expense. To the extent that the Interconnection Customer has already paid the Participating TO for any or all such costs of materials or equipment not taken by the Interconnection Customer, the Participating TO shall promptly refund such amounts to the Interconnection Customer, less any costs, including penalties, incurred by the Participating TO to cancel any pending orders of or return such materials, equipment, or contracts.

**2.4.2** The Participating TO may, at its option, retain any portion of such materials, equipment, or facilities that the Interconnection Customer chooses not to accept delivery of, in which case the Participating TO shall be responsible for all costs associated with procuring such materials, equipment, or facilities.

**2.4.3** With respect to any portion of the Interconnection Facilities, and any other facilities already installed or constructed pursuant to the terms of this LGIA, Interconnection Customer shall be responsible for all costs associated with the removal, relocation or other disposition or retirement of such materials, equipment, or facilities.

**2.5 Disconnection.** Upon termination of this LGIA, the Parties will take all appropriate steps to disconnect the Large Generating Facility from the Participating TO's Transmission System. All costs required to effectuate such disconnection shall be borne by the terminating Party, unless such termination resulted from the non-terminating Party's Default of this LGIA or such non-terminating Party otherwise is responsible for these costs under this LGIA.

**2.6 Survival.** This LGIA shall continue in effect after termination to the extent necessary to provide for final billings and payments and for costs incurred hereunder, including billings and payments pursuant to this LGIA; to permit the determination and enforcement of liability and indemnification obligations arising from acts or events that occurred while this LGIA was in effect; and to permit each Party to have access to the lands of the other Parties pursuant to this LGIA or other applicable agreements, to disconnect, remove or salvage its own facilities and equipment.

## Article 3. Regulatory Filings And CAISO Tariff Compliance

**3.1 Filing.** The Participating TO and the CAISO shall file this LGIA (and any amendment hereto) with the appropriate Governmental Authority(ies), if required. The Interconnection Customer may request that any information so provided be subject to the confidentiality provisions of Article 22. If the Interconnection Customer has executed this LGIA, or any amendment thereto, the Interconnection Customer shall reasonably cooperate with the Participating TO and CAISO with respect to such filing and to provide any information reasonably requested by the Participating TO or CAISO needed to comply with applicable regulatory requirements.

**3.2 Agreement Subject to CAISO Tariff.** The Interconnection Customer will comply with all applicable provisions of the CAISO Tariff, including the GIP.

**3.3 Relationship Between this LGIA and the CAISO Tariff.** With regard to rights and obligations between the Participating TO and the Interconnection Customer, if and to the extent a matter is specifically addressed by a provision of this LGIA (including any appendices, schedules or other attachments to this LGIA), the provisions of this LGIA shall govern. If and to the extent a provision of this LGIA is inconsistent with the CAISO Tariff and dictates rights and obligations between the CAISO and the Participating TO or the CAISO and the Interconnection Customer, the CAISO Tariff shall govern.

**3.4 Relationship Between this LGIA and the Net Scheduled PGA.** With regard to the rights and obligations of a Net Scheduled Generating Unit that has entered into a Net Scheduled PGA with the CAISO and has entered into this LGIA, if and to the extent a matter is specifically addressed by a provision of the Net Scheduled PGA that is inconsistent with this LGIA, the terms of the Net Scheduled PGA shall govern.

## Article 4. Scope Of Service

**4.1 Interconnection Service.** Interconnection Service allows the Interconnection Customer to connect the Large Generating Facility to the Participating TO's Transmission System and be eligible to deliver the Large Generating Facility's output using the available capacity of the CAISO Controlled Grid. To the extent the Interconnection Customer wants to receive Interconnection Service, the Participating TO shall construct facilities identified in Appendices A and C that the Participating TO is responsible to construct.

Interconnection Service does not necessarily provide the Interconnection Customer with the capability to physically deliver the output of its Large Generating Facility to any particular load on the CAISO Controlled Grid without incurring congestion costs. In the event of transmission constraints on the CAISO Controlled Grid, the Interconnection Customer's Large Generating Facility shall be subject to the applicable congestion management procedures in the CAISO Tariff in the same manner as all other resources.

**4.2 Provision of Service.** The Participating TO and the CAISO shall provide Interconnection Service for the Large Generating Facility.

**4.3 Performance Standards.** Each Party shall perform all of its obligations under this LGIA in accordance with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice, and to the extent a Party is required or prevented or limited in taking any action by such regulations and standards, such Party shall not be deemed to be in Breach of this LGIA for its compliance therewith. If such Party is the CAISO or Participating TO, then that Party shall amend the LGIA and submit the amendment to FERC for approval.

**4.4 No Transmission Service.** The execution of this LGIA does not constitute a request for, nor the provision of, any transmission service under the CAISO Tariff, and does not convey any right to deliver electricity to any specific customer or point of delivery.

**4.5 Interconnection Customer Provided Services.** The services provided by Interconnection Customer under this LGIA are set forth in Article 9.6 and Article 13.5.1. Interconnection Customer shall be paid for such services in accordance with Article 11.6.

**Article 5. Facilities Engineering, Procurement, And Construction**

Interconnection Facilities, Network Upgrades, and Distribution Upgrades shall be studied, designed, and constructed pursuant to Good Utility Practice. Such studies, design and construction shall be based on the assumed accuracy and completeness of all technical information received by the Participating TO and the CAISO from the Interconnection Customer associated with interconnecting the Large Generating Facility.

**5.1 Options.** Unless otherwise mutually agreed among the Parties, the Interconnection Customer shall select the In-Service Date, Initial Synchronization Date, and Commercial Operation Date; and either Standard Option or Alternate Option set forth below for completion of the Participating TO's Interconnection Facilities and Network Upgrades as set forth in Appendix A, Interconnection Facilities, Network Upgrades, and Distribution Upgrades, and such dates and selected option shall be set forth in Appendix B, Milestones.

**5.1.1 Standard Option.** The Participating TO shall design, procure, and construct the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades, using Reasonable Efforts to complete the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades by the dates set forth in Appendix B, Milestones. The Participating TO shall not be required to undertake any action which is inconsistent with its standard safety practices, its material and equipment specifications, its design criteria and construction procedures, its labor agreements, and Applicable Laws and Regulations. In the event the Participating TO reasonably expects that it will not be able to complete the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades by the specified dates, the Participating TO shall promptly provide written notice to the Interconnection Customer and the CAISO and shall undertake Reasonable Efforts to meet the earliest dates thereafter.

**5.1.2 Alternate Option.** If the dates designated by the Interconnection Customer are acceptable to the Participating TO, the Participating TO shall so notify the Interconnection Customer within thirty (30) Calendar Days, and shall assume responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities by the designated dates.

If the Participating TO subsequently fails to complete the Participating TO's Interconnection Facilities by the In-Service Date, to the extent necessary to provide back feed power; or fails to complete Network Upgrades by the Initial Synchronization Date to the extent necessary to allow for Trial Operation at full power output, unless other arrangements are made by the Parties for such Trial Operation; or fails to complete the Network Upgrades by the Commercial Operation Date, as such dates are reflected in Appendix B, Milestones; the Participating TO shall pay the Interconnection Customer liquidated damages in accordance with Article 5.3, Liquidated Damages, provided, however, the dates designated by the Interconnection Customer shall be extended day for day for each day that the CAISO refuses to grant clearances to install equipment.

**5.1.3 Option to Build.** If the dates designated by the Interconnection Customer are not acceptable to the Participating TO, the Participating TO shall so notify the Interconnection Customer within thirty (30) Calendar Days, and unless the Parties agree otherwise, the

Interconnection Customer shall have the option to assume responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades. If the Interconnection Customer elects to exercise its option to assume responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, it shall so notify the Participating TO within thirty (30) Calendar Days of receipt of the Participating TO's notification that the designated dates are not acceptable to the Participating TO. The Participating TO, CAISO, and Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify such Stand Alone Network Upgrades in Appendix A to this LGIA. Except for Stand Alone Network Upgrades, the Interconnection Customer shall have no right to construct Network Upgrades under this option.

**5.1.4 Negotiated Option.** If the Interconnection Customer elects not to exercise its option under Article 5.1.3, Option to Build, the Interconnection Customer shall so notify the Participating TO within thirty (30) Calendar Days of receipt of the Participating TO's notification that the designated dates are not acceptable to the Participating TO, and the Parties shall in good faith attempt to negotiate terms and conditions (including revision of the specified dates and liquidated damages, the provision of incentives or the procurement and construction of a portion of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades by the Interconnection Customer) pursuant to which the Participating TO is responsible for the design, procurement and construction of the Participating TO's Interconnection Facilities and Network Upgrades. If the Parties are unable to reach agreement on such terms and conditions, the Participating TO shall assume responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Network Upgrades pursuant to Article 5.1.1, Standard Option.

**5.2 General Conditions Applicable to Option to Build.** If the Interconnection Customer assumes responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades,

(1) the Interconnection Customer shall engineer, procure equipment, and construct the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades (or portions thereof) using Good Utility Practice and using standards and specifications provided in advance by the Participating TO;

(2) The Interconnection Customer's engineering, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades shall comply with all requirements of law to which the Participating TO would be subject in the engineering, procurement or construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades;

(3) the Participating TO shall review, and the Interconnection Customer shall obtain the Participating TO's approval of, the engineering design, equipment acceptance tests, and the construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, which approval shall not be unreasonably withheld, and the CAISO may, at its option, review the engineering design, equipment acceptance tests, and the construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades;

(4) prior to commencement of construction, the Interconnection Customer shall provide to the Participating TO, with a copy to the CAISO for informational purposes, a schedule for construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, and shall promptly respond to requests for information from the Participating TO;

(5) at any time during construction, the Participating TO shall have the right to gain unrestricted access to the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades and to conduct inspections of the same;

(6) at any time during construction, should any phase of the engineering, equipment procurement, or construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades not meet the standards and specifications provided by the Participating TO, the Interconnection Customer shall be obligated to remedy deficiencies in that portion of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades;

(7) the Interconnection Customer shall indemnify the CAISO and Participating TO for claims arising from the Interconnection Customer's construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades under the terms and procedures applicable to Article 18.1 Indemnity;

(8) The Interconnection Customer shall transfer control of the Participating TO's Interconnection Facilities to the Participating TO and shall transfer Operational Control of Stand Alone Network Upgrades to the CAISO;

(9) Unless the Parties otherwise agree, the Interconnection Customer shall transfer ownership of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades to the Participating TO. As soon as reasonably practicable, but within twelve months after completion of the construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, the Interconnection Customer shall provide an invoice of the final cost of the construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades to the Participating TO, which invoice shall set forth such costs in sufficient detail to enable the Participating TO to reflect the proper costs of such facilities in its transmission rate base and to identify the investment upon which refunds will be provided;

(10) the Participating TO shall accept for operation and maintenance the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades to the extent engineered, procured, and constructed in accordance with this Article 5.2; and

(11) The Interconnection Customer's engineering, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades shall comply with all requirements of the "Option to Build" conditions set forth in Appendix C. Interconnection Customer shall deliver to the Participating TO "as-built" drawings, information, and any other documents that are reasonably required by the Participating TO to assure that the Interconnection Facilities and Stand-Alone Network Upgrades are built to the standards and specifications required by the Participating TO.

**5.3 Liquidated Damages.** The actual damages to the Interconnection Customer, in the event the Participating TO's Interconnection Facilities or Network Upgrades are not completed by the dates designated by the Interconnection Customer and accepted by the Participating TO pursuant to subparagraphs 5.1.2 or 5.1.4, above, may include Interconnection Customer's fixed operation and maintenance costs and lost opportunity costs. Such actual damages are uncertain and impossible to determine at this time. Because of such uncertainty, any liquidated damages paid by the Participating TO to the Interconnection Customer in the event that the Participating TO does not complete any portion of the Participating TO's Interconnection Facilities or Network Upgrades by the applicable dates, shall be an amount equal to ½ of 1 percent per day of the actual cost of the Participating TO's Interconnection Facilities and Network Upgrades, in the aggregate, for which the Participating TO has assumed responsibility to design, procure and construct.

However, in no event shall the total liquidated damages exceed 20 percent of the actual cost of the Participating TO's Interconnection Facilities and Network Upgrades for which the Participating TO has assumed responsibility to design, procure, and construct. The foregoing payments will be made by the Participating TO to the Interconnection Customer as just compensation for the damages caused to the Interconnection Customer, which actual damages are uncertain and impossible to determine at this time, and as reasonable liquidated damages, but not as a penalty or a method to secure performance of this LGIA. Liquidated damages, when the Parties agree to them, are the exclusive remedy for the Participating TO's failure to meet its schedule.

No liquidated damages shall be paid to the Interconnection Customer if: (1) the Interconnection Customer is not ready to commence use of the Participating TO's Interconnection Facilities or Network Upgrades to take the delivery of power for the Electric Generating Unit's Trial Operation or to export power from the Electric Generating Unit on the specified dates, unless the Interconnection Customer would have been able to commence use of the Participating TO's Interconnection Facilities or Network Upgrades to take the delivery of power for Electric Generating Unit's Trial Operation or to export power from the Electric Generating Unit, but for the Participating TO's delay; (2) the Participating TO's failure to meet the specified dates is the result of the action or inaction of the Interconnection Customer or any other interconnection customer who has entered into an interconnection agreement with the CAISO and/or Participating TO, action or inaction by the CAISO, or any cause beyond the Participating TO's reasonable control or reasonable ability to cure; (3) the Interconnection Customer has assumed responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades; or (4) the Parties have otherwise agreed.

In no event shall the CAISO have any responsibility or liability to the Interconnection Customer for liquidated damages pursuant to the provisions of this Article 5.3.

**5.4 Power System Stabilizers.** The Interconnection Customer shall procure, install, maintain and operate Power System Stabilizers in accordance with Applicable Reliability Standards, the guidelines and procedures established by the Applicable Reliability Council, and the provisions of Section 4.6.5.1 of the CAISO Tariff. The CAISO reserves the right to establish reasonable minimum acceptable settings for any installed Power System Stabilizers, subject to the design and operating limitations of the Large Generating Facility. If the Large Generating Facility's Power System Stabilizers are removed from service or not capable of automatic operation, the Interconnection Customer shall immediately notify the CAISO and the Participating TO and restore the Power System Stabilizers to operation as soon as possible. The CAISO shall have the right to order the reduction in output or disconnection of the Large Generating Facility if the reliability of the CAISO Controlled Grid would be adversely affected as a result of improperly tuned Power System Stabilizers. The requirements of this Article 5.4 shall not apply to wind generators of the induction type.

**5.5 Equipment Procurement.** If responsibility for construction of the Participating TO's Interconnection Facilities or Network Upgrades is to be borne by the Participating TO, then the Participating TO shall commence design of the Participating TO's Interconnection Facilities or Network Upgrades and procure necessary equipment as soon as practicable after all of the following conditions are satisfied, unless the Parties otherwise agree in writing:

**5.5.1** The CAISO, in coordination with the applicable Participating TO(s), has completed the Phase II Interconnection Study or Governing Independent Study Interconnection Study pursuant to the applicable Generator Interconnection Facilities Study Process Agreement or other applicable study process agreement;

**5.5.2** The Participating TO has received written authorization to proceed with design and procurement from the Interconnection Customer by the date specified in Appendix B, Milestones; and

**5.5.3** The Interconnection Customer has provided security to the Participating TO in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

**5.6 Construction Commencement.** The Participating TO shall commence construction of the Participating TO's Interconnection Facilities and Network Upgrades for which it is responsible as soon as practicable after the following additional conditions are satisfied:

**5.6.1** Approval of the appropriate Governmental Authority has been obtained for any facilities requiring regulatory approval;

**5.6.2** Necessary real property rights and rights-of-way have been obtained, to the extent required for the construction of a discrete aspect of the Participating TO's Interconnection Facilities and Network Upgrades;

**5.6.3** The Participating TO has received written authorization to proceed with construction from the Interconnection Customer by the date specified in Appendix B, Milestones; and

**5.6.4** The Interconnection Customer has provided payment and security to the Participating TO in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

**5.7 Work Progress.** The Parties will keep each other advised periodically as to the progress of their respective design, procurement and construction efforts. Any Party may, at any time, request a progress report from another Party. If, at any time, the Interconnection Customer determines that the completion of the Participating TO's Interconnection Facilities will not be required until after the specified In-Service Date, the Interconnection Customer will provide written notice to the Participating TO and CAISO of such later date upon which the completion of the Participating TO's Interconnection Facilities will be required.

**5.8 Information Exchange.** As soon as reasonably practicable after the Effective Date, the Parties shall exchange information regarding the design and compatibility of the Interconnection Customer's Interconnection Facilities and Participating TO's Interconnection Facilities and compatibility of the Interconnection Facilities with the Participating TO's Transmission System, and shall work diligently and in good faith to make any necessary design changes.

**5.9 Limited Operation.** If any of the Participating TO's Interconnection Facilities or Network Upgrades are not reasonably expected to be completed prior to the Commercial Operation Date of the Electric Generating Unit, the Participating TO and/or CAISO, as applicable, shall, upon the request and at the expense of the Interconnection Customer, perform operating studies on a timely basis to determine the extent to which the Electric Generating Unit and the Interconnection Customer's Interconnection Facilities may operate prior to the completion of the Participating TO's Interconnection Facilities or Network Upgrades consistent with Applicable Laws and Regulations, Applicable Reliability Standards, Good Utility Practice, and this LGIA. The Participating TO and CAISO shall permit Interconnection Customer to operate the Electric Generating Unit and the Interconnection Customer's Interconnection Facilities in accordance with the results of such studies.

**5.10 Interconnection Customer's Interconnection Facilities.** The Interconnection Customer shall, at its expense, design, procure, construct, own and install the Interconnection Customer's Interconnection Facilities, as set forth in Appendix A.

**5.10.1 Large Generating Facility and Interconnection Customer's Interconnection Facilities Specifications.** In addition to the Interconnection Customer's responsibility to submit technical data with its Interconnection Request as required by Section 3.5.1 of the GIP, the Interconnection Customer shall submit all remaining necessary specifications for the Interconnection Customer's Interconnection Facilities and Large Generating Facility,

including System Protection Facilities, to the Participating TO and the CAISO at least one hundred eighty (180) Calendar Days prior to the Initial Synchronization Date; and final specifications for review and comment at least ninety (90) Calendar Days prior to the Initial Synchronization Date. The Participating TO and the CAISO shall review such specifications pursuant to this LGIA and the GIP to ensure that the Interconnection Customer's Interconnection Facilities and Large Generating Facility are compatible with the technical specifications, operational control, safety requirements, and any other applicable requirements of the Participating TO and the CAISO and comment on such specifications within thirty (30) Calendar Days of the Interconnection Customer's submission. All specifications provided hereunder shall be deemed confidential.

**5.10.2 Participating TO's and CAISO's Review.** The Participating TO's and the CAISO's review of the Interconnection Customer's final specifications shall not be construed as confirming, endorsing, or providing a warranty as to the design, fitness, safety, durability or reliability of the Large Generating Facility, or the Interconnection Customer's Interconnection Facilities. Interconnection Customer shall make such changes to the Interconnection Customer's Interconnection Facilities as may reasonably be required by the Participating TO or the CAISO, in accordance with Good Utility Practice, to ensure that the Interconnection Customer's Interconnection Facilities are compatible with the technical specifications, Operational Control, and safety requirements of the Participating TO or the CAISO.

**5.10.3 Interconnection Customer's Interconnection Facilities Construction.** The Interconnection Customer's Interconnection Facilities shall be designed and constructed in accordance with Good Utility Practice. Within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Participating TO and Interconnection Customer agree on another mutually acceptable deadline, the Interconnection Customer shall deliver to the Participating TO and CAISO "as-built" drawings, information and documents for the Interconnection Customer's Interconnection Facilities and the Electric Generating Unit(s), such as: a one-line diagram, a site plan showing the Large Generating Facility and the Interconnection Customer's Interconnection Facilities, plan and elevation drawings showing the layout of the Interconnection Customer's Interconnection Facilities, a relay functional diagram, relaying AC and DC schematic wiring diagrams and relay settings for all facilities associated with the Interconnection Customer's step-up transformers, the facilities connecting the Large Generating Facility to the step-up transformers and the Interconnection Customer's Interconnection Facilities, and the impedances (determined by factory tests) for the associated step-up transformers and the Electric Generating Units. The Interconnection Customer shall provide the Participating TO and the CAISO specifications for the excitation system, automatic voltage regulator, Large Generating Facility control and protection settings, transformer tap settings, and communications, if applicable. Any deviations from the relay settings, machine specifications, and other specifications originally submitted by the Interconnection Customer shall be assessed by the Participating TO and the CAISO pursuant to the appropriate provisions of this LGIA and the GIP.

**5.10.4 Interconnection Customer to Meet Requirements of the Participating TO's Interconnection Handbook.** The Interconnection Customer shall comply with the Participating TO's Interconnection Handbook.

**5.11 Participating TO's Interconnection Facilities Construction.** The Participating TO's Interconnection Facilities shall be designed and constructed in accordance with Good Utility Practice. Upon request, within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Participating TO and Interconnection Customer agree on another mutually acceptable deadline, the Participating TO shall deliver to the Interconnection Customer

and the CAISO the following “as-built” drawings, information and documents for the Participating TO's Interconnection Facilities [include appropriate drawings and relay diagrams].

The Participating TO will obtain control for operating and maintenance purposes of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades upon completion of such facilities. Pursuant to Article 5.2, the CAISO will obtain Operational Control of the Stand Alone Network Upgrades prior to the Commercial Operation Date.

**5.12 Access Rights.** Upon reasonable notice and supervision by a Party, and subject to any required or necessary regulatory approvals, a Party (“Granting Party”) shall furnish at no cost to the other Party (“Access Party”) any rights of use, licenses, rights of way and easements with respect to lands owned or controlled by the Granting Party, its agents (if allowed under the applicable agency agreement), or any Affiliate, that are necessary to enable the Access Party to obtain ingress and egress to construct, operate, maintain, repair, test (or witness testing), inspect, replace or remove facilities and equipment to: (i) interconnect the Large Generating Facility with the Participating TO’s Transmission System; (ii) operate and maintain the Large Generating Facility, the Interconnection Facilities and the Participating TO’s Transmission System; and (iii) disconnect or remove the Access Party’s facilities and equipment upon termination of this LGIA. In exercising such licenses, rights of way and easements, the Access Party shall not unreasonably disrupt or interfere with normal operation of the Granting Party’s business and shall adhere to the safety rules and procedures established in advance, as may be changed from time to time, by the Granting Party and provided to the Access Party.

**5.13 Lands of Other Property Owners.** If any part of the Participating TO’s Interconnection Facilities and/or Network Upgrades are to be installed on property owned by persons other than the Interconnection Customer or Participating TO, the Participating TO shall at the Interconnection Customer's expense use efforts, similar in nature and extent to those that it typically undertakes on its own behalf or on behalf of its Affiliates, including use of its eminent domain authority, and to the extent consistent with state law, to procure from such persons any rights of use, licenses, rights of way and easements that are necessary to construct, operate, maintain, test, inspect, replace or remove the Participating TO’s Interconnection Facilities and/or Network Upgrades upon such property.

**5.14 Permits.** Participating TO and Interconnection Customer shall cooperate with each other in good faith in obtaining all permits, licenses and authorization that are necessary to accomplish the interconnection in compliance with Applicable Laws and Regulations. With respect to this paragraph, the Participating TO shall provide permitting assistance to the Interconnection Customer comparable to that provided to the Participating TO’s own, or an Affiliate's generation.

**5.15 Early Construction of Base Case Facilities.** The Interconnection Customer may request the Participating TO to construct, and the Participating TO shall construct, using Reasonable Efforts to accommodate Interconnection Customer's In-Service Date, all or any portion of any Network Upgrades required for Interconnection Customer to be interconnected to the Participating TO’s Transmission System which are included in the Base Case of the Interconnection Studies for the Interconnection Customer, and which also are required to be constructed for another interconnection customer, but where such construction is not scheduled to be completed in time to achieve Interconnection Customer's In-Service Date.

**5.16 Suspension.** The Interconnection Customer reserves the right, upon written notice to the Participating TO and the CAISO, to suspend at any time all work associated with the construction and installation of the Participating TO's Interconnection Facilities, Network Upgrades, and/or Distribution Upgrades required under this LGIA, other than Network Upgrades identified in the Phase II Interconnection Study as common to multiple Generating Facilities, with the condition that the Participating TO’s electrical system and the CAISO Controlled Grid shall be left in a safe and reliable condition in accordance with Good Utility Practice and the Participating TO’s safety and reliability criteria and the CAISO’s Applicable Reliability Standards. In such event, the

Interconnection Customer shall be responsible for all reasonable and necessary costs which the Participating TO (i) has incurred pursuant to this LGIA prior to the suspension and (ii) incurs in suspending such work, including any costs incurred to perform such work as may be necessary to ensure the safety of persons and property and the integrity of the Participating TO's electric system during such suspension and, if applicable, any costs incurred in connection with the cancellation or suspension of material, equipment and labor contracts which the Participating TO cannot reasonably avoid; provided, however, that prior to canceling or suspending any such material, equipment or labor contract, the Participating TO shall obtain Interconnection Customer's authorization to do so.

The Participating TO shall invoice the Interconnection Customer for such costs pursuant to Article 12 and shall use due diligence to minimize its costs. In the event Interconnection Customer suspends work required under this LGIA pursuant to this Article 5.16, and has not requested the Participating TO to recommence the work or has not itself recommenced work required under this LGIA in time to ensure that the new projected Commercial Operation Date for the full Generating Facility Capacity of the Large Generating Facility is no more than three (3) years from the Commercial Operation Date identified in Appendix B hereto, this LGIA shall be deemed terminated and the Interconnection Customer's responsibility for costs will be determined in accordance with Article 2.4 of this LGIA. The suspension period shall begin on the date the suspension is requested, or the date of the written notice to the Participating TO and the CAISO, if no effective date is specified.

**5.17 Taxes.**

**5.17.1 Interconnection Customer Payments Not Taxable.** The Parties intend that all payments or property transfers made by the Interconnection Customer to the Participating TO for the installation of the Participating TO's Interconnection Facilities and the Network Upgrades shall be non-taxable, either as contributions to capital, or as a refundable advance, in accordance with the Internal Revenue Code and any applicable state income tax laws and shall not be taxable as contributions in aid of construction or otherwise under the Internal Revenue Code and any applicable state income tax laws.

**5.17.2 Representations And Covenants.** In accordance with IRS Notice 2001-82 and IRS Notice 88-129, the Interconnection Customer represents and covenants that (i) ownership of the electricity generated at the Large Generating Facility will pass to another party prior to the transmission of the electricity on the CAISO Controlled Grid, (ii) for income tax purposes, the amount of any payments and the cost of any property transferred to the Participating TO for the Participating TO's Interconnection Facilities will be capitalized by the Interconnection Customer as an intangible asset and recovered using the straight-line method over a useful life of twenty (20) years, and (iii) any portion of the Participating TO's Interconnection Facilities that is a "dual-use intertie," within the meaning of IRS Notice 88-129, is reasonably expected to carry only a de minimis amount of electricity in the direction of the Large Generating Facility. For this purpose, "de minimis amount" means no more than 5 percent of the total power flows in both directions, calculated in accordance with the "5 percent test" set forth in IRS Notice 88-129. This is not intended to be an exclusive list of the relevant conditions that must be met to conform to IRS requirements for non-taxable treatment.

At the Participating TO's request, the Interconnection Customer shall provide the Participating TO with a report from an independent engineer confirming its representation in clause (iii), above. The Participating TO represents and covenants that the cost of the Participating TO's Interconnection Facilities paid for by the Interconnection Customer without the possibility of refund or credit will have no net effect on the base upon which rates are determined.

**5.17.3 Indemnification for the Cost Consequence of Current Tax Liability Imposed Upon the Participating TO.** Notwithstanding Article 5.17.1, the Interconnection Customer shall protect, indemnify and hold harmless the Participating TO from the cost consequences of any current tax liability imposed against the Participating TO as the result of payments or property transfers made by the Interconnection Customer to the Participating TO under this LGIA for Interconnection Facilities, as well as any interest and penalties, other than interest and penalties attributable to any delay caused by the Participating TO.

The Participating TO shall not include a gross-up for the cost consequences of any current tax liability in the amounts it charges the Interconnection Customer under this LGIA unless (i) the Participating TO has determined, in good faith, that the payments or property transfers made by the Interconnection Customer to the Participating TO should be reported as income subject to taxation or (ii) any Governmental Authority directs the Participating TO to report payments or property as income subject to taxation; provided, however, that the Participating TO may require the Interconnection Customer to provide security for Interconnection Facilities, in a form reasonably acceptable to the Participating TO (such as a parental guarantee or a letter of credit), in an amount equal to the cost consequences of any current tax liability under this Article 5.17. The Interconnection Customer shall reimburse the Participating TO for such costs on a fully grossed-up basis, in accordance with Article 5.17.4, within thirty (30) Calendar Days of receiving written notification from the Participating TO of the amount due, including detail about how the amount was calculated.

The indemnification obligation shall terminate at the earlier of (1) the expiration of the ten year testing period and the applicable statute of limitation, as it may be extended by the Participating TO upon request of the IRS, to keep these years open for audit or adjustment, or (2) the occurrence of a subsequent taxable event and the payment of any related indemnification obligations as contemplated by this Article 5.17.

**5.17.4 Tax Gross-Up Amount.** The Interconnection Customer's liability for the cost consequences of any current tax liability under this Article 5.17 shall be calculated on a fully grossed-up basis. Except as may otherwise be agreed to by the parties, this means that the Interconnection Customer will pay the Participating TO, in addition to the amount paid for the Interconnection Facilities and Network Upgrades, an amount equal to (1) the current taxes imposed on the Participating TO ("Current Taxes") on the excess of (a) the gross income realized by the Participating TO as a result of payments or property transfers made by the Interconnection Customer to the Participating TO under this LGIA (without regard to any payments under this Article 5.17) (the "Gross Income Amount") over (b) the present value of future tax deductions for depreciation that will be available as a result of such payments or property transfers (the "Present Value Depreciation Amount"), plus (2) an additional amount sufficient to permit the Participating TO to receive and retain, after the payment of all Current Taxes, an amount equal to the net amount described in clause (1).

For this purpose, (i) Current Taxes shall be computed based on the Participating TO's composite federal and state tax rates at the time the payments or property transfers are received and the Participating TO will be treated as being subject to tax at the highest marginal rates in effect at that time (the "Current Tax Rate"), and (ii) the Present Value Depreciation Amount shall be computed by discounting the Participating TO's anticipated tax depreciation deductions as a result of such payments or property transfers by the Participating TO's current weighted average cost of capital. Thus, the formula for calculating the Interconnection Customer's liability to the Participating TO pursuant to this Article 5.17.4 can be expressed as follows: (Current Tax Rate x (Gross Income Amount – Present Value of Tax Depreciation))/(1-Current Tax Rate). Interconnection Customer's estimated tax liability in the event taxes are imposed shall be stated in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades.

**5.17.5 Private Letter Ruling or Change or Clarification of Law.** At the Interconnection Customer's request and expense, the Participating TO shall file with the IRS a request for a private letter ruling as to whether any property transferred or sums paid, or to be paid, by the Interconnection Customer to the Participating TO under this LGIA are subject to federal income taxation. The Interconnection Customer will prepare the initial draft of the request for a private letter ruling, and will certify under penalties of perjury that all facts represented in such request are true and accurate to the best of the Interconnection Customer's knowledge. The Participating TO and Interconnection Customer shall cooperate in good faith with respect to the submission of such request, provided, however, the Interconnection Customer and the Participating TO explicitly acknowledge (and nothing herein is intended to alter) Participating TO's obligation under law to certify that the facts presented in the ruling request are true, correct and complete.

The Participating TO shall keep the Interconnection Customer fully informed of the status of such request for a private letter ruling and shall execute either a privacy act waiver or a limited power of attorney, in a form acceptable to the IRS, that authorizes the Interconnection Customer to participate in all discussions with the IRS regarding such request for a private letter ruling. The Participating TO shall allow the Interconnection Customer to attend all meetings with IRS officials about the request and shall permit the Interconnection Customer to prepare the initial drafts of any follow-up letters in connection with the request.

**5.17.6 Subsequent Taxable Events.** If, within 10 years from the date on which the relevant Participating TO's Interconnection Facilities are placed in service, (i) the Interconnection Customer Breaches the covenants contained in Article 5.17.2, (ii) a "disqualification event" occurs within the meaning of IRS Notice 88-129, or (iii) this LGIA terminates and the Participating TO retains ownership of the Interconnection Facilities and Network Upgrades, the Interconnection Customer shall pay a tax gross-up for the cost consequences of any current tax liability imposed on the Participating TO, calculated using the methodology described in Article 5.17.4 and in accordance with IRS Notice 90-60.

**5.17.7 Contests.** In the event any Governmental Authority determines that the Participating TO's receipt of payments or property constitutes income that is subject to taxation, the Participating TO shall notify the Interconnection Customer, in writing, within thirty (30) Calendar Days of receiving notification of such determination by a Governmental Authority. Upon the timely written request by the Interconnection Customer and at the Interconnection Customer's sole expense, the Participating TO may appeal, protest, seek abatement of, or otherwise oppose such determination. Upon the Interconnection Customer's written request and sole expense, the Participating TO may file a claim for refund with respect to any taxes paid under this Article 5.17, whether or not it has received such a determination. The Participating TO reserve the right to make all decisions with regard to the prosecution of such appeal, protest, abatement or other contest, including the selection of counsel and compromise or settlement of the claim, but the Participating TO shall keep the Interconnection Customer informed, shall consider in good faith suggestions from the Interconnection Customer about the conduct of the contest, and shall reasonably permit the Interconnection Customer or an Interconnection Customer representative to attend contest proceedings.

The Interconnection Customer shall pay to the Participating TO on a periodic basis, as invoiced by the Participating TO, the Participating TO's documented reasonable costs of prosecuting such appeal, protest, abatement or other contest, including any costs associated with obtaining the opinion of independent tax counsel described in this Article 5.17.7. The Participating TO may abandon any contest if the Interconnection Customer

fails to provide payment to the Participating TO within thirty (30) Calendar Days of receiving such invoice.

At any time during the contest, the Participating TO may agree to a settlement either with the Interconnection Customer's consent or, if such consent is refused, after obtaining written advice from independent nationally-recognized tax counsel, selected by the Participating TO, but reasonably acceptable to the Interconnection Customer, that the proposed settlement represents a reasonable settlement given the hazards of litigation. The Interconnection Customer's obligation shall be based on the amount of the settlement agreed to by the Interconnection Customer, or if a higher amount, so much of the settlement that is supported by the written advice from nationally-recognized tax counsel selected under the terms of the preceding paragraph. The settlement amount shall be calculated on a fully grossed-up basis to cover any related cost consequences of the current tax liability. The Participating TO may also settle any tax controversy without receiving the Interconnection Customer's consent or any such written advice; however, any such settlement will relieve the Interconnection Customer from any obligation to indemnify the Participating TO for the tax at issue in the contest (unless the failure to obtain written advice is attributable to the Interconnection Customer's unreasonable refusal to the appointment of independent tax counsel).

**5.17.8 Refund.** In the event that (a) a private letter ruling is issued to the Participating TO which holds that any amount paid or the value of any property transferred by the Interconnection Customer to the Participating TO under the terms of this LGIA is not subject to federal income taxation, (b) any legislative change or administrative announcement, notice, ruling or other determination makes it reasonably clear to the Participating TO in good faith that any amount paid or the value of any property transferred by the Interconnection Customer to the Participating TO under the terms of this LGIA is not taxable to the Participating TO, (c) any abatement, appeal, protest, or other contest results in a determination that any payments or transfers made by the Interconnection Customer to the Participating TO are not subject to federal income tax, or (d) if the Participating TO receives a refund from any taxing authority for any overpayment of tax attributable to any payment or property transfer made by the Interconnection Customer to the Participating TO pursuant to this LGIA, the Participating TO shall promptly refund to the Interconnection Customer the following:

(i) any payment made by Interconnection Customer under this Article 5.17 for taxes that is attributable to the amount determined to be non-taxable, together with interest thereon,

(ii) interest on any amounts paid by the Interconnection Customer to the Participating TO for such taxes which the Participating TO did not submit to the taxing authority, calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date payment was made by the Interconnection Customer to the date the Participating TO refunds such payment to the Interconnection Customer, and

(iii) with respect to any such taxes paid by the Participating TO, any refund or credit the Participating TO receives or to which it may be entitled from any Governmental Authority, interest (or that portion thereof attributable to the payment described in clause (i), above) owed to the Participating TO for such overpayment of taxes (including any reduction in interest otherwise payable by the Participating TO to any Governmental Authority resulting from an offset or credit); provided, however, that the Participating TO will remit such amount promptly to the Interconnection Customer only after and to the extent that the Participating TO has received a tax refund, credit or offset from any

Governmental Authority for any applicable overpayment of income tax related to the Participating TO's Interconnection Facilities.

The intent of this provision is to leave the Parties, to the extent practicable, in the event that no taxes are due with respect to any payment for Interconnection Facilities and Network Upgrades hereunder, in the same position they would have been in had no such tax payments been made.

**5.17.9 Taxes Other Than Income Taxes.** Upon the timely request by the Interconnection Customer, and at the Interconnection Customer's sole expense, the CAISO or Participating TO may appeal, protest, seek abatement of, or otherwise contest any tax (other than federal or state income tax) asserted or assessed against the CAISO or Participating TO for which the Interconnection Customer may be required to reimburse the CAISO or Participating TO under the terms of this LGIA. The Interconnection Customer shall pay to the Participating TO on a periodic basis, as invoiced by the Participating TO, the Participating TO's documented reasonable costs of prosecuting such appeal, protest, abatement, or other contest. The Interconnection Customer, the CAISO, and the Participating TO shall cooperate in good faith with respect to any such contest. Unless the payment of such taxes is a prerequisite to an appeal or abatement or cannot be deferred, no amount shall be payable by the Interconnection Customer to the CAISO or Participating TO for such taxes until they are assessed by a final, non-appealable order by any court or agency of competent jurisdiction. In the event that a tax payment is withheld and ultimately due and payable after appeal, the Interconnection Customer will be responsible for all taxes, interest and penalties, other than penalties attributable to any delay caused by the Participating TO.

**5.18 Tax Status.** Each Party shall cooperate with the others to maintain the other Parties' tax status. Nothing in this LGIA is intended to adversely affect the CAISO's or any Participating TO's tax exempt status with respect to the issuance of bonds including, but not limited to, Local Furnishing Bonds.

**5.19 Modification.**

**5.19.1 General.** The Interconnection Customer or the Participating TO may undertake modifications to its facilities, subject to the provisions of this LGIA and the CAISO Tariff. If a Party plans to undertake a modification that reasonably may be expected to affect the other Parties' facilities, that Party shall provide to the other Parties sufficient information regarding such modification so that the other Parties may evaluate the potential impact of such modification prior to commencement of the work. Such information shall be deemed to be confidential hereunder and shall include information concerning the timing of such modifications and whether such modifications are expected to interrupt the flow of electricity from the Large Generating Facility. The Party desiring to perform such work shall provide the relevant drawings, plans, and specifications to the other Parties at least ninety (90) Calendar Days in advance of the commencement of the work or such shorter period upon which the Parties may agree, which agreement shall not unreasonably be withheld, conditioned or delayed.

In the case of Large Generating Facility modifications that do not require the Interconnection Customer to submit an Interconnection Request, the CAISO or Participating TO shall provide, within thirty (30) Calendar Days (or such other time as the Parties may agree), an estimate of any additional modifications to the CAISO Controlled Grid, Participating TO's Interconnection Facilities, Network Upgrades or Distribution Upgrades necessitated by such Interconnection Customer modification and a good faith estimate of the costs thereof. The Participating TO and the CAISO shall determine if a Large Generating Facility modification is a Material Modification in accordance with the GIP.

**5.19.2 Standards.** Any additions, modifications, or replacements made to a Party's facilities shall be designed, constructed and operated in accordance with this LGIA and Good Utility Practice.

**5.19.3 Modification Costs.** The Interconnection Customer shall not be directly assigned the costs of any additions, modifications, or replacements that the Participating TO makes to the Participating TO's Interconnection Facilities or the Participating TO's Transmission System to facilitate the interconnection of a third party to the Participating TO's Interconnection Facilities or the Participating TO's Transmission System, or to provide transmission service to a third party under the CAISO Tariff. The Interconnection Customer shall be responsible for the costs of any additions, modifications, or replacements to the Interconnection Facilities that may be necessary to maintain or upgrade such Interconnection Facilities consistent with Applicable Laws and Regulations, Applicable Reliability Standards or Good Utility Practice.

## Article 6. Testing And Inspection

**6.1 Pre-Commercial Operation Date Testing and Modifications.** Prior to the Commercial Operation Date, the Participating TO shall test the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades and the Interconnection Customer shall test the Large Generating Facility and the Interconnection Customer's Interconnection Facilities to ensure their safe and reliable operation. Similar testing may be required after initial operation. Each Party shall make any modifications to its facilities that are found to be necessary as a result of such testing. The Interconnection Customer shall bear the cost of all such testing and modifications. The Interconnection Customer shall not commence initial parallel operation of an Electric Generating Unit with the Participating TO's Transmission System until the Participating TO provides prior written approval, which approval shall not be unreasonably withheld, for operation of such Electric Generating Unit. The Interconnection Customer shall generate test energy at the Large Generating Facility only if it has arranged for the delivery of such test energy.

**6.2 Post-Commercial Operation Date Testing and Modifications.** Each Party shall at its own expense perform routine inspection and testing of its facilities and equipment in accordance with Good Utility Practice as may be necessary to ensure the continued interconnection of the Large Generating Facility with the Participating TO's Transmission System in a safe and reliable manner. Each Party shall have the right, upon advance written notice, to require reasonable additional testing of the other Party's facilities, at the requesting Party's expense, as may be in accordance with Good Utility Practice.

**6.3 Right to Observe Testing.** Each Party shall notify the other Parties at least fourteen (14) Calendar Days in advance of its performance of tests of its Interconnection Facilities or Generating Facility. The other Parties have the right, at their own expense, to observe such testing.

**6.4 Right to Inspect.** Each Party shall have the right, but shall have no obligation to: (i) observe another Party's tests and/or inspection of any of its System Protection Facilities and other protective equipment, including Power System Stabilizers; (ii) review the settings of another Party's System Protection Facilities and other protective equipment; and (iii) review another Party's maintenance records relative to the Interconnection Facilities, the System Protection Facilities and other protective equipment. A Party may exercise these rights from time to time as it deems necessary upon reasonable notice to the other Party. The exercise or non-exercise by a Party of any such rights shall not be construed as an endorsement or confirmation of any element or condition of the Interconnection Facilities or the System Protection Facilities or other protective equipment or the operation thereof, or as a warranty as to the fitness, safety, desirability, or reliability of same. Any information that a Party obtains through the exercise of any of its rights

under this Article 6.4 shall be deemed to be Confidential Information and treated pursuant to Article 22 of this LGIA.

## Article 7. Metering

**7.1 General.** Each Party shall comply with any Applicable Reliability Standards and the Applicable Reliability Council requirements. The Interconnection Customer and CAISO shall comply with the provisions of the CAISO Tariff regarding metering, including Section 10 of the CAISO Tariff. Unless otherwise agreed by the Participating TO and the Interconnection Customer, the Participating TO may install additional Metering Equipment at the Point of Interconnection prior to any operation of any Electric Generating Unit and shall own, operate, test and maintain such Metering Equipment. Power flows to and from the Large Generating Facility shall be measured at or, at the CAISO's or Participating TO's option for its respective Metering Equipment, compensated to, the Point of Interconnection. The CAISO shall provide metering quantities to the Interconnection Customer upon request in accordance with the CAISO Tariff by directly polling the CAISO's meter data acquisition system. The Interconnection Customer shall bear all reasonable documented costs associated with the purchase, installation, operation, testing and maintenance of the Metering Equipment.

**7.2 Check Meters.** The Interconnection Customer, at its option and expense, may install and operate, on its premises and on its side of the Point of Interconnection, one or more check meters to check the CAISO-polled meters or the Participating TO's meters. Such check meters shall be for check purposes only and shall not be used for the measurement of power flows for purposes of this LGIA, except in the case that no other means are available on a temporary basis at the option of the CAISO or the Participating TO. The check meters shall be subject at all reasonable times to inspection and examination by the CAISO or Participating TO or their designees. The installation, operation and maintenance thereof shall be performed entirely by the Interconnection Customer in accordance with Good Utility Practice.

**7.3 Participating TO Retail Metering.** The Participating TO may install retail revenue quality meters and associated equipment, pursuant to the Participating TO's applicable retail tariffs.

## Article 8. Communications

**8.1 Interconnection Customer Obligations.** The Interconnection Customer shall maintain satisfactory operating communications with the CAISO in accordance with the provisions of the CAISO Tariff and with the Participating TO's dispatcher or representative designated by the Participating TO. The Interconnection Customer shall provide standard voice line, dedicated voice line and facsimile communications at its Large Generating Facility control room or central dispatch facility through use of either the public telephone system, or a voice communications system that does not rely on the public telephone system. The Interconnection Customer shall also provide the dedicated data circuit(s) necessary to provide Interconnection Customer data to the CAISO and Participating TO as set forth in Appendix D, Security Arrangements Details. The data circuit(s) shall extend from the Large Generating Facility to the location(s) specified by the CAISO and Participating TO. Any required maintenance of such communications equipment shall be performed by the Interconnection Customer. Operational communications shall be activated and maintained under, but not be limited to, the following events: system paralleling or separation, scheduled and unscheduled shutdowns, equipment clearances, and hourly and daily load data.

**8.2 Remote Terminal Unit.** Prior to the Initial Synchronization Date of each Electric Generating Unit, a Remote Terminal Unit, or equivalent data collection and transfer equipment acceptable to the Parties, shall be installed by the Interconnection Customer, or by the Participating TO at the Interconnection Customer's expense, to gather accumulated and instantaneous data to be

telemetered to the location(s) designated by the CAISO and by the Participating TO through use of a dedicated point-to-point data circuit(s) as indicated in Article 8.1.

Telemetry to the CAISO shall be provided in accordance with the CAISO's technical standards for direct telemetry. For telemetry to the Participating TO, the communication protocol for the data circuit(s) shall be specified by the Participating TO. Instantaneous bi-directional real power and reactive power flow and any other required information must be telemetered directly to the location(s) specified by the Participating TO.

Each Party will promptly advise the other Parties if it detects or otherwise learns of any metering, telemetry or communications equipment errors or malfunctions that require the attention and/or correction by another Party. The Party owning such equipment shall correct such error or malfunction as soon as reasonably feasible.

**8.3 No Annexation.** Any and all equipment placed on the premises of a Party shall be and remain the property of the Party providing such equipment regardless of the mode and manner of annexation or attachment to real property, unless otherwise mutually agreed by the Parties.

## Article 9. Operations

**9.1 General.** Each Party shall comply with Applicable Reliability Standards and the Applicable Reliability Council requirements. Each Party shall provide to the other Party all information that may reasonably be required by the other Party to comply with Applicable Laws and Regulations and Applicable Reliability Standards.

**9.2 Balancing Authority Area Notification.** At least three months before Initial Synchronization Date, the Interconnection Customer shall notify the CAISO and Participating TO in writing of the Balancing Authority Area in which the Large Generating Facility intends to be located. If the Interconnection Customer intends to locate the Large Generating Facility in a Balancing Authority Area other than the Balancing Authority Area within whose electrically metered boundaries the Large Generating Facility is located, and if permitted to do so by the relevant transmission tariffs, all necessary arrangements, including but not limited to those set forth in Article 7 and Article 8 of this LGIA, and remote Balancing Authority Area generator interchange agreements, if applicable, and the appropriate measures under such agreements, shall be executed and implemented prior to the placement of the Large Generating Facility in the other Balancing Authority Area.

**9.3 CAISO and Participating TO Obligations.** The CAISO and Participating TO shall cause the Participating TO's Transmission System to be operated and controlled in a safe and reliable manner and in accordance with this LGIA. The Participating TO at the Interconnection Customer's expense shall cause the Participating TO's Interconnection Facilities to be operated, maintained and controlled in a safe and reliable manner and in accordance with this LGIA. The CAISO and Participating TO may provide operating instructions to the Interconnection Customer consistent with this LGIA and Participating TO and CAISO operating protocols and procedures as they may change from time to time. The Participating TO and CAISO will consider changes to their operating protocols and procedures proposed by the Interconnection Customer.

**9.4 Interconnection Customer Obligations.** The Interconnection Customer shall at its own expense operate, maintain and control the Large Generating Facility and the Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA. The Interconnection Customer shall operate the Large Generating Facility and the Interconnection Customer's Interconnection Facilities in accordance with all applicable requirements of the Balancing Authority Area of which it is part, including such requirements as set forth in Appendix C, Interconnection Details, of this LGIA. Appendix C, Interconnection Details, will be modified to reflect changes to the requirements as they may change from time to time. A Party may request that another Party provide copies of the requirements set forth in

Appendix C, Interconnection Details, of this LGIA. The Interconnection Customer shall not commence Commercial Operation of an Electric Generating Unit with the Participating TO's Transmission System until the Participating TO provides prior written approval, which approval shall not be unreasonably withheld, for operation of such Electric Generating Unit.

**9.5 Start-Up and Synchronization.** Consistent with the Parties' mutually acceptable procedures, the Interconnection Customer is responsible for the proper synchronization of each Electric Generating Unit to the CAISO Controlled Grid.

**9.6 Reactive Power.**

**9.6.1 Power Factor Design Criteria.** The Interconnection Customer shall design the Large Generating Facility to maintain a composite power delivery at continuous rated power output at the terminals of the Electric Generating Unit at a power factor within the range of 0.95 leading to 0.90 lagging, unless the CAISO has established different requirements that apply to all generators in the Balancing Authority Area on a comparable basis. Power factor design criteria for wind generators are provided in Appendix H of this LGIA.

**9.6.2 Voltage Schedules.** Once the Interconnection Customer has synchronized an Electric Generating Unit with the CAISO Controlled Grid, the CAISO or Participating TO shall require the Interconnection Customer to maintain a voltage schedule by operating the Electric Generating Unit to produce or absorb reactive power within the design limitations of the Electric Generating Unit set forth in Article 9.6.1 (Power Factor Design Criteria). CAISO's voltage schedules shall treat all sources of reactive power in the Balancing Authority Area in an equitable and not unduly discriminatory manner. The Participating TO shall exercise Reasonable Efforts to provide the Interconnection Customer with such schedules at least one (1) day in advance, and the CAISO or Participating TO may make changes to such schedules as necessary to maintain the reliability of the CAISO Controlled Grid or the Participating TO's electric system. The Interconnection Customer shall operate the Electric Generating Unit to maintain the specified output voltage or power factor within the design limitations of the Electric Generating Unit set forth in Article 9.6.1 (Power Factor Design Criteria), and as may be required by the CAISO to operate the Electric Generating Unit at a specific voltage schedule within the design limitations set forth in Article 9.6.1. If the Interconnection Customer is unable to maintain the specified voltage or power factor, it shall promptly notify the CAISO and the Participating TO.

**9.6.2.1 Governors and Regulators.** Whenever an Electric Generating Unit is operated in parallel with the CAISO Controlled Grid and the speed governors (if installed on the Electric Generating Unit pursuant to Good Utility Practice) and voltage regulators are capable of operation, the Interconnection Customer shall operate the Electric Generating Unit with its speed governors and voltage regulators in automatic operation. If the Electric Generating Unit's speed governors and voltage regulators are not capable of such automatic operation, the Interconnection Customer shall immediately notify the CAISO and the Participating TO and ensure that the Electric Generating Unit operates as specified in Article 9.6.2 through manual operation and that such Electric Generating Unit's reactive power production or absorption (measured in MVARs) are within the design capability of the Electric Generating Unit(s) and steady state stability limits. The Interconnection Customer shall restore the speed governors and voltage regulators to automatic operation as soon as possible. If the Large Generating Facility's speed governors and voltage regulators are improperly tuned or malfunctioning, the CAISO shall have the right to order the reduction in output or disconnection of the Large Generating Facility if the reliability of the CAISO Controlled Grid would be adversely affected. The Interconnection Customer shall not cause its Large Generating Facility to

disconnect automatically or instantaneously from the CAISO Controlled Grid or trip any Electric Generating Unit comprising the Large Generating Facility for an under or over frequency condition unless the abnormal frequency condition persists for a time period beyond the limits set forth in ANSI/IEEE Standard C37.106, or such other standard as applied to other generators in the Balancing Authority Area on a comparable basis.

**9.6.3 Payment for Reactive Power.** CAISO is required to pay the Interconnection Customer for reactive power that Interconnection Customer provides or absorbs from an Electric Generating Unit when the CAISO requests the Interconnection Customer to operate its Electric Generating Unit outside the range specified in Article 9.6.1, provided that if the CAISO pays other generators for reactive power service within the specified range, it must also pay the Interconnection Customer. Payments shall be pursuant to Article 11.6 or such other agreement to which the CAISO and Interconnection Customer have otherwise agreed.

## 9.7 Outages and Interruptions.

### 9.7.1 Outages.

**9.7.1.1 Outage Authority and Coordination.** Each Party may in accordance with Good Utility Practice in coordination with the other Parties remove from service any of its respective Interconnection Facilities or Network Upgrades that may impact another Party's facilities as necessary to perform maintenance or testing or to install or replace equipment. Absent an Emergency Condition, the Party scheduling a removal of such facility(ies) from service will use Reasonable Efforts to schedule such removal on a date and time mutually acceptable to all Parties. In all circumstances any Party planning to remove such facility(ies) from service shall use Reasonable Efforts to minimize the effect on the other Parties of such removal.

**9.7.1.2 Outage Schedules.** The CAISO shall post scheduled outages of CAISO Controlled Grid facilities in accordance with the provisions of the CAISO Tariff. The Interconnection Customer shall submit its planned maintenance schedules for the Large Generating Facility to the CAISO in accordance with the CAISO Tariff. The Interconnection Customer shall update its planned maintenance schedules in accordance with the CAISO Tariff. The CAISO may request the Interconnection Customer to reschedule its maintenance as necessary to maintain the reliability of the CAISO Controlled Grid in accordance with the CAISO Tariff. Such planned maintenance schedules and updates and changes to such schedules shall be provided by the Interconnection Customer to the Participating TO concurrently with their submittal to the CAISO. The CAISO shall compensate the Interconnection Customer for any additional direct costs that the Interconnection Customer incurs as a result of having to reschedule maintenance in accordance with the CAISO Tariff. The Interconnection Customer will not be eligible to receive compensation, if during the twelve (12) months prior to the date of the scheduled maintenance, the Interconnection Customer had modified its schedule of maintenance activities.

**9.7.1.3 Outage Restoration.** If an outage on a Party's Interconnection Facilities or Network Upgrades adversely affects another Party's operations or facilities, the Party that owns or controls the facility that is out of service shall use Reasonable Efforts to promptly restore such facility(ies) to a normal operating condition consistent with the nature of the outage. The Party that owns or controls the facility that is out of service shall provide the other Parties, to the extent such information is known, information on the nature of the Emergency Condition, if

the outage is caused by an Emergency Condition, an estimated time of restoration, and any corrective actions required. Initial verbal notice shall be followed up as soon as practicable with written notice explaining the nature of the outage, if requested by a Party, which may be provided by e-mail or facsimile.

**9.7.2 Interruption of Service.** If required by Good Utility Practice to do so, the CAISO or the Participating TO may require the Interconnection Customer to interrupt or reduce deliveries of electricity if such delivery of electricity could adversely affect the CAISO's or the Participating TO's ability to perform such activities as are necessary to safely and reliably operate and maintain the Participating TO's electric system or the CAISO Controlled Grid. The following provisions shall apply to any interruption or reduction permitted under this Article 9.7.2:

**9.7.2.1** The interruption or reduction shall continue only for so long as reasonably necessary under Good Utility Practice;

**9.7.2.2** Any such interruption or reduction shall be made on an equitable, non-discriminatory basis with respect to all generating facilities directly connected to the CAISO Controlled Grid, subject to any conditions specified in this LGIA;

**9.7.2.3** When the interruption or reduction must be made under circumstances which do not allow for advance notice, the CAISO or Participating TO, as applicable, shall notify the Interconnection Customer by telephone as soon as practicable of the reasons for the curtailment, interruption, or reduction, and, if known, its expected duration. Telephone notification shall be followed by written notification, if requested by the Interconnection Customer, as soon as practicable;

**9.7.2.4** Except during the existence of an Emergency Condition, the CAISO or Participating TO shall notify the Interconnection Customer in advance regarding the timing of such interruption or reduction and further notify the Interconnection Customer of the expected duration. The CAISO or Participating TO shall coordinate with the Interconnection Customer using Good Utility Practice to schedule the interruption or reduction during periods of least impact to the Interconnection Customer, the CAISO, and the Participating TO;

**9.7.2.5** The Parties shall cooperate and coordinate with each other to the extent necessary in order to restore the Large Generating Facility, Interconnection Facilities, the Participating TO's Transmission System, and the CAISO Controlled Grid to their normal operating state, consistent with system conditions and Good Utility Practice.

**9.7.3 Under-Frequency and Over Frequency Conditions.** The CAISO Controlled Grid is designed to automatically activate a load-shed program as required by Applicable Reliability Standards and the Applicable Reliability Council in the event of an under-frequency system disturbance. The Interconnection Customer shall implement under-frequency and over-frequency protection set points for the Large Generating Facility as required by Applicable Reliability Standards and the Applicable Reliability Council to ensure "ride through" capability. Large Generating Facility response to frequency deviations of pre-determined magnitudes, both under-frequency and over-frequency deviations, shall be studied and coordinated with the Participating TO and CAISO in accordance with Good Utility Practice. The term "ride through" as used herein shall mean the ability of a Generating Facility to stay connected to and synchronized with the CAISO Controlled Grid during system disturbances within a range of under-frequency and over-frequency conditions, in accordance with Good Utility Practice.

**9.7.4 System Protection and Other Control Requirements.**

**9.7.4.1 System Protection Facilities.** The Interconnection Customer shall, at its expense, install, operate and maintain System Protection Facilities as a part of the Large Generating Facility or the Interconnection Customer's Interconnection Facilities. The Participating TO shall install at the Interconnection Customer's expense any System Protection Facilities that may be required on the Participating TO's Interconnection Facilities or the Participating TO's Transmission System as a result of the interconnection of the Large Generating Facility and the Interconnection Customer's Interconnection Facilities.

**9.7.4.2** The Participating TO's and Interconnection Customer's protection facilities shall be designed and coordinated with other systems in accordance with Applicable Reliability Standards, Applicable Reliability Council criteria, and Good Utility Practice.

**9.7.4.3** The Participating TO and Interconnection Customer shall each be responsible for protection of its facilities consistent with Good Utility Practice.

**9.7.4.4** The Participating TO's and Interconnection Customer's protective relay design shall incorporate the necessary test switches to perform the tests required in Article 6. The required test switches will be placed such that they allow operation of lockout relays while preventing breaker failure schemes from operating and causing unnecessary breaker operations and/or the tripping of the Interconnection Customer's Electric Generating Units.

**9.7.4.5** The Participating TO and Interconnection Customer will test, operate and maintain System Protection Facilities in accordance with Good Utility Practice and, if applicable, the requirements of the Participating TO's Interconnection Handbook.

**9.7.4.6** Prior to the in-service date, and again prior to the Commercial Operation Date, the Participating TO and Interconnection Customer or their agents shall perform a complete calibration test and functional trip test of the System Protection Facilities. At intervals suggested by Good Utility Practice, the standards and procedures of the Participating TO, including, if applicable, the requirements of the Participating TO's Interconnection Handbook, and following any apparent malfunction of the System Protection Facilities, each Party shall perform both calibration and functional trip tests of its System Protection Facilities. These tests do not require the tripping of any in-service generation unit. These tests do, however, require that all protective relays and lockout contacts be activated.

**9.7.5 Requirements for Protection.** In compliance with Good Utility Practice and, if applicable, the requirements of the Participating TO's Interconnection Handbook, the Interconnection Customer shall provide, install, own, and maintain relays, circuit breakers and all other devices necessary to remove any fault contribution of the Large Generating Facility to any short circuit occurring on the Participating TO's Transmission System not otherwise isolated by the Participating TO's equipment, such that the removal of the fault contribution shall be coordinated with the protective requirements of the Participating TO's Transmission System. Such protective equipment shall include, without limitation, a disconnecting device with fault current-interrupting capability located between the Large Generating Facility and the Participating TO's Transmission System at a site selected upon mutual agreement (not to be unreasonably withheld, conditioned or delayed) of the Parties. The Interconnection Customer shall be responsible for protection of the Large Generating Facility and the Interconnection Customer's other equipment from such conditions as negative sequence currents, over- or under-frequency, sudden load

rejection, over- or under-voltage, and generator loss-of-field. The Interconnection Customer shall be solely responsible to disconnect the Large Generating Facility and the Interconnection Customer's other equipment if conditions on the CAISO Controlled Grid could adversely affect the Large Generating Facility.

**9.7.6 Power Quality.** Neither the Participating TO's nor the Interconnection Customer's facilities shall cause excessive voltage flicker nor introduce excessive distortion to the sinusoidal voltage or current waves as defined by ANSI Standard C84.1-1989, in accordance with IEEE Standard 519, any applicable superseding electric industry standard, or any alternative Applicable Reliability Standard or Applicable Reliability Council standard. In the event of a conflict among ANSI Standard C84.1-1989, any applicable superseding electric industry standard, or any alternative Applicable Reliability Standard or Applicable Reliability Council standard, the alternative Applicable Reliability Standard or Applicable Reliability Council standard shall control.

**9.8 Switching and Tagging Rules.** Each Party shall provide the other Parties a copy of its switching and tagging rules that are applicable to the other Parties' activities. Such switching and tagging rules shall be developed on a non-discriminatory basis. The Parties shall comply with applicable switching and tagging rules, as amended from time to time, in obtaining clearances for work or for switching operations on equipment.

**9.9 Use of Interconnection Facilities by Third Parties.**

**9.9.1 Purpose of Interconnection Facilities.** Except as may be required by Applicable Laws and Regulations, or as otherwise agreed to among the Parties, the Interconnection Facilities shall be constructed for the sole purpose of interconnecting the Large Generating Facility to the Participating TO's Transmission System and shall be used for no other purpose.

**9.9.2 Third Party Users.** If required by Applicable Laws and Regulations or if the Parties mutually agree, such agreement not to be unreasonably withheld, to allow one or more third parties to use the Participating TO's Interconnection Facilities, or any part thereof, the Interconnection Customer will be entitled to compensation for the capital expenses it incurred in connection with the Interconnection Facilities based upon the pro rata use of the Interconnection Facilities by the Participating TO, all third party users, and the Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually-agreed upon methodology. In addition, cost responsibility for ongoing costs, including operation and maintenance costs associated with the Interconnection Facilities, will be allocated between the Interconnection Customer and any third party users based upon the pro rata use of the Interconnection Facilities by the Participating TO, all third party users, and the Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually agreed upon methodology. If the issue of such compensation or allocation cannot be resolved through such negotiations, it shall be submitted to FERC for resolution.

**9.10 Disturbance Analysis Data Exchange.** The Parties will cooperate with one another in the analysis of disturbances to either the Large Generating Facility or the CAISO Controlled Grid by gathering and providing access to any information relating to any disturbance, including information from oscillography, protective relay targets, breaker operations and sequence of events records, and any disturbance information required by Good Utility Practice.

## Article 10. Maintenance

**10.1 Participating TO Obligations.** The Participating TO shall maintain the Participating TO's Transmission System and the Participating TO's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA.

**10.2 Interconnection Customer Obligations.** The Interconnection Customer shall maintain the Large Generating Facility and the Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA.

**10.3 Coordination.** The Parties shall confer regularly to coordinate the planning, scheduling and performance of preventive and corrective maintenance on the Large Generating Facility and the Interconnection Facilities.

**10.4 Secondary Systems.** The Participating TO and Interconnection Customer shall cooperate with the other Parties in the inspection, maintenance, and testing of control or power circuits that operate below 600 volts, AC or DC, including, but not limited to, any hardware, control or protective devices, cables, conductors, electric raceways, secondary equipment panels, transducers, batteries, chargers, and voltage and current transformers that directly affect the operation of a Party's facilities and equipment which may reasonably be expected to impact the other Parties. Each Party shall provide advance notice to the other Parties before undertaking any work on such circuits, especially on electrical circuits involving circuit breaker trip and close contacts, current transformers, or potential transformers.

**10.5 Operating and Maintenance Expenses.** Subject to the provisions herein addressing the use of facilities by others, and except for operations and maintenance expenses associated with modifications made for providing interconnection or transmission service to a third party and such third party pays for such expenses, the Interconnection Customer shall be responsible for all reasonable expenses including overheads, associated with: (1) owning, operating, maintaining, repairing, and replacing the Interconnection Customer's Interconnection Facilities; and (2) operation, maintenance, repair and replacement of the Participating TO's Interconnection Facilities.

## Article 11. Performance Obligation

**11.1 Interconnection Customer's Interconnection Facilities.** The Interconnection Customer shall design, procure, construct, install, own and/or control the Interconnection Customer's Interconnection Facilities described in Appendix A at its sole expense.

**11.2 Participating TO's Interconnection Facilities.** The Participating TO shall design, procure, construct, install, own and/or control the Participating TO's Interconnection Facilities described in Appendix A at the sole expense of the Interconnection Customer. Unless the Participating TO elects to fund the capital for the Participating TO's Interconnection Facilities, they shall be solely funded by the Interconnection Customer.

**11.3 Network Upgrades and Distribution Upgrades.** The Participating TO shall design, procure, construct, install, and own the Network Upgrades and Distribution Upgrades described in Appendix A. The Interconnection Customer shall be responsible for all costs related to Distribution Upgrades. Unless the Participating TO elects to fund the capital for the Distribution Upgrades and Network Upgrades, they shall be funded by the Interconnection Customer, which, for Interconnection Customers processed under the Section 6 of the GIP (in queue clusters), shall be in an amount determined pursuant to the methodology set forth in Section 6.5 of the GIP. This specific amount is set forth in Appendix G to this LGIA.

**11.4 Transmission Credits.** No later than thirty (30) Calendar Days prior to the Commercial Operation Date, the Interconnection Customer may make a one-time election by written notice to the CAISO and the Participating TO to receive Congestion Revenue Rights as defined in and as available under the CAISO Tariff at the time of the election in accordance with the CAISO Tariff, in lieu of a refund of the cost of Network Upgrades in accordance with Article 11.4.1.

**11.4.1 Repayment of Amounts Advanced for Network Upgrades.** Upon the Commercial Operation Date, the Interconnection Customer shall be entitled to a repayment, equal to the total amount paid to the Participating TO for the costs of Network Upgrades for which it is responsible, as set forth in Appendix G. Such amount shall include any tax gross-up or other tax-related payments associated with Network Upgrades not refunded to the Interconnection Customer pursuant to Article 5.17.8 or otherwise, and shall be paid to the Interconnection Customer by the Participating TO on a dollar-for-dollar basis either through (1) direct payments made on a levelized basis over the five-year period commencing on the Commercial Operation Date; or (2) any alternative payment schedule that is mutually agreeable to the Interconnection Customer and Participating TO, provided that such amount is paid within five (5) years from the Commercial Operation Date. Notwithstanding the foregoing, if this LGIA terminates within five (5) years from the Commercial Operation Date, the Participating TO's obligation to pay refunds to the Interconnection Customer shall cease as of the date of termination. Any repayment shall include interest calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date of any payment for Network Upgrades through the date on which the Interconnection Customer receives a repayment of such payment. Interest shall continue to accrue on the repayment obligation so long as this LGIA is in effect. The Interconnection Customer may assign such repayment rights to any person.

If the Large Generating Facility fails to achieve Commercial Operation, but it or another Generating Facility is later constructed and makes use of the Network Upgrades, the Participating TO shall at that time reimburse Interconnection Customer for the amounts advanced for the Network Upgrades. Before any such reimbursement can occur, the Interconnection Customer, or the entity that ultimately constructs the Generating Facility, if different, is responsible for identifying and demonstrating to the Participating TO the appropriate entity to which reimbursement must be made in order to implement the intent of this reimbursement obligation.

**11.4.2 Special Provisions for Affected Systems.** The Interconnection Customer shall enter into an agreement with the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid, as applicable, in accordance with the GIP. Such agreement shall specify the terms governing payments to be made by the Interconnection Customer to the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid as well as the repayment by the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid. In no event shall the Participating TO be responsible for the repayment for any facilities that are not part of the Participating TO's Transmission System. In the event the Participating TO is a joint owner with an Affected System or with any other co-owner of a facility affected by the Large Generating Facility, the Participating TO's obligation to reimburse the Interconnection Customer for payments made to address the impacts of the Large Generating Facility on the system shall not exceed the proportionate amount of the cost of any upgrades attributable to the proportion of the jointly-owned facility owned by the Participating TO.

**11.4.3** Notwithstanding any other provision of this LGIA, nothing herein shall be construed as relinquishing or foreclosing any rights, including but not limited to firm transmission rights, capacity rights, Congestion Revenue Rights, or transmission credits, that the

Interconnection Customer shall be entitled to, now or in the future under any other agreement or tariff as a result of, or otherwise associated with, the transmission capacity, if any, created by the Network Upgrades, including the right to obtain cash reimbursements, merchant transmission Congestion Revenue Rights in accordance with Section 36.11 of the CAISO Tariff, or transmission credits for transmission service that is not associated with the Large Generating Facility.

**11.5 Provision of Interconnection Financial Security.** The Interconnection Customer is obligated to provide all necessary Interconnection Financial Security required under Section 9 of the GIP in a manner acceptable under Section 9 of the GIP. Failure by the Interconnection Customer to timely satisfy the GIP's requirements for the provision of Interconnection Financial Security shall be deemed a breach of this Agreement and a condition of Default of this Agreement.

**11.5.1** Notwithstanding any other provision in this Agreement for notice of Default and opportunity to cure such Default, the CAISO or the Participating TO shall provide Interconnection Customer with written notice of any Default due to timely failure to post Financial Security, and the Interconnection Customer shall have five (5) Business Days from the date of such notice to cure such Default by posting the required Financial Security. If the Interconnection Customer fails to cure the Default, then this Agreement shall be deemed terminated.

**11.6 Interconnection Customer Compensation.** If the CAISO requests or directs the Interconnection Customer to provide a service pursuant to Articles 9.6.3 (Payment for Reactive Power) or 13.5.1 of this LGIA, the CAISO shall compensate the Interconnection Customer in accordance with the CAISO Tariff.

**11.6.1 Interconnection Customer Compensation for Actions During Emergency Condition.** The CAISO shall compensate the Interconnection Customer in accordance with the CAISO Tariff for its provision of real and reactive power and other Emergency Condition services that the Interconnection Customer provides to support the CAISO Controlled Grid during an Emergency Condition in accordance with Article 11.6.

## Article 12. Invoice

**12.1 General.** The Participating TO shall submit to the Interconnection Customer, on a monthly basis, invoices of amounts due pursuant to this LGIA for the preceding month. Each invoice shall state the month to which the invoice applies and fully describe the services and equipment provided. The Parties may discharge mutual debts and payment obligations due and owing to each other on the same date through netting, in which case all amounts a Party owes to the other Party under this LGIA, including interest payments or credits, shall be netted so that only the net amount remaining due shall be paid by the owing Party. Notwithstanding the foregoing, any invoices between the CAISO and another Party shall be submitted and paid in accordance with the CAISO Tariff.

**12.2 Final Invoice.** As soon as reasonably practicable, but within twelve months after completion of the construction of the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades, the Participating TO shall provide an invoice of the final cost of the construction of the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades, and shall set forth such costs in sufficient detail to enable the Interconnection Customer to compare the actual costs with the estimates and to ascertain deviations, if any, from the cost estimates. With respect to costs associated with the Participating TO's Interconnection Facilities and Distribution Upgrades, the Participating TO shall refund to the Interconnection Customer any amount by which the actual payment by the Interconnection Customer for estimated costs exceeds the actual costs of construction within thirty (30) Calendar Days of the issuance of such final construction invoice; or, in the event the actual costs of

construction exceed the Interconnection Customer's actual payment for estimated costs, then the Interconnection Customer shall pay to the Participating TO any amount by which the actual costs of construction exceed the actual payment by the Interconnection Customer for estimated costs within thirty (30) Calendar Days of the issuance of such final construction invoice. With respect to costs associated with Network Upgrades, the Participating TO shall refund to the Interconnection Customer any amount by which the actual payment by the Interconnection Customer for estimated costs exceeds the actual costs of construction multiplied by the Interconnection Customer's percentage share of those costs, as set forth in Appendix G to this LGIA within thirty (30) Calendar Days of the issuance of such final construction invoice. In the event the actual costs of construction multiplied by the Interconnection Customer's percentage share of those costs exceed the Interconnection Customer's actual payment for estimated costs, then the Participating TO shall recover such difference through its transmission service rates.

**12.3 Payment.** Invoices shall be rendered to the Interconnection Customer at the address specified in Appendix F. The Interconnection Customer shall pay, or Participating TO shall refund, the amounts due within thirty (30) Calendar Days of the Interconnection Customer's receipt of the invoice. All payments shall be made in immediately available funds payable to the Interconnection Customer or Participating TO, or by wire transfer to a bank named and account designated by the invoicing Interconnection Customer or Participating TO. Payment of invoices by any Party will not constitute a waiver of any rights or claims any Party may have under this LGIA.

**12.4 Disputes.** In the event of a billing dispute between the Interconnection Customer and the Participating TO, the Participating TO and the CAISO shall continue to provide Interconnection Service under this LGIA as long as the Interconnection Customer: (i) continues to make all payments not in dispute; and (ii) pays to the Participating TO or into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If the Interconnection Customer fails to meet these two requirements for continuation of service, then the Participating TO may provide notice to the Interconnection Customer of a Default pursuant to Article 17. Within thirty (30) Calendar Days after the resolution of the dispute, the Party that owes money to the other Party shall pay the amount due with interest calculated in accordance with the methodology set forth in FERC's Regulations at 18 C.F.R. § 35.19a(a)(2)(iii). Notwithstanding the foregoing, any billing dispute between the CAISO and another Party shall be resolved in accordance with the provisions of Article 27 of this LGIA.

## Article 13. Emergencies

**13.1 [Reserved]**

**13.2 Obligations.** Each Party shall comply with the Emergency Condition procedures of the CAISO, NERC, the Applicable Reliability Council, Applicable Reliability Standards, Applicable Laws and Regulations, and any emergency procedures set forth in this LGIA.

**13.3 Notice.** The Participating TO or the CAISO shall notify the Interconnection Customer promptly when it becomes aware of an Emergency Condition that affects the Participating TO's Interconnection Facilities or Distribution System or the CAISO Controlled Grid, respectively, that may reasonably be expected to affect the Interconnection Customer's operation of the Large Generating Facility or the Interconnection Customer's Interconnection Facilities. The Interconnection Customer shall notify the Participating TO and the CAISO promptly when it becomes aware of an Emergency Condition that affects the Large Generating Facility or the Interconnection Customer's Interconnection Facilities that may reasonably be expected to affect the CAISO Controlled Grid or the Participating TO's Interconnection Facilities. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of the Interconnection Customer's or Participating TO's facilities and operations, its anticipated duration and the corrective action taken

and/or to be taken. The initial notice shall be followed as soon as practicable with written notice, if requested by a Party, which may be provided by electronic mail or facsimile, or in the case of the CAISO may be publicly posted on the CAISO's internet web site.

**13.4 Immediate Action.** Unless, in the Interconnection Customer's reasonable judgment, immediate action is required, the Interconnection Customer shall obtain the consent of the CAISO and the Participating TO, such consent to not be unreasonably withheld, prior to performing any manual switching operations at the Large Generating Facility or the Interconnection Customer's Interconnection Facilities in response to an Emergency Condition declared by the Participating TO or CAISO or in response to any other emergency condition.

**13.5 CAISO and Participating TO Authority.**

**13.5.1 General.** The CAISO and Participating TO may take whatever actions or inactions, including issuance of dispatch instructions, with regard to the CAISO Controlled Grid or the Participating TO's Interconnection Facilities or Distribution System they deem necessary during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the CAISO Controlled Grid or the Participating TO's Interconnection Facilities or Distribution System, (iii) limit or prevent damage, and (iv) expedite restoration of service.

The Participating TO and the CAISO shall use Reasonable Efforts to minimize the effect of such actions or inactions on the Large Generating Facility or the Interconnection Customer's Interconnection Facilities. The Participating TO or the CAISO may, on the basis of technical considerations, require the Large Generating Facility to mitigate an Emergency Condition by taking actions necessary and limited in scope to remedy the Emergency Condition, including, but not limited to, directing the Interconnection Customer to shut-down, start-up, increase or decrease the real or reactive power output of the Large Generating Facility; implementing a reduction or disconnection pursuant to Article 13.5.2; directing the Interconnection Customer to assist with black start (if available) or restoration efforts; or altering the outage schedules of the Large Generating Facility and the Interconnection Customer's Interconnection Facilities. Interconnection Customer shall comply with all of the CAISO's Dispatch Instructions and Operating Instructions and Participating TO's dispatch instructions or Operating Instructions concerning Large Generating Facility real power and reactive power output within the manufacturer's design limitations of the Large Generating Facility's equipment that is in service and physically available for operation at the time, in compliance with Applicable Laws and Regulations.

**13.5.2 Reduction and Disconnection.** The Participating TO or the CAISO may reduce Interconnection Service or disconnect the Large Generating Facility or the Interconnection Customer's Interconnection Facilities when such reduction or disconnection is necessary under Good Utility Practice due to Emergency Conditions. These rights are separate and distinct from any right of curtailment of the CAISO pursuant to the CAISO Tariff. When the CAISO or Participating TO can schedule the reduction or disconnection in advance, the CAISO or Participating TO shall notify the Interconnection Customer of the reasons, timing and expected duration of the reduction or disconnection. The CAISO or Participating TO shall coordinate with the Interconnection Customer using Good Utility Practice to schedule the reduction or disconnection during periods of least impact to the Interconnection Customer and the CAISO and Participating TO. Any reduction or disconnection shall continue only for so long as reasonably necessary under Good Utility Practice. The Parties shall cooperate with each other to restore the Large Generating Facility, the Interconnection Facilities, and the CAISO Controlled Grid to their normal operating state as soon as practicable consistent with Good Utility Practice.

**13.6 Interconnection Customer Authority.** Consistent with Good Utility Practice, this LGIA, and the CAISO Tariff, the Interconnection Customer may take actions or inactions with regard to the Large Generating Facility or the Interconnection Customer's Interconnection Facilities during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the Large Generating Facility or the Interconnection Customer's Interconnection Facilities, (iii) limit or prevent damage, and (iv) expedite restoration of service. Interconnection Customer shall use Reasonable Efforts to minimize the effect of such actions or inactions on the CAISO Controlled Grid and the Participating TO's Interconnection Facilities. The CAISO and Participating TO shall use Reasonable Efforts to assist Interconnection Customer in such actions.

**13.7 Limited Liability.** Except as otherwise provided in Article 11.6.1 of this LGIA, no Party shall be liable to any other Party for any action it takes in responding to an Emergency Condition so long as such action is made in good faith and is consistent with Good Utility Practice.

## Article 14. Regulatory Requirements And Governing Law

**14.1 Regulatory Requirements.** Each Party's obligations under this LGIA shall be subject to its receipt of any required approval or certificate from one or more Governmental Authorities in the form and substance satisfactory to the applying Party, or the Party making any required filings with, or providing notice to, such Governmental Authorities, and the expiration of any time period associated therewith. Each Party shall in good faith seek and use its Reasonable Efforts to obtain such other approvals. Nothing in this LGIA shall require the Interconnection Customer to take any action that could result in its inability to obtain, or its loss of, status or exemption under the Federal Power Act or the Public Utility Holding Company Act of 1935, as amended, or the Public Utility Regulatory Policies Act of 1978, or the Energy Policy Act of 2005.

**14.2 Governing Law.**

**14.2.1** The validity, interpretation and performance of this LGIA and each of its provisions shall be governed by the laws of the state where the Point of Interconnection is located, without regard to its conflicts of law principles.

**14.2.2** This LGIA is subject to all Applicable Laws and Regulations.

**14.2.3** Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, rules, or regulations of a Governmental Authority.

## Article 15. Notices

**15.1 General.** Unless otherwise provided in this LGIA, any notice, demand or request required or permitted to be given by a Party to another and any instrument required or permitted to be tendered or delivered by a Party in writing to another shall be effective when delivered and may be so given, tendered or delivered, by recognized national courier, or by depositing the same with the United States Postal Service with postage prepaid, for delivery by certified or registered mail, addressed to the Party, or personally delivered to the Party, at the address set out in Appendix F, Addresses for Delivery of Notices and Billings.

A Party must update the information in Appendix F as information changes. A Party may change the notice information in this LGIA by giving five (5) Business Days written notice prior to the effective date of the change. Such changes shall not constitute an amendment to this LGIA.

**15.2 Billings and Payments.** Billings and payments shall be sent to the addresses set out in Appendix F.

**15.3 Alternative Forms of Notice.** Any notice or request required or permitted to be given by a Party to another and not required by this LGIA to be given in writing may be so given by telephone, facsimile or e-mail to the telephone numbers and e-mail addresses set out in Appendix F.

**15.4 Operations and Maintenance Notice.** Each Party shall notify the other Parties in writing of the identity of the person(s) that it designates as the point(s) of contact with respect to the implementation of Articles 9 and 10.

## Article 16. Force Majeure

**16.1 Force Majeure.**

**16.1.1** Economic hardship is not considered a Force Majeure event.

**16.1.2** No Party shall be considered to be in Default with respect to any obligation hereunder, (including obligations under Article 4), other than the obligation to pay money when due, if prevented from fulfilling such obligation by Force Majeure. A Party unable to fulfill any obligation hereunder (other than an obligation to pay money when due) by reason of Force Majeure shall give notice and the full particulars of such Force Majeure to the other Party in writing or by telephone as soon as reasonably possible after the occurrence of the cause relied upon. Telephone notices given pursuant to this Article shall be confirmed in writing as soon as reasonably possible and shall specifically state full particulars of the Force Majeure, the time and date when the Force Majeure occurred and when the Force Majeure is reasonably expected to cease. The Party affected shall exercise due diligence to remove such disability with reasonable dispatch, but shall not be required to accede or agree to any provision not satisfactory to it in order to settle and terminate a strike or other labor disturbance.

## Article 17. Default

**17.1 Default.**

**17.1.1 General.** No Default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of Force Majeure as defined in this LGIA or the result of an act or omission of the other Party. Upon a Breach, the affected non-Breaching Party(ies) shall give written notice of such Breach to the Breaching Party. Except as provided in Article 17.1.2, and in Article 11.5.1, the Breaching Party shall have thirty (30) Calendar Days from receipt of the Default notice within which to cure such Breach; provided however, if such Breach is not capable of cure within thirty (30) Calendar Days, the Breaching Party shall commence such cure within thirty (30) Calendar Days after notice and continuously and diligently complete such cure within ninety (90) Calendar Days from receipt of the Default notice; and, if cured within such time, the Breach specified in such notice shall cease to exist.

**17.1.2 Right to Terminate.** If a Breach is not cured as provided in this Article, or if a Breach is not capable of being cured within the period provided for herein, the affected non-Breaching Party(ies) shall have the right to declare a Default and terminate this LGIA by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not such Party(ies) terminates this LGIA, to recover from the Breaching Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this Article will survive termination of this LGIA.

## Article 18. Indemnity, Consequential Damages And Insurance

**18.1 Indemnity.** Each Party shall at all times indemnify, defend, and hold the other Parties harmless from, any and all Losses arising out of or resulting from another Party's action or inactions of its obligations under this LGIA on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the Indemnified Party.

**18.1.1 Indemnified Party.** If an Indemnified Party is entitled to indemnification under this Article 18 as a result of a claim by a third party, and the Indemnifying Party fails, after notice and reasonable opportunity to proceed under Article 18.1, to assume the defense of such claim, such Indemnified Party may at the expense of the Indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

**18.1.2 Indemnifying Party.** If an Indemnifying Party is obligated to indemnify and hold any Indemnified Party harmless under this Article 18, the amount owing to the Indemnified Party shall be the amount of such Indemnified Party's actual Loss, net of any insurance or other recovery.

**18.1.3 Indemnity Procedures.** Promptly after receipt by an Indemnified Party of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in Article 18.1 may apply, the Indemnified Party shall notify the Indemnifying Party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying Party.

The Indemnifying Party shall have the right to assume the defense thereof with counsel designated by such Indemnifying Party and reasonably satisfactory to the Indemnified Party. If the defendants in any such action include one or more Indemnified Parties and the Indemnifying Party and if the Indemnified Party reasonably concludes that there may be legal defenses available to it and/or other Indemnified Parties which are different from or additional to those available to the Indemnifying Party, the Indemnified Party shall have the right to select separate counsel to assert such legal defenses and to otherwise participate in the defense of such action on its own behalf. In such instances, the Indemnifying Party shall only be required to pay the fees and expenses of one additional attorney to represent an Indemnified Party or Indemnified Parties having such differing or additional legal defenses.

The Indemnified Party shall be entitled, at its expense, to participate in any such action, suit or proceeding, the defense of which has been assumed by the Indemnifying Party. Notwithstanding the foregoing, the Indemnifying Party (i) shall not be entitled to assume and control the defense of any such action, suit or proceedings if and to the extent that, in the opinion of the Indemnified Party and its counsel, such action, suit or proceeding involves the potential imposition of criminal liability on the Indemnified Party, or there exists a conflict or adversity of interest between the Indemnified Party and the Indemnifying Party, in such event the Indemnifying Party shall pay the reasonable expenses of the Indemnified Party, and (ii) shall not settle or consent to the entry of any judgment in any action, suit or proceeding without the consent of the Indemnified Party, which shall not be unreasonably withheld, conditioned or delayed.

**18.2 Consequential Damages.** Other than the liquidated damages heretofore described in Article 5.3, in no event shall any Party be liable under any provision of this LGIA for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to another Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

**18.3 Insurance.** Each Party shall, at its own expense, maintain in force throughout the period of this LGIA, and until released by the other Parties, the following minimum insurance coverages, with insurers rated no less than A- (with a minimum size rating of VII) by Bests' Insurance Guide and Key Ratings and authorized to do business in the state where the Point of Interconnection is located, except in the case of the CAISO, the State of California:

**18.3.1** Employer's Liability and Workers' Compensation Insurance providing statutory benefits in accordance with the laws and regulations of the state in which the Point of Interconnection is located, except in the case of the CAISO, the State of California.

**18.3.2** Commercial General Liability Insurance including premises and operations, personal injury, broad form property damage, broad form blanket contractual liability coverage (including coverage for the contractual indemnification) products and completed operations coverage, coverage for explosion, collapse and underground hazards, independent contractors coverage, coverage for pollution to the extent normally available and punitive damages to the extent normally available and a cross liability endorsement, with minimum limits of One Million Dollars ($1,000,000) per occurrence/One Million Dollars ($1,000,000) aggregate combined single limit for personal injury, bodily injury, including death and property damage.

**18.3.3** Business Automobile Liability Insurance for coverage of owned and non-owned and hired vehicles, trailers or semi-trailers designed for travel on public roads, with a minimum, combined single limit of One Million Dollars ($1,000,000) per occurrence for bodily injury, including death, and property damage.

**18.3.4** Excess Public Liability Insurance over and above the Employer's Liability Commercial General Liability and Business Automobile Liability Insurance coverage, with a minimum combined single limit of Twenty Million Dollars ($20,000,000) per occurrence/Twenty Million Dollars ($20,000,000) aggregate.

**18.3.5** The Commercial General Liability Insurance, Business Automobile Insurance and Excess Public Liability Insurance policies shall name the other Parties, their parents, associated and Affiliate companies and their respective directors, officers, agents, servants and employees ("Other Party Group") as additional insured. All policies shall contain provisions whereby the insurers waive all rights of subrogation in accordance with the provisions of this LGIA against the Other Party Group and provide thirty (30) Calendar Days advance written notice to the Other Party Group prior to anniversary date of cancellation or any material change in coverage or condition.

**18.3.6** The Commercial General Liability Insurance, Business Automobile Liability Insurance and Excess Public Liability Insurance policies shall contain provisions that specify that the policies are primary and shall apply to such extent without consideration for other policies separately carried and shall state that each insured is provided coverage as though a separate policy had been issued to each, except the insurer's liability shall not be increased beyond the amount for which the insurer would have been liable had only one insured been covered. Each Party shall be responsible for its respective deductibles or retentions.

**18.3.7** The Commercial General Liability Insurance, Business Automobile Liability Insurance and Excess Public Liability Insurance policies, if written on a Claims First Made Basis, shall be maintained in full force and effect for two (2) years after termination of this LGIA, which coverage may be in the form of tail coverage or extended reporting period coverage if agreed by the Parties.

**18.3.8** The requirements contained herein as to the types and limits of all insurance to be maintained by the Parties are not intended to and shall not in any manner, limit or qualify the liabilities and obligations assumed by the Parties under this LGIA.

**18.3.9** Within ten (10) Calendar Days following execution of this LGIA, and as soon as practicable after the end of each fiscal year or at the renewal of the insurance policy and in any event within ninety (90) Calendar Days thereafter, each Party shall provide certification of all insurance required in this LGIA, executed by each insurer or by an authorized representative of each insurer.

**18.3.10** Notwithstanding the foregoing, each Party may self-insure to meet the minimum insurance requirements of Articles 18.3.2 through 18.3.8 to the extent it maintains a self-insurance program; provided that, such Party's senior unsecured debt or issuer rating is BBB-, or better, as rated by Standard & Poor's and that its self-insurance program meets the minimum insurance requirements of Articles 18.3.2 through 18.3.8. For any period of time that a Party's senior unsecured debt rating and issuer rating are both unrated by Standard & Poor's or are both rated at less than BBB- by Standard & Poor's, such Party shall comply with the insurance requirements applicable to it under Articles 18.3.2 through 18.3.9. In the event that a Party is permitted to self-insure pursuant to this Article 18.3.10, it shall notify the other Parties that it meets the requirements to self-insure and that its self-insurance program meets the minimum insurance requirements in a manner consistent with that specified in Article 18.3.9.

**18.3.11** The Parties agree to report to each other in writing as soon as practical all accidents or occurrences resulting in injuries to any person, including death, and any property damage arising out of this LGIA.

## Article 19. Assignment

**19.1 Assignment.** This LGIA may be assigned by a Party only with the written consent of the other Parties; provided that a Party may assign this LGIA without the consent of the other Parties to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this LGIA; and provided further that the Interconnection Customer shall have the right to assign this LGIA, without the consent of the CAISO or Participating TO, for collateral security purposes to aid in providing financing for the Large Generating Facility, provided that the Interconnection Customer will promptly notify the CAISO and Participating TO of any such assignment. Any financing arrangement entered into by the Interconnection Customer pursuant to this Article will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify the CAISO and Participating TO of the date and particulars of any such exercise of assignment right(s), including providing the CAISO and Participating TO with proof that it meets the requirements of Articles 11.5 and 18.3. Any attempted assignment that violates this Article is void and ineffective. Any assignment under this LGIA shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

## Article 20. Severability

**20.1 Severability.** If any provision in this LGIA is finally determined to be invalid, void or unenforceable by any court or other Governmental Authority having jurisdiction, such determination shall not invalidate, void or make unenforceable any other provision, agreement or covenant of this LGIA; provided that if the Interconnection Customer (or any third party, but only if such third party is not acting at the direction of the Participating TO or CAISO) seeks and obtains such a final determination with respect to any provision of the Alternate Option (Article 5.1.2), or

the Negotiated Option (Article 5.1.4), then none of the provisions of Article 5.1.2 or 5.1.4 shall thereafter have any force or effect and the Parties' rights and obligations shall be governed solely by the Standard Option (Article 5.1.1).

## Article 21. Comparability

**21.1 Comparability.** The Parties will comply with all applicable comparability and code of conduct laws, rules and regulations, as amended from time to time.

## Article 22. Confidentiality

**22.1 Confidentiality.** Confidential Information shall include, without limitation, all information relating to a Party's technology, research and development, business affairs, and pricing, and any information supplied by any of the Parties to the other Parties prior to the execution of this LGIA.

Information is Confidential Information only if it is clearly designated or marked in writing as confidential on the face of the document, or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Parties receiving the information that the information is confidential.

If requested by any Party, the other Parties shall provide in writing, the basis for asserting that the information referred to in this Article 22 warrants confidential treatment, and the requesting Party may disclose such writing to the appropriate Governmental Authority. Each Party shall be responsible for the costs associated with affording confidential treatment to its information.

**22.1.1 Term.** During the term of this LGIA, and for a period of three (3) years after the expiration or termination of this LGIA, except as otherwise provided in this Article 22, each Party shall hold in confidence and shall not disclose to any person Confidential Information.

**22.1.2 Scope.** Confidential Information shall not include information that the receiving Party can demonstrate: (1) is generally available to the public other than as a result of a disclosure by the receiving Party; (2) was in the lawful possession of the receiving Party on a non-confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a third party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the disclosing Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the disclosing Party; (5) is, or becomes, publicly known, through no wrongful act or omission of the receiving Party or Breach of this LGIA; or (6) is required, in accordance with Article 22.1.7 of this LGIA, Order of Disclosure, to be disclosed by any Governmental Authority or is otherwise required to be disclosed by law or subpoena, or is necessary in any legal proceeding establishing rights and obligations under this LGIA. Information designated as Confidential Information will no longer be deemed confidential if the Party that designated the information as confidential notifies the other Parties that it no longer is confidential.

**22.1.3 Release of Confidential Information.** No Party shall release or disclose Confidential Information to any other person, except to its employees, consultants, Affiliates (limited by the Standards of Conduct requirements set forth in Part 358 of FERC's Regulations, 18 C.F.R. 358), subcontractors, or to parties who may be or considering providing financing to or equity participation with the Interconnection Customer, or to potential purchasers or assignees of the Interconnection Customer, on a need-to-know basis in connection with this LGIA, unless such person has first been advised of the confidentiality provisions of this Article 22 and has agreed to comply with such provisions. Notwithstanding the foregoing, a Party providing Confidential Information to any person

shall remain primarily responsible for any release of Confidential Information in contravention of this Article 22.

**22.1.4 Rights.** Each Party retains all rights, title, and interest in the Confidential Information that each Party discloses to the other Parties. The disclosure by each Party to the other Parties of Confidential Information shall not be deemed a waiver by a Party or any other person or entity of the right to protect the Confidential Information from public disclosure.

**22.1.5 No Warranties.** The mere fact that a Party has provided Confidential Information does not constitute a warranty or representation as to its accuracy or completeness. In addition, by supplying Confidential Information, no Party obligates itself to provide any particular information or Confidential Information to the other Parties nor to enter into any further agreements or proceed with any other relationship or joint venture.

**22.1.6 Standard of Care.** Each Party shall use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from unauthorized disclosure, publication or dissemination. Each Party may use Confidential Information solely to fulfill its obligations to the other Parties under this LGIA or its regulatory requirements.

**22.1.7 Order of Disclosure.** If a court or a Government Authority or entity with the right, power, and apparent authority to do so requests or requires any Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party shall provide the other Parties with prompt notice of such request(s) or requirement(s) so that the other Parties may seek an appropriate protective order or waive compliance with the terms of this LGIA. Notwithstanding the absence of a protective order or waiver, the Party may disclose such Confidential Information which, in the opinion of its counsel, the Party is legally compelled to disclose. Each Party will use Reasonable Efforts to obtain reliable assurance that confidential treatment will be accorded any Confidential Information so furnished.

**22.1.8 Termination of Agreement.** Upon termination of this LGIA for any reason, each Party shall, within ten (10) Calendar Days of receipt of a written request from another Party, use Reasonable Efforts to destroy, erase, or delete (with such destruction, erasure, and deletion certified in writing to the other Party) or return to the other Party, without retaining copies thereof, any and all written or electronic Confidential Information received from the other Party.

**22.1.9 Remedies.** The Parties agree that monetary damages would be inadequate to compensate a Party for another Party's Breach of its obligations under this Article 22. Each Party accordingly agrees that the other Parties shall be entitled to equitable relief, by way of injunction or otherwise, if the first Party Breaches or threatens to Breach its obligations under this Article 22, which equitable relief shall be granted without bond or proof of damages, and the receiving Party shall not plead in defense that there would be an adequate remedy at law. Such remedy shall not be deemed an exclusive remedy for the Breach of this Article 22, but shall be in addition to all other remedies available at law or in equity. The Parties further acknowledge and agree that the covenants contained herein are necessary for the protection of legitimate business interests and are reasonable in scope. No Party, however, shall be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with this Article 22.

**22.1.10 Disclosure to FERC, its Staff, or a State.** Notwithstanding anything in this Article 22 to the contrary, and pursuant to 18 C.F.R. section 1b.20, if FERC or its staff, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to this LGIA, the Party

shall provide the requested information to FERC or its staff, within the time provided for in the request for information. In providing the information to FERC or its staff, the Party must, consistent with 18 C.F.R. section 388.112, request that the information be treated as confidential and non-public by FERC and its staff and that the information be withheld from public disclosure. Parties are prohibited from notifying the other Parties to this LGIA prior to the release of the Confidential Information to FERC or its staff. The Party shall notify the other Parties to the LGIA when it is notified by FERC or its staff that a request to release Confidential Information has been received by FERC, at which time any of the Parties may respond before such information would be made public, pursuant to 18 C.F.R. section 388.112. Requests from a state regulatory body conducting a confidential investigation shall be treated in a similar manner if consistent with the applicable state rules and regulations.

**22.1.11** Subject to the exception in Article 22.1.10, Confidential Information shall not be disclosed by the other Parties to any person not employed or retained by the other Parties, except to the extent disclosure is (i) required by law; (ii) reasonably deemed by the disclosing Party to be required to be disclosed in connection with a dispute between or among the Parties, or the defense of litigation or dispute; (iii) otherwise permitted by consent of the other Parties, such consent not to be unreasonably withheld; or (iv) necessary to fulfill its obligations under this LGIA or as a transmission service provider or a Balancing Authority including disclosing the Confidential Information to an RTO or ISO or to a regional or national reliability organization. The Party asserting confidentiality shall notify the other Parties in writing of the information it claims is confidential. Prior to any disclosures of another Party's Confidential Information under this subparagraph, or if any third party or Governmental Authority makes any request or demand for any of the information described in this subparagraph, the disclosing Party agrees to promptly notify the other Party in writing and agrees to assert confidentiality and cooperate with the other Party in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order or other reasonable measures.

## Article 23. Environmental Releases

**23.1** Each Party shall notify the other Parties, first orally and then in writing, of the release of any Hazardous Substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Large Generating Facility or the Interconnection Facilities, each of which may reasonably be expected to affect the other Parties. The notifying Party shall: (i) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than twenty-four hours after such Party becomes aware of the occurrence; and (ii) promptly furnish to the other Parties copies of any publicly available reports filed with any Governmental Authorities addressing such events.

## Article 24. Information Requirements

**24.1 Information Acquisition.** The Participating TO and the Interconnection Customer shall submit specific information regarding the electrical characteristics of their respective facilities to each other as described below and in accordance with Applicable Reliability Standards.

**24.2 Information Submission by Participating TO.** The initial information submission by the Participating TO shall occur no later than one hundred eighty (180) Calendar Days prior to Trial Operation and shall include the Participating TO's Transmission System information necessary to allow the Interconnection Customer to select equipment and meet any system protection and stability requirements, unless otherwise agreed to by the Participating TO and the Interconnection Customer. On a monthly basis the Participating TO shall provide the Interconnection Customer and the CAISO a status report on the construction and installation of the Participating TO's Interconnection Facilities and Network Upgrades, including, but not limited to, the following

information: (1) progress to date; (2) a description of the activities since the last report; (3) a description of the action items for the next period; and (4) the delivery status of equipment ordered.

**24.3 Updated Information Submission by Interconnection Customer.** The updated information submission by the Interconnection Customer, including manufacturer information, shall occur no later than one hundred eighty (180) Calendar Days prior to the Trial Operation. The Interconnection Customer shall submit a completed copy of the Electric Generating Unit data requirements contained in Appendix 1 to the GIP. It shall also include any additional information provided to the Participating TO and the CAISO for the Interconnection Studies. Information in this submission shall be the most current Electric Generating Unit design or expected performance data. Information submitted for stability models shall be compatible with the Participating TO and CAISO standard models. If there is no compatible model, the Interconnection Customer will work with a consultant mutually agreed to by the Parties to develop and supply a standard model and associated information.

If the Interconnection Customer's data is materially different from what was originally provided to the Participating TO and the CAISO for the Interconnection Studies, then the Participating TO and the CAISO will conduct appropriate studies pursuant to the GIP to determine the impact on the Participating TO's Transmission System and affected portions of the CAISO Controlled Grid based on the actual data submitted pursuant to this Article 24.3. The Interconnection Customer shall not begin Trial Operation until such studies are completed and all other requirements of this LGIA are satisfied.

**24.4 Information Supplementation.** Prior to the Trial Operation date, the Parties shall supplement their information submissions described above in this Article 24 with any and all "as-built" Electric Generating Unit information or "as-tested" performance information that differs from the initial submissions or, alternatively, written confirmation that no such differences exist. The Interconnection Customer shall conduct tests on the Electric Generating Unit as required by Good Utility Practice such as an open circuit "step voltage" test on the Electric Generating Unit to verify proper operation of the Electric Generating Unit's automatic voltage regulator.

Unless otherwise agreed, the test conditions shall include: (1) Electric Generating Unit at synchronous speed; (2) automatic voltage regulator on and in voltage control mode; and (3) a five percent (5 percent) change in Electric Generating Unit terminal voltage initiated by a change in the voltage regulators reference voltage. The Interconnection Customer shall provide validated test recordings showing the responses of Electric Generating Unit terminal and field voltages. In the event that direct recordings of these voltages is impractical, recordings of other voltages or currents that mirror the response of the Electric Generating Unit's terminal or field voltage are acceptable if information necessary to translate these alternate quantities to actual Electric Generating Unit terminal or field voltages is provided. Electric Generating Unit testing shall be conducted and results provided to the Participating TO and the CAISO for each individual Electric Generating Unit in a station.

Subsequent to the Commercial Operation Date, the Interconnection Customer shall provide the Participating TO and the CAISO any information changes due to equipment replacement, repair, or adjustment. The Participating TO shall provide the Interconnection Customer any information changes due to equipment replacement, repair or adjustment in the directly connected substation or any adjacent Participating TO-owned substation that may affect the Interconnection Customer's Interconnection Facilities equipment ratings, protection or operating requirements. The Parties shall provide such information pursuant to Article 5.19.

## Article 25. Information Access And Audit Rights

**25.1 Information Access.** Each Party (the "disclosing Party") shall make available to the other Party information that is in the possession of the disclosing Party and is necessary in order for the other Party to: (i) verify the costs incurred by the disclosing Party for which the other Party is responsible under this LGIA; and (ii) carry out its obligations and responsibilities under this LGIA. The Parties shall not use such information for purposes other than those set forth in this Article 25.1 and to enforce their rights under this LGIA. Nothing in this Article 25 shall obligate the CAISO to make available to a Party any third party information in its possession or control if making such third party information available would violate a CAISO Tariff restriction on the use or disclosure of such third party information.

**25.2 Reporting of Non-Force Majeure Events.** Each Party (the "notifying Party") shall notify the other Parties when the notifying Party becomes aware of its inability to comply with the provisions of this LGIA for a reason other than a Force Majeure event. The Parties agree to cooperate with each other and provide necessary information regarding such inability to comply, including the date, duration, reason for the inability to comply, and corrective actions taken or planned to be taken with respect to such inability to comply. Notwithstanding the foregoing, notification, cooperation or information provided under this Article shall not entitle the Party receiving such notification to allege a cause for anticipatory breach of this LGIA.

**25.3 Audit Rights.** Subject to the requirements of confidentiality under Article 22 of this LGIA, the Parties' audit rights shall include audits of a Party's costs pertaining to such Party's performance or satisfaction of obligations owed to the other Party under this LGIA, calculation of invoiced amounts, the CAISO's efforts to allocate responsibility for the provision of reactive support to the CAISO Controlled Grid, the CAISO's efforts to allocate responsibility for interruption or reduction of generation on the CAISO Controlled Grid, and each such Party's actions in an Emergency Condition.

**25.3.1** The Interconnection Customer and the Participating TO shall each have the right, during normal business hours, and upon prior reasonable notice to the other Party, to audit at its own expense the other Party's accounts and records pertaining to either such Party's performance or either such Party's satisfaction of obligations owed to the other Party under this LGIA. Subject to Article 25.3.2, any audit authorized by this Article shall be performed at the offices where such accounts and records are maintained and shall be limited to those portions of such accounts and records that relate to each such Party's performance and satisfaction of obligations under this LGIA. Each such Party shall keep such accounts and records for a period equivalent to the audit rights periods described in Article 25.4.

**25.3.2** Notwithstanding anything to the contrary in Article 25.3, each Party's rights to audit the CAISO's accounts and records shall be as set forth in Section 22.1 of the CAISO Tariff.

**25.4 Audit Rights Periods.**

**25.4.1 Audit Rights Period for Construction-Related Accounts and Records.** Accounts and records related to the design, engineering, procurement, and construction of Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades constructed by the Participating TO shall be subject to audit for a period of twenty-four months following the Participating TO's issuance of a final invoice in accordance with Article 12.2. Accounts and records related to the design, engineering, procurement, and construction of Participating TO's Interconnection Facilities and/or Stand Alone Network Upgrades constructed by the Interconnection Customer shall be subject to audit and verification by the Participating TO and the CAISO for a period of twenty-four months following the Interconnection Customer's issuance of a final invoice in accordance with Article 5.2(8).

**25.4.2 Audit Rights Period for All Other Accounts and Records.** Accounts and records related to a Party's performance or satisfaction of all obligations under this LGIA other than those described in Article 25.4.1 shall be subject to audit as follows: (i) for an audit relating to cost obligations, the applicable audit rights period shall be twenty-four months after the auditing Party's receipt of an invoice giving rise to such cost obligations; and (ii) for an audit relating to all other obligations, the applicable audit rights period shall be twenty-four months after the event for which the audit is sought; provided that each Party's rights to audit the CAISO's accounts and records shall be as set forth in Section 22.1 of the CAISO Tariff.

**25.5 Audit Results.** If an audit by the Interconnection Customer or the Participating TO determines that an overpayment or an underpayment has occurred with respect to the other Party, a notice of such overpayment or underpayment shall be given to the other Party together with those records from the audit which supports such determination. The Party that is owed payment shall render an invoice to the other Party and such invoice shall be paid pursuant to Article 12 hereof.

**25.5.1** Notwithstanding anything to the contrary in Article 25.5, the Interconnection Customer's and Participating TO's rights to audit the CAISO's accounts and records shall be as set forth in Section 22.1 of the CAISO Tariff, and the CAISO's process for remedying an overpayment or underpayment shall be as set forth in the CAISO Tariff.

## Article 26. Subcontractors

**26.1 General.** Nothing in this LGIA shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this LGIA; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this LGIA in providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

**26.2 Responsibility of Principal.** The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this LGIA. The hiring Party shall be fully responsible to the other Parties for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall the CAISO or Participating TO be liable for the actions or inactions of the Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under Article 5 of this LGIA. Any applicable obligation imposed by this LGIA upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

**26.3 No Limitation by Insurance.** The obligations under this Article 26 will not be limited in any way by any limitation of subcontractor's insurance.

## Article 27. Disputes

All disputes arising out of or in connection with this LGIA whereby relief is sought by or from the CAISO shall be settled in accordance with the provisions of Article 13 of the CAISO Tariff, except that references to the CAISO Tariff in such Article 13 of the CAISO Tariff shall be read as references to this LGIA. Disputes arising out of or in connection with this LGIA not subject to provisions of Article 13 of the CAISO Tariff shall be resolved as follows:

**27.1 Submission.** In the event either Party has a dispute, or asserts a claim, that arises out of or in connection with this LGIA or its performance, such Party (the "disputing Party") shall provide the other Party with written notice of the dispute or claim ("Notice of Dispute"). Such dispute or claim shall be referred to a designated senior representative of each Party for resolution on an informal basis as promptly as practicable after receipt of the Notice of Dispute by the other Party. In the event the designated representatives are unable to resolve the claim or dispute through

unassisted or assisted negotiations within thirty (30) Calendar Days of the other Party's receipt of the Notice of Dispute, such claim or dispute may, upon mutual agreement of the Parties, be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below. In the event the Parties do not agree to submit such claim or dispute to arbitration, each Party may exercise whatever rights and remedies it may have in equity or at law consistent with the terms of this LGIA.

**27.2 External Arbitration Procedures.** Any arbitration initiated under this LGIA shall be conducted before a single neutral arbitrator appointed by the Parties. If the Parties fail to agree upon a single arbitrator within ten (10) Calendar Days of the submission of the dispute to arbitration, each Party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty (20) Calendar Days select a third arbitrator to chair the arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the Parties an opportunity to be heard and, except as otherwise provided herein, shall conduct the arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("Arbitration Rules") and any applicable FERC regulations; provided, however, in the event of a conflict between the Arbitration Rules and the terms of this Article 27, the terms of this Article 27 shall prevail.

**27.3 Arbitration Decisions.** Unless otherwise agreed by the Parties, the arbitrator(s) shall render a decision within ninety (90) Calendar Days of appointment and shall notify the Parties in writing of such decision and the reasons therefor. The arbitrator(s) shall be authorized only to interpret and apply the provisions of this LGIA and shall have no power to modify or change any provision of this Agreement in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in the Federal Arbitration Act or the Administrative Dispute Resolution Act. The final decision of the arbitrator(s) must also be filed with FERC if it affects jurisdictional rates, terms and conditions of service, Interconnection Facilities, or Network Upgrades.

**27.4 Costs.** Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable: (1) the cost of the arbitrator chosen by the Party to sit on the three member panel and one half of the cost of the third arbitrator chosen; or (2) one half the cost of the single arbitrator jointly chosen by the Parties.

## Article 28. Representations, Warranties And Covenants

**28.1 General.** Each Party makes the following representations, warranties and covenants:

**28.1.1 Good Standing.** Such Party is duly organized, validly existing and in good standing under the laws of the state in which it is organized, formed, or incorporated, as applicable; that it is qualified to do business in the state or states in which the Large Generating Facility, Interconnection Facilities and Network Upgrades owned by such Party, as applicable, are located; and that it has the corporate power and authority to own its properties, to carry on its business as now being conducted and to enter into this LGIA and carry out the transactions contemplated hereby and perform and carry out all covenants and obligations on its part to be performed under and pursuant to this LGIA.

**28.1.2 Authority.** Such Party has the right, power and authority to enter into this LGIA, to become a Party hereto and to perform its obligations hereunder. This LGIA is a legal, valid and binding obligation of such Party, enforceable against such Party in

accordance with its terms, except as the enforceability thereof may be limited by applicable bankruptcy, insolvency, reorganization or other similar laws affecting creditors' rights generally and by general equitable principles (regardless of whether enforceability is sought in a proceeding in equity or at law).

**28.1.3** **No Conflict.** The execution, delivery and performance of this LGIA does not violate or conflict with the organizational or formation documents, or bylaws or operating agreement, of such Party, or any judgment, license, permit, order, material agreement or instrument applicable to or binding upon such Party or any of its assets.

**28.1.4** **Consent and Approval.** Such Party has sought or obtained, or, in accordance with this LGIA will seek or obtain, each consent, approval, authorization, order, or acceptance by any Governmental Authority in connection with the execution, delivery and performance of this LGIA, and it will provide to any Governmental Authority notice of any actions under this LGIA that are required by Applicable Laws and Regulations.

## Article 29. [Reserved]

## Article 30. Miscellaneous

**30.1** **Binding Effect.** This LGIA and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

**30.2** **Conflicts.** In the event of a conflict between the body of this LGIA and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this LGIA shall prevail and be deemed the final intent of the Parties.

**30.3** **Rules of Interpretation.** This LGIA, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this LGIA, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this LGIA), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any Applicable Laws and Regulations means such Applicable Laws and Regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article of this LGIA or such Appendix to this LGIA, or such Section to the GIP or such Appendix to the LGIP, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this LGIA as a whole and not to any particular Article or other provision hereof or thereof; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".

**30.4** **Entire Agreement.** This LGIA, including all Appendices and Schedules attached hereto, constitutes the entire agreement among the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between or among the Parties with respect to the subject matter of this LGIA. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this LGIA.

**30.5 No Third Party Beneficiaries.** This LGIA is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

**30.6 Waiver.** The failure of a Party to this LGIA to insist, on any occasion, upon strict performance of any provision of this LGIA will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this LGIA shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this LGIA. Termination or Default of this LGIA for any reason by the Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Participating TO. Any waiver of this LGIA shall, if requested, be provided in writing.

**30.7 Headings.** The descriptive headings of the various Articles of this LGIA have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this LGIA.

**30.8 Multiple Counterparts.** This LGIA may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

**30.9 Amendment.** The Parties may by mutual agreement amend this LGIA by a written instrument duly executed by all of the Parties. Such amendment shall become effective and a part of this LGIA upon satisfaction of all Applicable Laws and Regulations.

**30.10 Modification by the Parties.** The Parties may by mutual agreement amend the Appendices to this LGIA by a written instrument duly executed by all of the Parties. Such amendment shall become effective and a part of this LGIA upon satisfaction of all Applicable Laws and Regulations.

**30.11 Reservation of Rights.** The CAISO and Participating TO shall each have the right to make a unilateral filing with FERC to modify this LGIA pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following Articles and Appendices of this LGIA and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these Articles and Appendices:

> Recitals, 1, 2.1, 2.2, 2.3, 2.4, 2.6, 3.1, 3.3, 4.1, 4.2, 4.3, 4.4, 5 preamble, 5.4, 5.7, 5.8, 5.9, 5.12, 5.13, 5.18, 5.19.1, 7.1, 7.2, 8, 9.1, 9.2, 9.3, 9.5, 9.6, 9.7, 9.8, 9.10, 10.3, 11.4, 12.1, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24.3, 24.4, 25.1, 25.2, 25.3 (excluding subparts), 25.4.2, 26, 28, 29, 30, Appendix D, Appendix F, Appendix G, and any other Article not reserved exclusively to the Participating TO or the CAISO below.

The Participating TO shall have the exclusive right to make a unilateral filing with FERC to modify this LGIA pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following Articles and Appendices of this LGIA and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these Articles and Appendices:

> 2.5, 5.1, 5.2, 5.3, 5.5, 5.6, 5.10, 5.11, 5.14, 5.15, 5.16, 5.17, 5.19 (excluding 5.19.1), 6, 7.3, 9.4, 9.9, 10.1, 10.2, 10.4, 10.5, 11.1, 11.2, 11.3, 11.5, 12.2, 12.3, 12.4, 24.1, 24.2, 25.3.1, 25.4.1, 25.5 (excluding 25.5.1), 27 (excluding preamble), Appendix A, Appendix B, Appendix C, and Appendix E.

The CAISO shall have the exclusive right to make a unilateral filing with FERC to modify this LGIA pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following Articles of this LGIA and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these Articles:

3.2, 4.5, 11.6, 25.3.2, 25.5.1, and 27 preamble.

The Interconnection Customer, the CAISO, and the Participating TO shall have the right to make a unilateral filing with FERC to modify this LGIA pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this LGIA shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**30.12 No Partnership.** This LGIA shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership among the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

**30.13 Joint and Several Obligations.** Except as otherwise provided in this LGIA, the obligations of the CAISO, the Participating TO, and the Interconnection Customer are several, and are neither joint nor joint and several.

**IN WITNESS WHEREOF,** the Parties have executed this LGIA in multiple originals, each of which shall constitute and be an original effective agreement among the Parties.

**[Insert name of Interconnection Customer]**

By: _____

Title: _____

Date:

**[Insert name of Participating TO]**

By: _____

Title:

Date:

**California Independent System Operator Corporation**

By:

Title:

Date:

**Appendix A Interconnection Facilities & Network & Distribution Upgrades To LGIA**

**Interconnection Facilities, Network Upgrades and Distribution Upgrades**

**1. Interconnection Facilities:**

**(a) [insert Interconnection Customer's Interconnection Facilities]:**

**(b) [insert Participating TO's Interconnection Facilities]:**

**2. Network Upgrades:**

**(a) [insert Stand Alone Network Upgrades]:**

**(b) [insert Other Network Upgrades]:**

**(i) [insert Participating TO's Reliability Network Upgrades]**

**(ii) [insert Participating TO's Delivery Network Upgrades]**

**3. Distribution Upgrades:**

**Appendix B**
**To LGIA**

**Milestones**

**Appendix C**
**To LGIA**

**Interconnection Details**

**Appendix D**
**To LGIA**

**Security Arrangements Details**

Infrastructure security of CAISO Controlled Grid equipment and operations and control hardware and software is essential to ensure day-to-day CAISO Controlled Grid reliability and operational security. FERC will expect the CAISO, all Participating TOs, market participants, and Interconnection Customers interconnected to the CAISO Controlled Grid to comply with Applicable Reliability Criteria. All public utilities will be expected to meet basic standards for system infrastructure and operational security, including physical, operational, and cyber-security practices.

The Interconnection Customer shall meet the requirements for security implemented pursuant to the CAISO Tariff, including the CAISO's standards for information security posted on the CAISO's internet web site at the following internet address: http://www.caiso.com/pubinfo/info-security/index.html.

**Appendix E**
**To LGIA**

**Commercial Operation Date**

[This Appendix E sets forth a form of letter to be provided by the Interconnection Customer to the CAISO and Participating TO to provide formal notice of the Commercial Operation of an Electric Generating Unit.]

**[Date]**

**[CAISO Address]**

**[Participating TO Address]**

Re: _____ Electric Generating Unit

Dear _____:

On [Date] [Interconnection Customer] has completed Trial Operation of Unit No. ___. This letter confirms that [Interconnection Customer] commenced Commercial Operation of Unit No. ___ at the Electric Generating Unit, effective as of [Date plus one day] and that [Interconnection Customer] provided the CAISO's operations personnel advance notice of its intended Commercial Operation Date no less than five Business Days prior to that date.

Thank you.

**[Signature]**

**[Interconnection Customer Representative]**

**Appendix F**
**To LGIA**

**Addresses for Delivery of Notices and Billings**

**Notices:**

Participating TO:

[To be supplied.]

Interconnection Customer:

[To be supplied.]

CAISO:

[To be supplied.]

**Billings and Payments:**

Participating TO:

[To be supplied.]

Interconnection Customer:

[To be supplied.]

CAISO:

[To be supplied.]

**Alternative Forms of Delivery of Notices (telephone, facsimile or e-mail):**

Participating TO:

[To be supplied.]

Interconnection Customer:

[To be supplied.]

CAISO:

[To be supplied.]

**Appendix G**

**To LGIA**

**Interconnection Customer's Proportional Share of Costs of Network Upgrades for Applicable Project Group**

**Appendix H**
**To LGIA**

**INTERCONNECTION REQUIREMENTS FOR A WIND GENERATING PLANT**

Appendix H sets forth requirements and provisions specific to a wind generating plant. All other requirements of this LGIA continue to apply to wind generating plant interconnections.

**A. Technical Standards Applicable to a Wind Generating Plant**

**i. Low Voltage Ride-Through (LVRT) Capability**

A wind generating plant shall be able to remain online during voltage disturbances up to the time periods and associated voltage levels set forth in the standard below.

All wind generating plants subject to FERC Order No. 661 must meet the following requirements:

1. Wind generating plants are required to remain in-service during three-phase faults with normal clearing (which is a time period of approximately 4 – 9 cycles) and single line to ground faults with delayed clearing, and subsequent post-fault voltage recovery to prefault voltage unless clearing the fault effectively disconnects the generator from the system. The clearing time requirement for a three-phase fault will be specific to the wind generating plant substation location, as determined by and documented by the Participating TO. The maximum clearing time the wind generating plant shall be required to withstand for a three-phase fault shall be 9 cycles after which, if the fault remains following the location-specific normal clearing time for three-phase faults, the wind generating plant may disconnect from the CAISO Controlled Grid. A wind generating plant shall remain interconnected during such a fault on the CAISO Controlled Grid for a voltage level as low as zero volts, as measured at the high voltage side of the wind GSU.

2. This requirement does not apply to faults that would occur between the wind generator terminals and the high side of the GSU.

3. Wind generating plants may be tripped after the fault period if this action is intended as part of a Remedial Action Scheme.

4. Wind generating plants may meet the LVRT requirements of this standard by the performance of the generators or by installing additional equipment (e.g., Static VAr Compensator) within the wind generating plant or by a combination of generator performance and additional equipment.

5. Existing individual generator units that are, or have been, interconnected to the CAISO Controlled Grid at the same location at the effective date of the Appendix H LVRT Standard are exempt from meeting the Appendix H LVRT Standard for the remaining life of the existing generation equipment. Existing individual generator units that are replaced are required to meet the Appendix H LVRT Standard.

**ii. Power Factor Design Criteria (Reactive Power)**

A wind generating plant shall operate within a power factor within the range of 0.95 leading to 0.95 lagging, measured at the Point of Interconnection as defined in this LGIA in order to maintain a specified voltage schedule, if the Phase II Interconnection Study shows that such a requirement is necessary to ensure safety or reliability. The power factor range standard can be met by using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors, or a combination of the two, if

agreed to by the Participating TO and CAISO. The Interconnection Customer shall not disable power factor equipment while the wind plant is in operation. Wind plants shall also be able to provide sufficient dynamic voltage support in lieu of the power system stabilizer and automatic voltage regulation at the generator excitation system if the Phase II Interconnection Study shows this to be required for system safety or reliability.

**iii. Supervisory Control and Data Acquisition (SCADA) Capability**

The wind plant shall provide SCADA capability to transmit data and receive instructions from the Participating TO and CAISO to protect system reliability. The Participating TO and CAISO and the wind plant Interconnection Customer shall determine what SCADA information is essential for the proposed wind plant, taking into account the size of the plant and its characteristics, location, and importance in maintaining generation resource adequacy and transmission system reliability in its area.

**Appendix AA**

**Grandfathered Resource Adequacy Provisions for February 2018 to March 2018**

Notwithstanding any other provisions of the CAISO Tariff, the following provisions shall apply to the CAISO's treatment of RA Capacity for the February 2018 and March 2018 RA months. In all other respects, the CAISO Tariff (including the provisions of Section 9, Section 40, Section 43A, and Appendix A) not covered by this Appendix AA, will apply to the CAISO's treatment of RA Capacity for the February 2018 and March 2018 RA months.

*** * * ***

**9.3.1.3 Coordinating Maintenance Outages of RA Resources**

In performing outage coordination management under Section 9, and this Section 9.3.1.3, the CAISO may take into consideration the status of a Generating Unit as a Resource Adequacy Resource. The CAISO may deny, reschedule or cancel an Approved Maintenance Outage for facilities that comprise the CAISO Controlled Grid or Generating Units of Participating Generators if it determines that the outage is likely to have a detrimental effect on the availability of Resource Adequacy Capacity or the efficient use and reliable operation of the CAISO Controlled Grid or the facilities of a Connected Entity.

**9.3.1.3.1 Replacement Requirement for LSEs**

**9.3.1.3.1.1 LSE RA Plans**

Each Scheduling Coordinator for a Load Serving Entity shall submit to the CAISO a monthly Resource Adequacy Plan that meets the requirements set forth in Sections 40.2.2.4 or 40.2.3.4, as applicable. Resource Adequacy Capacity included in the monthly Resource Adequacy Plan that, as of the due date for the plan, is scheduled to take an Approved Maintenance Outage during the period of designation may be subject to replacement. To the extent that a resource included in a monthly Resource Adequacy Plan as Resource Adequacy Capacity is scheduled to take an Approved Maintenance Outage for all or portion of its capacity during the resource adequacy month, the capacity scheduled for outage is not operationally available to the CAISO and may be required by the CAISO to be replaced with capacity from another resource(s) that is operationally available in the amount and for the duration of the scheduled outage during that month, as discussed in Sections 9.3.1.3.2.2 through 9.3.1.3.2.5.

#### 9.3.1.3.1.2 RA Resource Pending Maintenance Outage Requests

If a Resource Adequacy Resource requested a planned Maintenance Outage, or change to an Approved Maintenance Outage, more than forty-five days prior to the first day of the resource adequacy month, but does not receive approval or denial of the request by the CAISO as of the due date for the Resource Adequacy Plans and Supply Plans, the CAISO, as part of the validation under Sections 9.3.1.3.2.3 and 40.7(b), will determine whether the outage should be approved and, if so, whether it must be replaced in the Resource Adequacy Plan with capacity from another resource that is operationally available in the amount and for the duration of the scheduled outage during the month.

#### 9.3.1.3.1.3 Optional List of Specified RA Replacement Capacity

A Scheduling Coordinator for a Load Serving Entity may include with a monthly Resource Adequacy Plan a list of Specified RA Replacement Capacity for the CAISO's use as RA Replacement Capacity to replace specific Resource Adequacy Capacity identified by the Load Serving Entity that is in its Resource Adequacy Plan, and that is scheduled to take an Approved Maintenance Outage during the month, as provided in Sections 9.3.1.3.2.2 and 40.2.2.4. If the Scheduling Coordinator for a Load Serving Entity opts to include a list of Specified RA Replacement Capacity, the CAISO, in its discretion, will use the specified capacity as RA Replacement Capacity to automatically replace the identified Resource Adequacy Capacity included in that Load Serving Entity's Resource Adequacy Plan in the amount and for the days specified by the Load Serving Entity that the Resource Adequacy Resource is scheduled to take an Approved Maintenance Outage during the month. The Specified RA Replacement Capacity will not be subject to the must-offer obligations in Section 40.6, nor the standard capacity product provisions in Section 40.9, unless the specified capacity is used by the CAISO as RA Replacement Capacity as provided in Section 9.3.1.3.2.2. The list of Specified RA Replacement Capacity included with a monthly Resource Adequacy Plan shall:

(a) Identify the resource being replaced,

(b) Identify the resource that will provide the Specified RA Replacement Capacity, the MW amount and time period of the replacement, and other information as may be required in the Business Practice Manuals, and

(c) Be submitted in the format required by the Business Practice Manual.

#### 9.3.1.3.1.4 Optional List of Non-Specified RA Capacity

A Scheduling Coordinator for a Load Serving Entity may include with a monthly Resource Adequacy Plan a list of Non-Specified RA Capacity for the CAISO's use as RA Replacement Capacity to replace Resource Adequacy Capacity included in that Load Serving Entity's monthly Resource Adequacy Plan that is scheduled to take an Approved Maintenance Outage during the month, as provided in Sections 9.3.1.3.2.3, 9.3.1.3.2.4, and 40.2.2.4. If the Scheduling Coordinator for a Load Serving Entity opts to include a list of Non-Specified RA Capacity in its Resource Adequacy Plan, the CAISO, in its discretion, will select capacity from the list and use the selected capacity as RA Replacement Capacity to automatically replace Resource Adequacy Capacity included in that Load Serving Entity's Resource Adequacy Plan in the amount and for the days on which the CAISO's validation of the plan determines that the designated capacity scheduled to take an Approved Maintenance Outage during the resource adequacy month must be replaced. The listed Non-Specified RA Capacity will not be subject to the must-offer obligations in Section 40.6, nor the standard capacity product provisions in Section 40.9, unless the Non-Specified Capacity is selected by the CAISO and used as RA Replacement Capacity as provided in Section 9.3.1.3.2.4. The list of Non-Specified RA Capacity included with a monthly Resource Adequacy Plan shall:

(a) Rank each resource that has available Non-Specified RA Capacity in the order of use preferred by the Load Serving Entity;

(b) Provide the identity of the resource, the MW amount of available capacity, the time periods when the capacity is available, and other information as may be specified in the Business Practice Manual;

(c) Indicate the willingness of the Load Serving Entity to offer each resource that has available Non-Specified RA Capacity for procurement as backstop capacity under the Capacity Procurement Mechanism pursuant to Section 43A; and

(d) Be submitted in the format required by the Business Practice Manuals.

#### 9.3.1.3.2 CAISO Replacement Determination for LSE RA Plans

##### 9.3.1.3.2.1 Review of LSE RA Plans

The CAISO shall review each monthly Resource Adequacy Plan pursuant to Section 40.7(b) to validate that the capacity provided is equal to or greater than the applicable forecasted monthly Demand and Reserve Margin for the Load Serving Entity and shall provide the results of this review to the Local Regulatory Authority. Additionally, the CAISO will review each monthly Resource Adequacy Plan to identify any Resource Adequacy Capacity included in the plan that will not be operationally available to the CAISO due to an Approved Maintenance Outage scheduled to occur during the month.

##### 9.3.1.3.2.2 Replacement by Specified RA Replacement Capacity

If the review performed by the CAISO under Section 9.3.1.3.2.1 validates that a monthly Resource Adequacy Plan includes no capacity that will be operationally unavailable to the CAISO due to an Approved Maintenance Outage scheduled to occur during the month, no replacement by Specified RA Replacement Capacity will occur. If the review performed by the CAISO under Section 9.3.1.3.2.1 validates that a monthly Resource Adequacy Plan includes capacity that will not be operationally available to the CAISO due to an Approved Maintenance Outage scheduled to occur during the month, and the Load Serving Entity has provided a list of Specified RA Replacement Capacity, then the CAISO will verify that the Specified RA Replacement Capacity is available during the specified replacement period and will replace the unavailable capacity in that Load Serving Entity's Resource Adequacy Plan with the available Specified RA Replacement Capacity. The CAISO will not accept any Specified RA Replacement Capacity that is unavailable during the specified replacement period. The CAISO will notify the Scheduling Coordinator for the Load Serving Entity and Scheduling Coordinator for the resource providing the Specified RA Replacement Capacity that the Specified RA Replacement Capacity has been accepted as RA Replacement Capacity. The Scheduling Coordinator for the resource providing the Specified RA Replacement Capacity must verify their agreement to provide the Specified RA Replacement Capacity. For the duration of the period that the resource is providing Specified RA Replacement Capacity, the resource shall be subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed on Resource Adequacy Resources by the CAISO Tariff, including the must-offer obligations in Section 40.6, and the standard capacity product

provisions in Section 40.9, for the MW amount and duration of the outage replacement period, which includes the full day of the start date and the full day of the end date of the outage.

**9.3.1.3.2.3 CAISO Replacement Determination**

Following replacement by Specified RA Replacement Capacity, the CAISO will determine whether Load Serving Entities are required to replace any capacity remaining in their monthly Resource Adequacy Plans that will not be operationally available to the CAISO due to an Approved Maintenance Outage scheduled to occur during the month. The CAISO will make the replacement determination as follows:

(a) For each day of the month, the CAISO will calculate the System Total Available RA Capacity provided in the Resource Adequacy Plans and compare that MW amount to the CAISO system RA Reliability Margin.

(b) For each day of the month where the System Total Available RA Capacity provided in the Resource Adequacy Plans exceeds the CAISO system RA Reliability Margin, the CAISO may determine that no further replacement is required.

(c) For each day of the month where the System Total Available RA Capacity provided in the Resource Adequacy Plans is less than the CAISO system RA Reliability Margin, the CAISO may require replacement of the Resource Adequacy Capacity scheduled to take an Approved Maintenance Outage, as provided in Sections 9.3.1.3.2.3 and 9.3.1.3.2.4. When replacement is required, the Scheduling Coordinator for each Load Serving Entity that did not include in its Resource Adequacy Plan available Resource Adequacy Capacity for the day in a MW amount equal to or greater than the applicable forecasted monthly Demand and Reserve Margin for that Load Serving Entity will be required to provide the RA Replacement Capacity.

(d) When replacement is required under Section 9.3.1.3.2.3(c), the CAISO will consider whether the Resource Adequacy Capacity scheduled to take an Approved Maintenance Outage requires replacement in the reverse order of the dates on which the outage requests were received. The Resource Adequacy Capacity subject to the most recently requested Approved Maintenance Outages will require replacement before the Resource Adequacy Capacity subject to Approved Maintenance Outages that were requested on

earlier dates. Any request for a change to an Approved Maintenance Outage that extends the scheduled duration of the outage or increases the MW amount of capacity on outage will be treated as a new outage request.

(e) Beginning with the date of the most recent request to take an Approved Maintenance Outage during the month, the CAISO will either replace the unavailable Resource Adequacy Capacity with Non-Specified RA Replacement Capacity under Section 9.3.1.3.2.4, or will require the Scheduling Coordinator for the Load Serving Entity to replace the unavailable Resource Adequacy Capacity under Section 9.3.1.3.2.5. The CAISO will continue this replacement process in reverse order of the dates on which the requests to take the Approved Maintenance Outages were received until sufficient unavailable Resource Adequacy Capacity has been replaced each day to meet the criteria set forth in Section 9.3.1.3.2.3(b).

**9.3.1.3.2.4 Replacement by Non-Specified RA Replacement Capacity**

For each day of the month where the CAISO determines under Section 9.3.1.3.2.3 that replacement is required of Resource Adequacy Capacity scheduled to take an Approved Maintenance Outage, the CAISO may replace the unavailable capacity with Non-Specified RA Replacement Capacity as follows:

(a) The CAISO will identify each Load Serving Entity that did not include in its monthly Resource Adequacy Plan available Resource Adequacy Capacity for each day in a MW amount equal to or greater than its applicable forecasted monthly Demand Reserve Margin, and will verify whether each such Load Serving Entity provided a list of Non-Specified RA Replacement Capacity with its plan.

(b) To the extent that a Load Serving Entity provided a list of Non-Specified Replacement Capacity, the CAISO during the replacement process set forth in Section 9.3.1.3.2.3 will select capacity, in its discretion, from the list and use the selected capacity as RA Replacement Capacity to automatically replace unavailable Resource Adequacy Capacity included in that Load Serving Entity's Resource Adequacy Plan for each day where the CAISO determines that replacement is required.

(c) The CAISO will verify whether the Non-Specified RA Replacement Capacity on each list is available during the replacement period and replace the unavailable capacity in the Resource Adequacy Plan with available Non-Specified RA Replacement Capacity. The CAISO will not accept Non-Specified RA Replacement Capacity that is unavailable during the replacement period.

(d) The CAISO will notify the Scheduling Coordinator for the Load Serving Entity and the Scheduling Coordinator for the resource providing the Non-Specified RA Replacement Capacity that the Non-Specified RA Replacement Capacity has been selected as RA Replacement Capacity. The Scheduling Coordinator for the resource providing the Non-Specified RA Replacement Capacity must verify its agreement to provide the Non-Specified RA Replacement Capacity.

(e) For the duration of the period that the Non-Specified RA Capacity is providing RA Replacement Capacity, it shall be subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed on Resource Adequacy Resources by the CAISO Tariff, including the must-offer obligations in Section 40.6 and the standard capacity product provisions in Section 40.9 for the MW amount and duration of the replacement period, which includes the full day of the start date and the full day of the end date of the outage.

#### 9.3.1.3.2.5 Unreplaced Capacity in an RA Plan

Following replacement by Non-Specified Capacity, for each day of the month where the criteria set forth in Section 9.3.1.3.2.3(b) is not met, and where the Load Serving Entity either did not provide Non-Specified RA Replacement Capacity, or the Non-Specified RA Replacement Capacity it provided was already selected by the CAISO, was insufficient, or was unavailable during the replacement period, the Scheduling Coordinator for the Load Serving Entity will have a replacement requirement. The CAISO will notify the Scheduling Coordinator for the Load Serving Entity of the replacement requirement and will identify the MW amount of capacity remaining in its Resource Adequacy Plan that will be operationally unavailable to the CAISO due to an Approved Maintenance Outage on that day and that it is required to replace. The CAISO will treat the unreplaced capacity as an outage replacement requirement pursuant to

Section 40.7(b). If the Scheduling Coordinator for the Load Serving Entity does not provide sufficient operationally available RA Replacement Capacity to meet the replacement requirement identified by the CAISO, and the resource does not reschedule or cancel the outage after its Supply Plan is submitted, the CAISO may exercise its authority to procure backstop capacity under the Capacity Procurement Mechanism pursuant to Section 43A.

#### 9.3.1.3.3 Replacement Requirement for RA Resources

To the extent that a resource is committed to provide Resource Adequacy Capacity during a month, the Scheduling Coordinator for the resource may request an RA Maintenance Outage With Replacement, RA Maintenance Outage Without Replacement, Off Peak Opportunity RA Maintenance Outage, or Short-Notice Opportunity RA Outage, or may request to reschedule an Approved Maintenance Outage, for that Resource Adequacy Capacity in accordance with the provisions of this Section. The timelines set forth in this Section for submitting an Outage request and classifying the outage as a Maintenance Outage or a Forced Outage exclude the day that the request is submitted and the day that the outage is scheduled to commence.

##### 9.3.1.3.3.1 RA Maintenance Outage With Replacement

(a) **Replacement Option.** The Scheduling Coordinator of a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may request that a planned Maintenance Outage be scheduled, or an Approved Maintenance Outage be rescheduled, as an RA Maintenance Outage With Replacement during that month.

(b) **Request.** A request for an RA Maintenance Outage With Replacement must: (i) be submitted to the CAISO no more than forty-five days prior to the first day of the resource adequacy month that the outage is requested for, and no less than eight days prior to the start of the outag;e (ii) provide RA Replacement Capacity in an amount no less than the Resource Adequacy Capacity designated for the resource for the duration of the scheduled outage; and (iii) otherwise comply with the requirements set forth in Section 9.

(c) **Approval.**

(1) The CAISO will consider requests for an RA Maintenance Outage With Replacement in the order that the requests are received.

(2) The CAISO may approve the request for an RA Maintenance Outage With Replacement if it determines that: (i) the request meets the requirements in Section 9.3.1.3.3.1(b); and (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid.

(3) If the request was submitted no more than forty-five days prior to the first day of the resource adequacy month that the outage is requested for, and no less than eight days prior to the start date for the outage, and it meets the requirements in Section 9.3.1.3.3.1(c)(2), the CAISO may approve the request as an RA Maintenance Outage With Replacement,

(4) If the CAISO denies the request for failing to meet the requirements in Section 9.3.1.3.3.1(c)(2), the Scheduling Coordinator for the Resource Adequacy Resource may request a different schedule for the RA Maintenance Outage With Replacement or may request that the CAISO accommodate the outage without RA Replacement Capacity at another time.

(d) **Resource Adequacy Obligation.** The RA Replacement Capacity for an RA Maintenance Outage With Replacement approved under Section 9.3.1.3.3.1(c)(3) shall be subject to all of the availability, dispatch, testing, reporting, verification and any other applicable requirements imposed on Resource Adequacy Resources by the CAISO Tariff, including the must-offer obligations in Section 40.6 and the RAAIM provisions in Section 40.9, for the MW amount and duration of the outage replacement period, which includes the full day of the start date and the full day of the end date of the outage.

**9.3.1.3.3.2 RA Maintenance Outage Without Replacement**

(a) **Option for No Replacement.** The Scheduling Coordinator for a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy

month may request that a Maintenance Outage be scheduled, or an Approved Maintenance Outage be rescheduled, as an RA Maintenance Outage Without Replacement, without a requirement to provide RA Replacement Capacity for the unavailable capacity for the duration of the outage.

(b) **Request.** A request for an RA Maintenance Outage Without Replacement must: (i) be submitted to the CAISO no more than forty-five days prior to the first day of the resource adequacy month that the outage is requested for, and no less than eight days prior to the start date of the outage; and (ii) otherwise comply with the requirements of Section 9.

(c) **Approval.**

(1) The CAISO will consider requests received for an RA Maintenance Outage Without Replacement in the order the requests were received.

(2) The CAISO may approve a request for an RA Maintenance Outage Without Replacement if it determines that: (i) the request meets the requirements in Section 9.3.1.3.3.2(b); (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid; and (iii) the outage will not result in insufficient available Resource Adequacy Capacity during the outage period. The analysis of system conditions and the overall outage schedule will include Approved Maintenance Outage requests that were received before and after the request for an RA Maintenance Outage Without Replacement.

(3) The CAISO will not approve a request for an RA Maintenance Outage Without Replacement earlier than seven days before the first day of the resource adequacy month, and may hold the request as pending until system conditions are sufficiently known for the CAISO to determine whether the outage meets the requirements in Section 9.3.1.3.3.2(c)(2).

(4) If the CAISO denies a request for an RA Maintenance Outage Without Replacement for failing to meet the requirements in Section 9.3.1.3.3.2(c)(2), the Scheduling Coordinator for the Resource Adequacy Resource may request an RA Maintenance Outage with Replacement or may request that the CAISO accommodate the outage at another time.

**9.3.1.3.3.3 Off-Peak Opportunity RA Maintenance Outage**

(a) **Option for Off-Peak Outage.** The Scheduling Coordinator for a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may submit a request for an Off-Peak Opportunity RA Maintenance Outage without a requirement to provide RA Replacement Capacity for the unavailable capacity for the duration of the outage.

(b) **Request.** A request for an Off-Peak Opportunity RA Maintenance Outage must: (i) be submitted to the CAISO no more than forty-five days prior to the first day of the resource adequacy month for which the outage is requested and no less than eight days prior to the start date for the outage; (ii) schedule the outage to begin during off-peak hours (as specified in the Business Practice Manuals) on a weekday, and to be completed prior to on-peak hours (as specified in the Business Practice Manuals) the following weekday, or to begin during off-peak hours (as specified in the Business Practice Manuals) on Friday, or on Saturday, Sunday, or a holiday, and to be completed prior to on-peak hours (as specified in the Business Practice Manual) on the next weekday; and (iii) otherwise comply with the requirements set forth in Section 9.

(c) **Approval.**

(1) The CAISO will consider requests for an Off-Peak Opportunity RA Maintenance Outage in the order the requests were received.

(2) If the request was submitted no more than forty-five days prior to the first day of the resource adequacy month for which the outage is requested and no less than eight days prior to the start date for the outage, the CAISO may approve the request as an Off-Peak Opportunity RA Maintenance Outage if it determines that:

(i) the request meets the requirements set forth in Section 9.3.1.3.3.3(b); and (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid.

(3) If the CAISO denies a request for an Off-Peak Opportunity RA Maintenance Outage for failing to meet the requirements in Section 9.3.1.3.3.3(c)(2), the Scheduling Coordinator for the Resource Adequacy Resource may request an RA Maintenance Outage with Replacement or may request that the CAISO accommodate the outage at another time.

(4) To the extent that an approved Off-Peak Opportunity RA Maintenance Outage is not completed during off-peak hours as scheduled, and extends into on-peak hours, the Scheduling Coordinator for the resource shall submit the portion of the outage that extends into on-peak hours as a new Forced Outage, which shall be subject to the RAAIM provisions in Section 40.9.

**9.3.1.3.3.4 Short-Notice Opportunity RA Outage**

(a) **Option for Short-Notice Outage.** The Scheduling Coordinator for a Resource Adequacy Resource designated as Resource Adequacy Capacity during the resource adequacy month may submit a request for a Short-Notice Opportunity RA Outage without a requirement to provide RA Replacement Capacity or RA Substitute Capacity for the Resource Adequacy Capacity that will be on the Forced Outage or de-rate.

(b) **A Short-Notice Opportunity RA Outage shall not exceed five days in length.** The request for a Short-Notice Opportunity RA Outage must: (i) be submitted no more than seven days prior to the requested start date for the outage; (ii) provide the CAISO adequate time to analyze the request before the outage begins; (iii) be submitted before the outage has commenced as a Forced Outage; and (iv) otherwise comply with the requirements of Section 9.

(c) **Approval.**

(1) The CAISO will consider Short-Notice Opportunity RA Outages in the order the requests are received.

(2) If the request was submitted no more than seven days and no less than four days prior to the start date of the outage, the CAISO may approve the request as a Short Notice Opportunity RA Outage if it determines that: (i) the outage and the request meet the requirements set forth in Section 9.3.1.3.3.4(b); (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid; and (iii) the outage will not result in insufficient available Resource Adequacy Capacity during the outage period. The approved outage will be a Forced Outage and will be subject to the RAAIM provisions in Section 40.9.

(3) If the request was submitted three days or less prior to the start date of the outage, the CAISO may approve the request as a Forced Outage if it determines that: (i) the outage and request meet the requirements set forth in Section 9.3.1.3.3.4(b); (ii) system conditions and the overall outage schedule provide an opportunity to take the resource out of service without a detrimental effect on the efficient use and reliable operation of the CAISO Controlled Grid; (iii) the outage will not result in insufficient available Resource Adequacy Capacity during the outage period; and (iv) the repairs are necessary to maintain system or resource reliability and require immediate attention to prevent equipment damage or failure. A Short-Notice Opportunity RA Outage approved under this Section will be a Forced Outage but it will not be subject to the RAAIM provisions in Section 40.9.

(4) To the extent that an approved Short-Notice Opportunity RA Outage is not completed during the originally approved outage schedule, the Scheduling Coordinator for the resource must submit the portion of the outage that continues

from the approved completion time until the time the outage is actually completed as a new Forced Outage, which will be subject to the RAAIM provisions in Section 40.9.

**9.3.1.3.4 Replacement Requirement Information**

In order to make information available to Market Participants pertinent to the replacement requirement provisions in Section 9.3.1.3, the CAISO will:

(a) Annually post on the CAISO Website a calendar of the timeline of due dates for each month of the following resource adequacy compliance year; and

(b) Provide the opportunity for Market Participants to post and view information on an electronic bulletin board about non-Resource Adequacy Capacity and Non-Designated RA Capacity that may be needed or available as RA Replacement Capacity in the bilateral market. Use of the bulletin board is voluntary and limited to use for informational purposes only.

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**40.2.1 Reserve Sharing Load Serving Entities**

**40.2.1.1 Requirements for CPUC Load Serving Entities**

(a) The Scheduling Coordinator for a CPUC Load Serving Entity must provide the CAISO with all information or data to be provided to the CAISO as required by the CPUC and pursuant to the schedule adopted by the CPUC, except that the monthly Resource Adequacy Plans or the same information as required to be included in the monthly Resource Adequacy Plans, plus any other information the CAISO requires as identified in the Business Practice Manual, shall be submitted to the CAISO no less than 45 days in advance of the first day of the month covered by the plan, as provided in Section 40.2.1.1(e).

(b) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include Reserve Margin(s), then the provisions of Section 40.2.2.1(b) shall apply.

(c) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include criteria for determining qualifying resource types and their Qualifying Capacity,

then the provisions of Section 40.8 shall apply.

(d) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include annual and monthly Demand Forecast requirements, then the provisions of Section 40.2.2.3 shall apply.

(e) Where the information or data provided to the CAISO under Section 40.2.1.1(a) does not include annual and monthly Resource Adequacy Plan requirements, or where there is a requirement to submit monthly Resource Adequacy Plans but the submission date is less than 45 days in advance of the first day of the month covered by the plan, then Section 40.2.2.4 shall apply.

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**40.2.2.4 Annual and Monthly Resource Adequacy Plans**

The Scheduling Coordinator for a Non-CPUC Load Serving Entity or a CPUC Load Serving Entity subject to Section 40.2.1.1(b) must provide annual and monthly Resource Adequacy Plans for such Load Serving Entity, as follows:

(a) Each annual Resource Adequacy Plan must be submitted to the CAISO on a schedule and in the reporting format(s) set forth in the Business Practice Manual. The annual Resource Adequacy Plan must, at a minimum, set forth the Local Capacity Area Resources, if any, procured by the Load Serving Entity as described in Section 40.3.

(b) Each monthly Resource Adequacy Plan or the same information as required to be included in the monthly Resource Adequacy Plan, plus any other information the CAISO requires as identified in the Business Practice Manual, must be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, and in accordance with the schedule and in the reporting format(s) set forth in the Business Practice Manual. The monthly Resource Adequacy Plan must identify all resources, including Local Capacity Area Resources, the Load Serving Entity will rely upon to satisfy the applicable month's peak hour Demand of the Load Serving Entity as determined by the Demand Forecasts developed in accordance with Section 40.2.2.3 and applicable Reserve Margin. Resource Adequacy Plans must utilize the Net Qualifying Capacity

requirements of Section 40.4.

(c) The Scheduling Coordinator for the Load Serving Entity may submit at any time from 45 days through 11 days in advance of the relevant month, a revision to its monthly Resource Adequacy Plan to correct an error in the plan. The CAISO will not accept any revisions to a monthly Resource Adequacy Plan from 10 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Load Serving Entity demonstrates good cause for the change and explains why it was not possible to submit the change earlier.

(d) In order to ensure that the CAISO's outage replacement determination remains accurate, the Scheduling Coordinator for the Load Serving Entity that submits a revision to its monthly Resource Adequacy Plan to correct an error must include in the revision a MW amount of Resource Adequacy Capacity for each day of month that is no less than the MW amount of Resource Adequacy Capacity included in its original plan for each day of the month.

(e) In order to ensure that the amount of Resource Adequacy Capacity required to be included in the Load Serving Entity's Resource Adequacy Plan is operationally available to the CAISO throughout the resource adequacy month, the Load Serving Entity that submits the monthly Resource Adequacy Plan is subject to the replacement requirement in Section 9.3.1.3.1.

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### 40.3.2 Allocation of Local Capacity Area Resource Obligations

The CAISO will allocate responsibility for Local Capacity Area Resources to Scheduling Coordinators for Load Serving Entities in the following sequential manner:

(a) The responsibility for the aggregate Local Capacity Area Resources required for all Local Capacity Areas within each TAC Area as determined by the Local Capacity Technical Study will be allocated to all Scheduling Coordinators for Load Serving Entities that serve Load in the TAC Area in accordance with the Load Serving Entity's proportionate share of the LSE's TAC Area Load at the time of the CAISO's annual coincident peak Demand set

forth in the annual peak Demand Forecast for the next Resource Adequacy Compliance Year as determined by the California Energy Commission. Expressed as a formula, the allocation of Local Area Capacity Resource obligations will be as follows: (∑ Local Capacity Area MW in TAC Area from the Local Capacity Technical Study) * (LSE Demand in TAC Area at CAISO annual coincident peak Demand)/(Total TAC Area Demand at the time of CAISO annual coincident peak Demand). This will result in a MW responsibility for each Load Serving Entity for each TAC Area in which the LSE serves Load. The LSE may meet its MW responsibility, as assigned under this Section, for each TAC Area in which the LSE serves Load by procurement of that MW quantity in any Local Capacity Area in the TAC Area.

(b) For Scheduling Coordinators for Non-CPUC Load Serving Entities, the Local Capacity Area Resource obligation will be allocated based on Section 40.3.2(a) above.

(c) For Scheduling Coordinators for CPUC Load Serving Entities, the CAISO will allocate the Local Capacity Area Resource obligation based on an allocation methodology, if any, adopted by the CPUC. However, if the allocation methodology adopted by the CPUC does not fully allocate the total sum of each CPUC Load Serving Entity's proportionate share calculated under Section 40.3.2(a), the CAISO will allocate the difference to all Scheduling Coordinators for CPUC Load Serving Entities in accordance with their proportionate share calculated under 40.3.2(a). If the CPUC does not adopt an allocation methodology, the CAISO will allocate Local Capacity Area Resources to Scheduling Coordinators for CPUC Load Serving Entities based on Section 40.3.2(a).

Once the CAISO has allocated the total responsibility for Local Capacity Area Resources, the CAISO will inform the Scheduling Coordinator for each LSE of the LSE's specific allocated responsibility for Local Capacity Area Resources in each TAC Area in which the LSE serves Load.

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### 40.4.7 Submission of Supply Plans

#### 40.4.7.1 Schedule for Submission of Supply Plans

Scheduling Coordinators representing Resource Adequacy Resources supplying Resource Adequacy Capacity shall provide the CAISO with annual and monthly Supply Plans, as follows:

(a) The annual Supply Plan shall be submitted to the CAISO on the schedule set forth in the Business Practice Manual and shall verify their agreement to provide Resource Adequacy Capacity during the next Resource Adequacy Compliance Year.

(b) The monthly Supply Plans or the same information as required to be included in the monthly Supply Plan, plus any other information the CAISO requires as identified in the Business Practice Manual, shall be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, and in accordance with the schedule and in the reporting format(s) set forth in the Business Practice Manual, and shall verify their agreement to provide Resource Adequacy Capacity during that resource adequacy month.

(c) The Scheduling Coordinator for the Resource Adequacy Resource may submit, at any time from 45 days through 11 days in advance of the relevant month, a revision to its monthly Supply Plan to correct an error in the plan. The CAISO will not accept any revisions to a monthly Supply Plan from 10 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Resource Adequacy Resource demonstrates good cause for the change and explains why it was not possible to submit the change earlier.

(d) The monthly Supply Plan may indicate the willingness of the resource to offer capacity for procurement as backstop capacity under the Capacity Procurement Mechanism pursuant to Section 43, and provide the identity of the resource, the available capacity amount, the time periods when the capacity is available, and other information as may be specified in the Business Practice Manual.

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**40.7 Compliance**

The CAISO will evaluate Resource Adequacy Plans and Supply Plans as follows:

(a) The CAISO will evaluate whether each annual and monthly Resource Adequacy Plan submitted by a Scheduling Coordinator on behalf of a Load Serving Entity demonstrates Resource Adequacy Capacity sufficient to satisfy the Load Serving Entity's (i) allocated responsibility for Local Capacity Area Resources under Section 40.3.2 and (ii) applicable Demand and Reserve Margin requirements. If the CAISO determines that a Resource Adequacy Plan does not demonstrate Local Capacity Area Resources sufficient to meet its allocated responsibility under Section 40.3.2, compliance with applicable Demand and Reserve Margin requirements, or compliance with any other resource adequacy requirement in this Section 40 or adopted by the CPUC, Local Regulatory Authority, or federal agency, as applicable, the CAISO will notify the relevant Scheduling Coordinator, CPUC, Local Regulatory Authority, or federal agency with jurisdiction over the relevant Load Serving Entity, or in the case of a mismatch between Resource Adequacy Plan(s) and Supply Plan(s), the relevant Scheduling Coordinators, in an attempt to resolve any deficiency in accordance with the procedures set forth in the Business Practice Manual. The notification will be made at least 25 days in advance of the first day of the month covered by the plan and will include the reasons the CAISO believes a deficiency exists. If the deficiency relates to the demonstration of Local Capacity Area Resources in a Load Serving Entity's annual Resource Adequacy Plan, and the CAISO does not provide a written notice of resolution of the deficiency as set forth in the Business Practice Manual, the Scheduling Coordinator for the Load Serving Entity may demonstrate that the identified deficiency is cured by submitting a revised annual Resource Adequacy Plan within thirty (30) days of the beginning of the Resource Adequacy Compliance Year. For all other identified deficiencies, at least ten (10) days prior the effective month of the relevant Resource Adequacy Plan, the Scheduling Coordinator for the Load Serving Entity shall (i) demonstrate that the identified deficiency is cured by submitting a revised Resource Adequacy Plan or (ii) advise the CAISO that the CPUC, Local Regulatory

Authority, or federal agency, as appropriate, has determined that no deficiency exists.

(b) The CAISO will evaluate whether each monthly Resource Adequacy Plan submitted by a Scheduling Coordinator on behalf of a Load Serving Entity demonstrates operationally available Resource Adequacy Capacity, excluding capacity scheduled to take an Approved Maintenance Outage during the resource adequacy month, that is equal to or greater than the Load Serving Entity's applicable forecasted monthly Demand and Reserve Margin. For each day of the month where the CAISO determines that the criteria set forth in Section 9.3.1.3.2.3(b) is not met, if a monthly Resource Adequacy Plan (i) includes capacity scheduled to take an Approved Maintenance Outage on that day that has not been replaced pursuant to Sections 9.3.1.3.1, or 9.3.1.3.2, and (ii) does not demonstrate operationally available Resource Adequacy Capacity equal to or greater than the Load Serving Entity's applicable forecasted monthly Demand and Reserve Margin, the CAISO will require outage replacement and will provide notice of the outage replacement requirement to the Local Regulatory Authority, the Scheduling Coordinator for the Load Serving Entity, and the Scheduling Coordinator for the Resource Adequacy Resource scheduled to take the Approved Maintenance Outage. The notification will be made at least 25 days in advance of the first day of the month covered by the plan and will include the reasons why the CAISO believes an outage replacement requirement exists. At least eleven (11) days prior to the resource adequacy month, the Scheduling Coordinator for either the Load Serving Entity or the Resource Adequacy Resource may demonstrate that the identified outage replacement requirement is cured by submitting to the CAISO a revision or update to the monthly Resource Adequacy Plan or Supply Plan, as applicable. If neither the Scheduling Coordinator for the Load Serving Entity nor the Scheduling Coordinator for the Resource Adequacy Resource timely advises the CAISO that the identified outage replacement requirement is cured, the CAISO may exercise its authority to procure backstop capacity under the Capacity Procurement Mechanism pursuant to Section 43A.

(c) In the case of a mismatch between Resource Adequacy Plan(s) and Supply Plan(s), if

resolved, the relevant Scheduling Coordinator(s) must provide the CAISO with revised Resource Adequacy Plan(s) or Supply Plans, as applicable, at least ten (10) days prior to the effective month. If the CAISO is not advised that the deficiency or mismatch is resolved at least ten (10) days prior to the effective month, the CAISO will use the information contained in the Supply Plan to set the obligations of Resource Adequacy Resources under this Section 40 and/or to assign any costs incurred under this Section 40 and Section 43A.

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**40.9.3.4 Treatment of Maintenance Outages**

(a) **Replacement Not Required.** The RAAIM Availability Assessment for a Resource Adequacy Resource excludes the capacity, duration, and must-offer requirements for Resource Adequacy Capacity –

(1) with an Approved Maintenance Outage or pending request for a Maintenance Outage as of 45 days prior to the start date of the Resource Adequacy month; however any subsequent incremental increase in the MWs or duration of the outage will be subject to RAAIM unless RA Replacement Capacity for the incremental outage is required and provided or is not required; or

(2) on an Approved Maintenance Outage during the Resource Adequacy month that does not require RA Replacement Capacity under Section 9.3.1.3.3.

(b) **Replacement Requirement Provided.** For each Maintenance Outage that a Resource Adequacy Resource requests less than 45 days prior to the start of the relevant resource adequacy month and that requires RA Replacement Capacity –

(1) the RAAIM Availability Assessment for the resource excludes the capacity, duration, and must-offer requirement for Resource Adequacy Capacity on an Approved Maintenance Outage to the extent the resource provides RA Replacement Capacity for that outage as required under Section 9.3.1.3.3; and

(2) the RAAIM Availability Assessment for the replacement resource includes the capacity, duration, and must-offer requirement for the RA Replacement Capacity

commitment.

(c) **Replacement Requirement Not Provided.** For each Maintenance Outage that a Resource Adequacy Resource requests less than 45 days prior to the start of the relevant resource adequacy month, the RAAIM Availability Assessment for the resource includes the capacity, duration, and must-offer requirement for Resource Adequacy Capacity on an Approved Maintenance Outage to the extent the resource does not provide RA Replacement Capacity for the outage as required under Section 9.3.1.3.3.

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**40.9.3.5 Treatment of Forced Outages**

(a) **RA Substitute Capacity - Local and System**

(1) The RAAIM Availability Assessment for a Resource Adequacy Resource includes the capacity, duration, and must-offer requirement for Resource Adequacy Capacity on a Forced Outage, except to extent the resource provides RA Substitute Capacity for the outage in accordance with Section 40.9.3.6.

(2) The RAAIM Availability Assessment for the substitute resource includes the capacity, duration, and must-offer requirement for the RA Substitute Capacity.

(b) **RA Substitute Capacity – Flexible**

(1) The RAAIM Availability Assessment for a Flexible RA Resource includes the capacity, duration, and must-offer requirement for Flexible RA Capacity on a Forced Outage, except to extent the resource provides RA Substitute Capacity for that outage in accordance with Section 40.9.3.6.

(2) The RAAIM Availability Assessment for the substitute resource includes the capacity, duration, and must-offer requirement for the RA Substitute Capacity.

(3) For each day the substitute resource is committed to provide Flexible RA Capacity and/or RA Substitute Capacity in more than one Flexible Capacity Category, the RAAIM Availability Assessment applies the must-offer obligation for the highest quality Flexible Capacity Category to the total MWs of the flexible capacity requirement.

(c) **Exclusions from RAAIM.** The RAAIM Availability Assessment excludes the capacity, duration, and must-offer requirement for local and/or system Resource Adequacy Capacity or Flexible RA Capacity on a Forced Outage in a nature of work category relating to an administrative action by the resource owner, a cause outside of the control of the resource owner, or a short-term use limitation, as those categories are specified in the Business Practice Manual.

(d) Scheduling Coordinators for Resource Adequacy Resources with a PMax of at least one (1) MW but less than 10 MWs that do not meet the requirement to provide information on Forced Outages in accordance with Section 9.3.10 shall report outages and de-rates in accordance with the process set forth the Business Practice Manual.

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**40.9.3.6 Substitute Capacity**

(a) **Substitution**

(1) The Scheduling Coordinator for a Resource Adequacy Resource may provide RA Substitute Capacity for its local and/or system Resource Adequacy Capacity or Flexible RA Capacity on a Forced Outage or de-rate.

(2) If the Resource Adequacy Resource on outage and the substituting resource do not have the same Scheduling Coordinator, the Scheduling Coordinator for the substituting resource must confirm and approve the proposed substitution in accordance with the process set forth in the Business Practice Manual.

(b) **Availability**

(1) RA Substitute Capacity must be operationally available to the CAISO:

(2) Capacity on, or scheduled to be on, a Forced Outage, Approved Maintenance Outage, or de-rate, is not operationally available and shall not qualify to be RA Substitute Capacity for the duration of the period that it is unavailable.

(3) RA Replacement Capacity, RMR Capacity, CPM Capacity, and capacity committed to be Resource Adequacy Capacity in a monthly Supply Plan shall not qualify to be RA Substitute Capacity for the duration of that commitment.

(4) RA Substitute Capacity shall not qualify to be RA Replacement Capacity, RMR Capacity, CPM Capacity, or Resource Adequacy Capacity in a monthly Supply Plan, for the duration of the substitution.

(5) If a resource provides RA Substitute Capacity for multiple Resource Adequacy Resources under Section 40.9.3.6.3, the same capacity committed as RA Substitute Capacity for one Resource Adequacy Resource shall not qualify as RA Substitute Capacity for a different Resource Adequacy Resource during the same substitution period.

(6) RA Substitute Capacity will be treated as Resource Adequacy Capacity during the period of substitution for purposes of a Forced Outage or de-rate allocation.

(c) **Timing of Substitution Request**

(1) **Day-Ahead Market.** Requests for substitution in the Day-Ahead Market must be submitted in accordance with the timeline specified in the Business Practice Manual and be approved by the CAISO to be included in the Day-Ahead Market for the next Trading Day. Requests for substitution in the Day-Ahead Market submitted at or after the timeline specified in the Business Practice Manual and that are approved by the CAISO will be included in the Day-Ahead Market for the second Trading Day.

(2) **Real-Time Market.** Requests for substitution in the Real-Time Market must be submitted in accordance with the timeline in the Business Practice Manual.

**40.9.3.6.1 RA Substitute Capacity from a Single Resource**

(a) **Option.** The Scheduling Coordinator for a Resource Adequacy Resource that is on a Forced Outage or de-rate may provide RA Substitute Capacity for that capacity from a single resource.

(b) **Local Capacity Area Resource Substitution**

(1) **Pre-Qualified Substitution.**

(A) **Annual Process.** The CAISO will annually conduct a process to assess the eligibility of resources to pre-qualify as RA Substitute Capacity for

Local Capacity Resource Adequacy Resources. The CAISO will publish a list of the pre-qualified resources in accordance with the timeline in the Business Practice Manual.

(B) **Pre-Qualification Requirement.** The CAISO will pre-qualify a resource to provide RA Substitute Capacity that is located at the same bus as, or a compatible bus to, that of the Local Capacity Area Resource Adequacy Resource for which it could substitute.

(C) **Request.** To use a pre-qualified resource in the Day-Ahead Market or Real-Time Market as RA Substitute Capacity, the Scheduling Coordinator for the Local Capacity Area Resource Adequacy Resource on a Forced Outage or de-rate must submit a timely substitution request in accordance with Section 40.9.3.6(c).

(D) **Approval.** The CAISO will grant a request that meets the requirements in Sections 40.9.3.6.1(b)(1)(C) and 40.9.3.6(b).

(2) **Non-Pre-Qualified Substitution.**

(A) **Day-Ahead Market.** The Scheduling Coordinator for a Local Capacity Area Resource Adequacy Resource on a Forced Outage or de-rate may submit a request to substitute a non-pre-qualified resource only in the Day-Ahead Market.

(B) **Request.** To use a non-pre-qualified resource as RA Substitute Capacity, the Scheduling Coordinator for the Local Capacity Area Resource Adequacy Resource must submit a timely substitution request in accordance with Section 40.9.3.6(c), and the alternate resource must be located in the same Local Capacity Area.

(C) **Approval.** The CAISO will grant a request that meets the requirements in Sections 40.9.3.6.1(b)(2)(A) and (B), and 40.9.3.6(b).

(c) **Non-Local Capacity Area Resource Substitution**

(1) **Request.** To use a resource as RA Substitute Capacity, the Scheduling Coordinator for a non-Local Capacity Area Resource Adequacy Resource that has a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market or Real-Time Market in accordance with Section 40.9.3.6(c).

(2) **Approval.** The CAISO will grant the request if the alternate resource has adequate deliverable capacity to provide the RA Substitute Capacity and meets the requirements in Sections 40.9.3.6.1(c)(1) and 40.9.3.6(b).

(d) **External Resources**

(1) **Request.** To use a Dynamic System Resource, Non-Dynamic System Resource, NRS-RA Resource, or Pseudo-Tie as RA Substitute Capacity, the Scheduling Coordinator for a Resource Adequacy Resource that has a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6(c).

(2) **Approval.** The CAISO will grant the request if the alternate resource is external to the CAISO Balancing Authority Area (including Pseudo-Ties), the Scheduling Coordinator for the resource has an adequate available import allocation at the resource's Scheduling Point to provide the RA Substitute Capacity, and meets the requirements in Sections 40.9.3.6.1(d)(1) and 40.9.3.6(b).

(e) **Flexible RA Capacity**

(1) **Request.** To use a resource as RA Substitute Capacity, the Scheduling Coordinator for the Flexible RA Resource that has a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market or Real-Time Market in accordance with Section 40.9.3.6(c) and specify the MW of RA Substitute Capacity to be provided, which may not exceed the MWs of the outage.

(2) **Approval.** The CAISO will grant the request if the alternate resource has adequate deliverable capacity to provide the RA Substitute Capacity, meets the applicable requirements in Sections 40.9.3.6.1(e) and 40.9.3.6(b), and is capable of meeting the must-offer obligation in Section 40.10.6 applicable to the highest quality Flexible Capacity Category for the MWs of the Flexible RA Capacity commitments of the resource on outage and the alternate resource.

**40.9.3.6.2 RA Substitute Capacity from Multiple Resources**

(a) **Option.** The Scheduling Coordinator for a Resource Adequacy Resource on a Forced Outage or de-rate may submit a request to substitute that capacity with RA Substitute Capacity from multiple alternate resources, including a resource already providing RA Substitute Capacity for one or more Resource Adequacy Resources.

(b) **Local Capacity Area Resource Substitution**

(1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for the Local Capacity Area Resource Adequacy Resource on a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6(c) if any of the alternate resources are not pre-qualified to substitute for the resource on the outage; however, if all of the alternate resources are pre-qualified to provide RA Substitute Capacity for that resource, the request may be submitted in the Day-Ahead Market or Real-Time Market.

(2) **Approval.** The CAISO will grant the request if it meets the requirements in Sections 40.9.3.6.2(b)(1) and 40.9.3.6(c) and the alternate resources are either pre-qualified, or are not pre-qualified but are located in the same Local Capacity Area as the Resource Adequacy Resource.

(c) **Non-Local Capacity Area Resources**

(1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for a non-Local Capacity Area Resource Adequacy Resource on a Forced Outage or de-rate must submit a timely substitution

request in the Day-Ahead Market or the Real-Time Market in accordance with Section 40.9.3.6(c).

(2) **Approval.** The CAISO will grant the request if all of the alternate resources meet the requirements in Sections 40.9.3.6.2(c)(1) and 40.9.3.6(c).

(d) **External Resources**

(1) **Request.** To use multiple Dynamic System Resources, Non-Dynamic System Resources, NRS-RA Resources, or Pseudo-Ties as RA Substitute Capacity, the Scheduling Coordinator for a Resource Adequacy Resource that has a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market in accordance with Section 40.9.3.6(c).

(2) **Approval.** The CAISO will grant the request if the alternate resources are external to the CAISO Balancing Authority Area (including Pseudo-Ties), and the Scheduling Coordinator of each alternate resource has an adequate available import allocation at the resource's Scheduling Point to provide the RA Substitute Capacity, and meet the requirements in Sections 40.9.3.6.e(d)(1) and 40.9.3.6(b).

(e) **Flexible RA Capacity**

(1) **Request.** To use RA Substitute Capacity from multiple resources, the Scheduling Coordinator for a resource providing Flexible RA Capacity on a Forced Outage or de-rate must submit a timely substitution request in the Day-Ahead Market or the Real-Time Market and the alternate resources must be located in the CAISO Balancing Authority Area, which does not include a Pseudo-Tie of a Generating Unit or a Resource-Specific System Resource.

(2) **Approval.** The CAISO will grant the request if the alternate resources meet the requirements in Sections 40.9.3.6.2(d)(1) and 40.9.3.6(c).

**40.9.3.6.3 Multiple Substitution by One Resource.** The Scheduling Coordinator for a resource already providing RA Substitute Capacity may provide RA Substitute Capacity for one or more additional Resource Adequacy Resources on a Forced Outage or de-rate, subject to approval by the CAISO

pursuant to Section 40.9.3.6.1 or 40.9.3.6.2.

**40.9.3.6.4 Resource Adequacy Obligation.** To the extent a resource provides RA Substitute Capacity, the resource must meet and comply with all requirements in Section 40 applicable to RA Substitute Capacity for the duration of the substitution; except that RA Substitute Capacity shall be released from this obligation and the substitution requirements in Section 40.9 -

(a) at the end of the approved substitution period; or

(b) upon request by either the Scheduling Coordinator for the resource on Forced Outage or the Scheduling Coordinator for the substitute resource, and approval by the other Scheduling Coordinator, in accordance with the process set forth in the Business Practice Manual.

**40.9.3.6.5 Treatment of Unbid Capacity.** If the Scheduling Coordinator for RA Substitute Capacity does not submit Bids or Self-Schedules for all or a portion of that capacity in accordance with Section 40.6 or 40.10.6, the CAISO –

(1) will treat the unbid capacity as unavailable for purposes of Section 40.9; and

(2) will reflect that unavailability in the RAAIM availability calculation for the Resource Adequacy Resource providing the RA Substitute Capacity.

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**40.9.4 Availability Assessment**

(a) The CAISO shall determine a resource's monthly average availability on a percentage basis, based on –

(1) the availability assessment of the resource's minimum daily availability of local and/or system Resource Adequacy Capacity under Section 40.9.3.1, Flexible RA Capacity under Section 40.9.3.2, and overlapping Resource Adequacy commitments under Section 40.9.3.3, in the Day-Ahead Market and Real-Time Market;

(2) including the capacity, duration, and must-offer requirement for local and/or system Resource Adequacy Capacity or Flexible RA Capacity on a Forced Outage, except to the extent the resource provides RA Substitute Capacity for

the outage in accordance with Section 40.9.3.6, or the Forced Outage is excluded from RAAIM under Section 40.9.3.5;

(3) including the capacity, duration, and must-offer requirement for any RA Substitute Capacity, RA Replacement Capacity, or CPM Capacity the resource is committed to provide; and

(4) excluding the Maintenance Outages specified in Section 40.9.3.4.

(b) If the resource's minimum daily availability is the same in the Day-Ahead Market and the Real-Time Market, the CAISO will use the availability in the Real-Time Market in the calculation of the monthly average availability.

(c) If the resource is committed to provide local and/or system RA capacity and Flexible RA Capacity in a month, but does not provide both for the full month, the CAISO prorates the number of days that local and/or system Resource Adequacy Capacity and Flexible RA Capacity was provided against the total number of days in the month.

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**40.10.5 Flexible RA Capacity Plans**

**40.10.5.1 LSE Flexible RA Capacity Plans**

(a) **Submission Requirement.** A Scheduling Coordinator must submit annual and monthly LSE Flexible RA Capacity Plans for each Load Serving Entity it represents.

(b) **Annual Plan.** Each annual LSE Flexible RA Capacity Plan must -

(1) demonstrate that the Load Serving Entity has procured for each month at least 90 percent of the annual Flexible RA Capacity requirement determined by the CAISO; or the amount of Flexible RA Capacity required by the Load Serving Entity's Local Regulatory Authority, if the Local Regulatory Authority has set such requirement;

(2) identify the resources the Load Serving Entity intends to rely on to provide the Flexible RA Capacity, but need not identify the flexible resource adequacy categories; and

(3) include all information and be submitted no later than the last Business Day in

October, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.

(c) **Monthly Plan.** The monthly LSE Flexible RA Capacity Plan must --

(1) demonstrate that the Load Serving Entity procured 100 percent of the total monthly Flexible RA Capacity requirement determined by the CAISO; or the monthly amount of Flexible RA Capacity required by the Local Regulatory Authority, if the Local Regulatory Authority has set such requirement;

(2) demonstrate that the Load Serving Entity met the total monthly requirement determined by the CAISO within the minimum or maximum quantity, as applicable, for each Flexible Capacity Category; or only if the Local Regulatory Authority has established its own flexible capacity requirement, show that the Load Serving Entity has met the total monthly requirement determined by the Local Regulatory Authority within the minimum or maximum quantity for each Flexible Capacity Category required by the Local Regulatory Authority, if applicable;

(3) identify all resources the Load Serving Entity will rely on to provide the Flexible RA Capacity and for each resource specify the Flexible Capacity Category in which the Flexible RA Capacity will be provided; and

(4) include all information and be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.

(d) **Correction to Monthly Plan.** The Scheduling Coordinator for the Load Serving Entity may submit at any time from 45 days through 11 days in advance of the first day of the month covered by the plan, a revision to its monthly LSE Flexible RA Capacity Plan to correct an error in the plan. The CAISO will not accept any revisions to a monthly LSE Flexible RA Capacity Plan from 10 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Load Serving Entity demonstrates good cause for the change and explains why it was not possible to submit

the change earlier.

**40.10.5.1.1 Load-Following MSS**

(1) Each Load-following MSS Load Serving Entity for which the CAISO has calculated an allocable share of the Flexible Capacity Need under Section 40.10.2.2 must submit annual and monthly LSE Flexible RA Capacity Plans pursuant to this Section 40.10.5.1 to identify the Flexible RA Capacity it is using to satisfy such requirement.

(2) The Load-following MSS must increase the Flexible RA Capacity in its monthly plan by the MW amount of Capacity for a Variable Energy Resource that is initially shown as being included in the Load-following MSS Load Serving Entity's resource portfolio in the information required pursuant to Section 40.10.1.2, but is subsequently not included in the current MSS resource portfolio at the time the monthly LSE Flexible RA Capacity Plan is due for the applicable month.

**40.10.5.2 Resource Flexible RA Capacity Plans**

(a) **Submission Requirement.** A Scheduling Coordinator must submit annual and monthly Resource Flexible RA Capacity Plans for each resource it represents that provides Flexible RA Capacity; except that an annual plan is not required for 2015.

(b) **Annual Plan.** The annual Resource Flexible RA Capacity Plan shall --

(1) verify the resource's agreement to provide Flexible RA Capacity during the next Resource Adequacy Compliance Year; and

(2) include all information and be submitted no later than the last Business Day in October, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.

(c) **Monthly Plan.** The monthly Resource Flexible RA Capacity Plan shall –

(1) verify the resource's agreement to provide Flexible RA Capacity during the month;

(2) include an affirmative representation by the Scheduling Coordinator submitting the plan that the CAISO is entitled to rely on the accuracy of the information provided in the plan to perform those functions set forth in this Section 40; and

(3) include all information and be submitted to the CAISO at least 45 days in advance of the first day of the month covered by the plan, in accordance with the reporting requirements and schedule set forth in the Business Practice Manual.

(d) **Correction to Monthly Plan.** The Scheduling Coordinator for the resource may correct an error in the plan by submitting a revision to its monthly Resource Flexible RA Capacity Plan at any time from 45 days through 11 days in advance of the first day of the month covered by the plan. The CAISO will not accept any revisions to a monthly Resource Flexible RA Capacity Plan from 10 days in advance of the relevant month through the end of the month, unless the Scheduling Coordinator for the Resource demonstrates good cause for the change and explains why it was not possible to submit the change earlier.

**40.10.5.3 Review of Flexible RA Capacity Plans**

(a) **Validation for Deficiency in an Individual LSE Plan.**

(1) If the Local Regulatory Authority has not established its own flexible capacity procurement requirements, the CAISO will validate the annual and monthly LSE Flexible RA Capacity Plans for that Local Regulatory Authority's jurisdictional Load Serving Entities, and will use the Effective Flexible Capacity value for each resource calculated under Section 40.10.4. The CAISO will determine whether each Load Serving Entity met its annual or monthly total Flexible RA Capacity Requirement, and for the monthly LSE Flexible RA Capacity Plan, whether it met the total monthly requirement within the minimum or maximum quantity, as applicable, for each Flexible Capacity Category.

(2) If the Local Regulatory Authority has established its own flexible capacity procurement requirements, the CAISO will not validate the individual LSE Flexible Capacity Plans for that Local Regulatory Authority's jurisdictional Load Serving Entities.

(b) I**dentification of Discrepancy.** The CAISO will compare all LSE Flexible RA Capacity Plans and Resource Flexible RA Capacity Plans to identify any discrepancy in the

Resource Adequacy Resources listed or the amount of the Resource Adequacy Capacity committed.

(c) **Evaluation for Cumulative Deficiency.**

(1) The CAISO will evaluate the annual LSE Flexible RA Capacity Plans of all Load Serving Entities on a cumulative basis to determine whether the total amount of Flexible RA Capacity shown in the plans meets 90 percent of the annual Flexible Capacity Need determined by the CAISO pursuant to Section 40.10.1 or whether a cumulative deficiency may exist under Section 43.2.7(a).

(2) The CAISO will evaluate the monthly Flexible RA Capacity Plans of all Load Serving Entities to determine whether (i) the total amount of Flexible RA Capacity shown in the plans, limited to the maximum monthly requirement for each category, meets the applicable monthly Flexible Capacity Need determined by the CAISO pursuant to Section 40.10.1 or whether a cumulative deficiency may exist under Section 43.2.7(b)(1); or (ii) the total amount of Flexible RA Capacity shown in the base ramping Flexible Capacity Category in the plans meets the minimum monthly requirement for the base ramping Flexible Capacity Category determined by the CAISO pursuant to Section 40.10.1.5 or whether a cumulative deficiency may exist under Section 43.2.7(b)(2).

(d) **Calculation of Flexible RA Capacity.** The CAISO will calculate the amount of Flexible RA Capacity included in the annual and monthly Flexible RA Capacity Plans using the MW amount of Flexible RA Capacity for each resource designated in a plan as a Flexible RA Capacity Resource up to the Effective Flexible Capacity value for the resource calculated under Section 40.10.4.

(e) **Allocated Flexible RA Capacity Requirement.** The CAISO will calculate the Load Serving Entity's allocated annual and monthly Flexible RA Capacity Requirement –

(1) For Load Serving Entities within a Local Regulatory Authority that has not adopted its own allocation methodology, the CAISO will calculate the Load Serving Entity's allocated requirement based on the CAISO's allocation

methodology set forth in Section 40.10.2.

(2) For Load Serving Entities within a Local Regulatory Authority that has adopted its own allocation methodology, the CAISO will use that Local Regulatory Authority's methodology for the Local Regulatory Authority's jurisdictional Load Serving Entities.

**40.10.5.4 Deficiency in LSE Flexible RA Capacity Plan**

(a) **Finding and Notification.** If the CAISO's validation under Section 40.10.5.3(a) finds either (i) that the total amount of Flexible RA Capacity included in an annual or monthly LSE Flexible RA Capacity Plan is not sufficient to satisfy the Load Serving Entity's allocated Flexible RA Capacity Requirement or (ii) that the total monthly requirement in a monthly LSE Flexible RA Capacity Plan was not met within the minimum or maximum quantity, as applicable, for each Flexible Capacity Category, the CAISO will --

(1) notify the relevant Scheduling Coordinator, and the Local Regulatory Authority or federal agency with jurisdiction over the relevant Load Serving Entity, in an attempt to resolve any deficiency in accordance with the procedures set forth in the Business Practice Manual; and

(2) provide the notice at least 25 days in advance of the first day of the month covered by the plan and include the reasons the CAISO believes a deficiency exists.

(b) **Resolved Deficiency.** If the CAISO issues a notice of deficiency under Section 40.10.5.4(a), and the deficiency is resolved, the Scheduling Coordinator for the Load Serving Entity shall -

(1) demonstrate, no less than 11 days prior to the first day of the month covered by the LSE Flexible RA Capacity Plan, that the identified deficiency is cured by submitting a revised LSE Flexible RA Capacity Plan, or

(2) advise the CAISO that the Load Serving Entity's Local Regulatory Authority, or federal agency, as appropriate, has determined that no deficiency exists.

(c) **Unresolved Deficiency.** If the CAISO issues a notice of deficiency under Section

40.10.5.4(a) and is not advised that the deficiency is resolved, the CAISO will use the information contained in the Resource Flexible RA Capacity Plan to set the obligations of resources under Section 40.10 and/or to assign any costs incurred under this Section 40 and Section 43.

**40.10.5.5 Discrepancy Between Flexible RA Capacity Plans.**

(a) **Finding and Notification.** If the CAISO's review under Section 40.10.5.3(b) finds a discrepancy between an LSE Flexible RA Capacity Plan and a Resource Flexible RA Capacity Plan, the CAISO will --

(1) notify the relevant Scheduling Coordinators of the mismatch in an attempt to resolve the discrepancy in accordance with the procedures set forth in the Business Practice Manual; and

(2) provide the notice at least 25 days in advance of the first day of the month covered by the plans and include the reasons the CAISO believes a discrepancy exists.

(b) **Resolved Discrepancy.** If the CAISO issues a notice of discrepancy under Section 40.10.5.5(a) and the discrepancy is resolved, the Scheduling Coordinator must provide the CAISO with a revised LSE Flexible RA Capacity Plan or Resource Flexible RA Capacity Plan, as applicable, no less than 11 days prior to the first day of the month covered by the plans.

(c) **Unresolved Discrepancy.** If the CAISO issues a notice of discrepancy under Section 40.10.5.5(a) and is not advised that the discrepancy is resolved, the CAISO will use the information contained in the Resource Flexible RA Capacity Plan to set the obligations of resources under Section 40.10 and/or to assign any costs incurred under this Section 40 and Section 43.

**40.10.5.6 LRA Deficiency.**

(a) **Finding and Notification.** If the CAISO's evaluation under Section 40.10.5.3(c) finds a cumulative deficiency in Flexible RA Capacity, the CAISO will –

(1) identify each Local Regulatory Authority that did not meet its allocable share of

the Flexible Capacity Need using the cumulative amount of Flexible RA Capacity that the Local Regulatory Authority's jurisdictional Load Serving Entities included in their annual and monthly Flexible RA Capacity Plans in total and, for the monthly Flexible RA Capacity Plans, in each Flexible Capacity Category;

(2) identify each Load Serving Entity that (i) is subject to the jurisdiction of a Local Regulatory Authority that did not meet its allocable share of the Flexible Capacity Need under Section 40.10.5.6, and (ii) did not include sufficient Flexible RA Capacity in an annual or monthly plan to meet its allocated Flexible RA Capacity Requirement or did not meet the monthly requirement within the minimum or maximum quantity, as applicable, for each Flexible Capacity Category, based on the allocation methodology of the Local Regulatory Authority if it has established its own methodology for allocating the Flexible Capacity Need to its jurisdictional Load Serving Entities;

(3) notify each Local Regulatory Authority identified under Section 40.10.5.6(a)(1) and the Scheduling Coordinator for each Load Serving Entity identified under Section 40.10.5.6(a)(2) of the cumulative deficiency in an attempt to resolve any deficiency in accordance with the procedures set forth in the Business Practice Manual; and

(4) provide the notice at least 25 days in advance of the first day of the month covered by the plan and include the reasons the CAISO believes a cumulative deficiency exists.

(b) **Resolved Deficiency.** If the CAISO provides a notice of cumulative deficiency under Section 40.10.5.6(a), and the deficiency is resolved, the Scheduling Coordinator for the Load Serving Entity shall demonstrate, no less than 11 days prior to the first day of the month covered by the LSE Flexible RA Capacity Plan, that the identified deficiency is cured by submitting a revised LSE Flexible RA Capacity Plan.

(c) **Unresolved Deficiency.** If the CAISO provides a notice of deficiency under Section 40.10.5.6(a) and is not advised that the deficiency is resolved, the CAISO will use the information contained in the Resource Flexible RA Capacity Plan to set the obligations of resources under Section 40.10 and/or to assign any costs incurred under this Section 40 and Section 43A.

*** * * ***

**43A.8.8 Allocation of Flexible Capacity CPM Costs**

(a) **Calculation of Deficiency by LRA.**

(1) The CAISO will determine whether each Local Regulatory Authority met its allocable share of the Flexible Capacity Need based on the cumulative amount of Flexible RA Capacity that Local Regulatory Authority's jurisdictional Load Serving Entities included in their annual and monthly Flexible RA Capacity Plans in total, and included in their monthly Flexible RA Capacity Plans for each Flexible Capacity Category.

(2) The CAISO will calculate the total amount of Flexible RA Capacity included in the annual and monthly Flexible RA Capacity Plans collectively for all Load Serving Entities within the Local Regulatory Authority, and the total amount included in the monthly Flexible RA Capacity Plans for each Flexible Capacity Category using the minimum or maximum quantity, as applicable, for each category, and using the Effective Flexible Capacity value calculated under Section 40.10.4 for each resource designated in a plan as a Flexible RA Capacity Resource.

(b) **Allocation by CAISO Method.**

(1) If the amount of Flexible RA Capacity the jurisdictional Load Serving Entities included in their annual Flexible RA Capacity Plans or monthly Flexible RA Capacity Plans, in total and in each Flexible Capacity Category, meets or exceeds the applicable Flexible Capacity Need allocated to their Local Regulatory Authority, the CAISO will not allocate any of the Flexible Capacity CPM costs to the Scheduling Coordinators for those Load Serving Entities.

(2) If the amount of Flexible RA Capacity the jurisdictional Load Serving Entities included in their annual Flexible RA Capacity Plans or monthly Flexible RA Capacity Plans, either in total or for a Flexible Capacity Category, is less than the applicable Flexible Capacity Need allocated to their Local Regulatory Authority, and that Local Authority has not established its own methodology for allocating the Flexible Capacity Need to its jurisdictional Load Serving Entities, the CAISO will allocate the Flexible Capacity CPM costs proportionately to the Scheduling Coordinator of each jurisdictional Load Serving Entity that failed to meet its procurement obligation.

(c) **Allocation by Local Regulatory Authority Method.** If Load Serving Entities jurisdictional to a Local Regulatory Authority have a cumulative deficiency under Section 43A.8.8(a) and the Local Regulatory Authority has established its own methodology for allocating the Flexible Capacity Need to its jurisdictional Load Serving Entities, the CAISO will use the Local Regulatory Authority's methodology to allocate the Flexible Capacity CPM costs to the Scheduling Coordinator of each Load Serving Entity that is jurisdictional to that Local Regulatory Authority and that failed to meet its procurement obligation. If the Local Regulatory Authority does not notify the CAISO of its allocation method by the deadline established in the relevant Business Practice Manual, then the CAISO allocates Flexible Capacity CPM costs using its default allocation methodology under Section 43A.8.8(b)(2).

(d) **Reduction of Cost Allocation.** If the CAISO issues a Flexible Capacity CPM designation, a Scheduling Coordinator for a Load Serving Entity that was deficient, but provided additional Flexible RA Capacity in a revised annual or monthly Flexible RA Capacity Plan consistent with the Market Notice under Section 43A.2.7.1 –

(1) will be not be allocated a share of the Flexible Capacity CPM procurement costs if the additional Flexible RA Capacity included in that LSE's revised LSE Flexible RA Capacity Plan resolved the total deficiency of that Load Serving Entity; or

(2) will be allocated a share of the Flexible Capacity CPM procurement costs on a proportionate basis to the extent that Load Serving Entity has a remaining partial deficiency.

*** * * ***

**- Non-Specified RA Replacement Capacity**

Capacity the Load Serving Entity procured that is capable of providing Resource Adequacy Capacity, but not designated as Resource Adequacy Capacity in the Load Serving Entity's monthly Resource Adequacy Plan for the month.

**- RA Replacement Capacity**

Specified RA Replacement Capacity, Non-Specified RA Replacement Capacity, or capacity that is not Resource Adequacy Capacity, CPM Capacity, or capacity under an RMR contract, that replaces Resource Adequacy Capacity that is not operationally available to the CAISO due to a Maintenance Outage, an RA Maintenance Outage With Replacement or a Forced Outage approved under Section 9.3.1.3.3.1(c)(4).

**- Specified RA Replacement Capacity**

RA Replacement Capacity specified by the Load Serving Entity to replace specific Resource Adequacy Capacity included in its monthly Resource Adequacy Plan, for all or a portion of the period that the Resource Adequacy Capacity will not be operationally available to the CAISO during the month due to an Approved Maintenance Outage.

**- System Total Available RA Capacity**

The system total Resource Adequacy Capacity provided in the Resource Adequacy Plans, including the total MW of Specified RA Replacement Capacity accepted by the CAISO, less the total MW of unreplaced capacity in the Resource Adequacy Plans that is scheduled to take an Approved Maintenance Outage during the month.

# CAISO TARIFF APPENDIX BB

## Standard Large Generator Interconnection Agreement

## for Interconnection Requests in a Serial Study Group that are tendered or execute a Large Generator Interconnection Agreement on or after May 15, 2018

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**STANDARD LARGE GENERATOR INTERCONNECTION AGREEMENT**

**[INTERCONNECTION CUSTOMER]**

**[PARTICIPATING TO]**

**CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

**THIS STANDARD LARGE GENERATOR INTERCONNECTION AGREEMENT** ("LGIA") is made and entered into this ____ day of _____ 20___, by and among _____, a _____ organized and existing under the laws of the State/Commonwealth of _____ ("Interconnection Customer" with a Large Generating Facility), _____, a corporation organized and existing under the laws of the State of California ("**Participating TO**"), and **California Independent System Operator Corporation**, a California nonprofit public benefit corporation organized and existing under the laws of the State of California ("CAISO"). Interconnection Customer, Participating TO, and CAISO each may be referred to as a "Party" or collectively as the "Parties."

**RECITALS**

**WHEREAS,** CAISO exercises Operational Control over the CAISO Controlled Grid; and

**WHEREAS,** the Participating TO owns, operates, and maintains the Participating TO's Transmission System; and

**WHEREAS,** Interconnection Customer intends to own, lease and/or control and operate the Generating Facility identified as a Large Generating Facility in Appendix C to this LGIA; and

**WHEREAS,** Interconnection Customer, Participating TO, and CAISO have agreed to enter into this LGIA for the purpose of interconnecting the Large Generating Facility with the Participating TO's Transmission System;

**NOW, THEREFORE,** in consideration of and subject to the mutual covenants contained herein, it is agreed:

When used in this LGIA, terms with initial capitalization that are not defined in Article 1 shall have the meanings specified in the Article in which they are used.

**ARTICLE 1. DEFINITIONS**

**Adverse System Impact** shall mean the negative effects due to technical or operational limits on conductors or equipment being exceeded that may compromise the safety and reliability of the electric system.

**Affected System** shall mean an electric system other than the CAISO Controlled Grid that may be affected by the proposed interconnection, including the Participating TO's electric system that is not part of the CAISO Controlled Grid.

**Affiliate** shall mean, with respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

**Applicable Laws and Regulations** shall mean all duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.

**Applicable Reliability Council** shall mean the Western Electricity Coordinating Council or its successor.

**Applicable Reliability Standards** shall mean the requirements and guidelines of NERC, the Applicable Reliability Council, and the Balancing Authority Area of the Participating TO's Transmission System to which the Generating Facility is directly connected, including requirements adopted pursuant to Section 215 of the Federal Power Act.

**Asynchronous Generating Facility** shall mean an induction, doubly-fed, or electronic power generating unit(s) that produces 60 Hz (nominal) alternating current.

**Balancing Authority** shall mean the responsible entity that integrates resource plans ahead of time, maintains load-interchange-generation balance within a Balancing Authority Area, and supports Interconnection frequency in real time.

**Balancing Authority Area** shall mean the collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.

**Base Case** shall mean the base case power flow, short circuit, and stability data bases used for the Interconnection Studies.

**Breach** shall mean the failure of a Party to perform or observe any material term or condition of this LGIA.

**Breaching Party** shall mean a Party that is in Breach of this LGIA.

**Business Day** shall mean Monday through Friday, excluding federal holidays and the day after Thanksgiving Day.

**Calendar Day** shall mean any day including Saturday, Sunday or a federal holiday.

**Commercial Operation** shall mean the status of an Electric Generating Unit at a Generating Facility that has commenced generating electricity for sale, excluding electricity generated during Trial Operation.

**Commercial Operation Date** of an Electric Generating Unit shall mean the date on which the Electric Generating Unit at the Generating Facility commences Commercial Operation as agreed to by the applicable Participating TO and the Interconnection Customer pursuant to Appendix E to this LGIA.

**Confidential Information** shall mean any confidential, proprietary or trade secret information of a plan, specification, pattern, procedure, design, device, list, concept, policy or compilation relating to the present or planned business of a Party, which is designated as confidential by the Party supplying the information, whether conveyed orally, electronically, in writing, through inspection, or otherwise, subject to Article 22.1.2.

**Default** shall mean the failure of a Breaching Party to cure its Breach in accordance with Article 17 of this LGIA.

**Distribution System** shall mean those non-CAISO-controlled transmission and distribution facilities owned by the Participating TO.

**Distribution Upgrades** shall mean the additions, modifications, and upgrades to the Participating TO's Distribution System. Distribution Upgrades do not include Interconnection Facilities.

**Effective Date** shall mean the date on which this LGIA becomes effective upon execution by the Parties subject to acceptance by FERC, or if filed unexecuted, upon the date specified by FERC.

**Electric Generating Unit** shall mean an individual electric generator and its associated plant and apparatus whose electrical output is capable of being separately identified and metered.

**Emergency Condition** shall mean a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (2) that, in the case of the CAISO, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the CAISO Controlled Grid or the electric systems of others to which the CAISO Controlled Grid is directly connected; (3) that, in the case of the Participating TO, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Participating TO's Transmission System, Participating TO's Interconnection Facilities, Distribution System, or the electric systems of others to which the Participating TO's electric system is directly connected; or (4) that, in the case of the Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Generating Facility or Interconnection Customer's Interconnection Facilities. System restoration and black start shall be considered Emergency Conditions; provided, that Interconnection Customer is not obligated by this LGIA to possess black start capability.

**Environmental Law** shall mean Applicable Laws or Regulations relating to pollution or protection of the environment or natural resources.

**Federal Power Act** shall mean the Federal Power Act, as amended, 16 U.S.C. §§ 791a *et seq*.

**FERC** shall mean the Federal Energy Regulatory Commission or its successor.

**Force Majeure** shall mean any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure event does not include acts of negligence or intentional wrongdoing by the Party claiming Force Majeure.

**Generating Facility** shall mean the Interconnection Customer's Electric Generating Unit(s) used for the production of electricity identified in the Interconnection Customer's Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

**Generating Facility Capacity** shall mean the net capacity of the Generating Facility and the aggregate net capacity of the Generating Facility where it includes multiple energy production devices.

**Good Utility Practice** shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or

any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be any one of a number of the optimum practices, methods, or acts to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

**Governmental Authority** shall mean any federal, state, local or other governmental, regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the Interconnection Customer, CAISO, Participating TO, or any Affiliate thereof.

**Hazardous Substances** shall mean any chemicals, materials or substances defined as or included in the definition of "hazardous substances," "hazardous wastes," "hazardous materials," "hazardous constituents," "restricted hazardous materials," "extremely hazardous substances," "toxic substances," "radioactive substances," "contaminants," "pollutants," "toxic pollutants" or words of similar meaning and regulatory effect under any applicable Environmental Law, or any other chemical, material or substance, exposure to which is prohibited, limited or regulated by any applicable Environmental Law.

**Initial Synchronization Date** shall mean the date upon which an Electric Generating Unit is initially synchronized and upon which Trial Operation begins.

**In-Service Date** shall mean the date upon which the Interconnection Customer reasonably expects it will be ready to begin use of the Participating TO's Interconnection Facilities to obtain back feed power.

**Interconnection Customer's Interconnection Facilities** shall mean all facilities and equipment, as identified in Appendix A of this LGIA, that are located between the Generating Facility and the Point of Change of Ownership, including any modification, addition, or upgrades to such facilities and equipment necessary to physically and electrically interconnect the Generating Facility to the Participating TO's Transmission System. Interconnection Customer's Interconnection Facilities are sole use facilities.

**Interconnection Facilities** shall mean the Participating TO's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Generating Facility to the Participating TO's Transmission System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

**Interconnection Facilities Study** shall mean the study conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), or a third party consultant for the Interconnection Customer to determine a list of facilities (including the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades), the cost of those facilities, and the time required to interconnect the Generating Facility with the Participating TO's Transmission System.

**Interconnection Facilities Study Agreement** shall mean the agreement between the Interconnection Customer and the CAISO for conducting the Interconnection Facilities Study.

**Interconnection Feasibility Study** shall mean the preliminary evaluation conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), or a third party consultant for the Interconnection Customer of the system impact and cost of interconnecting the Generating Facility to the Participating TO's Transmission System.

**Interconnection Handbook** shall mean a handbook, developed by the Participating TO and posted on the Participating TO's web site or otherwise made available by the Participating TO, describing technical and operational requirements for wholesale generators and loads connected to the Participating TO's portion of the CAISO Controlled Grid, as such handbook may be modified or superseded from time to time. Participating TO's standards contained in the Interconnection Handbook shall be deemed consistent with Good Utility Practice and Applicable Reliability Standards. In the event of a conflict between the terms of this LGIA and the terms of the Participating TO's Interconnection Handbook, the terms in this LGIA shall apply.

**Interconnection Request** shall mean a request, in the form of Appendix 1 to the Standard Large Generator Interconnection Procedures, in accordance with the CAISO Tariff.

**Interconnection Service** shall mean the service provided by the Participating TO and CAISO associated with interconnecting the Interconnection Customer's Generating Facility to the Participating TO's Transmission System and enabling the CAISO Controlled Grid to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of this LGIA, the Participating TO's Transmission Owner Tariff, and the CAISO Tariff.

**Interconnection Study** shall mean any of the following studies: the Interconnection Feasibility Study, the Interconnection System Impact Study, and the Interconnection Facilities Study conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), or a third party consultant for the Interconnection Customer pursuant to the Standard Large Generator Interconnection Procedures.

**Interconnection System Impact Study** shall mean the engineering study conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), or a third party consultant for the Interconnection Customer that evaluates the impact of the proposed interconnection on the safety and reliability of the Participating TO's Transmission System and, if applicable, an Affected System. The study shall identify and detail the system impacts that would result if the Generating Facility were interconnected without project modifications or system modifications, focusing on the Adverse System Impacts identified in the Interconnection Feasibility Study, or to study potential impacts, including but not limited to those identified in the Scoping Meeting as described in the Standard Large Generator Interconnection Procedures.

**IRS** shall mean the Internal Revenue Service.

**CAISO Controlled Grid** shall mean the system of transmission lines and associated facilities of the parties to the Transmission Control Agreement that have been placed under the CAISO's Operational Control.

**CAISO Tariff** shall mean the CAISO's tariff, as filed with FERC, and as amended or supplemented from time to time, or any successor tariff.

**Large Generating Facility** shall mean a Generating Facility having a Generating Facility Capacity of more than 20 MW.

**Loss** shall mean any and all damages, losses, and claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties.

**Material Modification** shall mean those modifications that have a material impact on the cost or timing of any Interconnection Request or any other valid interconnection request with a later queue priority date.

**Metering Equipment** shall mean all metering equipment installed or to be installed for measuring the output of the Generating Facility pursuant to this LGIA at the metering points, including but not limited to instrument transformers, MWh-meters, data acquisition equipment, transducers, remote terminal unit, communications equipment, phone lines, and fiber optics.

**NERC** shall mean the North American Electric Reliability Corporation or its successor organization.

**Net Scheduled Generating Unit** shall mean an Electric Generating Unit identified in a Net Scheduled PGA operated as a single unit such that the energy bid or self-schedule with the CAISO is the net value of the aggregate electrical net output of the Electric Generating Unit and the self-provided load.

**Net Scheduled PGA** shall mean a Net Scheduled Participating Generator Agreement specifying the special provisions for the operating relationship between a Net Scheduled Generating Unit and the CAISO, a pro forma version of which is set forth in Appendix B.3 of the CAISO Tariff.

**Network Upgrades** shall be Participating TO's Delivery Network Upgrades and Participating TO's Reliability Network Upgrades.

**Operational Control** shall mean the rights of the CAISO under the Transmission Control Agreement and the CAISO Tariff to direct the parties to the Transmission Control Agreement how to operate their transmission lines and facilities and other electric plant affecting the reliability of those lines and facilities for the purpose of affording comparable non-discriminatory transmission access and meeting applicable reliability criteria.

**Participating TO's Delivery Network Upgrades** shall mean the additions, modifications, and upgrades to the Participating TO's Transmission System at or beyond the Point of Interconnection, other than Reliability Network Upgrades, identified in the Interconnection Studies, as identified in Appendix A, to relieve constraints on the CAISO Controlled Grid.

**Participating TO's Interconnection Facilities** shall mean all facilities and equipment owned, controlled or operated by the Participating TO from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to this LGIA, including any modifications, additions or upgrades to such facilities and equipment. Participating TO's Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

**Participating TO's Reliability Network Upgrades** shall mean the additions, modifications, and upgrades to the Participating TO's Transmission System at or beyond the Point of Interconnection, identified in the Interconnection Studies, as identified in Appendix A, necessary to interconnect the Large Generating Facility safely and reliably to the Participating TO's Transmission System, which would not have been necessary but for the interconnection of the Large Generating Facility, including additions, modifications, and upgrades necessary to remedy short circuit or stability problems resulting from the interconnection of the Large Generating Facility to the Participating TO's Transmission System. Participating TO's Reliability Network Upgrades also include, consistent with Applicable Reliability Council practice, the Participating TO's facilities necessary to mitigate any adverse impact the Large Generating Facility's interconnection may have on a path's Applicable Reliability Council rating.

**Participating TO's Transmission System** shall mean the facilities owned and operated by the Participating TO and that have been placed under the CAISO's Operational Control, which facilities form part of the CAISO Controlled Grid.

**Party or Parties** shall mean the Participating TO, CAISO, Interconnection Customer or the applicable combination of the above.

**Point of Change of Ownership** shall mean the point, as set forth in Appendix A to this LGIA, where the Interconnection Customer's Interconnection Facilities connect to the Participating TO's Interconnection Facilities.

**Point of Interconnection** shall mean the point, as set forth in Appendix A to this LGIA, where the Interconnection Facilities connect to the Participating TO's Transmission System.

**Reasonable Efforts** shall mean, with respect to an action required to be attempted or taken by a Party under this LGIA, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

**Scoping Meeting** shall mean the meeting among representatives of the Interconnection Customer, the Participating TO(s), other Affected Systems, and the CAISO conducted for the purpose of discussing alternative interconnection options, to exchange information including any transmission data and earlier study evaluations that would be reasonably expected to impact such interconnection options, to analyze such information, and to determine the potential feasible Points of Interconnection.

**Stand Alone Network Upgrades** shall mean Network Upgrades that the Interconnection Customer may construct without affecting day-to-day operations of the CAISO Controlled Grid or Affected Systems during their construction. The Participating TO, the CAISO, and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to this LGIA.

**Standard Large Generator Interconnection Procedures (LGIP)** shall mean the CAISO protocol that sets forth the interconnection procedures applicable to an Interconnection Request pertaining to a Large Generating Facility that is included in CAISO Tariff Appendix U.

**System Protection Facilities** shall mean the equipment, including necessary protection signal communications equipment, that protects (1) the Participating TO's Transmission System, Participating TO's Interconnection Facilities, CAISO Controlled Grid, and Affected Systems from faults or other electrical disturbances occurring at the Generating Facility and (2) the Generating Facility from faults or other electrical system disturbances occurring on the CAISO Controlled Grid, Participating TO's Interconnection Facilities, and Affected Systems or on other delivery systems or other generating systems to which the CAISO Controlled Grid is directly connected.

**Transmission Control Agreement** shall mean CAISO FERC Electric Tariff No. 7.

**Trial Operation** shall mean the period during which the Interconnection Customer is engaged in on-site test operations and commissioning of an Electric Generating Unit prior to Commercial Operation.

## ARTICLE 2. EFFECTIVE DATE, TERM AND TERMINATION

**2.1** **Effective Date**. This LGIA shall become effective upon execution by the Parties subject to acceptance by FERC (if applicable), or if filed unexecuted, upon the date specified by FERC. The CAISO and Participating TO shall promptly file this LGIA with FERC upon execution in accordance with Article 3.1, if required.

**2.2** **Term of Agreement**. Subject to the provisions of Article 2.3, this LGIA shall remain in effect for a period of ____ years from the Effective Date (Term Specified in Individual Agreements to be ten (10) years or such other longer period as the Interconnection Customer may request) and shall be automatically renewed for each successive one-year period thereafter.

**2.3** **Termination Procedures**.

**2.3.1** **Written Notice**. This LGIA may be terminated by the Interconnection Customer after giving the CAISO and the Participating TO ninety (90) Calendar Days advance written notice, or by the CAISO and the Participating TO notifying FERC after the Generating Facility permanently ceases Commercial Operation.

**2.3.2** **Default**. A Party may terminate this LGIA in accordance with Article 17.

**2.3.3** **Suspension of Work**. This LGIA may be deemed terminated in accordance with Article 5.16.

**2.3.4** Notwithstanding Articles 2.3.1, 2.3.2, and 2.3.3, no termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination, including the filing with FERC of a notice of termination of this LGIA, which notice has been accepted for filing by FERC.

**2.4** **Termination Costs.** If this LGIA terminates pursuant to Article 2.3 above, the Interconnection Customer shall pay all costs incurred or irrevocably committed to be incurred in association with the Interconnection Customer's interconnection (including any cancellation costs relating to orders or contracts for Interconnection Facilities and equipment) and other expenses, including any Network Upgrades and Distribution Upgrades for which the Participating TO or CAISO has incurred expenses or has irrevocably committed to incur expenses and has not been reimbursed by the Interconnection Customer, as of the date of the other Parties' receipt of the notice of termination, subject to the limitations set forth in this Article 2.4. Nothing in this Article 2.4 shall limit the Parties' rights under Article 17.

**2.4.1** Notwithstanding the foregoing, in the event of termination by a Party, all Parties shall use commercially Reasonable Efforts to mitigate the costs, damages and charges arising as a consequence of termination. With respect to any portion of the Participating TO's Interconnection Facilities that have not yet been constructed or installed, the Participating TO shall to the extent possible and with the Interconnection Customer's authorization cancel any pending orders of, or return, any materials or equipment for, or contracts for construction of, such facilities; provided that in the event the Interconnection Customer elects not to authorize such cancellation, the Interconnection Customer shall assume all payment obligations with respect to such materials, equipment, and contracts, and the Participating TO shall deliver such material and equipment, and, if necessary, assign such contracts, to the Interconnection Customer as soon as practicable, at the Interconnection Customer's expense. To the extent that the Interconnection Customer has already paid the Participating TO for any or all such costs of materials or equipment not taken by the Interconnection Customer, the Participating TO shall promptly refund such amounts to the Interconnection Customer, less any costs, including penalties, incurred by the Participating TO to cancel any pending orders of or return such materials, equipment, or contracts.

**2.4.2** The Participating TO may, at its option, retain any portion of such materials, equipment, or facilities that the Interconnection Customer chooses not to accept

delivery of, in which case the Participating TO shall be responsible for all costs associated with procuring such materials, equipment, or facilities.

**2.4.3** With respect to any portion of the Interconnection Facilities, and any other facilities already installed or constructed pursuant to the terms of this LGIA, Interconnection Customer shall be responsible for all costs associated with the removal, relocation or other disposition or retirement of such materials, equipment, or facilities.

**2.5** **Disconnection**. Upon termination of this LGIA, the Parties will take all appropriate steps to disconnect the Large Generating Facility from the Participating TO's Transmission System. All costs required to effectuate such disconnection shall be borne by the terminating Party, unless such termination resulted from the non-terminating Party's Default of this LGIA or such non-terminating Party otherwise is responsible for these costs under this LGIA.

**2.6** **Survival**. This LGIA shall continue in effect after termination to the extent necessary to provide for final billings and payments and for costs incurred hereunder, including billings and payments pursuant to this LGIA; to permit the determination and enforcement of liability and indemnification obligations arising from acts or events that occurred while this LGIA was in effect; and to permit each Party to have access to the lands of the other Parties pursuant to this LGIA or other applicable agreements, to disconnect, remove or salvage its own facilities and equipment.

## ARTICLE 3. REGULATORY FILINGS AND CAISO TARIFF COMPLIANCE

**3.1** **Filing**. The Participating TO and the CAISO shall file this LGIA (and any amendment hereto) with the appropriate Governmental Authority(ies), if required. The Interconnection Customer may request that any information so provided be subject to the confidentiality provisions of Article 22. If the Interconnection Customer has executed this LGIA, or any amendment thereto, the Interconnection Customer shall reasonably cooperate with the Participating TO and CAISO with respect to such filing and to provide any information reasonably requested by the Participating TO or CAISO needed to comply with applicable regulatory requirements.

**3.2** **Agreement Subject to CAISO Tariff**. The Interconnection Customer will comply with all applicable provisions of the CAISO Tariff, including the LGIP.

**3.3** **Relationship Between this LGIA and the CAISO Tariff.** With regard to rights and obligations between the Participating TO and the Interconnection Customer, if and to the extent a matter is specifically addressed by a provision of this LGIA (including any appendices, schedules or other attachments to this LGIA), the provisions of this LGIA shall govern. If and to the extent a provision of this LGIA is inconsistent with the CAISO Tariff and dictates rights and obligations between the CAISO and the Participating TO or the CAISO and the Interconnection Customer, the CAISO Tariff shall govern.

**3.4** **Relationship Between this LGIA and the Net Scheduled PGA.** With regard to the rights and obligations of a Net Scheduled Generating Unit that has entered into a Net Scheduled PGA with the CAISO and has entered into this LGIA, if and to the extent a matter is specifically addressed by a provision of the Net Scheduled PGA that is inconsistent with this LGIA, the terms of the Net Scheduled PGA shall govern.

## ARTICLE 4. SCOPE OF SERVICE

**4.1** **Interconnection Service.** Interconnection Service allows the Interconnection Customer to connect the Large Generating Facility to the Participating TO's Transmission System

and be eligible to deliver the Large Generating Facility's output using the available capacity of the CAISO Controlled Grid. To the extent the Interconnection Customer wants to receive Interconnection Service, the Participating TO shall construct facilities identified in Appendices A and C that the Participating TO is responsible to construct.

Interconnection Service does not necessarily provide the Interconnection Customer with the capability to physically deliver the output of its Large Generating Facility to any particular load on the CAISO Controlled Grid without incurring congestion costs. In the event of transmission constraints on the CAISO Controlled Grid, the Interconnection Customer's Large Generating Facility shall be subject to the applicable congestion management procedures in the CAISO Tariff in the same manner as all other resources.

**4.2** **Provision of Service**. The Participating TO and the CAISO shall provide Interconnection Service for the Large Generating Facility.

**4.3** **Performance Standards**. Each Party shall perform all of its obligations under this LGIA in accordance with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice, and to the extent a Party is required or prevented or limited in taking any action by such regulations and standards, such Party shall not be deemed to be in Breach of this LGIA for its compliance therewith. If such Party is the CAISO or Participating TO, then that Party shall amend the LGIA and submit the amendment to FERC for approval.

**4.4** **No Transmission Service**. The execution of this LGIA does not constitute a request for, nor the provision of, any transmission service under the CAISO Tariff, and does not convey any right to deliver electricity to any specific customer or point of delivery.

**4.5** **Interconnection Customer Provided Services**. The services provided by Interconnection Customer under this LGIA are set forth in Article 9.6 and Article 13.5.1. Interconnection Customer shall be paid for such services in accordance with Article 11.6.

## ARTICLE 5. INTERCONNECTION FACILITIES ENGINEERING, PROCUREMENT, AND CONSTRUCTION

Interconnection Facilities, Network Upgrades, and Distribution Upgrades shall be studied, designed, and constructed pursuant to Good Utility Practice. Such studies, design and construction shall be based on the assumed accuracy and completeness of all technical information received by the Participating TO and the CAISO from the Interconnection Customer associated with interconnecting the Large Generating Facility.

**5.1** **Options**. Unless otherwise mutually agreed among the Parties, the Interconnection Customer shall select the In-Service Date, Initial Synchronization Date, and Commercial Operation Date; and either Standard Option or Alternate Option set forth below for completion of the Participating TO's Interconnection Facilities and Network Upgrades as set forth in Appendix A, Interconnection Facilities, Network Upgrades, and Distribution Upgrades, and such dates and selected option shall be set forth in Appendix B, Milestones.

**5.1.1** **Standard Option**. The Participating TO shall design, procure, and construct the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades, using Reasonable Efforts to complete the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades by the dates set forth in Appendix B, Milestones. The Participating TO shall not be required to undertake any action which is inconsistent with its standard safety practices, its material and equipment specifications, its design criteria and construction procedures, its labor agreements, and Applicable Laws and

Regulations. In the event the Participating TO reasonably expects that it will not be able to complete the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades by the specified dates, the Participating TO shall promptly provide written notice to the Interconnection Customer and the CAISO and shall undertake Reasonable Efforts to meet the earliest dates thereafter.

**5.1.2 Alternate Option**. If the dates designated by the Interconnection Customer are acceptable to the Participating TO, the Participating TO shall so notify the Interconnection Customer within thirty (30) Calendar Days, and shall assume responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities by the designated dates.

If the Participating TO subsequently fails to complete the Participating TO's Interconnection Facilities by the In-Service Date, to the extent necessary to provide back feed power; or fails to complete Network Upgrades by the Initial Synchronization Date to the extent necessary to allow for Trial Operation at full power output, unless other arrangements are made by the Parties for such Trial Operation; or fails to complete the Network Upgrades by the Commercial Operation Date, as such dates are reflected in Appendix B, Milestones; the Participating TO shall pay the Interconnection Customer liquidated damages in accordance with Article 5.3, Liquidated Damages, provided, however, the dates designated by the Interconnection Customer shall be extended day for day for each day that the CAISO refuses to grant clearances to install equipment.

**5.1.3 Option to Build**. If the dates designated by the Interconnection Customer are not acceptable to the Participating TO, the Participating TO shall so notify the Interconnection Customer within thirty (30) Calendar Days, and unless the Parties agree otherwise, the Interconnection Customer shall have the option to assume responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades. If the Interconnection Customer elects to exercise its option to assume responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, it shall so notify the Participating TO within thirty (30) Calendar Days of receipt of the Participating TO's notification that the designated dates are not acceptable to the Participating TO. The Participating TO, CAISO, and Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify such Stand Alone Network Upgrades in Appendix A to this LGIA. Except for Stand Alone Network Upgrades, the Interconnection Customer shall have no right to construct Network Upgrades under this option.

**5.1.4 Negotiated Option**. If the Interconnection Customer elects not to exercise its option under Article 5.1.3, Option to Build, the Interconnection Customer shall so notify the Participating TO within thirty (30) Calendar Days of receipt of the Participating TO's notification that the designated dates are not acceptable to the Participating TO, and the Parties shall in good faith attempt to negotiate terms and conditions (including revision of the specified dates and liquidated damages, the provision of incentives or the procurement and construction of a portion of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades by the Interconnection Customer) pursuant to which the Participating TO is responsible for the design, procurement and construction of the Participating TO's Interconnection Facilities and Network Upgrades. If the Parties are unable to reach agreement on such terms and conditions, the Participating TO shall assume responsibility for the design, procurement and construction of the

Participating TO's Interconnection Facilities and Network Upgrades pursuant to Article 5.1.1, Standard Option.

**5.2 General Conditions Applicable to Option to Build.** If the Interconnection Customer assumes responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades,

(1) the Interconnection Customer shall engineer, procure equipment, and construct the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades (or portions thereof) using Good Utility Practice and using standards and specifications provided in advance by the Participating TO;

(2) The Interconnection Customer's engineering, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades shall comply with all requirements of law to which the Participating TO would be subject in the engineering, procurement or construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades;

(3) the Participating TO shall review, and the Interconnection Customer shall obtain the Participating TO's approval of, the engineering design, equipment acceptance tests, and the construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, which approval shall not be unreasonably withheld, and the CAISO may, at its option, review the engineering design, equipment acceptance tests, and the construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades;

(4) prior to commencement of construction, the Interconnection Customer shall provide to the Participating TO, with a copy to the CAISO for informational purposes, a schedule for construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, and shall promptly respond to requests for information from the Participating TO;

(5) at any time during construction, the Participating TO shall have the right to gain unrestricted access to the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades and to conduct inspections of the same;

(6) at any time during construction, should any phase of the engineering, equipment procurement, or construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades not meet the standards and specifications provided by the Participating TO, the Interconnection Customer shall be obligated to remedy deficiencies in that portion of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades;

(7) the Interconnection Customer shall indemnify the CAISO and Participating TO for claims arising from the Interconnection Customer's construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades under the terms and procedures applicable to Article 18.1 Indemnity;

(8) The Interconnection Customer shall transfer control of the Participating TO's Interconnection Facilities to the Participating TO and shall transfer Operational Control of Stand Alone Network Upgrades to the CAISO;

(9) Unless the Parties otherwise agree, the Interconnection Customer shall transfer ownership of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades to the Participating TO. As soon as reasonably practicable, but within twelve months after completion of the construction of the

Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, the Interconnection Customer shall provide an invoice of the final cost of the construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades to the Participating TO, which invoice shall set forth such costs in sufficient detail to enable the Participating TO to reflect the proper costs of such facilities in its transmission rate base and to identify the investment upon which refunds will be provided;

(10) the Participating TO shall accept for operation and maintenance the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades to the extent engineered, procured, and constructed in accordance with this Article 5.2; and

(11) The Interconnection Customer's engineering, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades shall comply with all requirements of the "Option to Build" conditions set forth in Appendix C. Interconnection Customer shall deliver to the Participating TO "as-built" drawings, information, and any other documents that are reasonably required by the Participating TO to assure that the Interconnection Facilities and Stand-Alone Network Upgrades are built to the standards and specifications required by the Participating TO.

**5.3 Liquidated Damages**. The actual damages to the Interconnection Customer, in the event the Participating TO's Interconnection Facilities or Network Upgrades are not completed by the dates designated by the Interconnection Customer and accepted by the Participating TO pursuant to subparagraphs 5.1.2 or 5.1.4, above, may include Interconnection Customer's fixed operation and maintenance costs and lost opportunity costs. Such actual damages are uncertain and impossible to determine at this time. Because of such uncertainty, any liquidated damages paid by the Participating TO to the Interconnection Customer in the event that the Participating TO does not complete any portion of the Participating TO's Interconnection Facilities or Network Upgrades by the applicable dates, shall be an amount equal to ½ of 1 percent per day of the actual cost of the Participating TO's Interconnection Facilities and Network Upgrades, in the aggregate, for which the Participating TO has assumed responsibility to design, procure and construct.

However, in no event shall the total liquidated damages exceed 20 percent of the actual cost of the Participating TO's Interconnection Facilities and Network Upgrades for which the Participating TO has assumed responsibility to design, procure, and construct. The foregoing payments will be made by the Participating TO to the Interconnection Customer as just compensation for the damages caused to the Interconnection Customer, which actual damages are uncertain and impossible to determine at this time, and as reasonable liquidated damages, but not as a penalty or a method to secure performance of this LGIA. Liquidated damages, when the Parties agree to them, are the exclusive remedy for the Participating TO's failure to meet its schedule.

No liquidated damages shall be paid to the Interconnection Customer if: (1) the Interconnection Customer is not ready to commence use of the Participating TO's Interconnection Facilities or Network Upgrades to take the delivery of power for the Electric Generating Unit's Trial Operation or to export power from the Electric Generating Unit on the specified dates, unless the Interconnection Customer would have been able to commence use of the Participating TO's Interconnection Facilities or Network Upgrades to take the delivery of power for Electric Generating Unit's Trial Operation or to export power from the Electric Generating Unit, but for the Participating TO's delay; (2) the Participating TO's failure to meet the specified dates is the result of the action or inaction of the Interconnection Customer or any other interconnection customer who has

entered into an interconnection agreement with the CAISO and/or Participating TO, action or inaction by the CAISO, or any cause beyond the Participating TO's reasonable control or reasonable ability to cure; (3) the Interconnection Customer has assumed responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades; or (4) the Parties have otherwise agreed.

In no event shall the CAISO have any responsibility or liability to the Interconnection Customer for liquidated damages pursuant to the provisions of this Article 5.3.

**5.4** **Power System Stabilizers**. The Interconnection Customer shall procure, install, maintain and operate Power System Stabilizers in accordance with the guidelines and procedures established by the Applicable Reliability Council and in accordance with the provisions of Section 4.6.5.1 of the CAISO Tariff. The CAISO reserves the right to establish reasonable minimum acceptable settings for any installed Power System Stabilizers, subject to the design and operating limitations of the Large Generating Facility. If the Large Generating Facility's Power System Stabilizers are removed from service or not capable of automatic operation, the Interconnection Customer shall immediately notify the CAISO and the Participating TO and restore the Power System Stabilizers to operation as soon as possible. The CAISO shall have the right to order the reduction in output or disconnection of the Large Generating Facility if the reliability of the CAISO Controlled Grid would be adversely affected as a result of improperly tuned Power System Stabilizers. The requirements of this Article 5.4 shall apply to Asynchronous Generating Facilities in accordance with Appendix H.

**5.5** **Equipment Procurement**. If responsibility for construction of the Participating TO's Interconnection Facilities or Network Upgrades is to be borne by the Participating TO, then the Participating TO shall commence design of the Participating TO's Interconnection Facilities or Network Upgrades and procure necessary equipment as soon as practicable after all of the following conditions are satisfied, unless the Parties otherwise agree in writing:

**5.5.1** The CAISO, in coordination with the applicable Participating TO(s), has completed the Interconnection Facilities Study pursuant to the Interconnection Facilities Study Agreement;

**5.5.2** The Participating TO has received written authorization to proceed with design and procurement from the Interconnection Customer by the date specified in Appendix B, Milestones; and

**5.5.3** The Interconnection Customer has provided security to the Participating TO in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

**5.6** **Construction Commencement**. The Participating TO shall commence construction of the Participating TO's Interconnection Facilities and Network Upgrades for which it is responsible as soon as practicable after the following additional conditions are satisfied:

**5.6.1** Approval of the appropriate Governmental Authority has been obtained for any facilities requiring regulatory approval;

**5.6.2** Necessary real property rights and rights-of-way have been obtained, to the extent required for the construction of a discrete aspect of the Participating TO's Interconnection Facilities and Network Upgrades;

**5.6.3** The Participating TO has received written authorization to proceed with construction from the Interconnection Customer by the date specified in Appendix B, Milestones; and

**5.6.4** The Interconnection Customer has provided payment and security to the Participating TO in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

**5.7** **Work Progress**. The Parties will keep each other advised periodically as to the progress of their respective design, procurement and construction efforts. Any Party may, at any time, request a progress report from another Party. If, at any time, the Interconnection Customer determines that the completion of the Participating TO's Interconnection Facilities will not be required until after the specified In-Service Date, the Interconnection Customer will provide written notice to the Participating TO and CAISO of such later date upon which the completion of the Participating TO's Interconnection Facilities will be required.

**5.8** **Information Exchange**. As soon as reasonably practicable after the Effective Date, the Parties shall exchange information regarding the design and compatibility of the Interconnection Customer's Interconnection Facilities and Participating TO's Interconnection Facilities and compatibility of the Interconnection Facilities with the Participating TO's Transmission System, and shall work diligently and in good faith to make any necessary design changes.

**5.9** **Limited Operation**. If any of the Participating TO's Interconnection Facilities or Network Upgrades are not reasonably expected to be completed prior to the Commercial Operation Date of the Electric Generating Unit, the Participating TO and/or CAISO, as applicable, shall, upon the request and at the expense of the Interconnection Customer, perform operating studies on a timely basis to determine the extent to which the Electric Generating Unit and the Interconnection Customer's Interconnection Facilities may operate prior to the completion of the Participating TO's Interconnection Facilities or Network Upgrades consistent with Applicable Laws and Regulations, Applicable Reliability Standards, Good Utility Practice, and this LGIA. The Participating TO and CAISO shall permit Interconnection Customer to operate the Electric Generating Unit and the Interconnection Customer's Interconnection Facilities in accordance with the results of such studies.

**5.10** **Interconnection Customer's Interconnection Facilities**. The Interconnection Customer shall, at its expense, design, procure, construct, own and install the Interconnection Customer's Interconnection Facilities, as set forth in Appendix A.

**5.10.1** **Large Generating Facility and Interconnection Customer's Interconnection Facilities Specifications**. The Interconnection Customer shall submit initial specifications for the Interconnection Customer's Interconnection Facilities and Large Generating Facility, including System Protection Facilities, to the Participating TO and the CAISO at least one hundred eighty (180) Calendar Days prior to the Initial Synchronization Date; and final specifications for review and comment at least ninety (90) Calendar Days prior to the Initial Synchronization Date. The Participating TO and the CAISO shall review such specifications pursuant to this LGIA and the LGIP to ensure that the Interconnection Customer's Interconnection Facilities and Large Generating Facility are compatible with the technical specifications, operational control, safety requirements, and any other applicable requirements of the Participating TO and the CAISO and comment on such specifications within thirty (30) Calendar Days of the Interconnection Customer's submission. All specifications provided hereunder shall be deemed confidential.

**5.10.2 Participating TO's and CAISO's Review**. The Participating TO's and the CAISO's review of the Interconnection Customer's final specifications shall not be construed as confirming, endorsing, or providing a warranty as to the design, fitness, safety, durability or reliability of the Large Generating Facility, or the Interconnection Customer's Interconnection Facilities. Interconnection Customer shall make such changes to the Interconnection Customer's Interconnection Facilities as may reasonably be required by the Participating TO or the CAISO, in accordance with Good Utility Practice, to ensure that the Interconnection Customer's Interconnection Facilities are compatible with the technical specifications, Operational Control, and safety requirements of the Participating TO or the CAISO.

**5.10.3 Interconnection Customer's Interconnection Facilities Construction**. The Interconnection Customer's Interconnection Facilities shall be designed and constructed in accordance with Good Utility Practice. Within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Participating TO and Interconnection Customer agree on another mutually acceptable deadline, the Interconnection Customer shall deliver to the Participating TO and CAISO "as-built" drawings, information and documents for the Interconnection Customer's Interconnection Facilities and the Electric Generating Unit(s), such as: a one-line diagram, a site plan showing the Large Generating Facility and the Interconnection Customer's Interconnection Facilities, plan and elevation drawings showing the layout of the Interconnection Customer's Interconnection Facilities, a relay functional diagram, relaying AC and DC schematic wiring diagrams and relay settings for all facilities associated with the Interconnection Customer's step-up transformers, the facilities connecting the Large Generating Facility to the step-up transformers and the Interconnection Customer's Interconnection Facilities, and the impedances (determined by factory tests) for the associated step-up transformers and the Electric Generating Units. The Interconnection Customer shall provide the Participating TO and the CAISO specifications for the excitation system, automatic voltage regulator, Large Generating Facility control and protection settings, transformer tap settings, and communications, if applicable. Any deviations from the relay settings, machine specifications, and other specifications originally submitted by the Interconnection Customer shall be assessed by the Participating TO and the CAISO pursuant to the appropriate provisions of this LGIA and the LGIP.

**5.10.4 Interconnection Customer to Meet Requirements of the Participating TO's Interconnection Handbook**. The Interconnection Customer shall comply with the Participating TO's Interconnection Handbook.

**5.11 Participating TO's Interconnection Facilities Construction**. The Participating TO's Interconnection Facilities shall be designed and constructed in accordance with Good Utility Practice. Upon request, within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Participating TO and Interconnection Customer agree on another mutually acceptable deadline, the Participating TO shall deliver to the Interconnection Customer and the CAISO the following "as-built" drawings, information and documents for the Participating TO's Interconnection Facilities [include appropriate drawings and relay diagrams].

The Participating TO will obtain control for operating and maintenance purposes of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades upon completion of such facilities. Pursuant to Article 5.2, the CAISO will obtain Operational Control of the Stand Alone Network Upgrades prior to the Commercial Operation Date.

**5.12 Access Rights**. Upon reasonable notice and supervision by a Party, and subject to any required or necessary regulatory approvals, a Party ("Granting Party") shall furnish at no cost to the other Party ("Access Party") any rights of use, licenses, rights of way and easements with respect to lands owned or controlled by the Granting Party, its agents (if allowed under the applicable agency agreement), or any Affiliate, that are necessary to enable the Access Party to obtain ingress and egress to construct, operate, maintain, repair, test (or witness testing), inspect, replace or remove facilities and equipment to: (i) interconnect the Large Generating Facility with the Participating TO's Transmission System; (ii) operate and maintain the Large Generating Facility, the Interconnection Facilities and the Participating TO's Transmission System; and (iii) disconnect or remove the Access Party's facilities and equipment upon termination of this LGIA. In exercising such licenses, rights of way and easements, the Access Party shall not unreasonably disrupt or interfere with normal operation of the Granting Party's business and shall adhere to the safety rules and procedures established in advance, as may be changed from time to time, by the Granting Party and provided to the Access Party.

**5.13 Lands of Other Property Owners**. If any part of the Participating TO's Interconnection Facilities and/or Network Upgrades are to be installed on property owned by persons other than the Interconnection Customer or Participating TO, the Participating TO shall at the Interconnection Customer's expense use efforts, similar in nature and extent to those that it typically undertakes on its own behalf or on behalf of its Affiliates, including use of its eminent domain authority, and to the extent consistent with state law, to procure from such persons any rights of use, licenses, rights of way and easements that are necessary to construct, operate, maintain, test, inspect, replace or remove the Participating TO's Interconnection Facilities and/or Network Upgrades upon such property.

**5.14 Permits.** Participating TO and Interconnection Customer shall cooperate with each other in good faith in obtaining all permits, licenses and authorization that are necessary to accomplish the interconnection in compliance with Applicable Laws and Regulations. With respect to this paragraph, the Participating TO shall provide permitting assistance to the Interconnection Customer comparable to that provided to the Participating TO's own, or an Affiliate's generation.

**5.15 Early Construction of Base Case Facilities.** The Interconnection Customer may request the Participating TO to construct, and the Participating TO shall construct, using Reasonable Efforts to accommodate Interconnection Customer's In-Service Date, all or any portion of any Network Upgrades required for Interconnection Customer to be interconnected to the Participating TO's Transmission System which are included in the Base Case of the Interconnection Studies for the Interconnection Customer, and which also are required to be constructed for another interconnection customer, but where such construction is not scheduled to be completed in time to achieve Interconnection Customer's In-Service Date.

**5.16 Suspension.** The Interconnection Customer may request to suspend at any time all work associated with the construction and installation of the Participating TO's Interconnection Facilities, Network Upgrades, and/or Distribution Upgrades required under this LGIA. Interconnection Customers seeking to suspend construction will provide the CAISO and Participating TO a request for assessment pursuant to Section 6.9.2.3 of the LGIP, a modification assessment deposit, and an anticipated end date of the suspension. Interconnection Customers may request a suspension for the maximum amount of time in lieu of providing an anticipated end date. The CAISO and Participating TO will approve suspension requests where::

(a) that the Participating TO's electrical system and the CAISO Controlled Grid can be left in a safe and reliable condition in accordance with Good Utility Practice,

the Participating TO's safety and reliability criteria, and Applicable Reliability Standards; and

(b) the CAISO and Participating TO determine the suspension will not result in a Material Modification.

During suspension, the Interconnection Customer may request to extend or shorten their suspension period, consistent with the maximum period provided in this Article. The CAISO and Participating TO will approve such requests where they meet criteria (a) and (b), above. Requests to extend or shorten extensions will require a new modification assessment request and deposit. The Interconnection Customer shall be responsible for all reasonable and necessary costs for suspension for which the Participating TO (i) has incurred pursuant to this LGIA prior to the suspension and (ii) incurs in suspending such work, including any costs incurred to perform such work as may be necessary to ensure the safety of persons and property and the integrity of the Participating TO's electric system during such suspension and, if applicable, any costs incurred in connection with the cancellation or suspension of material, equipment and labor contracts which the Participating TO cannot reasonably avoid; provided, however, that prior to canceling or suspending any such material, equipment or labor contract, the Participating TO shall obtain Interconnection Customer's authorization to do so.

The Participating TO shall invoice the Interconnection Customer for such costs pursuant to Article 12 and shall use due diligence to minimize its costs. In the event Interconnection Customer suspends work required under this LGIA pursuant to this Article 5.16, and has not requested the Participating TO to recommence the work or has not itself recommenced work required under this LGIA on or before the expiration of three (3) years following commencement of such suspension, this LGIA shall be deemed terminated. The three-year period shall begin on the date the Interconnection Customer provides its request, if approved. Ninety (90) days before the anticipated end date of the suspension, the Participating TO and the CAISO will tender an amended draft LGIA with new construction milestones. The Parties agree to negotiate the amended draft LGIA in good faith such that it can be executed by the end of the suspension.

**5.17 Taxes.**

**5.17.1 Interconnection Customer Payments Not Taxable.** The Parties intend that all payments or property transfers made by the Interconnection Customer to the Participating TO for the installation of the Participating TO's Interconnection Facilities and the Network Upgrades shall be non-taxable, either as contributions to capital, or as a refundable advance, in accordance with the Internal Revenue Code and any applicable state income tax laws and shall not be taxable as contributions in aid of construction or otherwise under the Internal Revenue Code and any applicable state income tax laws.

**5.17.2 Representations And Covenants.** In accordance with IRS Notice 2001-82 and IRS Notice 88-129, the Interconnection Customer represents and covenants that (i) ownership of the electricity generated at the Large Generating Facility will pass to another party prior to the transmission of the electricity on the CAISO Controlled Grid, (ii) for income tax purposes, the amount of any payments and the cost of any property transferred to the Participating TO for the Participating TO's Interconnection Facilities will be capitalized by the Interconnection Customer as an intangible asset and recovered using the straight-line method over a useful life of twenty (20) years, and (iii) any portion of the Participating TO's Interconnection Facilities that is a "dual-use intertie," within the meaning of IRS Notice 88-129, is reasonably expected to carry only a de minimis amount of electricity in the direction of the Large Generating Facility. For this purpose, "de

minimis amount" means no more than 5 percent of the total power flows in both directions, calculated in accordance with the "5 percent test" set forth in IRS Notice 88-129. This is not intended to be an exclusive list of the relevant conditions that must be met to conform to IRS requirements for non-taxable treatment.

At the Participating TO's request, the Interconnection Customer shall provide the Participating TO with a report from an independent engineer confirming its representation in clause (iii), above. The Participating TO represents and covenants that the cost of the Participating TO's Interconnection Facilities paid for by the Interconnection Customer without the possibility of refund or credit will have no net effect on the base upon which rates are determined.

**5.17.3 Indemnification for the Cost Consequence of Current Tax Liability Imposed Upon the Participating TO.** Notwithstanding Article 5.17.1, the Interconnection Customer shall protect, indemnify and hold harmless the Participating TO from the cost consequences of any current tax liability imposed against the Participating TO as the result of payments or property transfers made by the Interconnection Customer to the Participating TO under this LGIA for Interconnection Facilities, as well as any interest and penalties, other than interest and penalties attributable to any delay caused by the Participating TO.

The Participating TO shall not include a gross-up for the cost consequences of any current tax liability in the amounts it charges the Interconnection Customer under this LGIA unless (i) the Participating TO has determined, in good faith, that the payments or property transfers made by the Interconnection Customer to the Participating TO should be reported as income subject to taxation or (ii) any Governmental Authority directs the Participating TO to report payments or property as income subject to taxation; provided, however, that the Participating TO may require the Interconnection Customer to provide security for Interconnection Facilities, in a form reasonably acceptable to the Participating TO (such as a parental guarantee or a letter of credit), in an amount equal to the cost consequences of any current tax liability under this Article 5.17. The Interconnection Customer shall reimburse the Participating TO for such costs on a fully grossed-up basis, in accordance with Article 5.17.4, within thirty (30) Calendar Days of receiving written notification from the Participating TO of the amount due, including detail about how the amount was calculated.

The indemnification obligation shall terminate at the earlier of (1) the expiration of the ten year testing period and the applicable statute of limitation, as it may be extended by the Participating TO upon request of the IRS, to keep these years open for audit or adjustment, or (2) the occurrence of a subsequent taxable event and the payment of any related indemnification obligations as contemplated by this Article 5.17.

**5.17.4 Tax Gross-Up Amount.** The Interconnection Customer's liability for the cost consequences of any current tax liability under this Article 5.17 shall be calculated on a fully grossed-up basis. Except as may otherwise be agreed to by the parties, this means that the Interconnection Customer will pay the Participating TO, in addition to the amount paid for the Interconnection Facilities and Network Upgrades, an amount equal to (1) the current taxes imposed on the Participating TO ("Current Taxes") on the excess of (a) the gross income realized by the Participating TO as a result of payments or property transfers made by the Interconnection Customer to the Participating TO under this LGIA (without regard to any payments under this Article 5.17) (the "Gross Income Amount") over (b) the present value of future tax deductions for depreciation that will be available

as a result of such payments or property transfers (the "Present Value Depreciation Amount"), plus (2) an additional amount sufficient to permit the Participating TO to receive and retain, after the payment of all Current Taxes, an amount equal to the net amount described in clause (1).

For this purpose, (i) Current Taxes shall be computed based on the Participating TO's composite federal and state tax rates at the time the payments or property transfers are received and the Participating TO will be treated as being subject to tax at the highest marginal rates in effect at that time (the "Current Tax Rate"), and (ii) the Present Value Depreciation Amount shall be computed by discounting the Participating TO's anticipated tax depreciation deductions as a result of such payments or property transfers by the Participating TO's current weighted average cost of capital. Thus, the formula for calculating the Interconnection Customer's liability to the Participating TO pursuant to this Article 5.17.4 can be expressed as follows: (Current Tax Rate x (Gross Income Amount – Present Value of Tax Depreciation))/(1-Current Tax Rate). Interconnection Customer's estimated tax liability in the event taxes are imposed shall be stated in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades.

**5.17.5 Private Letter Ruling or Change or Clarification of Law**. At the Interconnection Customer's request and expense, the Participating TO shall file with the IRS a request for a private letter ruling as to whether any property transferred or sums paid, or to be paid, by the Interconnection Customer to the Participating TO under this LGIA are subject to federal income taxation. The Interconnection Customer will prepare the initial draft of the request for a private letter ruling, and will certify under penalties of perjury that all facts represented in such request are true and accurate to the best of the Interconnection Customer's knowledge. The Participating TO and Interconnection Customer shall cooperate in good faith with respect to the submission of such request, provided, however, the Interconnection Customer and the Participating TO explicitly acknowledge (and nothing herein is intended to alter) Participating TO's obligation under law to certify that the facts presented in the ruling request are true, correct and complete.

The Participating TO shall keep the Interconnection Customer fully informed of the status of such request for a private letter ruling and shall execute either a privacy act waiver or a limited power of attorney, in a form acceptable to the IRS, that authorizes the Interconnection Customer to participate in all discussions with the IRS regarding such request for a private letter ruling. The Participating TO shall allow the Interconnection Customer to attend all meetings with IRS officials about the request and shall permit the Interconnection Customer to prepare the initial drafts of any follow-up letters in connection with the request.

**5.17.6 Subsequent Taxable Events**. If, within 10 years from the date on which the relevant Participating TO's Interconnection Facilities are placed in service, (i) the Interconnection Customer Breaches the covenants contained in Article 5.17.2, (ii) a "disqualification event" occurs within the meaning of IRS Notice 88-129, or (iii) this LGIA terminates and the Participating TO retains ownership of the Interconnection Facilities and Network Upgrades, the Interconnection Customer shall pay a tax gross-up for the cost consequences of any current tax liability imposed on the Participating TO, calculated using the methodology described in Article 5.17.4 and in accordance with IRS Notice 90-60.

**5.17.7 Contests**. In the event any Governmental Authority determines that the Participating TO's receipt of payments or property constitutes income that is subject to taxation, the Participating TO shall notify the Interconnection

Customer, in writing, within thirty (30) Calendar Days of receiving notification of such determination by a Governmental Authority. Upon the timely written request by the Interconnection Customer and at the Interconnection Customer's sole expense, the Participating TO may appeal, protest, seek abatement of, or otherwise oppose such determination. Upon the Interconnection Customer's written request and sole expense, the Participating TO may file a claim for refund with respect to any taxes paid under this Article 5.17, whether or not it has received such a determination. The Participating TO reserve the right to make all decisions with regard to the prosecution of such appeal, protest, abatement or other contest, including the selection of counsel and compromise or settlement of the claim, but the Participating TO shall keep the Interconnection Customer informed, shall consider in good faith suggestions from the Interconnection Customer about the conduct of the contest, and shall reasonably permit the Interconnection Customer or an Interconnection Customer representative to attend contest proceedings.

The Interconnection Customer shall pay to the Participating TO on a periodic basis, as invoiced by the Participating TO, the Participating TO's documented reasonable costs of prosecuting such appeal, protest, abatement or other contest, including any costs associated with obtaining the opinion of independent tax counsel described in this Article 5.17.7. The Participating TO may abandon any contest if the Interconnection Customer fails to provide payment to the Participating TO within thirty (30) Calendar Days of receiving such invoice.

At any time during the contest, the Participating TO may agree to a settlement either with the Interconnection Customer's consent or, if such consent is refused, after obtaining written advice from independent nationally-recognized tax counsel, selected by the Participating TO, but reasonably acceptable to the Interconnection Customer, that the proposed settlement represents a reasonable settlement given the hazards of litigation. The Interconnection Customer's obligation shall be based on the amount of the settlement agreed to by the Interconnection Customer, or if a higher amount, so much of the settlement that is supported by the written advice from nationally-recognized tax counsel selected under the terms of the preceding paragraph. The settlement amount shall be calculated on a fully grossed-up basis to cover any related cost consequences of the current tax liability. The Participating TO may also settle any tax controversy without receiving the Interconnection Customer's consent or any such written advice; however, any such settlement will relieve the Interconnection Customer from any obligation to indemnify the Participating TO for the tax at issue in the contest (unless the failure to obtain written advice is attributable to the Interconnection Customer's unreasonable refusal to the appointment of independent tax counsel).

**5.17.8 Refund.** In the event that (a) a private letter ruling is issued to the Participating TO which holds that any amount paid or the value of any property transferred by the Interconnection Customer to the Participating TO under the terms of this LGIA is not subject to federal income taxation, (b) any legislative change or administrative announcement, notice, ruling or other determination makes it reasonably clear to the Participating TO in good faith that any amount paid or the value of any property transferred by the Interconnection Customer to the Participating TO under the terms of this LGIA is not taxable to the Participating TO, (c) any abatement, appeal, protest, or other contest results in a determination that any payments or transfers made by the Interconnection Customer to the Participating TO are not subject to federal income tax, or (d) if the Participating TO receives a refund from any taxing authority for any overpayment of tax attributable to any payment or property transfer made by the

Interconnection Customer to the Participating TO pursuant to this LGIA, the Participating TO shall promptly refund to the Interconnection Customer the following:

(i) any payment made by Interconnection Customer under this Article 5.17 for taxes that is attributable to the amount determined to be non-taxable, together with interest thereon,

(ii) interest on any amounts paid by the Interconnection Customer to the Participating TO for such taxes which the Participating TO did not submit to the taxing authority, calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date payment was made by the Interconnection Customer to the date the Participating TO refunds such payment to the Interconnection Customer, and

(iii) with respect to any such taxes paid by the Participating TO, any refund or credit the Participating TO receives or to which it may be entitled from any Governmental Authority, interest (or that portion thereof attributable to the payment described in clause (i), above) owed to the Participating TO for such overpayment of taxes (including any reduction in interest otherwise payable by the Participating TO to any Governmental Authority resulting from an offset or credit); provided, however, that the Participating TO will remit such amount promptly to the Interconnection Customer only after and to the extent that the Participating TO has received a tax refund, credit or offset from any Governmental Authority for any applicable overpayment of income tax related to the Participating TO's Interconnection Facilities.

The intent of this provision is to leave the Parties, to the extent practicable, in the event that no taxes are due with respect to any payment for Interconnection Facilities and Network Upgrades hereunder, in the same position they would have been in had no such tax payments been made.

**5.17.9 Taxes Other Than Income Taxes**. Upon the timely request by the Interconnection Customer, and at the Interconnection Customer's sole expense, the CAISO or Participating TO may appeal, protest, seek abatement of, or otherwise contest any tax (other than federal or state income tax) asserted or assessed against the CAISO or Participating TO for which the Interconnection Customer may be required to reimburse the CAISO or Participating TO under the terms of this LGIA. The Interconnection Customer shall pay to the Participating TO on a periodic basis, as invoiced by the Participating TO, the Participating TO's documented reasonable costs of prosecuting such appeal, protest, abatement, or other contest. The Interconnection Customer, the CAISO, and the Participating TO shall cooperate in good faith with respect to any such contest. Unless the payment of such taxes is a prerequisite to an appeal or abatement or cannot be deferred, no amount shall be payable by the Interconnection Customer to the CAISO or Participating TO for such taxes until they are assessed by a final, non-appealable order by any court or agency of competent jurisdiction. In the event that a tax payment is withheld and ultimately due and payable after appeal, the Interconnection Customer will be responsible for all taxes, interest and penalties, other than penalties attributable to any delay caused by the Participating TO.

**5.18 Tax Status**. Each Party shall cooperate with the others to maintain the other Parties' tax status. Nothing in this LGIA is intended to adversely affect the CAISO's or any

Participating TO's tax exempt status with respect to the issuance of bonds including, but not limited to, Local Furnishing Bonds.

**5.19 Modification**.

**5.19.1 General.** The Interconnection Customer or the Participating TO may undertake modifications to its facilities, subject to Sections 25 and 25.1(c) of the CAISO Tariff if the Interconnection Customer has achieved its Commercial Operation Date, and subject to Section 6.9.2 of the LGIP if it has not.

If a Party plans to undertake a modification that reasonably may be expected to affect the other Parties' facilities, that Party shall provide to the other Parties sufficient information regarding such modification so that the other Parties may evaluate the potential impact of such modification prior to commencement of the work. Such information shall be deemed to be confidential hereunder and shall include information concerning the timing of such modifications and whether such modifications are expected to interrupt the flow of electricity from the Large Generating Facility. The Party desiring to perform such work shall provide the relevant drawings, plans, and specifications to the other Parties at least ninety (90) Calendar Days in advance of the commencement of the work or such shorter period upon which the Parties may agree, which agreement shall not unreasonably be withheld, conditioned or delayed.

Notwithstanding Section 7.5 of Appendix DD, at any time after achieving its Commercial Operation Date, the Interconnection Customer may reduce the megawatt generating capacities of its Generating Facilities, subject to Section 25.1(c) of the CAISO Tariff. Section 7.5.11 of Appendix DD will still apply to such requests to reduce capacity.

**5.19.2 Standards.** Any additions, modifications, or replacements made to a Party's facilities shall be designed, constructed and operated in accordance with this LGIA and Good Utility Practice.

**5.19.3 Modification Costs.** The Interconnection Customer shall not be directly assigned the costs of any additions, modifications, or replacements that the Participating TO makes to the Participating TO's Interconnection Facilities or the Participating TO's Transmission System to facilitate the interconnection of a third party to the Participating TO's Interconnection Facilities or the Participating TO's Transmission System, or to provide transmission service to a third party under the CAISO Tariff. The Interconnection Customer shall be responsible for the costs of any additions, modifications, or replacements to the Interconnection Facilities that may be necessary to maintain or upgrade such Interconnection Facilities consistent with Applicable Laws and Regulations, Applicable Reliability Standards or Good Utility Practice.

## ARTICLE 6. TESTING AND INSPECTION

**6.1 Pre-Commercial Operation Date Testing and Modifications**. Prior to the Commercial Operation Date, the Participating TO shall test the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades and the Interconnection Customer shall test the Large Generating Facility and the Interconnection Customer's Interconnection Facilities to ensure their safe and reliable operation. Similar testing may be required after initial operation. Each Party shall make any modifications to its facilities that are found to be necessary as a result of such testing. The Interconnection Customer shall bear the cost of all such testing and modifications. The Interconnection Customer shall not commence initial parallel operation of an Electric Generating Unit with the

Participating TO's Transmission System until the Participating TO provides prior written approval, which approval shall not be unreasonably withheld, for operation of such Electric Generating Unit. The Interconnection Customer shall generate test energy at the Large Generating Facility only if it has arranged for the delivery of such test energy.

**6.2** **Post-Commercial Operation Date Testing and Modifications**. Each Party shall at its own expense perform routine inspection and testing of its facilities and equipment in accordance with Good Utility Practice as may be necessary to ensure the continued interconnection of the Large Generating Facility with the Participating TO's Transmission System in a safe and reliable manner. Each Party shall have the right, upon advance written notice, to require reasonable additional testing of the other Party's facilities, at the requesting Party's expense, as may be in accordance with Good Utility Practice.

**6.3** **Right to Observe Testing**. Each Party shall notify the other Parties at least fourteen (14) days in advance of its performance of tests of its Interconnection Facilities or Generating Facility. The other Parties have the right, at their own expense, to observe such testing.

**6.4** **Right to Inspect**. Each Party shall have the right, but shall have no obligation to: (i) observe another Party's tests and/or inspection of any of its System Protection Facilities and other protective equipment, including Power System Stabilizers; (ii) review the settings of another Party's System Protection Facilities and other protective equipment; and (iii) review another Party's maintenance records relative to the Interconnection Facilities, the System Protection Facilities and other protective equipment. A Party may exercise these rights from time to time as it deems necessary upon reasonable notice to the other Party. The exercise or non-exercise by a Party of any such rights shall not be construed as an endorsement or confirmation of any element or condition of the Interconnection Facilities or the System Protection Facilities or other protective equipment or the operation thereof, or as a warranty as to the fitness, safety, desirability, or reliability of same. Any information that a Party obtains through the exercise of any of its rights under this Article 6.4 shall be deemed to be Confidential Information and treated pursuant to Article 22 of this LGIA.

## ARTICLE 7. METERING

**7.1** **General.** Each Party shall comply with the Applicable Reliability Council requirements. The Interconnection Customer and CAISO shall comply with the provisions of the CAISO Tariff regarding metering, including Section 10 of the CAISO Tariff. Unless otherwise agreed by the Participating TO and the Interconnection Customer, the Participating TO may install additional Metering Equipment at the Point of Interconnection prior to any operation of any Electric Generating Unit and shall own, operate, test and maintain such Metering Equipment. Power flows to and from the Large Generating Facility shall be measured at or, at the CAISO's or Participating TO's option for its respective Metering Equipment, compensated to, the Point of Interconnection. The CAISO shall provide metering quantities to the Interconnection Customer upon request in accordance with the CAISO Tariff by directly polling the CAISO's meter data acquisition system. The Interconnection Customer shall bear all reasonable documented costs associated with the purchase, installation, operation, testing and maintenance of the Metering Equipment.

**7.2** **Check Meters**. The Interconnection Customer, at its option and expense, may install and operate, on its premises and on its side of the Point of Interconnection, one or more check meters to check the CAISO-polled meters or the Participating TO's meters. Such check meters shall be for check purposes only and shall not be used for the measurement of power flows for purposes of this LGIA, except in the case that no other means are available on a temporary basis at the option of the CAISO or the Participating TO. The check meters shall be subject at all reasonable times to inspection and

examination by the CAISO or Participating TO or their designees. The installation, operation and maintenance thereof shall be performed entirely by the Interconnection Customer in accordance with Good Utility Practice.

**7.3** **Participating TO Retail Metering**. The Participating TO may install retail revenue quality meters and associated equipment, pursuant to the Participating TO's applicable retail tariffs.

## ARTICLE 8. COMMUNICATIONS

**8.1** **Interconnection Customer Obligations**. The Interconnection Customer shall maintain satisfactory operating communications with the CAISO in accordance with the provisions of the CAISO Tariff and with the Participating TO's dispatcher or representative designated by the Participating TO. The Interconnection Customer shall provide standard voice line, dedicated voice line and facsimile communications at its Large Generating Facility control room or central dispatch facility through use of either the public telephone system, or a voice communications system that does not rely on the public telephone system. The Interconnection Customer shall also provide the dedicated data circuit(s) necessary to provide Interconnection Customer data to the CAISO and Participating TO as set forth in Appendix D, Security Arrangements Details. The data circuit(s) shall extend from the Large Generating Facility to the location(s) specified by the CAISO and Participating TO. Any required maintenance of such communications equipment shall be performed by the Interconnection Customer. Operational communications shall be activated and maintained under, but not be limited to, the following events: system paralleling or separation, scheduled and unscheduled shutdowns, equipment clearances, and hourly and daily load data.

**8.2** **Remote Terminal Unit**. Prior to the Initial Synchronization Date of each Electric Generating Unit, a Remote Terminal Unit, or equivalent data collection and transfer equipment acceptable to the Parties, shall be installed by the Interconnection Customer, or by the Participating TO at the Interconnection Customer's expense, to gather accumulated and instantaneous data to be telemetered to the location(s) designated by the CAISO and by the Participating TO through use of a dedicated point-to-point data circuit(s) as indicated in Article 8.1.

Telemetry to the CAISO shall be provided in accordance with the CAISO's technical standards for direct telemetry. For telemetry to the Participating TO, the communication protocol for the data circuit(s) shall be specified by the Participating TO. Instantaneous bi-directional real power and reactive power flow and any other required information must be telemetered directly to the location(s) specified by the Participating TO.

Each Party will promptly advise the other Parties if it detects or otherwise learns of any metering, telemetry or communications equipment errors or malfunctions that require the attention and/or correction by another Party. The Party owning such equipment shall correct such error or malfunction as soon as reasonably feasible.

**8.3** **No Annexation.** Any and all equipment placed on the premises of a Party shall be and remain the property of the Party providing such equipment regardless of the mode and manner of annexation or attachment to real property, unless otherwise mutually agreed by the Parties.

## ARTICLE 9. OPERATIONS

**9.1** **General.** Each Party shall comply with the Applicable Reliability Council requirements. Each Party shall provide to the other Party all information that may reasonably be required by the other Party to comply with Applicable Laws and Regulations and Applicable Reliability Standards.

**9.2 Balancing Authority Area Notification**. At least three months before Initial Synchronization Date, the Interconnection Customer shall notify the CAISO and Participating TO in writing of the Balancing Authority Area in which the Large Generating Facility intends to be located. If the Interconnection Customer intends to locate the Large Generating Facility in a Balancing Authority Area other than the Balancing Authority Area within whose electrically metered boundaries the Large Generating Facility is located, and if permitted to do so by the relevant transmission tariffs, all necessary arrangements, including but not limited to those set forth in Article 7 and Article 8 of this LGIA, and remote Balancing Authority Area generator interchange agreements, if applicable, and the appropriate measures under such agreements, shall be executed and implemented prior to the placement of the Large Generating Facility in the other Balancing Authority Area.

**9.3 CAISO and Participating TO Obligations**. The CAISO and Participating TO shall cause the Participating TO's Transmission System to be operated and controlled in a safe and reliable manner and in accordance with this LGIA. The Participating TO at the Interconnection Customer's expense shall cause the Participating TO's Interconnection Facilities to be operated, maintained and controlled in a safe and reliable manner and in accordance with this LGIA. The CAISO and Participating TO may provide operating instructions to the Interconnection Customer consistent with this LGIA and Participating TO and CAISO operating protocols and procedures as they may change from time to time. The Participating TO and CAISO will consider changes to their operating protocols and procedures proposed by the Interconnection Customer.

**9.4 Interconnection Customer Obligations**. The Interconnection Customer shall at its own expense operate, maintain and control the Large Generating Facility and the Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA. The Interconnection Customer shall operate the Large Generating Facility and the Interconnection Customer's Interconnection Facilities in accordance with all applicable requirements of the Balancing Authority Area of which it is part, including such requirements as set forth in Appendix C, Interconnection Details, of this LGIA. Appendix C, Interconnection Details, will be modified to reflect changes to the requirements as they may change from time to time. A Party may request that another Party provide copies of the requirements set forth in Appendix C, Interconnection Details, of this LGIA. The Interconnection Customer shall not commence Commercial Operation of an Electric Generating Unit with the Participating TO's Transmission System until the Participating TO provides prior written approval, which approval shall not be unreasonably withheld, for operation of such Electric Generating Unit.

**9.5 Start-Up and Synchronization.** Consistent with the Parties' mutually acceptable procedures, the Interconnection Customer is responsible for the proper synchronization of each Electric Generating Unit to the CAISO Controlled Grid.

**9.6 Reactive Power and Primary Frequency Response.**

**9.6.1 Power Factor Design Criteria.** For all Generating Facilities other than Asynchronous Generating Facilities, the Interconnection Customer shall design the Large Generating Facility to maintain a composite power delivery at continuous rated power output at the terminals of the Electric Generating Unit at a power factor within the range of 0.95 leading to 0.90 lagging, unless the CAISO has established different requirements that apply to all generators in the Balancing Authority Area on a comparable basis. For Asynchronous Generating Facilities, the Interconnection Customer shall design the Large Generating Facility to maintain power factor criteria in accordance with Appendix H of this LGIA.

For Asynchronous Generating Facilities submitting a written request to continue a re-study under Section 6.4 of Appendix U of the CAISO Tariff on or after September 21, 2016, the Interconnection Customer shall design the Large Generating Facility to maintain a composite power delivery at continuous rated power output at the high-side of the generator substation at a power factor within the range of 0.95 leading to 0.95 lagging, unless the CAISO has established a different power factor range that applies to all Asynchronous Generating Facilities on a comparable basis. This power factor range standard shall be dynamic and can be met using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors and reactors, or a combination of the two.

**9.6.2 Voltage Schedules.** Once the Interconnection Customer has synchronized an Electric Generating Unit with the CAISO Controlled Grid, the CAISO or Participating TO shall require the Interconnection Customer to maintain a voltage schedule by operating the Electric Generating Unit to produce or absorb reactive power within the design limitations of the Electric Generating Unit set forth in Article 9.6.1 (Power Factor Design Criteria). CAISO's voltage schedules shall treat all sources of reactive power in the Balancing Authority Area in an equitable and not unduly discriminatory manner. The Participating TO shall exercise Reasonable Efforts to provide the Interconnection Customer with such schedules at least one (1) day in advance, and the CAISO or Participating TO may make changes to such schedules as necessary to maintain the reliability of the CAISO Controlled Grid or the Participating TO's electric system. The Interconnection Customer shall operate the Electric Generating Unit to maintain the specified output voltage or power factor within the design limitations of the Electric Generating Unit set forth in Article 9.6.1 (Power Factor Design Criteria), and as may be required by the CAISO to operate the Electric Generating Unit at a specific voltage schedule within the design limitations set forth in Article 9.6.1. If the Interconnection Customer is unable to maintain the specified voltage or power factor, it shall promptly notify the CAISO and the Participating TO.

**9.6.2.1 Voltage Regulators**. Whenever an Electric Generating Unit is operated in parallel with the CAISO Controlled Grid and voltage regulators are capable of operation, the Interconnection Customer shall operate the Electric Generating Unit with its voltage regulators in automatic operation. If the Electric Generating Unit's voltage regulators are not capable of such automatic operation, the Interconnection Customer shall immediately notify the CAISO and the Participating TO and ensure that the Electric Generating Unit operates as specified in Article 9.6.2 through manual operation and that such Electric Generating Unit's reactive power production or absorption (measured in MVARs) are within the design capability of the Electric Generating Unit(s) and steady state stability limits. The Interconnection Customer shall restore the speed governors and voltage regulators to automatic operation as soon as possible. If the Large Generating Facility's speed governors and voltage regulators are improperly tuned or malfunctioning, the CAISO shall have the right to order the reduction in output or disconnection of the Large Generating Facility if the reliability of the CAISO Controlled Grid would be adversely affected. The Interconnection Customer shall not cause its Large Generating Facility to disconnect automatically or instantaneously from the CAISO Controlled Grid or trip any Electric Generating Unit comprising the Large Generating Facility for an under or over frequency condition unless the abnormal frequency condition persists for a time period beyond the limits set forth in ANSI/IEEE Standard C37.106, or

such other standard as applied to other generators in the Balancing Authority Area on a comparable basis.

**9.6.3 Payment for Reactive Power.** CAISO is required to pay the Interconnection Customer for reactive power that Interconnection Customer provides or absorbs from an Electric Generating Unit when the CAISO requests the Interconnection Customer to operate its Electric Generating Unit outside the range specified in Article 9.6.1, provided that if the CAISO pays other generators for reactive power service within the specified range, it must also pay the Interconnection Customer. Payments shall be pursuant to Article 11.6 or such other agreement to which the CAISO and Interconnection Customer have otherwise agreed.

**9.6.4 Primary Frequency Response.** Interconnection Customer shall ensure the primary frequency response capability of its Electric Generating Unit(s) by installing, maintaining, and operating a functioning governor or equivalent controls. The term "functioning governor or equivalent controls" as used herein shall mean the required hardware and/or software that provides frequency responsive real power control with the ability to sense changes in system frequency and autonomously adjust the Electric Generating Unit's real power output in accordance with the droop and deadband parameters and in the direction needed to correct frequency deviations. Interconnection Customer is required to install a governor or equivalent controls with the capability of operating: (1) with a maximum 5 percent droop and ±0.036 Hz deadband; or (2) in accordance with the relevant droop, deadband, and timely and sustained response settings from Applicable Reliability Standards providing for equivalent or more stringent parameters. The droop characteristic shall be: (1) based on the nameplate capacity of the Electric Generating Unit(s), and shall be linear in the range of frequencies between 59 to 61 Hz that are outside of the deadband parameter; or (2) based on Applicable Reliability Standards providing for an equivalent or more stringent parameter. The deadband parameter shall be: the range of frequencies above and below nominal (60 Hz) in which the governor or equivalent controls is not expected to adjust the Electric Generating Unit's real power output in response to frequency deviations. The deadband shall be implemented: (1) without a step to the droop curve, that is, once the frequency deviation exceeds the deadband parameter, the expected change in the Electric Generating Unit's real power output in response to frequency deviations shall start from zero and then increase (for under-frequency deviations) or decrease (for over-frequency deviations) linearly in proportion to the magnitude of the frequency deviation; or (2) in accordance with Applicable Reliability Standards providing for an equivalent or more stringent parameter. Interconnection Customer shall notify the CAISO that the primary frequency response capability of the Electric Generating Unit(s) has been tested and confirmed during commissioning. Once Interconnection Customer has synchronized the Electric Generating Unit(s) with the CAISO Controlled Grid, Interconnection Customer shall operate the Electric Generating Unit(s) consistent with the provisions specified in Sections 9.6.4.1 and 9.6.4.2 of this LGIA. The primary frequency response requirements contained herein shall apply to both synchronous and non-synchronous Large Generating Facilities.

**9.6.4.1 Governor or Equivalent Controls.** Whenever the Electric Generating Unit(s) is operated in parallel with the CAISO Controlled Grid, Interconnection Customer shall operate the Electric Generating Unit(s) with its governor or equivalent controls in service and responsive to frequency. Interconnection Customer shall, in coordination with the CAISO, set the deadband parameter to: (1) a maximum of ±0.036 Hz and set the droop parameter to a maximum of 5 percent; or (2)

implement the relevant droop and deadband settings from Applicable Reliability Standards that provides for equivalent or more stringent parameters. Interconnection Customer shall be required to provide the status and settings of the governor or equivalent controls to the CAISO upon request. If Interconnection Customer needs to operate the Electric Generating Unit(s) with its governor or equivalent controls not in service, Interconnection Customer shall immediately notify the CAISO, and provide the following information: (1) the operating status of the governor or equivalent controls (i.e., whether it is currently out of service or when it will be taken out of service); (2) the reasons for removing the governor or equivalent controls from service; and (3) a reasonable estimate of when the governor or equivalent controls will be returned to service. Interconnection Customer shall make Reasonable Efforts to return its governor or equivalent controls into service as soon as practicable. Interconnection Customer shall make Reasonable Efforts to keep outages of the Electric Generating Unit's governor or equivalent controls to a minimum whenever the Electric Generating Unit(s) is operated in parallel with the CAISO Controlled Grid.

**9.6.4.2 Timely and Sustained Response.** Interconnection Customer shall ensure that the Electric Generating Unit's real power response to sustained frequency deviations outside of the deadband setting is automatically provided and shall begin immediately after frequency deviates outside of the deadband, and to the extent the Electric Generating Unit(s) has operating capability in the direction needed to correct the frequency deviation. Interconnection Customer shall not block or otherwise inhibit the ability of the governor or equivalent controls to respond and shall ensure that the response is not inhibited, except under certain operational constraints including, but not limited to, ambient temperature limitations, physical energy limitations, outages of mechanical equipment, or regulatory requirements. The Electric Generating Unit(s) shall sustain the real power response at least until system frequency returns to a value within the deadband setting of the governor or equivalent controls. A FERC-approved Applicable Reliability Standard with equivalent or more stringent requirements shall supersede the above requirements.

**9.6.4.3 Exemptions.** Large Generating Facilities that are regulated by the Nuclear Regulatory Commission shall be exempt from Sections 9.6.4, 9.6.4.1, and 9.6.4.2 of this LGIA. Large Generating Facilities that are behind-the-meter generation that is sized-to-load (i.e., the thermal load and the generation are near-balanced in real-time operation and the generation is primarily controlled to maintain the unique thermal, chemical, or mechanical output necessary for the operating requirements of its host facility) shall be required to install primary frequency response capability in accordance with the droop and deadband capability requirements specified in Section 9.6.4, but shall be otherwise exempt from the operating requirements in Sections 9.6.4, 9.6.4.1, 9.6.4.2, and 9.6.4.4 of this LGIA.

**9.6.4.4 Electric Storage Resources.** Interconnection Customer interconnecting an electric storage resource shall establish an operating range in Appendix C of this LGIA that specifies a minimum state of charge and a maximum state of charge between which the electric storage resource will be required to provide primary frequency response consistent with the conditions set forth in Sections 9.6.4, 9.6.4.1, 9.6.4.2, and 9.6.4.3 of

this LGIA. Appendix C shall specify whether the operating range is static or dynamic, and shall consider: (1) the expected magnitude of frequency deviations in the interconnection; (2) the expected duration that system frequency will remain outside of the deadband parameter in the interconnection; (3) the expected incidence of frequency deviations outside of the deadband parameter in the interconnection; (4) the physical capabilities of the electric storage resource; (5) operational limitations of the electric storage resource due to manufacturer specifications; and (6) any other relevant factors agreed to by the CAISO and Interconnection Customer, and in consultation with the relevant transmission owner or balancing authority as appropriate. If the operating range is dynamic, then Appendix C must establish how frequently the operating range will be reevaluated and the factors that may be considered during its reevaluation.

Interconnection Customer's electric storage resource is required to provide timely and sustained primary frequency response consistent with Section 9.6.4.2 of this LGIA when it is online and dispatched to inject electricity to the CAISO Controlled Grid and/or receive electricity from the Participating TO's Transmission System or the CAISO Controlled Grid. This excludes circumstances when the electric storage resource is not dispatched to inject electricity to the CAISO Controlled Grid and/or dispatched to receive electricity from the Participating TO's Transmission system or the CAISO Controlled Grid. If Interconnection Customer's electric storage resource is charging at the time of a frequency deviation outside of its deadband parameter, it is to increase (for over-frequency deviations) or decrease (for under-frequency deviations) the rate at which it is charging in accordance with its droop parameter. Interconnection Customer's electric storage resource is not required to change from charging to discharging, or vice versa, unless the response necessitated by the droop and deadband settings requires it to do so and it is technically capable of making such a transition.

**9.7 Outages and Interruptions.**

**9.7.1 Outages.**

**9.7.1.1 Outage Authority and Coordination**. Each Party may in accordance with Good Utility Practice in coordination with the other Parties remove from service any of its respective Interconnection Facilities or Network Upgrades that may impact another Party's facilities as necessary to perform maintenance or testing or to install or replace equipment. Absent an Emergency Condition, the Party scheduling a removal of such facility(ies) from service will use Reasonable Efforts to schedule such removal on a date and time mutually acceptable to all Parties. In all circumstances any Party planning to remove such facility(ies) from service shall use Reasonable Efforts to minimize the effect on the other Parties of such removal.

**9.7.1.2 Outage Schedules.** The CAISO shall post scheduled outages of CAISO Controlled Grid facilities in accordance with the provisions of the CAISO Tariff. The Interconnection Customer shall submit its planned maintenance schedules for the Large Generating Facility to the CAISO in accordance with the CAISO Tariff. The Interconnection Customer shall update its planned maintenance schedules in accordance with the CAISO Tariff. The CAISO may request the Interconnection Customer to

reschedule its maintenance as necessary to maintain the reliability of the CAISO Controlled Grid in accordance with the CAISO Tariff. Such planned maintenance schedules and updates and changes to such schedules shall be provided by the Interconnection Customer to the Participating TO concurrently with their submittal to the CAISO. The CAISO shall compensate the Interconnection Customer for any additional direct costs that the Interconnection Customer incurs as a result of having to reschedule maintenance in accordance with the CAISO Tariff. The Interconnection Customer will not be eligible to receive compensation, if during the twelve (12) months prior to the date of the scheduled maintenance, the Interconnection Customer had modified its schedule of maintenance activities.

**9.7.1.3 Outage Restoration**. If an outage on a Party's Interconnection Facilities or Network Upgrades adversely affects another Party's operations or facilities, the Party that owns or controls the facility that is out of service shall use Reasonable Efforts to promptly restore such facility(ies) to a normal operating condition consistent with the nature of the outage. The Party that owns or controls the facility that is out of service shall provide the other Parties, to the extent such information is known, information on the nature of the Emergency Condition, if the outage is caused by an Emergency Condition, an estimated time of restoration, and any corrective actions required. Initial verbal notice shall be followed up as soon as practicable with written notice explaining the nature of the outage, if requested by a Party, which may be provided by e-mail or facsimile.

**9.7.2 Interruption of Service**. If required by Good Utility Practice to do so, the CAISO or the Participating TO may require the Interconnection Customer to interrupt or reduce deliveries of electricity if such delivery of electricity could adversely affect the CAISO's or the Participating TO's ability to perform such activities as are necessary to safely and reliably operate and maintain the Participating TO's electric system or the CAISO Controlled Grid. The following provisions shall apply to any interruption or reduction permitted under this Article 9.7.2:

**9.7.2.1** The interruption or reduction shall continue only for so long as reasonably necessary under Good Utility Practice;

**9.7.2.2** Any such interruption or reduction shall be made on an equitable, non-discriminatory basis with respect to all generating facilities directly connected to the CAISO Controlled Grid, subject to any conditions specified in this LGIA;

**9.7.2.3** When the interruption or reduction must be made under circumstances which do not allow for advance notice, the CAISO or Participating TO, as applicable, shall notify the Interconnection Customer by telephone as soon as practicable of the reasons for the curtailment, interruption, or reduction, and, if known, its expected duration. Telephone notification shall be followed by written notification, if requested by the Interconnection Customer, as soon as practicable;

**9.7.2.4** Except during the existence of an Emergency Condition, the CAISO or Participating TO shall notify the Interconnection Customer in advance regarding the timing of such interruption or reduction and further notify the Interconnection Customer of the expected duration. The CAISO or Participating TO shall coordinate with the Interconnection Customer

using Good Utility Practice to schedule the interruption or reduction during periods of least impact to the Interconnection Customer, the CAISO, and the Participating TO;

**9.7.2.5** The Parties shall cooperate and coordinate with each other to the extent necessary in order to restore the Large Generating Facility, Interconnection Facilities, the Participating TO's Transmission System, and the CAISO Controlled Grid to their normal operating state, consistent with system conditions and Good Utility Practice.

**9.7.3 Under-Frequency and Over Frequency Conditions**. The CAISO Controlled Grid is designed to automatically activate a load-shed program as required by the Applicable Reliability Council in the event of an under-frequency system disturbance. The Interconnection Customer shall implement under-frequency and over-frequency protection set points for the Large Generating Facility as required by the Applicable Reliability Council to ensure "ride through" capability. Large Generating Facility response to frequency deviations of pre-determined magnitudes, both under-frequency and over-frequency deviations, shall be studied and coordinated with the Participating TO and CAISO in accordance with Good Utility Practice. The term "ride through" as used herein shall mean the ability of a Generating Facility to stay connected to and synchronized with the CAISO Controlled Grid during system disturbances within a range of under-frequency and over-frequency conditions, in accordance with Good Utility Practice. Asynchronous Generating Facilities shall be subject to frequency ride through capability requirements in accordance with Appendix H to this LGIA.

**9.7.4 System Protection and Other Control Requirements**.

**9.7.4.1 System Protection Facilities**. The Interconnection Customer shall, at its expense, install, operate and maintain System Protection Facilities as a part of the Large Generating Facility or the Interconnection Customer's Interconnection Facilities. The Participating TO shall install at the Interconnection Customer's expense any System Protection Facilities that may be required on the Participating TO's Interconnection Facilities or the Participating TO's Transmission System as a result of the interconnection of the Large Generating Facility and the Interconnection Customer's Interconnection Facilities.

**9.7.4.2** The Participating TO's and Interconnection Customer's protection facilities shall be designed and coordinated with other systems in accordance with Applicable Reliability Council criteria and Good Utility Practice.

**9.7.4.3** The Participating TO and Interconnection Customer shall each be responsible for protection of its facilities consistent with Good Utility Practice.

**9.7.4.4** The Participating TO's and Interconnection Customer's protective relay design shall incorporate the necessary test switches to perform the tests required in Article 6. The required test switches will be placed such that they allow operation of lockout relays while preventing breaker failure schemes from operating and causing unnecessary breaker operations and/or the tripping of the Interconnection Customer's Electric Generating Units.

**9.7.4.5** The Participating TO and Interconnection Customer will test, operate and maintain System Protection Facilities in accordance with Good Utility Practice and, if applicable, the requirements of the Participating TO's Interconnection Handbook.

**9.7.4.6** Prior to the in-service date, and again prior to the Commercial Operation Date, the Participating TO and Interconnection Customer or their agents shall perform a complete calibration test and functional trip test of the System Protection Facilities. At intervals suggested by Good Utility Practice, the standards and procedures of the Participating TO, including, if applicable, the requirements of the Participating TO's Interconnection Handbook, and following any apparent malfunction of the System Protection Facilities, each Party shall perform both calibration and functional trip tests of its System Protection Facilities. These tests do not require the tripping of any in-service generation unit. These tests do, however, require that all protective relays and lockout contacts be activated.

**9.7.5** **Requirements for Protection**. In compliance with Good Utility Practice and, if applicable, the requirements of the Participating TO's Interconnection Handbook, the Interconnection Customer shall provide, install, own, and maintain relays, circuit breakers and all other devices necessary to remove any fault contribution of the Large Generating Facility to any short circuit occurring on the Participating TO's Transmission System not otherwise isolated by the Participating TO's equipment, such that the removal of the fault contribution shall be coordinated with the protective requirements of the Participating TO's Transmission System. Such protective equipment shall include, without limitation, a disconnecting device with fault current-interrupting capability located between the Large Generating Facility and the Participating TO's Transmission System at a site selected upon mutual agreement (not to be unreasonably withheld, conditioned or delayed) of the Parties. The Interconnection Customer shall be responsible for protection of the Large Generating Facility and the Interconnection Customer's other equipment from such conditions as negative sequence currents, over- or under-frequency, sudden load rejection, over- or under-voltage, and generator loss-of-field. The Interconnection Customer shall be solely responsible to disconnect the Large Generating Facility and the Interconnection Customer's other equipment if conditions on the CAISO Controlled Grid could adversely affect the Large Generating Facility.

**9.7.6** **Power Quality**. Neither the Participating TO's nor the Interconnection Customer's facilities shall cause excessive voltage flicker nor introduce excessive distortion to the sinusoidal voltage or current waves as defined by ANSI Standard C84.1-1989, in accordance with IEEE Standard 519, any applicable superseding electric industry standard, or any alternative Applicable Reliability Council standard. In the event of a conflict between ANSI Standard C84.1-1989, any applicable superseding electric industry standard, or any alternative Applicable Reliability Council standard, the alternative Applicable Reliability Council standard shall control.

**9.8** **Switching and Tagging Rules.** Each Party shall provide the other Parties a copy of its switching and tagging rules that are applicable to the other Parties' activities. Such switching and tagging rules shall be developed on a non-discriminatory basis. The Parties shall comply with applicable switching and tagging rules, as amended from time to time, in obtaining clearances for work or for switching operations on equipment.

**9.9 Use of Interconnection Facilities by Third Parties**.

**9.9.1 Purpose of Interconnection Facilities**. Except as may be required by Applicable Laws and Regulations, or as otherwise agreed to among the Parties, the Interconnection Facilities shall be constructed for the sole purpose of interconnecting the Large Generating Facility to the Participating TO's Transmission System and shall be used for no other purpose.

**9.9.2 Third Party Users**. If required by Applicable Laws and Regulations or if the Parties mutually agree, such agreement not to be unreasonably withheld, to allow one or more third parties to use the Participating TO's Interconnection Facilities, or any part thereof, the Interconnection Customer will be entitled to compensation for the capital expenses it incurred in connection with the Interconnection Facilities based upon the pro rata use of the Interconnection Facilities by the Participating TO, all third party users, and the Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually-agreed upon methodology. In addition, cost responsibility for ongoing costs, including operation and maintenance costs associated with the Interconnection Facilities, will be allocated between the Interconnection Customer and any third party users based upon the pro rata use of the Interconnection Facilities by the Participating TO, all third party users, and the Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually agreed upon methodology. If the issue of such compensation or allocation cannot be resolved through such negotiations, it shall be submitted to FERC for resolution.

**9.10 Disturbance Analysis Data Exchange**. The Parties will cooperate with one another in the analysis of disturbances to either the Large Generating Facility or the CAISO Controlled Grid by gathering and providing access to any information relating to any disturbance, including information from oscillography, protective relay targets, breaker operations and sequence of events records, and any disturbance information required by Good Utility Practice.

## ARTICLE 10. MAINTENANCE

**10.1 Participating TO Obligations.** The Participating TO shall maintain the Participating TO's Transmission System and the Participating TO's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA.

**10.2 Interconnection Customer Obligations**. The Interconnection Customer shall maintain the Large Generating Facility and the Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA.

**10.3 Coordination**. The Parties shall confer regularly to coordinate the planning, scheduling and performance of preventive and corrective maintenance on the Large Generating Facility and the Interconnection Facilities.

**10.4 Secondary Systems**. The Participating TO and Interconnection Customer shall cooperate with the other Parties in the inspection, maintenance, and testing of control or power circuits that operate below 600 volts, AC or DC, including, but not limited to, any hardware, control or protective devices, cables, conductors, electric raceways, secondary equipment panels, transducers, batteries, chargers, and voltage and current transformers that directly affect the operation of a Party's facilities and equipment which may reasonably be expected to impact the other Parties. Each Party shall provide advance notice to the other Parties before undertaking any work on such circuits, especially on

electrical circuits involving circuit breaker trip and close contacts, current transformers, or potential transformers.

**10.5 Operating and Maintenance Expenses**. Subject to the provisions herein addressing the use of facilities by others, and except for operations and maintenance expenses associated with modifications made for providing interconnection or transmission service to a third party and such third party pays for such expenses, the Interconnection Customer shall be responsible for all reasonable expenses including overheads, associated with: (1) owning, operating, maintaining, repairing, and replacing the Interconnection Customer's Interconnection Facilities; and (2) operation, maintenance, repair and replacement of the Participating TO's Interconnection Facilities.

## ARTICLE 11. PERFORMANCE OBLIGATION

**11.1 Interconnection Customer's Interconnection Facilities**. The Interconnection Customer shall design, procure, construct, install, own and/or control the Interconnection Customer's Interconnection Facilities described in Appendix A at its sole expense.

**11.2 Participating TO's Interconnection Facilities**. The Participating TO shall design, procure, construct, install, own and/or control the Participating TO's Interconnection Facilities described in Appendix A at the sole expense of the Interconnection Customer. Unless the Participating TO elects to fund the capital for the Participating TO's Interconnection Facilities, they shall be solely funded by the Interconnection Customer.

**11.3 Network Upgrades and Distribution Upgrades**. The Participating TO shall design, procure, construct, install, and own the Network Upgrades and Distribution Upgrades described in Appendix A. The Interconnection Customer shall be responsible for all costs related to Distribution Upgrades. Unless the Participating TO elects to fund the capital for the Distribution Upgrades and Network Upgrades, they shall be solely funded by the Interconnection Customer.

**11.4 Transmission Credits**. No later than thirty (30) days prior to the Commercial Operation Date, the Interconnection Customer may make a one-time election by written notice to the CAISO and the Participating TO to receive Congestion Revenue Rights as defined in and as available under the CAISO Tariff at the time of the election in accordance with the CAISO Tariff, in lieu of a refund of the cost of Network Upgrades in accordance with Article 11.4.1.

**11.4.1 Repayment of Amounts Advanced for Network Upgrades**. Upon the Commercial Operation Date, the Interconnection Customer shall be entitled to a repayment, equal to the total amount paid to the Participating TO for the cost of Network Upgrades. Such amount shall include any tax gross-up or other tax-related payments associated with Network Upgrades not refunded to the Interconnection Customer pursuant to Article 5.17.8 or otherwise, and shall be paid to the Interconnection Customer by the Participating TO on a dollar-for-dollar basis either through (1) direct payments made on a levelized basis over the five-year period commencing on the Commercial Operation Date; or (2) any alternative payment schedule that is mutually agreeable to the Interconnection Customer and Participating TO, provided that such amount is paid within five (5) years from the Commercial Operation Date. Notwithstanding the foregoing, if this LGIA terminates within five (5) years from the Commercial Operation Date, the Participating TO's obligation to pay refunds to the Interconnection Customer shall cease as of the date of termination. Any repayment shall include interest calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date of any payment for Network Upgrades through the date on which the Interconnection Customer receives a repayment of

such payment. Interest shall continue to accrue on the repayment obligation so long as this LGIA is in effect. The Interconnection Customer may assign such repayment rights to any person.

If the Large Generating Facility fails to achieve commercial operation, but it or another Generating Facility is later constructed and makes use of the Network Upgrades, the Participating TO shall at that time reimburse Interconnection Customer for the amounts advanced for the Network Upgrades. Before any such reimbursement can occur, the Interconnection Customer, or the entity that ultimately constructs the Generating Facility, if different, is responsible for identifying the entity to which reimbursement must be made.

**11.4.2** **Special Provisions for Affected Systems**. The Interconnection Customer shall enter into an agreement with the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid, as applicable, in accordance with the LGIP. Such agreement shall specify the terms governing payments to be made by the Interconnection Customer to the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid as well as the repayment by the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid. In no event shall the Participating TO be responsible for the repayment for any facilities that are not part of the Participating TO's Transmission System.

**11.4.3** Notwithstanding any other provision of this LGIA, nothing herein shall be construed as relinquishing or foreclosing any rights, including but not limited to firm transmission rights, capacity rights, Congestion Revenue Rights, or transmission credits, that the Interconnection Customer shall be entitled to, now or in the future under any other agreement or tariff as a result of, or otherwise associated with, the transmission capacity, if any, created by the Network Upgrades, including the right to obtain cash reimbursements or transmission credits for transmission service that is not associated with the Large Generating Facility.

**11.5** **Provision of Security**. At least thirty (30) Calendar Days prior to the commencement of the procurement, installation, or construction of a discrete portion of a Participating TO's Interconnection Facilities, Network Upgrades, or Distribution Upgrades, the Interconnection Customer shall provide the Participating TO, at the Interconnection Customer's option, a guarantee, a surety bond, letter of credit or other form of security that is reasonably acceptable to the Participating TO and is consistent with the Uniform Commercial Code of the jurisdiction identified in Article 14.2.1. Such security for payment shall be in an amount sufficient to cover the costs for constructing, procuring and installing the applicable portion of the Participating TO's Interconnection Facilities, Network Upgrades, or Distribution Upgrades. Such security shall be reduced on a dollar-for-dollar basis for payments made to the Participating TO for these purposes.

In addition:

**11.5.1** The guarantee must be made by an entity that meets the creditworthiness requirements of the Participating TO, and contain terms and conditions that guarantee payment of any amount that may be due from the Interconnection Customer, up to an agreed-to maximum amount.

**11.5.2** The letter of credit must be issued by a financial institution reasonably acceptable to the Participating TO and must specify a reasonable expiration date.

**11.5.3** The surety bond must be issued by an insurer reasonably acceptable to the Participating TO and must specify a reasonable expiration date.

**11.6 Interconnection Customer Compensation**. If the CAISO requests or directs the Interconnection Customer to provide a service pursuant to Articles 9.6.3 (Payment for Reactive Power) or 13.5.1 of this LGIA, the CAISO shall compensate the Interconnection Customer in accordance with the CAISO Tariff.

**11.6.1 Interconnection Customer Compensation for Actions During Emergency Condition**. The CAISO shall compensate the Interconnection Customer in accordance with the CAISO Tariff for its provision of real and reactive power and other Emergency Condition services that the Interconnection Customer provides to support the CAISO Controlled Grid during an Emergency Condition in accordance with Article 11.6.

## ARTICLE 12. INVOICE

**12.1 General.** The Participating TO shall submit to the Interconnection Customer, on a monthly basis, invoices of amounts due pursuant to this LGIA for the preceding month. Each invoice shall state the month to which the invoice applies and fully describe the services and equipment provided. The Parties may discharge mutual debts and payment obligations due and owing to each other on the same date through netting, in which case all amounts a Party owes to the other Party under this LGIA, including interest payments or credits, shall be netted so that only the net amount remaining due shall be paid by the owing Party. Notwithstanding the foregoing, any invoices between the CAISO and another Party shall be submitted and paid in accordance with the CAISO Tariff.

**12.2 Final Invoice**. As soon as reasonably practicable, but within twelve months after completion of the construction of the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades, the Participating TO shall provide an invoice of the final cost of the construction of the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades, and shall set forth such costs in sufficient detail to enable the Interconnection Customer to compare the actual costs with the estimates and to ascertain deviations, if any, from the cost estimates. The Participating TO shall refund to the Interconnection Customer any amount by which the actual payment by the Interconnection Customer for estimated costs exceeds the actual costs of construction within thirty (30) Calendar Days of the issuance of such final construction invoice; or, in the event the actual costs of construction exceed the Interconnection Customer's actual payment for estimated costs, then the Interconnection Customer shall pay to the Participating TO any amount by which the actual costs of construction exceed the actual payment by the Interconnection Customer for estimated costs within thirty (30) Calendar Days of the issuance of such final construction invoice.

**12.3 Payment**. Invoices shall be rendered to the Interconnection Customer at the address specified in Appendix F. The Interconnection Customer shall pay, or Participating TO shall refund, the amounts due within thirty (30) Calendar Days of the Interconnection Customer's receipt of the invoice. All payments shall be made in immediately available funds payable to the Interconnection Customer or Participating TO, or by wire transfer to a bank named and account designated by the invoicing Interconnection Customer or Participating TO. Payment of invoices by any Party will not constitute a waiver of any rights or claims any Party may have under this LGIA.

**12.4 Disputes**. In the event of a billing dispute between the Interconnection Customer and the Participating TO, the Participating TO and the CAISO shall continue to provide Interconnection Service under this LGIA as long as the Interconnection Customer: (i) continues to make all payments not in dispute; and (ii) pays to the Participating TO or into

an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If the Interconnection Customer fails to meet these two requirements for continuation of service, then the Participating TO may provide notice to the Interconnection Customer of a Default pursuant to Article 17. Within thirty (30) Calendar Days after the resolution of the dispute, the Party that owes money to the other Party shall pay the amount due with interest calculated in accordance with the methodology set forth in FERC's Regulations at 18 C.F.R. § 35.19a(a)(2)(iii). Notwithstanding the foregoing, any billing dispute between the CAISO and another Party shall be resolved in accordance with the provisions of Article 27 of this LGIA.

## ARTICLE 13. EMERGENCIES

**13.1 [Reserved]**

**13.2 Obligations**. Each Party shall comply with the Emergency Condition procedures of the CAISO, NERC, the Applicable Reliability Council, Applicable Laws and Regulations, and any emergency procedures set forth in this LGIA.

**13.3 Notice.** The Participating TO or the CAISO shall notify the Interconnection Customer promptly when it becomes aware of an Emergency Condition that affects the Participating TO's Interconnection Facilities or Distribution System or the CAISO Controlled Grid, respectively, that may reasonably be expected to affect the Interconnection Customer's operation of the Large Generating Facility or the Interconnection Customer's Interconnection Facilities. The Interconnection Customer shall notify the Participating TO and the CAISO promptly when it becomes aware of an Emergency Condition that affects the Large Generating Facility or the Interconnection Customer's Interconnection Facilities that may reasonably be expected to affect the CAISO Controlled Grid or the Participating TO's Interconnection Facilities. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of the Interconnection Customer's or Participating TO's facilities and operations, its anticipated duration and the corrective action taken and/or to be taken. The initial notice shall be followed as soon as practicable with written notice, if requested by a Party, which may be provided by electronic mail or facsimile, or in the case of the CAISO may be publicly posted on the CAISO's internet web site.

**13.4 Immediate Action**. Unless, in the Interconnection Customer's reasonable judgment, immediate action is required, the Interconnection Customer shall obtain the consent of the CAISO and the Participating TO, such consent to not be unreasonably withheld, prior to performing any manual switching operations at the Large Generating Facility or the Interconnection Customer's Interconnection Facilities in response to an Emergency Condition declared by the Participating TO or CAISO or in response to any other emergency condition.

**13.5 CAISO and Participating TO Authority.**

**13.5.1 General**. The CAISO and Participating TO may take whatever actions or inactions, including issuance of dispatch instructions, with regard to the CAISO Controlled Grid or the Participating TO's Interconnection Facilities or Distribution System they deem necessary during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the CAISO Controlled Grid or the Participating TO's Interconnection Facilities or Distribution System, and (iii) limit or prevent damage, (iv) expedite restoration of service. The Participating TO and the CAISO shall use Reasonable Efforts to minimize the effect of such actions or inactions on the Large Generating Facility or the Interconnection Customer's Interconnection Facilities. The Participating TO or the CAISO may, on the basis of technical considerations, require the Large

Generating Facility to mitigate an Emergency Condition by taking actions necessary and limited in scope to remedy the Emergency Condition, including, but not limited to, directing the Interconnection Customer to shut-down, start-up, increase or decrease the real or reactive power output of the Large Generating Facility; implementing a reduction or disconnection pursuant to Article 13.5.2; directing the Interconnection Customer to assist with black start (if available) or restoration efforts; or altering the outage schedules of the Large Generating Facility and the Interconnection Customer's Interconnection Facilities. Interconnection Customer shall comply with all of the CAISO's Dispatch Instructions and Operating Instructions and Participating TO's dispatch instructions or Operating Instructions concerning Large Generating Facility real power and reactive power output within the manufacturer's design limitations of the Large Generating Facility's equipment that is in service and physically available for operation at the time, in compliance with Applicable Laws and Regulations.

**13.5.2 Reduction and Disconnection**. The Participating TO or the CAISO may reduce Interconnection Service or disconnect the Large Generating Facility or the Interconnection Customer's Interconnection Facilities when such reduction or disconnection is necessary under Good Utility Practice due to Emergency Conditions. These rights are separate and distinct from any right of curtailment of the CAISO pursuant to the CAISO Tariff. When the CAISO or Participating TO can schedule the reduction or disconnection in advance, the CAISO or Participating TO shall notify the Interconnection Customer of the reasons, timing and expected duration of the reduction or disconnection. The CAISO or Participating TO shall coordinate with the Interconnection Customer using Good Utility Practice to schedule the reduction or disconnection during periods of least impact to the Interconnection Customer and the CAISO and Participating TO. Any reduction or disconnection shall continue only for so long as reasonably necessary under Good Utility Practice. The Parties shall cooperate with each other to restore the Large Generating Facility, the Interconnection Facilities, and the CAISO Controlled Grid to their normal operating state as soon as practicable consistent with Good Utility Practice.

**13.6 Interconnection Customer Authority**. Consistent with Good Utility Practice, this LGIA, and the CAISO Tariff, the Interconnection Customer may take actions or inactions with regard to the Large Generating Facility or the Interconnection Customer's Interconnection Facilities during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the Large Generating Facility or the Interconnection Customer's Interconnection Facilities, (iii) limit or prevent damage, and (iv) expedite restoration of service. Interconnection Customer shall use Reasonable Efforts to minimize the effect of such actions or inactions on the CAISO Controlled Grid and the Participating TO's Interconnection Facilities. The CAISO and Participating TO shall use Reasonable Efforts to assist Interconnection Customer in such actions.

**13.7 Limited Liability**. Except as otherwise provided in Article 11.6.1 of this LGIA, no Party shall be liable to any other Party for any action it takes in responding to an Emergency Condition so long as such action is made in good faith and is consistent with Good Utility Practice.

## ARTICLE 14. REGULATORY REQUIREMENTS AND GOVERNING LAW

**14.1 Regulatory Requirements**. Each Party's obligations under this LGIA shall be subject to its receipt of any required approval or certificate from one or more Governmental Authorities in the form and substance satisfactory to the applying Party, or the Party making any required filings with, or providing notice to, such Governmental Authorities,

and the expiration of any time period associated therewith. Each Party shall in good faith seek and use its Reasonable Efforts to obtain such other approvals. Nothing in this LGIA shall require the Interconnection Customer to take any action that could result in its inability to obtain, or its loss of, status or exemption under the Federal Power Act or the Public Utility Holding Company Act of 1935, as amended, or the Public Utility Regulatory Policies Act of 1978, or the Energy Policy Act of 2005.

**14.2 Governing Law**.

**14.2.1** The validity, interpretation and performance of this LGIA and each of its provisions shall be governed by the laws of the state where the Point of Interconnection is located, without regard to its conflicts of law principles.

**14.2.2** This LGIA is subject to all Applicable Laws and Regulations.

**14.2.3** Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, rules, or regulations of a Governmental Authority.

## ARTICLE 15. NOTICES

**15.1 General**. Unless otherwise provided in this LGIA, any notice, demand or request required or permitted to be given by a Party to another and any instrument required or permitted to be tendered or delivered by a Party in writing to another shall be effective when delivered and may be so given, tendered or delivered, by recognized national courier, or by depositing the same with the United States Postal Service with postage prepaid, for delivery by certified or registered mail, addressed to the Party, or personally delivered to the Party, at the address set out in Appendix F, Addresses for Delivery of Notices and Billings.

A Party must update the information in Appendix F as information changes. A Party may change the notice information in this LGIA by giving five (5) Business Days written notice prior to the effective date of the change. Such changes shall not constitute an amendment to this LGIA.

**15.2 Billings and Payments**. Billings and payments shall be sent to the addresses set out in Appendix F.

**15.3 Alternative Forms of Notice**. Any notice or request required or permitted to be given by a Party to another and not required by this LGIA to be given in writing may be so given by telephone, facsimile or e-mail to the telephone numbers and e-mail addresses set out in Appendix F.

**15.4 Operations and Maintenance Notice**. Each Party shall notify the other Parties in writing of the identity of the person(s) that it designates as the point(s) of contact with respect to the implementation of Articles 9 and 10.

## ARTICLE 16. FORCE MAJEURE

**16.1 Force Majeure.**

**16.1.1** Economic hardship is not considered a Force Majeure event.

**16.1.2** No Party shall be considered to be in Default with respect to any obligation hereunder, (including obligations under Article 4), other than the obligation to pay money when due, if prevented from fulfilling such obligation by Force Majeure. A Party unable to fulfill any obligation hereunder (other than an obligation to pay

money when due) by reason of Force Majeure shall give notice and the full particulars of such Force Majeure to the other Party in writing or by telephone as soon as reasonably possible after the occurrence of the cause relied upon. Telephone notices given pursuant to this Article shall be confirmed in writing as soon as reasonably possible and shall specifically state full particulars of the Force Majeure, the time and date when the Force Majeure occurred and when the Force Majeure is reasonably expected to cease. The Party affected shall exercise due diligence to remove such disability with reasonable dispatch, but shall not be required to accede or agree to any provision not satisfactory to it in order to settle and terminate a strike or other labor disturbance.

## ARTICLE 17. DEFAULT

**17.1 Default**

**17.1.1 General.** No Default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of Force Majeure as defined in this LGIA or the result of an act or omission of the other Party. Upon a Breach, the affected non-Breaching Party(ies) shall give written notice of such Breach to the Breaching Party. Except as provided in Article 17.1.2, the Breaching Party shall have thirty (30) Calendar Days from receipt of the Default notice within which to cure such Breach; provided however, if such Breach is not capable of cure within thirty (30) Calendar Days, the Breaching Party shall commence such cure within thirty (30) Calendar Days after notice and continuously and diligently complete such cure within ninety (90) Calendar Days from receipt of the Default notice; and, if cured within such time, the Breach specified in such notice shall cease to exist.

**17.1.2 Right to Terminate**. If a Breach is not cured as provided in this Article, or if a Breach is not capable of being cured within the period provided for herein, the affected non-Breaching Party(ies) shall have the right to declare a Default and terminate this LGIA by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not such Party(ies) terminates this LGIA, to recover from the Breaching Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this Article will survive termination of this LGIA.

## ARTICLE 18. INDEMNITY, CONSEQUENTIAL DAMAGES AND INSURANCE

**18.1 Indemnity**. Each Party shall at all times indemnify, defend, and hold the other Parties harmless from, any and all Losses arising out of or resulting from another Party's action or inactions of its obligations under this LGIA on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the Indemnified Party.

**18.1.1 Indemnified Party**. If an Indemnified Party is entitled to indemnification under this Article 18 as a result of a claim by a third party, and the Indemnifying Party fails, after notice and reasonable opportunity to proceed under Article 18.1, to assume the defense of such claim, such Indemnified Party may at the expense of the Indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

**18.1.2 Indemnifying Party**. If an Indemnifying Party is obligated to indemnify and hold any Indemnified Party harmless under this Article 18, the amount owing to the Indemnified Party shall be the amount of such Indemnified Party’s actual Loss, net of any insurance or other recovery.

**18.1.3 Indemnity Procedures**. Promptly after receipt by an Indemnified Party of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in Article 18.1 may apply, the Indemnified Party shall notify the Indemnifying Party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying Party.

The Indemnifying Party shall have the right to assume the defense thereof with counsel designated by such Indemnifying Party and reasonably satisfactory to the Indemnified Party. If the defendants in any such action include one or more Indemnified Parties and the Indemnifying Party and if the Indemnified Party reasonably concludes that there may
be legal defenses available to it and/or other Indemnified Parties which are different from or additional to those available to the Indemnifying Party, the Indemnified Party shall have the right to select separate counsel to assert such legal defenses and to otherwise participate in the defense of such action on its own behalf. In such instances, the Indemnifying Party shall only be required to pay the fees and expenses of one additional attorney to represent an Indemnified Party or Indemnified Parties having such differing or additional legal defenses.

The Indemnified Party shall be entitled, at its expense, to participate in any such action, suit or proceeding, the defense of which has been assumed by the Indemnifying Party. Notwithstanding the foregoing, the Indemnifying Party (i) shall not be entitled to assume and control the defense of any such action, suit or proceedings if and to the extent that, in the opinion of the Indemnified Party and its counsel, such action, suit or proceeding involves the potential imposition of criminal liability on the Indemnified Party, or there exists a conflict or adversity of interest between the Indemnified Party and the Indemnifying Party, in such event the Indemnifying Party shall pay the reasonable expenses of the Indemnified Party, and (ii) shall not settle or consent to the entry of any judgment in any action, suit or proceeding without the consent of the Indemnified Party, which shall not be unreasonably withheld, conditioned or delayed.

**18.2 Consequential Damages**. Other than the liquidated damages heretofore described in Article 5.3, in no event shall any Party be liable under any provision of this LGIA for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to another Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

**18.3 Insurance**. Each Party shall, at its own expense, maintain in force throughout the period of this LGIA, and until released by the other Parties, the following minimum insurance coverages, with insurers rated no less than A- (with a minimum size rating of VII) by Bests' Insurance Guide and Key Ratings and authorized to do business in the state where the Point of Interconnection is located, except in the case of the CAISO, the State of California:

**18.3.1** Workers' Compensation and Employers' Liability Insurance providing statutory benefits in accordance with the laws and regulations of the state in which the Point of Interconnection is located, except in the case of the CAISO, the State of California.

**18.3.2** Commercial General Liability Insurance including coverage for premises and operations, bodily injury (including death), personal injury, property damage, products and completed operations coverage, coverage for explosion, collapse and underground hazards, independent contractors coverage, and (i) liability of Participating TO and the Interconnection Customer that would be imposed without the LGIA, or (ii) liability assumed by the Participating TO and the Interconnection Customer in a contract or agreement that is an "insured contract" under commercial general liability insurance policy. Such insurance shall include no cross liability exclusions or separation of insured clause endorsement exclusions, with minimum limits of One Million Dollars ($1,000,000) per occurrence/One Million Dollars ($1,000,000) aggregate.

**18.3.3** Business Automobile Liability Insurance for coverage of owned and non-owned and hired vehicles, trailers or semi-trailers designed for travel on public roads, with a minimum, combined single limit of One Million Dollars ($1,000,000) per occurrence for bodily injury, including death, and property damage.

**18.3.4** Excess Liability Insurance over and above the Employer's Liability Commercial General Liability and Business Automobile Liability Insurance coverage, with a minimum limit of Twenty Million Dollars ($20,000,000) per occurrence/Twenty Million Dollars ($20,000,000) aggregate.

**18.3.5** The Commercial General Liability Insurance, Business Automobile Insurance and Excess Liability Insurance policies shall include the other Parties, their parents, their subsidiaries, respective directors, officers, agents, servants and employees ("Other Party Group") as additional insured. All policies shall contain provisions whereby the insurers waive all rights of subrogation in accordance with the provisions of this LGIA against the Other Party Group.

**18.3.6** The Commercial General Liability Insurance, Business Automobile Liability Insurance and Excess Liability Insurance policies shall contain provisions that specify that the policies are primary non-contributory. Each Party shall be responsible for its respective deductibles or self-insured retentions.

**18.3.7** The Commercial General Liability Insurance, Business Automobile Liability Insurance and Excess Liability Insurance policies, if written on a Claims First Made Basis, shall be maintained in full force and effect for two (2) years after termination of this LGIA, which coverage may be in the form of extended reporting period coverage if agreed by the Parties.

**18.3.8** [Not used.]

**18.3.9** Thirty (30) Calendar Days prior to the start of any work at the construction site related to Interconnection Facilities or Generating Facility under this LGIA, and as soon as practicable after the end of each fiscal year or at the renewal of the insurance policy and in any event within ninety (90) Calendar Days thereafter, the Participating TO and the Interconnection Customer shall provide a certificate of insurance for all insurance required in this LGIA, executed by each insurer or by an authorized representative of each insurer.

**18.3.10** Notwithstanding the foregoing, each Party may self-insure to meet the minimum insurance requirements of Articles 18.3.2 through 18.3.8 to the extent it maintains a self-insurance program; provided that, such Party's senior unsecured debt or issuer rating is BBB-, or better, as rated by Standard & Poor's and that its self-insurance program meets the minimum insurance requirements of Articles 18.3.2 through 18.3.8. For any period of time that a

Party's senior unsecured debt rating and issuer rating are both unrated by Standard & Poor's or are both rated at less than BBB- by Standard & Poor's, such Party shall comply with the insurance requirements applicable to it under Articles 18.3.2 through 18.3.9. In the event that a Party is permitted to self-insure pursuant to this Article 18.3.10, it shall notify the other Parties that it meets the requirements to self-insure and that its self-insurance program meets the minimum insurance requirements in a manner consistent with that specified in Article 18.3.9.

**18.3.11** The Parties agree to report to each other in writing as soon as practical all accidents or occurrences resulting in injuries to any person, including death, and any property damage greater than $25,000, including within the scope of coverage of such insurance whether or not such coverage is sought.

## ARTICLE 19. ASSIGNMENT

**19.1** **Assignment**. This LGIA may be assigned by a Party only with the written consent of the other Parties; provided that a Party may assign this LGIA without the consent of the other Parties to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this LGIA; and provided further that the Interconnection Customer shall have the right to assign this LGIA, without the consent of the CAISO or Participating TO, for collateral security purposes to aid in providing financing for the Large Generating Facility, provided that the Interconnection Customer will promptly notify the CAISO and Participating TO of any such assignment. Any financing arrangement entered into by the Interconnection Customer pursuant to this Article will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify the CAISO and Participating TO of the date and particulars of any such exercise of assignment right(s), including providing the CAISO and Participating TO with proof that it meets the requirements of Articles 11.5 and 18.3. Any attempted assignment that violates this Article is void and ineffective. Any assignment under this LGIA shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

## ARTICLE 20. SEVERABILITY

**20.1** **Severability**. If any provision in this LGIA is finally determined to be invalid, void or unenforceable by any court or other Governmental Authority having jurisdiction, such determination shall not invalidate, void or make unenforceable any other provision, agreement or covenant of this LGIA; provided that if the Interconnection Customer (or any third party, but only if such third party is not acting at the direction of the Participating TO or CAISO) seeks and obtains such a final determination with respect to any provision of the Alternate Option (Article 5.1.2), or the Negotiated Option (Article 5.1.4), then none of the provisions of Article 5.1.2 or 5.1.4 shall thereafter have any force or effect and the Parties' rights and obligations shall be governed solely by the Standard Option (Article 5.1.1).

## ARTICLE 21. COMPARABILITY

**21.1 Comparability**. The Parties will comply with all applicable comparability and code of conduct laws, rules and regulations, as amended from time to time.

## ARTICLE 22. CONFIDENTIALITY

**22.1 Confidentiality.** Confidential Information shall include, without limitation, all information relating to a Party's technology, research and development, business affairs, and pricing, and any information supplied by any of the Parties to the other Parties prior to the execution of this LGIA.

Information is Confidential Information only if it is clearly designated or marked in writing as confidential on the face of the document, or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Parties receiving the information that the information is confidential.

If requested by any Party, the other Parties shall provide in writing, the basis for asserting that the information referred to in this Article 22 warrants confidential treatment, and the requesting Party
may disclose such writing to the appropriate Governmental Authority. Each Party shall be responsible for the costs associated with affording confidential treatment to its information.

**22.1.1 Term**. During the term of this LGIA, and for a period of three (3) years after the expiration or termination of this LGIA, except as otherwise provided in this Article 22, each Party shall hold in confidence and shall not disclose to any person Confidential Information.

**22.1.2 Scope**. Confidential Information shall not include information that the receiving Party can demonstrate: (1) is generally available to the public other than as a result of a disclosure by the receiving Party; (2) was in the lawful possession of the receiving Party on a non-confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a third party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the disclosing Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the disclosing Party; (5) is, or becomes, publicly known, through no wrongful act or omission of the receiving Party or Breach of this LGIA; or (6) is required, in accordance with Article 22.1.7 of this LGIA, Order of Disclosure, to be disclosed by any Governmental Authority or is otherwise required to be disclosed by law or subpoena, or is necessary in any legal proceeding establishing rights and obligations under this LGIA. Information designated as Confidential Information will no longer be deemed confidential if the Party that designated the information as confidential notifies the other Parties that it no longer is confidential.

**22.1.3 Release of Confidential Information**. No Party shall release or disclose Confidential Information to any other person, except to its employees, consultants, Affiliates (limited by the Standards of Conduct requirements set forth in Part 358 of FERC's Regulations, 18 C.F.R. 358), subcontractors, or to parties who may be or considering providing financing to or equity participation with the Interconnection Customer, or to potential purchasers or assignees of the Interconnection Customer, on a need-to-know basis in connection with this LGIA, unless such person has first been advised of the confidentiality provisions of this Article 22 and has agreed to comply with such provisions. Notwithstanding the

foregoing, a Party providing Confidential Information to any person shall remain primarily responsible for any release of Confidential Information in contravention of this Article 22.

**22.1.4 Rights**. Each Party retains all rights, title, and interest in the Confidential Information that each Party discloses to the other Parties. The disclosure by each Party to the other Parties of Confidential Information shall not be deemed a waiver by a Party or any other person or entity of the right to protect the Confidential Information from public disclosure.

**22.1.5 No Warranties**. The mere fact that a Party has provided Confidential Information does not constitute a warranty or representation as to its accuracy or completeness. In addition, by supplying Confidential Information, no Party obligates itself to provide any particular information or Confidential Information to the other Parties nor to enter into any further agreements or proceed with any other relationship or joint venture.

**22.1.6 Standard of Care**. Each Party shall use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from unauthorized disclosure, publication or dissemination. Each Party may use Confidential Information solely to fulfill its obligations to the other Parties under this LGIA or its regulatory requirements.

**22.1.7 Order of Disclosure**. If a court or a Government Authority or entity with the right, power, and apparent authority to do so requests or requires any Party, by subpoena, oral
deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party shall provide the other Parties with prompt notice of such request(s) or requirement(s) so that the other Parties may seek an appropriate protective order or waive compliance with the terms of this LGIA. Notwithstanding the absence of a protective order or waiver, the Party may disclose such Confidential Information which, in the opinion of its counsel, the Party is legally compelled to disclose. Each Party will use Reasonable Efforts to obtain reliable assurance that confidential treatment will be accorded any Confidential Information so furnished.

**22.1.8 Termination of Agreement**. Upon termination of this LGIA for any reason, each Party shall, within ten (10) Calendar Days of receipt of a written request from another Party, use Reasonable Efforts to destroy, erase, or delete (with such destruction, erasure, and deletion certified in writing to the other Party) or return to the other Party, without retaining copies thereof, any and all written or electronic Confidential Information received from the other Party.

**22.1.9 Remedies**. The Parties agree that monetary damages would be inadequate to compensate a Party for another Party's Breach of its obligations under this Article 22. Each Party accordingly agrees that the other Parties shall be entitled to equitable relief, by way of injunction or otherwise, if the first Party Breaches or threatens to Breach its obligations under this Article 22, which equitable relief shall be granted without bond or proof of damages, and the receiving Party shall not plead in defense that there would be an adequate remedy at law. Such remedy shall not be deemed an exclusive remedy for the Breach of this Article 22, but shall be in addition to all other remedies available at law or in equity. The Parties further acknowledge and agree that the covenants contained herein are necessary for the protection of legitimate business interests and are reasonable in scope. No Party, however, shall be liable for indirect, incidental, or

consequential or punitive damages of any nature or kind resulting from or arising in connection with this Article 22.

**22.1.10 Disclosure to FERC, its Staff, or a State**. Notwithstanding anything in this Article 22 to the contrary, and pursuant to 18 C.F.R. section 1b.20, if FERC or its staff, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to this LGIA, the Party shall provide the requested information to FERC or its staff, within the time provided for in the request for information. In providing the information to FERC or its staff, the Party must, consistent with 18 C.F.R. section 388.112, request that the information be treated as confidential and non-public by FERC and its staff and that the information be withheld from public disclosure. Parties are prohibited from notifying the other Parties to this LGIA prior to the release of the Confidential Information to FERC or its staff. The Party shall notify the other Parties to the LGIA when it is notified by FERC or its staff that a request to release Confidential Information has been received by FERC, at which time any of the Parties may respond before such information would be made public, pursuant to 18 C.F.R. section 388.112. Requests from a state regulatory body conducting a confidential investigation shall be treated in a similar manner if consistent with the applicable state rules and regulations.

**22.1.11** Subject to the exception in Article 22.1.10, Confidential Information shall not be disclosed by the other Parties to any person not employed or retained by the other Parties, except to the extent disclosure is (i) required by law; (ii) reasonably deemed by the disclosing Party to be required to be disclosed in connection with a dispute between or among the Parties, or the defense of litigation or dispute; (iii) otherwise permitted by consent of the other Parties, such consent not to be unreasonably withheld; or (iv) necessary to fulfill its obligations under this LGIA or as a transmission service provider or a Balancing Authority including disclosing the Confidential Information to an RTO or ISO or to a regional or national reliability organization. The Party asserting confidentiality shall notify the other Parties in writing of the information it claims is confidential. Prior to any disclosures of another Party's Confidential Information under this subparagraph, or if any third party or Governmental Authority makes any request or demand for any of the information described in this subparagraph, the disclosing Party agrees to promptly notify the other Party in writing and agrees to assert confidentiality and cooperate with the other Party in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order or other reasonable measures.

## ARTICLE 23. ENVIRONMENTAL RELEASES

**23.1** Each Party shall notify the other Parties, first orally and then in writing, of the release of any Hazardous Substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Large Generating Facility or the Interconnection Facilities, each of which may reasonably be expected to affect the other Parties. The notifying Party shall: (i) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than twenty-four hours after such Party becomes aware of the occurrence; and (ii) promptly furnish to the other Parties copies of any publicly available reports filed with any Governmental Authorities addressing such events.

## ARTICLE 24. INFORMATION REQUIREMENTS

**24.1 Information Acquisition**. The Participating TO and the Interconnection Customer shall submit specific information regarding the electrical characteristics of their respective

facilities to each other as described below and in accordance with Applicable Reliability Standards.

**24.2 Information Submission by Participating TO**. The initial information submission by the Participating TO shall occur no later than one hundred eighty (180) Calendar Days prior to Trial Operation and shall include the Participating TO's Transmission System information necessary to allow the Interconnection Customer to select equipment and meet any system protection and stability requirements, unless otherwise agreed to by the Participating TO and the Interconnection Customer. On a monthly basis the Participating TO shall provide the Interconnection Customer and the CAISO a status report on the construction and installation of the Participating TO's Interconnection Facilities and Network Upgrades, including, but not limited to, the following information: (1) progress to date; (2) a description of the activities since the last report; (3) a description of the action items for the next period; and (4) the delivery status of equipment ordered.

**24.3 Updated Information Submission by Interconnection Customer**. The updated information submission by the Interconnection Customer, including manufacturer information, shall occur no later than one hundred eighty (180) Calendar Days prior to the Trial Operation. The Interconnection Customer shall submit a completed copy of the Electric Generating Unit data requirements contained in Appendix 1 to the LGIP. It shall also include any additional information provided to the Participating TO and the CAISO for the Interconnection Studies. Information in this submission shall be the most current Electric Generating Unit design or expected performance data. Information submitted for stability models shall be compatible with the Participating TO and CAISO standard models. If there is no compatible model, the Interconnection Customer will work with a consultant mutually agreed to by the Parties to develop and supply a standard model and associated information.

If the Interconnection Customer's data is materially different from what was originally provided to the Participating TO and the CAISO for the Interconnection Studies, then the Participating TO and the CAISO will conduct appropriate studies pursuant to the LGIP to determine the impact on the Participating TO's Transmission System and affected portions of the CAISO Controlled Grid based on the actual data submitted pursuant to this Article 24.3. The Interconnection Customer shall not begin Trial Operation until such studies are completed and all other requirements of this LGIA are satisfied.

**24.4 Information Supplementation**. Prior to the Trial Operation date, the Parties shall supplement their information submissions described above in this Article 24 with any and all "as-built" Electric Generating Unit information or "as-tested" performance information that differs from the initial submissions or, alternatively, written confirmation that no such differences exist. The Interconnection Customer shall conduct tests on the Electric Generating Unit as required by Good Utility Practice such as an open circuit "step voltage" test on the Electric Generating Unit to verify proper operation of the Electric Generating Unit's automatic voltage regulator.

Unless otherwise agreed, the test conditions shall include: (1) Electric Generating Unit at synchronous speed; (2) automatic voltage regulator on and in voltage control mode; and (3) a five percent (5 percent) change in Electric Generating Unit terminal voltage initiated by a change in the voltage regulators reference voltage. The Interconnection Customer shall provide validated test recordings showing the responses of Electric Generating Unit terminal and field voltages. In the event that direct recordings of these voltages is impractical, recordings of other voltages or currents that mirror the response of the Electric Generating Unit's terminal or field voltage are acceptable if information necessary to translate these alternate quantities to actual Electric Generating Unit terminal or field voltages is provided. Electric Generating Unit testing shall be conducted and results

provided to the Participating TO and the CAISO for each individual Electric Generating Unit in a station.

Subsequent to the Commercial Operation Date, the Interconnection Customer shall provide the Participating TO and the CAISO any information changes due to equipment replacement, repair, or adjustment. The Participating TO shall provide the Interconnection Customer any information changes due to equipment replacement, repair or adjustment in the directly connected substation or any adjacent Participating TO-owned substation that may affect the Interconnection Customer's Interconnection Facilities equipment ratings, protection or operating requirements. The Parties shall provide such information pursuant to Article 5.19.

## ARTICLE 25. INFORMATION ACCESS AND AUDIT RIGHTS

**25.1** **Information Access**. Each Party (the "disclosing Party") shall make available to the other Party information that is in the possession of the disclosing Party and is necessary in order for the other Party to: (i) verify the costs incurred by the disclosing Party for which the other Party is responsible under this LGIA; and (ii) carry out its obligations and responsibilities under this LGIA. The Parties shall not use such information for purposes other than those set forth in this Article 25.1 and to enforce their rights under this LGIA. Nothing in this Article 25 shall obligate the CAISO to make available to a Party any third party information in its possession or control if making such third party information available would violate a CAISO Tariff restriction on the use or disclosure of such third party information.

**25.2** **Reporting of Non-Force Majeure Events**. Each Party (the "notifying Party") shall notify the other Parties when the notifying Party becomes aware of its inability to comply with the provisions of this LGIA for a reason other than a Force Majeure event. The Parties agree to cooperate with each other and provide necessary information regarding such inability to comply, including the date, duration, reason for the inability to comply, and corrective actions taken or planned to be taken with respect to such inability to comply. Notwithstanding the foregoing, notification, cooperation or information provided under this Article shall not entitle the Party receiving such notification to allege a cause for anticipatory breach of this LGIA.

**25.3** **Audit Rights**. Subject to the requirements of confidentiality under Article 22 of this LGIA, the Parties' audit rights shall include audits of a Party's costs pertaining to such Party's performance or satisfaction of obligations owed to the other Party under this LGIA, calculation of invoiced amounts, the CAISO's efforts to allocate responsibility for the provision of reactive support to the CAISO Controlled Grid, the CAISO's efforts to allocate responsibility for interruption or reduction of generation on the CAISO Controlled Grid, and each such Party's actions in an Emergency Condition.

**25.3.1** The Interconnection Customer and the Participating TO shall each have the right, during normal business hours, and upon prior reasonable notice to the other Party, to audit at its own expense the other Party's accounts and records pertaining to either such Party's performance or either such Party's satisfaction of obligations owed to the other Party under this LGIA. Subject to Article 25.3.2, any audit authorized by this Article shall be performed at the offices where such accounts and records are maintained and shall be limited to those portions of such accounts and records that relate to each such Party's performance and satisfaction of obligations under this LGIA. Each such Party shall keep such accounts and records for a period equivalent to the audit rights periods described in Article 25.4.

**25.3.2** Notwithstanding anything to the contrary in Article 25.3, each Party's rights to audit the CAISO's accounts and records shall be as set forth in Section 22.1 of the CAISO Tariff.

**25.4 Audit Rights Periods.**

**25.4.1 Audit Rights Period for Construction-Related Accounts and Records**. Accounts and records related to the design, engineering, procurement, and construction of Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades constructed by the Participating TO shall be subject to audit for a period of twenty-four months following the Participating TO's issuance of a final invoice in accordance with Article 12.2. Accounts and records related to the design, engineering, procurement, and construction of Participating TO's Interconnection Facilities and/or Stand Alone Network Upgrades constructed by the Interconnection Customer shall be subject to audit and verification by the Participating TO and the CAISO for a period of twenty-four months following the Interconnection Customer's issuance of a final invoice in accordance with Article 5.2(8).

**25.4.2 Audit Rights Period for All Other Accounts and Records**. Accounts and records related to a Party's performance or satisfaction of all obligations under this LGIA other than those described in Article 25.4.1 shall be subject to audit as follows: (i) for an audit relating to cost obligations, the applicable audit rights period shall be twenty-four months after the auditing Party's receipt of an invoice giving rise to such cost obligations; and (ii) for an audit relating to all other obligations, the applicable audit rights period shall be twenty-four months after the event for which the audit is sought; provided that each Party's rights to audit the CAISO's accounts and records shall be as set forth in Section 22.1 of the CAISO Tariff.

**25.5 Audit Results**. If an audit by the Interconnection Customer or the Participating TO determines that an overpayment or an underpayment has occurred with respect to the other Party, a notice of such overpayment or underpayment shall be given to the other Party together with those records from the audit which supports such determination. The Party that is owed payment shall render an invoice to the other Party and such invoice shall be paid pursuant to Article 12 hereof.

**25.5.1** Notwithstanding anything to the contrary in Article 25.5, the Interconnection Customer's and Participating TO's rights to audit the CAISO's accounts and records shall be as set forth in Section 22.1 of the CAISO Tariff, and the CAISO's process for remedying an overpayment or underpayment shall be as set forth in the CAISO Tariff.

## ARTICLE 26. SUBCONTRACTORS

**26.1 General**. Nothing in this LGIA shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this LGIA; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this LGIA in providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

**26.2 Responsibility of Principal**. The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this LGIA. The hiring Party shall be fully responsible to the other Parties for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall the CAISO or Participating TO be liable for the actions or inactions of the

Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under Article 5 of this LGIA. Any applicable obligation imposed by this LGIA upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

**26.3 No Limitation by Insurance**. The obligations under this Article 26 will not be limited in any way by any limitation of subcontractor's insurance.

## ARTICLE 27. DISPUTES

All disputes arising out of or in connection with this LGIA whereby relief is sought by or from the CAISO shall be settled in accordance with the provisions of Article 13 of the CAISO Tariff, except that references to the CAISO Tariff in such Article 13 of the CAISO Tariff shall be read as references to this LGIA. Disputes arising out of or in connection with this LGIA not subject to provisions of Article 13 of the CAISO Tariff shall be resolved as follows:

**27.1 Submission**. In the event either Party has a dispute, or asserts a claim, that arises out of or in connection with this LGIA or its performance, such Party (the "disputing Party") shall provide the other Party with written notice of the dispute or claim ("Notice of Dispute"). Such dispute or claim shall be referred to a designated senior representative of each Party for resolution on an informal basis as promptly as practicable after receipt of the Notice of Dispute by the other Party. In the event the designated representatives are unable to resolve the claim or dispute through unassisted or assisted negotiations within thirty (30) Calendar Days of the other Party's receipt of the Notice of Dispute, such claim or dispute may, upon mutual agreement of the Parties, be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below. In the event the Parties do not agree to submit such claim or dispute to arbitration, each Party may exercise whatever rights and remedies it may have in equity or at law consistent with the terms of this LGIA.

**27.2 External Arbitration Procedures**. Any arbitration initiated under this LGIA shall be conducted before a single neutral arbitrator appointed by the Parties. If the Parties fail to agree upon a single arbitrator within ten (10) Calendar Days of the submission of the dispute to arbitration, each Party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty (20) Calendar Days select a third arbitrator to chair the arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the Parties an opportunity to be heard and, except as otherwise provided herein, shall conduct the arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("Arbitration Rules") and
any applicable FERC regulations; provided, however, in the event of a conflict between the Arbitration Rules and the terms of this Article 27, the terms of this Article 27 shall prevail.

**27.3 Arbitration Decisions.** Unless otherwise agreed by the Parties, the arbitrator(s) shall render a decision within ninety (90) Calendar Days of appointment and shall notify the Parties in writing of such decision and the reasons therefor. The arbitrator(s) shall be authorized only to interpret and apply the provisions of this LGIA and shall have no power to modify or change any provision of this Agreement in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in the Federal Arbitration Act or the Administrative

Dispute Resolution Act. The final decision of the arbitrator must also be filed with FERC if it affects jurisdictional rates, terms and conditions of service, Interconnection Facilities, or Network Upgrades.

**27.4 Costs.** Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable: (1) the cost of the arbitrator chosen by the Party to sit on the three member panel and one half of the cost of the third arbitrator chosen; or (2) one half the cost of the single arbitrator jointly chosen by the Parties.

## ARTICLE 28. REPRESENTATIONS, WARRANTIES AND COVENANTS

**28.1 General**. Each Party makes the following representations, warranties and covenants:

**28.1.1 Good Standing**. Such Party is duly organized, validly existing and in good standing under the laws of the state in which it is organized, formed, or incorporated, as applicable; that it is qualified to do business in the state or states in which the Large Generating Facility, Interconnection Facilities and Network Upgrades owned by such Party, as applicable, are located; and that it has the corporate power and authority to own its properties, to carry on its business as now being conducted and to enter into this LGIA and carry out the transactions contemplated hereby and perform and carry out all covenants and obligations on its part to be performed under and pursuant to this LGIA.

**28.1.2 Authority**. Such Party has the right, power and authority to enter into this LGIA, to become a Party hereto and to perform its obligations hereunder. This LGIA is a legal, valid and binding obligation of such Party, enforceable against such Party in accordance with its terms, except as the enforceability thereof may be limited by applicable bankruptcy, insolvency, reorganization or other similar laws affecting creditors' rights generally and by general equitable principles (regardless of whether enforceability is sought in a proceeding in equity or at law).

**28.1.3 No Conflict**. The execution, delivery and performance of this LGIA does not violate or conflict with the organizational or formation documents, or bylaws or operating agreement, of such Party, or any judgment, license, permit, order, material agreement or instrument applicable to or binding upon such Party or any of its assets.

**28.1.4 Consent and Approval**. Such Party has sought or obtained, or, in accordance with this LGIA will seek or obtain, each consent, approval, authorization, order, or acceptance by any Governmental Authority in connection with the execution, delivery and performance of this LGIA, and it will provide to any Governmental Authority notice of any actions under this LGIA that are required by Applicable Laws and Regulations.

## ARTICLE 29. [RESERVED]

## ARTICLE 30. MISCELLANEOUS

**30.1 Binding Effect**. This LGIA and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

**30.2 Conflicts**. In the event of a conflict between the body of this LGIA and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this LGIA shall prevail and be deemed the final intent of the Parties.

**30.3 Rules of Interpretation**. This LGIA, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this LGIA, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this LGIA), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any Applicable Laws and Regulations means such Applicable Laws and Regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article of this LGIA or such Appendix to this LGIA, or such Section to the LGIP or such Appendix to the LGIP, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this LGIA as a whole and not to any particular Article or other provision hereof or thereof; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".

**30.4 Entire Agreement**. This LGIA, including all Appendices and Schedules attached hereto, constitutes the entire agreement among the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between or among the Parties with respect to the subject matter of this LGIA. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this LGIA.

**30.5 No Third Party Beneficiaries.** This LGIA is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

**30.6 Waiver**. The failure of a Party to this LGIA to insist, on any occasion, upon strict performance of any provision of this LGIA will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this LGIA shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this LGIA. Termination or Default of this LGIA for any reason by the Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Participating TO. Any waiver of this LGIA shall, if requested, be provided in writing.

**30.7 Headings**. The descriptive headings of the various Articles of this LGIA have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this LGIA.

**30.8 Multiple Counterparts.** This LGIA may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

**30.9 Amendment.** The Parties may by mutual agreement amend this LGIA by a written instrument duly executed by all of the Parties. Such amendment shall become effective and a part of this LGIA upon satisfaction of all Applicable Laws and Regulations.

**30.10 Modification by the Parties**. The Parties may by mutual agreement amend the Appendices to this LGIA by a written instrument duly executed by all of the Parties. Such amendment shall become effective and a part of this LGIA upon satisfaction of all Applicable Laws and Regulations.

**30.11 Reservation of Rights**. The CAISO and Participating TO shall each have the right to make a unilateral filing with FERC to modify this LGIA pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following Articles of this LGIA and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these Articles:

> Recitals, 1, 2.1, 2.2, 2.3, 2.4, 2.6, 3.1, 3.3, 4.1, 4.2, 4.3, 4.4, 5 preamble, 5.4, 5.7, 5.8, 5.9, 5.12, 5.13, 5.18, 5.19.1, 7.1, 7.2, 8, 9.1, 9.2, 9.3, 9.5, 9.6, 9.7, 9.8, 9.10, 10.3, 11.4, 12.1, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24.3, 24.4, 25.1, 25.2, 25.3 (excluding subparts), 25.4.2, 26, 28, 29, 30, Appendix D, Appendix F, and any other Article not reserved exclusively to the Participating TO or the CAISO below.

The Participating TO shall have the exclusive right to make a unilateral filing with FERC to modify this LGIA pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following Articles of this LGIA and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these Articles:

> 2.5, 5.1, 5.2, 5.3, 5.5, 5.6, 5.10, 5.11, 5.14, 5.15, 5.16, 5.17, 5.19 (excluding 5.19.1), 6, 7.3, 9.4, 9.9, 10.1, 10.2, 10.4, 10.5, 11.1, 11.2, 11.3, 11.5, 12.2, 12.3, 12.4, 24.1, 24.2, 25.3.1, 25.4.1, 25.5 (excluding 25.5.1), 27 (excluding preamble), Appendix A, Appendix B, Appendix C, and Appendix E.

The CAISO shall have the exclusive right to make a unilateral filing with FERC to modify this LGIA pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following Articles of this LGIA and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these Articles:

> 3.2, 4.5, 11.6, 25.3.2, 25.5.1, and 27 preamble.

The Interconnection Customer, the CAISO, and the Participating TO shall have the right to make a unilateral filing with FERC to modify this LGIA pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this LGIA shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**30.12 No Partnership**. This LGIA shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership among the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act

on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

**30.13 Joint and Several Obligations**. Except as otherwise provided in this LGIA, the obligations of the CAISO, the Participating TO, and the Interconnection Customer are several, and are neither joint nor joint and several.

**IN WITNESS WHEREOF,** the Parties have executed this LGIA in multiple originals, each of which shall constitute and be an original effective agreement among the Parties.

**[Insert name of Participating TO]**

By: _____

Title: _____

Date:

**California Independent System Operator Corporation**

By: _____

Title: _____

Date:

**[Insert name of Interconnection Customer]**

By: _____

Title: _____

Date:

**Appendices to LGIA**

Appendix A Interconnection Facilities, Network Upgrades and Distribution Upgrades

Appendix B Milestones

Appendix C Interconnection Details

Appendix D Security Arrangements Details

Appendix E Commercial Operation Date

Appendix F Addresses for Delivery of Notices and Billings

Appendix G [Not Used]

Appendix H Interconnection Requirements for an Asynchronous Generating Facility

**Appendix A**
**To LGIA**

**Interconnection Facilities, Network Upgrades and Distribution Upgrades**

**1. Interconnection Facilities:**

**(a) [insert Interconnection Customer's Interconnection Facilities]:**

**(b) [insert Participating TO's Interconnection Facilities]:**

**2. Network Upgrades:**

**(a) [insert Stand Alone Network Upgrades]:**

**(b) [insert Other Network Upgrades]:**

**(i) [insert Participating TO's Reliability Network Upgrades]**

**(ii) [insert Participating TO's Delivery Network Upgrades]**

**3. Distribution Upgrades:**

**Appendix B**
**To LGIA**

**Milestones**

**Appendix C**
**To LGIA**

**Interconnection Details**

**Appendix D**
**To LGIA**

**Security Arrangements Details**

Infrastructure security of CAISO Controlled Grid equipment and operations and control hardware and software is essential to ensure day-to-day CAISO Controlled Grid reliability and operational security. FERC will expect the CAISO, all Participating TOs, market participants, and Interconnection Customers interconnected to the CAISO Controlled Grid to comply with Applicable Reliability Standards. All public utilities will be expected to meet basic standards for system infrastructure and operational security, including physical, operational, and cyber-security practices.

The Interconnection Customer shall meet the requirements for security implemented pursuant to the CAISO Tariff, including the CAISO's standards for information security posted on the CAISO's internet web site at the following internet address: http://www.caiso.com/pubinfo/info-security/index.html.

**Appendix E**
**To LGIA**

**Commercial Operation Date**

This Appendix E is a part of the LGIA.

**[Date]**

**[CAISO Address]**

**[Participating TO Address]**

Re: _____ Electric Generating Unit

Dear _____:

On **[Date] [Interconnection Customer]** has completed Trial Operation of Unit No. ___. This letter confirms that [Interconnection Customer] commenced Commercial Operation of Unit No. ___ at the Electric Generating Unit, effective as of **[Date plus one day]**.

Thank you.

**[Signature]**

**[Interconnection Customer Representative]**

**Appendix F**
**To LGIA**

**Addresses for Delivery of Notices and Billings**

**Notices:**.

CAISO:

[To be supplied.]

Participating TO:

[To be supplied.]

Interconnection Customer:

[To be supplied.]

**Billings and Payments:**

Participating TO:

[To be supplied.]

Interconnection Customer:

[To be supplied.]

CAISO:

[To be supplied.]

**Alternative Forms of Delivery of Notices (telephone, facsimile or e-mail):**

CAISO:

[To be supplied.]

Participating TO:

[To be supplied.]

Interconnection Customer:

[To be supplied.]

**Appendix G**

**[Not Used]**

**Appendix H**
**To LGIA**

## INTERCONNECTION REQUIREMENTS FOR AN ASYNCHRONOUS GENERATING FACILITY

Appendix H sets forth interconnection requirements specific to all Asynchronous Generating Facilities. Existing individual generating units of an Asynchronous Generating Facility that are, or have been, interconnected to the CAISO Controlled Grid at the same location are exempt from the requirements of this Appendix H for the remaining life of the existing generating unit. Generating units that are replaced, however, shall meet the requirements of this Appendix H.

### A. Technical Requirements Applicable to Asynchronous Generating Facilities

#### i. Low Voltage Ride-Through (LVRT) Capability

An Asynchronous Generating Facility shall be able to remain online during voltage disturbances up to the time periods and associated voltage levels set forth in the requirements below.

1. An Asynchronous Generating Facility shall remain online for the voltage disturbance caused by any fault on the transmission grid, or within the Asynchronous Generating Facility between the Point of Interconnection and the high voltage terminals of the Asynchronous Generating Facility's step up transformer, having a duration equal to the lesser of the normal three-phase fault clearing time (4-9 cycles) or one-hundred fifty (150) milliseconds, plus any subsequent post-fault voltage recovery to the final steady-state post-fault voltage unless clearing the fault effectively disconnects the generator from the system. Clearing time shall be based on the maximum normal clearing time associated with any three-phase fault location that reduces the voltage at the Asynchronous Generating Facility's Point of Interconnection to 0.2 per-unit of nominal voltage or less, independent of any fault current contribution from the Asynchronous Generating Facility.

2. An Asynchronous Generating Facility shall remain online for any voltage disturbance caused by a single-phase fault on the transmission grid, or within the Asynchronous Generating Facility between the Point of Interconnection and the high voltage terminals of the Asynchronous Generating Facility's step up transformer, with delayed clearing, plus any subsequent post-fault voltage recovery to the final steady-state post-fault voltage unless clearing the fault effectively disconnects the generator from the system. Clearing time shall be based on the maximum backup clearing time associated with a single point of failure (protection or breaker failure) for any single-phase fault location that reduces any phase-to-ground or phase-to-phase voltage at the Asynchronous Generating Facility's Point of Interconnection to 0.2 per-unit of nominal voltage or less, independent of any fault current contribution from the Asynchronous Generating Facility.

3. Remaining on-line shall be defined as continuous connection between the Point of Interconnection and the Asynchronous Generating Facility's units, without any mechanical isolation. Asynchronous Generating Facilities may cease to inject current into the transmission grid during a fault.

4. The Asynchronous Generating Facility is not required to remain on line during multi-phased faults exceeding the duration described in Section A.i.1 of this Appendix H or single-phase faults exceeding the duration described in Section A.i.2 of this Appendix H.

5. The requirements of this Section A.i of this Appendix H do not apply to faults that occur between the Asynchronous Generating Facility's terminals and the high side of the step-up transformer to the high-voltage transmission system.

6. Asynchronous Generating Facilities may be tripped after the fault period if this action is intended as part of a Remedial Action Scheme.

7. Asynchronous Generating Facilities may meet the requirements of this Section A.i of this Appendix H through the performance of the generating units or by installing additional equipment within the Asynchronous Generating Facility, or by a combination of generating unit performance and additional equipment.

8. The provisions of this Section A.i of this Appendix H apply only if the voltage at the Point of Interconnection has remained within the range of 0.9 and 1.10 per-unit of nominal voltage for the preceding two seconds, excluding any sub-cycle transient deviations.

The requirements of this Section A.i in this Appendix H shall not apply to any Asynchronous Generating Facility that can demonstrate to the CAISO a binding commitment, as of July 3, 2010, to purchase inverters for thirty (30) percent or more of the Generating Facility's maximum Generating Facility Capacity that are incapable of complying with the requirements of this Section A.i in this Appendix H. The Interconnection Customer must include a statement from the inverter manufacturer confirming the inability to comply with this requirement in addition to any information requested by the CAISO to determine the applicability of this exemption.

**ii. Frequency Disturbance Ride-Through Capability**

An Asynchronous Generating Facility shall comply with the off nominal frequency requirements set forth in the WECC Under Frequency Load Shedding Relay Application Guide or successor requirements as they may be amended from time to time.

**iii. Power Factor Design Criteria (Reactive Power)**

An Asynchronous Generating Facility shall operate within a power factor within the range of 0.95 leading to 0.95 lagging, measured at the Point of Interconnection as defined in this LGIA in order to maintain a specified voltage schedule, if the Phase II Interconnection Study shows that such a requirement is necessary to ensure safety or reliability. The power factor range standard can be met by using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors, or a combination of the two, if agreed to by the Participating TO and CAISO. The Interconnection Customer shall not disable power factor equipment while the Asynchronous Generating Facility is in operation. Asynchronous Generating Facilities shall also be able to provide sufficient dynamic voltage support in lieu of the power system stabilizer and automatic voltage regulation at the generator excitation system if the Phase II Interconnection Study shows this to be required for system safety or reliability.

**iv. Supervisory Control and Data Acquisition (SCADA) Capability**

An Asynchronous Generating Facility shall provide SCADA capability to transmit data and receive instructions from the Participating TO and CAISO to protect system reliability. The Participating TO and CAISO and the Asynchronous Generating Facility Interconnection Customer shall determine what SCADA information is essential for the proposed Asynchronous Generating Facility, taking into account the size of the plant and its characteristics, location, and importance in maintaining generation resource adequacy and transmission system reliability.

**v. Power System Stabilizers (PSS)**

Power system stabilizers are not required for Asynchronous Generating Facilities.

# CAISO TARIFF APPENDIX CC

## Large Generator Interconnection Agreement
## for Interconnection Requests in a Queue Cluster Window
## that are tendered a Large Generator Interconnection Agreement on or after May 15, 2018

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**LARGE GENERATOR INTERCONNECTION AGREEMENT**

**[INTERCONNECTION CUSTOMER]**

**[PARTICIPATING TO]**

**CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

**THIS LARGE GENERATOR INTERCONNECTION AGREEMENT** ("LGIA") is made and entered into this ____ day of _____ 20___, by and among _____, a _____ organized and existing under the laws of the State/Commonwealth of _____ ("Interconnection Customer" with a Large Generating Facility), _____, a corporation organized and existing under the laws of the State of California ("**Participating TO**"), and **California Independent System Operator Corporation**, a California nonprofit public benefit corporation organized and existing under the laws of the State of California ("CAISO"). Interconnection Customer, Participating TO, and CAISO each may be referred to as a "Party" or collectively as the "Parties."

**RECITALS**

**WHEREAS,** CAISO exercises Operational Control over the CAISO Controlled Grid; and

**WHEREAS,** the Participating TO owns, operates, and maintains the Participating TO's Transmission System; and

**WHEREAS,** Interconnection Customer intends to own, lease and/or control and operate the Generating Facility identified as a Large Generating Facility in Appendix C to this LGIA; and

**WHEREAS,** Interconnection Customer, Participating TO, and CAISO have agreed to enter into this LGIA for the purpose of interconnecting the Large Generating Facility with the Participating TO's Transmission System;

**NOW, THEREFORE,** in consideration of and subject to the mutual covenants contained herein, it is agreed:

When used in this LGIA, terms with initial capitalization that are not defined in Article 1 shall have the meanings specified in the Article in which they are used.

**ARTICLE 1. DEFINITIONS**

**Adverse System Impact** shall mean the negative effects due to technical or operational limits on conductors or equipment being exceeded that may compromise the safety and reliability of the electric system.

**Affected System** shall mean an electric system other than the CAISO Controlled Grid that may be affected by the proposed interconnection, including the Participating TO's electric system that is not part of the CAISO Controlled Grid.

**Affiliate** shall mean, with respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

**Applicable Laws and Regulations** shall mean all duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or

judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.

**Applicable Reliability Council** shall mean the Western Electricity Coordinating Council or its successor.

**Applicable Reliability Standards** shall mean the requirements and guidelines of NERC, the Applicable Reliability Council, and the Balancing Authority Area of the Participating TO's Transmission System to which the Generating Facility is directly connected, including requirements adopted pursuant to Section 215 of the Federal Power Act.

**Asynchronous Generating Facility** shall mean an induction, doubly-fed, or electronic power generating unit(s) that produces 60 Hz (nominal) alternating current.

**Balancing Authority** shall mean the responsible entity that integrates resource plans ahead of time, maintains load-interchange-generation balance within a Balancing Authority Area, and supports Interconnection frequency in real time.

**Balancing Authority Area** shall mean the collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.

**Base Case** shall mean the base case power flow, short circuit, and stability data bases used for the Interconnection Studies.

**Breach** shall mean the failure of a Party to perform or observe any material term or condition of this LGIA.

**Breaching Party** shall mean a Party that is in Breach of this LGIA.

**Business Day** shall mean Monday through Friday, excluding federal holidays and the day after Thanksgiving Day.

**CAISO Controlled Grid** shall mean the system of transmission lines and associated facilities of the parties to the Transmission Control Agreement that have been placed under the CAISO's Operational Control.

**CAISO Tariff** shall mean the CAISO's tariff, as filed with FERC, and as amended or supplemented from time to time, or any successor tariff.

**Calendar Day** shall mean any day including Saturday, Sunday or a federal holiday.

**Commercial Operation** shall mean the status of an Electric Generating Unit or project phase at a Generating Facility that has commenced generating electricity for sale, excluding electricity generated during Trial Operation.

**Commercial Operation Date** of an Electric Generating Unit or project phase shall mean the date on which the Electric Generating Unit or project phase at the Generating Facility commences Commercial Operation as agreed to by the applicable Participating TO, the CAISO, and the Interconnection Customer pursuant to Appendix E to this LGIA, and in accordance with the implementation plan agreed to by the Participating TO and the CAISO for multiple individual Electric Generating Units or project phases at a Generating Facility where an Interconnection Customer intends to establish separate Commercial Operation Dates for those Electric Generating Units or project phases.

**Confidential Information** shall mean any confidential, proprietary or trade secret information of a plan, specification, pattern, procedure, design, device, list, concept, policy or compilation relating to the present or planned business of a Party, which is designated as confidential by the Party supplying the information, whether conveyed orally, electronically, in writing, through inspection, or otherwise, subject to Article 22.1.2.

**Default** shall mean the failure of a Breaching Party to cure its Breach in accordance with Article 17 of this LGIA.

**Distribution System** shall mean those non-CAISO-controlled transmission and distribution facilities owned by the Participating TO.

**Distribution Upgrades** shall mean the additions, modifications, and upgrades to the Participating TO's Distribution System. Distribution Upgrades do not include Interconnection Facilities.

**Effective Date** shall mean the date on which this LGIA becomes effective upon execution by all Parties subject to acceptance by FERC, or if filed unexecuted, upon the date specified by FERC.

**Electric Generating Unit** shall mean an individual electric generator and its associated plant and apparatus whose electrical output is capable of being separately identified and metered.

**Emergency Condition** shall mean a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (2) that, in the case of the CAISO, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the CAISO Controlled Grid or the electric systems of others to which the CAISO Controlled Grid is directly connected; (3) that, in the case of the Participating TO, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Participating TO's Transmission System, Participating TO's Interconnection Facilities, Distribution System, or the electric systems of others to which the Participating TO's electric system is directly connected; or (4) that, in the case of the Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Generating Facility or Interconnection Customer's Interconnection Facilities. System restoration and black start shall be considered Emergency Conditions; provided, that Interconnection Customer is not obligated by this LGIA to possess black start capability.

**Environmental Law** shall mean Applicable Laws or Regulations relating to pollution or protection of the environment or natural resources.

**Federal Power Act** shall mean the Federal Power Act, as amended, 16 U.S.C. §§ 791a et seq.

**FERC** shall mean the Federal Energy Regulatory Commission or its successor.

**Force Majeure** shall mean any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure event does not include acts of negligence or intentional wrongdoing by the Party claiming Force Majeure.

**Generating Facility** shall mean the Interconnection Customer's Electric Generating Unit(s) used for the production of electricity identified in the Interconnection Customer's

Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

**Generating Facility Capacity** shall mean the net capacity of the Generating Facility and the aggregate net capacity of the Generating Facility where it includes multiple energy production devices.

**Generator Interconnection Procedures (GIP)** shall mean the CAISO protocol that sets forth the interconnection procedures applicable to an Interconnection Request pertaining to a Large Generating Facility that is included in CAISO Tariff Appendix Y.

**Generator Interconnection Study Process Agreement** shall mean the agreement between the Interconnection Customer and the CAISO for the conduct of the Interconnection Studies.

**Good Utility Practice** shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be any one of a number of the optimum practices, methods, or acts to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

**Governing Independent Study Process Interconnection Studies** shall mean the engineering study(ies) conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), that evaluates the impact of the proposed interconnection on the safety and reliability of the Participating TO's Transmission System and, if applicable, an Affected System, which shall consist primarily of a Facilities Study as described in Section 4.5 of the Generation Interconnection Procedures or a System Impact Study as described in Section 4.4 of the Generation Interconnection Procedures.

**Governmental Authority** shall mean any federal, state, local or other governmental, regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the Interconnection Customer, CAISO, Participating TO, or any Affiliate thereof.

**Hazardous Substances** shall mean any chemicals, materials or substances defined as or included in the definition of "hazardous substances," "hazardous wastes," "hazardous materials," "hazardous constituents," "restricted hazardous materials," "extremely hazardous substances," "toxic substances," "radioactive substances," "contaminants," "pollutants," "toxic pollutants" or words of similar meaning and regulatory effect under any applicable Environmental Law, or any other chemical, material or substance, exposure to which is prohibited, limited or regulated by any applicable Environmental Law.

**Initial Synchronization Date** shall mean the date upon which an Electric Generating Unit is initially synchronized and upon which Trial Operation begins.

**In-Service Date** shall mean the date upon which the Interconnection Customer reasonably expects it will be ready to begin use of the Participating TO's Interconnection Facilities to obtain back feed power.

**Interconnection Customer's Interconnection Facilities** shall mean all facilities and equipment, as identified in Appendix A of this LGIA, that are located between the Generating Facility and the Point of Change of Ownership, including any modification, addition, or upgrades to such facilities and equipment necessary to physically and electrically interconnect the Generating Facility to the Participating TO's Transmission System. Interconnection Customer's Interconnection Facilities are sole use facilities.

**Interconnection Facilities** shall mean the Participating TO's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Generating Facility to the Participating TO's Transmission System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

**Interconnection Financial Security** shall mean any of the financial instruments listed in Section 9.1 of the GIP that are posted by an Interconnection Customer.

**Interconnection Handbook** shall mean a handbook, developed by the Participating TO and posted on the Participating TO's web site or otherwise made available by the Participating TO, describing technical and operational requirements for wholesale generators and loads connected to the Participating TO's portion of the CAISO Controlled Grid, as such handbook may be modified or superseded from time to time. Participating TO's standards contained in the Interconnection Handbook shall be deemed consistent with Good Utility Practice and Applicable Reliability Standards. In the event of a conflict between the terms of this LGIA and the terms of the Participating TO's Interconnection Handbook, the terms in this LGIA shall apply.

**Interconnection Request** shall mean a request, in the form of Appendix 1 to the Generator Interconnection Procedures, in accordance with the CAISO Tariff.

**Interconnection Service** shall mean the service provided by the Participating TO and CAISO associated with interconnecting the Interconnection Customer's Generating Facility to the Participating TO's Transmission System and enabling the CAISO Controlled Grid to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of this LGIA, the Participating TO's Transmission Owner Tariff, and the CAISO Tariff.

**Interconnection Study** shall mean

(i) For Interconnection Requests processed under the cluster study process described in the Generator Interconnection Procedures, either of the following studies: the Phase I Interconnection Study or the Phase II Interconnection Study conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), pursuant to the Generator Interconnection Procedures;

(ii) For Interconnection Requests processed under the Independent Study Process described in the Generator Interconnection Procedures, the governing study(ies) conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), pursuant to the Generator Interconnection Procedures, which shall consist primarily of a facilities study as described in Section 4.5 of the GIP or a system impact study as described in Section 4.4 of the GIP.

**IRS** shall mean the Internal Revenue Service.

**Large Generating Facility** shall mean a Generating Facility having a Generating Facility Capacity of more than 20 MW.

**Loss** shall mean any and all damages, losses, and claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties.

**Material Modification** shall mean those modifications that have a material impact on the cost or timing of any Interconnection Request or any other valid interconnection request with a later queue priority date.

**Metering Equipment** shall mean all metering equipment installed or to be installed for measuring the output of the Generating Facility pursuant to this LGIA at the metering points, including but not limited to instrument transformers, MWh-meters, data acquisition equipment, transducers, remote terminal unit, communications equipment, phone lines, and fiber optics.

**NERC** shall mean the North American Electric Reliability Corporation or its successor organization.

**Net Scheduled Generating Unit** shall mean an Electric Generating Unit identified in a Net Scheduled PGA operated as a single unit such that the energy bid or self-schedule with the CAISO is the net value of the aggregate electrical net output of the Electric Generating Unit and the self-provided load.

**Net Scheduled PGA** shall mean a Net Scheduled Participating Generator Agreement specifying the special provisions for the operating relationship between a Net Scheduled Generating Unit and the CAISO, a pro forma version of which is set forth in Appendix B.3 of the CAISO Tariff.

**Network Upgrades** shall be Participating TO's Delivery Network Upgrades and Participating TO's Reliability Network Upgrades.

**Operational Control** shall mean the rights of the CAISO under the Transmission Control Agreement and the CAISO Tariff to direct the parties to the Transmission Control Agreement how to operate their transmission lines and facilities and other electric plant affecting the reliability of those lines and facilities for the purpose of affording comparable non-discriminatory transmission access and meeting applicable reliability criteria.

**Participating TO's Delivery Network Upgrades** shall mean the additions, modifications, and upgrades to the Participating TO's Transmission System at or beyond the Point of Interconnection, other than Reliability Network Upgrades, identified in the Interconnection Studies, as identified in Appendix A, to relieve constraints on the CAISO Controlled Grid.

**Participating TO's Interconnection Facilities** shall mean all facilities and equipment owned, controlled or operated by the Participating TO from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to this LGIA, including any modifications, additions or upgrades to such facilities and equipment. Participating TO's Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

**Participating TO's Reliability Network Upgrades** shall mean the additions, modifications, and upgrades to the Participating TO's Transmission System at or beyond the Point of Interconnection, identified in the Interconnection Studies, as identified in Appendix A, necessary to interconnect the Large Generating Facility safely and reliably to the Participating TO's Transmission System, which would not have been necessary but for the interconnection of the Large Generating Facility, including additions, modifications, and upgrades necessary to remedy short circuit or stability problems resulting from the interconnection of the Large Generating Facility to the Participating TO's Transmission System. Participating TO's Reliability Network Upgrades also include, consistent with Applicable Reliability Standards and Applicable

Reliability Council practice, the Participating TO's facilities necessary to mitigate any adverse impact the Large Generating Facility's interconnection may have on a path's Applicable Reliability Council rating. Participating TO's Reliability Network Upgrades do not include any Participating TO's Delivery Network Upgrades.

**Participating TO's Transmission System** shall mean the facilities owned and operated by the Participating TO and that have been placed under the CAISO's Operational Control, which facilities form part of the CAISO Controlled Grid.

**Party or Parties** shall mean the Participating TO, CAISO, Interconnection Customer or the applicable combination of the above.

**Phased Generating Facility** shall mean a Generating Facility that is structured to be completed and to achieve Commercial Operation in two or more successive sequences that are specified in this LGIA, such that each sequence comprises a portion of the total megawatt generation capacity of the entire Generating Facility.

**Phase I Interconnection Study** shall mean the engineering study conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), that evaluates the impact of the proposed interconnection on the safety and reliability of the Participating TO's Transmission System and, if applicable, an Affected System. The study shall identify and detail the system impacts that would result if the Generating Facility(ies) were interconnected without identified project modifications or system modifications, as provided in the On-Peak Deliverability Assessment (as defined in the CAISO Tariff), and other potential impacts, including but not limited to those identified in the Scoping Meeting as described in the Generator Interconnection Procedures. The study will also identify the approximate total costs, based on per unit costs, of mitigating these impacts, along with an equitable allocation of those costs to Interconnection Customers for their individual Generating Facilities.

**Phase II Interconnection Study** shall mean an engineering and operational study conducted or caused to be performed by the CAISO once per calendar year, in coordination with the applicable Participating TO(s), to determine the Point of Interconnection and a list of facilities (including the Participating TO's Interconnection Facilities, Network Upgrades, Distribution Upgrades, and Stand Alone Network Upgrades), the cost of those facilities, and the time required to interconnect the Generating Facility(ies) with the Participating TO's Transmission System.

**Point of Change of Ownership** shall mean the point, as set forth in Appendix A to this LGIA, where the Interconnection Customer's Interconnection Facilities connect to the Participating TO's Interconnection Facilities.

**Point of Interconnection** shall mean the point, as set forth in Appendix A to this LGIA, where the Interconnection Facilities connect to the Participating TO's Transmission System.

**Reasonable Efforts** shall mean, with respect to an action required to be attempted or taken by a Party under this LGIA, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

**Scoping Meeting** shall mean the meeting among representatives of the Interconnection Customer, the Participating TO(s), other Affected Systems, and the CAISO conducted for the purpose of discussing alternative interconnection options, to exchange information including any transmission data and earlier study evaluations that would be reasonably expected to impact such interconnection options, to analyze such information, and to determine the potential feasible Points of Interconnection.

**Stand Alone Network Upgrades** shall mean Network Upgrades that the Interconnection Customer may construct without affecting day-to-day operations of the CAISO Controlled Grid or

Affected Systems during their construction. The Participating TO, the CAISO, and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to this LGIA.

**System Protection Facilities** shall mean the equipment, including necessary protection signal communications equipment, that protects (1) the Participating TO's Transmission System, Participating TO's Interconnection Facilities, CAISO Controlled Grid, and Affected Systems from faults or other electrical disturbances occurring at the Generating Facility and (2) the Generating Facility from faults or other electrical system disturbances occurring on the CAISO Controlled Grid, Participating TO's Interconnection Facilities, and Affected Systems or on other delivery systems or other generating systems to which the CAISO Controlled Grid is directly connected.

**Transmission Control Agreement** shall mean CAISO FERC Electric Tariff No. 7.

**Trial Operation** shall mean the period during which the Interconnection Customer is engaged in on-site test operations and commissioning of an Electric Generating Unit prior to Commercial Operation.

## ARTICLE 2. EFFECTIVE DATE, TERM AND TERMINATION

**2.1 Effective Date.** This LGIA shall become effective upon execution by all Parties subject to acceptance by FERC (if applicable), or if filed unexecuted, upon the date specified by FERC. The CAISO and Participating TO shall promptly file this LGIA with FERC upon execution in accordance with Article 3.1, if required.

**2.2 Term of Agreement.** Subject to the provisions of Article 2.3, this LGIA shall remain in effect for a period of ____ years from the Effective Date (Term Specified in Individual Agreements to be ten (10) years or such other longer period as the Interconnection Customer may request) and shall be automatically renewed for each successive one-year period thereafter.

**2.3 Termination Procedures.**

**2.3.1 Written Notice.** This LGIA may be terminated by the Interconnection Customer after giving the CAISO and the Participating TO ninety (90) Calendar Days advance written notice, or by the CAISO and the Participating TO notifying FERC after the Generating Facility permanently ceases Commercial Operation.

**2.3.2 Default.** A Party may terminate this LGIA in accordance with Article 17.

**2.3.3 Suspension of Work.** This LGIA may be deemed terminated in accordance with Article 5.16.

**2.3.4** Notwithstanding Articles 2.3.1, 2.3.2, and 2.3.3, no termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination, including the filing with FERC of a notice of termination of this LGIA (if applicable), which notice has been accepted for filing by FERC, and the Interconnection Customer has fulfilled its termination cost obligations under Article 2.4.

**2.4 Termination Costs.** Immediately upon the other Parties' receipt of a notice of the termination of this LGIA pursuant to Article 2.3 above, the CAISO and the Participating TO will determine the total cost responsibility of the Interconnection Customer. If, as of the date of the other Parties' receipt of the notice of termination, the Interconnection Customer has not already paid its share of Network Upgrade costs, as set forth in Appendix G to this LGIA, the Participating TO will liquidate the Interconnection

Customer's Interconnection Financial Security associated with its cost responsibility for Network Upgrades, in accordance with Section 9.4 of the GIP.

The Interconnection Customer will also be responsible for all costs incurred or irrevocably committed to be incurred in association with the construction of the Participating TO's Interconnection Facilities (including any cancellation costs relating to orders or contracts for Interconnection Facilities and equipment) and other such expenses, including any Distribution Upgrades for which the Participating TO or CAISO has incurred expenses or has irrevocably committed to incur expenses and has not been reimbursed by the Interconnection Customer, as of the date of the other Parties' receipt of the notice of termination, subject to the limitations set forth in this Article 2.4. Nothing in this Article 2.4 shall limit the Parties' rights under Article 17. If, as of the date of the other Parties' receipt of the notice of termination, the Interconnection Customer has not already reimbursed the Participating TO and the CAISO for costs incurred to construct the Participating TO's Interconnection Facilities, the Participating TO will liquidate the Interconnection Customer's Interconnection Financial Security associated with the construction of the Participating TO's Interconnection Facilities, in accordance with Section 9.4 of the GIP. If the amount of the Interconnection Financial Security liquidated by the Participating TO under this Article 2.4 is insufficient to compensate the CAISO and the Participating TO for actual costs associated with the construction of the Participating TO's Interconnection Facilities contemplated in this Article, any additional amounts will be the responsibility of the Interconnection Customer, subject to the provisions of Section 9.4 of the GIP. Any such additional amounts due from the Interconnection Customer beyond the amounts covered by its Interconnection Financial Security will be due to the Participating TO immediately upon termination of this LGIA in accordance with Section 9.4 of the GIP.

If the amount of the Interconnection Financial Security exceeds the Interconnection Customer's cost responsibility under Section 9.4 of the GIP, any excess amount will be released to the Interconnection Customer in accordance with Section 9.4 of the GIP.

**2.4.1** Notwithstanding the foregoing, in the event of termination by a Party, all Parties shall use commercially Reasonable Efforts to mitigate the costs, damages and charges arising as a consequence of termination. With respect to any portion of the Participating TO's Interconnection Facilities that have not yet been constructed or installed, the Participating TO shall to the extent possible and with the Interconnection Customer's authorization cancel any pending orders of, or return, any materials or equipment for, or contracts for construction of, such facilities; provided that in the event the Interconnection Customer elects not to authorize such cancellation, the Interconnection Customer shall assume all payment obligations with respect to such materials, equipment, and contracts, and the Participating TO shall deliver such material and equipment, and, if necessary, assign such contracts, to the Interconnection Customer as soon as practicable, at the Interconnection Customer's expense. To the extent that the Interconnection Customer has already paid the Participating TO for any or all such costs of materials or equipment not taken by the Interconnection Customer, the Participating TO shall promptly refund such amounts to the Interconnection Customer, less any costs, including penalties, incurred by the Participating TO to cancel any pending orders of or return such materials, equipment, or contracts.

**2.4.2** The Participating TO may, at its option, retain any portion of such materials, equipment, or facilities that the Interconnection Customer chooses not to accept delivery of, in which case the Participating TO shall be responsible for all costs associated with procuring such materials, equipment, or facilities.

**2.4.3** With respect to any portion of the Interconnection Facilities, and any other facilities already installed or constructed pursuant to the terms of this LGIA, Interconnection Customer shall be responsible for all costs associated with the removal, relocation or other disposition or retirement of such materials, equipment, or facilities.

**2.5 Disconnection.** Upon termination of this LGIA, the Parties will take all appropriate steps to disconnect the Large Generating Facility from the Participating TO's Transmission System. All costs required to effectuate such disconnection shall be borne by the terminating Party, unless such termination resulted from the non-terminating Party's Default of this LGIA or such non-terminating Party otherwise is responsible for these costs under this LGIA.

**2.6 Survival.** This LGIA shall continue in effect after termination to the extent necessary to provide for final billings and payments and for costs incurred hereunder, including billings and payments pursuant to this LGIA; to permit the determination and enforcement of liability and indemnification obligations arising from acts or events that occurred while this LGIA was in effect; and to permit each Party to have access to the lands of the other Parties pursuant to this LGIA or other applicable agreements, to disconnect, remove or salvage its own facilities and equipment.

## ARTICLE 3. REGULATORY FILINGS AND CAISO TARIFF COMPLIANCE

**3.1 Filing.** The Participating TO and the CAISO shall file this LGIA (and any amendment hereto) with the appropriate Governmental Authority(ies), if required. The Interconnection Customer may request that any information so provided be subject to the confidentiality provisions of Article 22. If the Interconnection Customer has executed this LGIA, or any amendment thereto, the Interconnection Customer shall reasonably cooperate with the Participating TO and CAISO with respect to such filing and to provide any information reasonably requested by the Participating TO or CAISO needed to comply with applicable regulatory requirements.

**3.2 Agreement Subject to CAISO Tariff.** The Interconnection Customer will comply with all applicable provisions of the CAISO Tariff, including the GIP.

**3.3 Relationship Between this LGIA and the CAISO Tariff.** With regard to rights and obligations between the Participating TO and the Interconnection Customer, if and to the extent a matter is specifically addressed by a provision of this LGIA (including any appendices, schedules or other attachments to this LGIA), the provisions of this LGIA shall govern. If and to the extent a provision of this LGIA is inconsistent with the CAISO Tariff and dictates rights and obligations between the CAISO and the Participating TO or the CAISO and the Interconnection Customer, the CAISO Tariff shall govern.

**3.4 Relationship Between this LGIA and the Net Scheduled PGA.** With regard to the rights and obligations of a Net Scheduled Generating Unit that has entered into a Net Scheduled PGA with the CAISO and has entered into this LGIA, if and to the extent a matter is specifically addressed by a provision of the Net Scheduled PGA that is inconsistent with this LGIA, the terms of the Net Scheduled PGA shall govern.

## ARTICLE 4. SCOPE OF SERVICE

**4.1 Interconnection Service.** Interconnection Service allows the Interconnection Customer to connect the Large Generating Facility to the Participating TO's Transmission System and be eligible to deliver the Large Generating Facility's output using the available capacity of the CAISO Controlled Grid. To the extent the Interconnection Customer

wants to receive Interconnection Service, the Participating TO shall construct facilities identified in Appendices A and C that the Participating TO is responsible to construct.

Interconnection Service does not necessarily provide the Interconnection Customer with the capability to physically deliver the output of its Large Generating Facility to any particular load on the CAISO Controlled Grid without incurring congestion costs. In the event of transmission constraints on the CAISO Controlled Grid, the Interconnection Customer's Large Generating Facility shall be subject to the applicable congestion management procedures in the CAISO Tariff in the same manner as all other resources.

**4.2 Provision of Service.** The Participating TO and the CAISO shall provide Interconnection Service for the Large Generating Facility.

**4.3 Performance Standards.** Each Party shall perform all of its obligations under this LGIA in accordance with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice, and to the extent a Party is required or prevented or limited in taking any action by such regulations and standards, such Party shall not be deemed to be in Breach of this LGIA for its compliance therewith. If such Party is the CAISO or Participating TO, then that Party shall amend the LGIA and submit the amendment to FERC for approval.

**4.4 No Transmission Service.** The execution of this LGIA does not constitute a request for, nor the provision of, any transmission service under the CAISO Tariff, and does not convey any right to deliver electricity to any specific customer or point of delivery.

**4.5 Interconnection Customer Provided Services.** The services provided by Interconnection Customer under this LGIA are set forth in Article 9.6 and Article 13.5.1. Interconnection Customer shall be paid for such services in accordance with Article 11.6.

## ARTICLE 5. INTERCONNECTION FACILITIES ENGINEERING, PROCUREMENT, AND CONSTRUCTION

Interconnection Facilities, Network Upgrades, and Distribution Upgrades shall be studied, designed, and constructed pursuant to Good Utility Practice. Such studies, design and construction shall be based on the assumed accuracy and completeness of all technical information received by the Participating TO and the CAISO from the Interconnection Customer associated with interconnecting the Large Generating Facility.

**5.1 Options.** Unless otherwise mutually agreed among the Parties, the Interconnection Customer shall select the In-Service Date, Initial Synchronization Date, and Commercial Operation Date; and either Standard Option or Alternate Option set forth below for completion of the Participating TO's Interconnection Facilities and Network Upgrades as set forth in Appendix A, Interconnection Facilities, Network Upgrades, and Distribution Upgrades, and such dates and selected option shall be set forth in Appendix B, Milestones.

**5.1.1 Standard Option.** The Participating TO shall design, procure, and construct the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades, using Reasonable Efforts to complete the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades by the dates set forth in Appendix B, Milestones. The Participating TO shall not be required to undertake any action which is inconsistent with its standard safety practices, its material and equipment specifications, its design criteria and construction procedures, its labor agreements, and Applicable Laws and Regulations. In the event the Participating TO reasonably expects that it will not

be able to complete the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades by the specified dates, the Participating TO shall promptly provide written notice to the Interconnection Customer and the CAISO and shall undertake Reasonable Efforts to meet the earliest dates thereafter.

**5.1.2 Alternate Option.** If the dates designated by the Interconnection Customer are acceptable to the Participating TO, the Participating TO shall so notify the Interconnection Customer within thirty (30) Calendar Days, and shall assume responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities by the designated dates.

If the Participating TO subsequently fails to complete the Participating TO's Interconnection Facilities by the In-Service Date, to the extent necessary to provide back feed power; or fails to complete Network Upgrades by the Initial Synchronization Date to the extent necessary to allow for Trial Operation at full power output, unless other arrangements are made by the Parties for such Trial Operation; or fails to complete the Network Upgrades by the Commercial Operation Date, as such dates are reflected in Appendix B, Milestones; the Participating TO shall pay the Interconnection Customer liquidated damages in accordance with Article 5.3, Liquidated Damages, provided, however, the dates designated by the Interconnection Customer shall be extended day for day for each day that the CAISO refuses to grant clearances to install equipment.

**5.1.3 Option to Build.** If the dates designated by the Interconnection Customer are not acceptable to the Participating TO, the Participating TO shall so notify the Interconnection Customer within thirty (30) Calendar Days, and unless the Parties agree otherwise, the Interconnection Customer shall have the option to assume responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades. If the Interconnection Customer elects to exercise its option to assume responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, it shall so notify the Participating TO within thirty (30) Calendar Days of receipt of the Participating TO's notification that the designated dates are not acceptable to the Participating TO. The Participating TO, CAISO, and Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify such Stand Alone Network Upgrades in Appendix A to this LGIA. Except for Stand Alone Network Upgrades, the Interconnection Customer shall have no right to construct Network Upgrades under this option.

**5.1.4 Negotiated Option.** If the Interconnection Customer elects not to exercise its option under Article 5.1.3, Option to Build, the Interconnection Customer shall so notify the Participating TO within thirty (30) Calendar Days of receipt of the Participating TO's notification that the designated dates are not acceptable to the Participating TO, and the Parties shall in good faith attempt to negotiate terms and conditions (including revision of the specified dates and liquidated damages, the provision of incentives or the procurement and construction of a portion of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades by the Interconnection Customer) pursuant to which the Participating TO is responsible for the design, procurement and construction of the Participating TO's Interconnection Facilities and Network Upgrades. If the Parties are unable to reach agreement on such terms and conditions, the Participating TO shall assume responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Network Upgrades pursuant to Article 5.1.1, Standard Option.

**5.2 General Conditions Applicable to Option to Build.** If the Interconnection Customer assumes responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades,

(1) the Interconnection Customer shall engineer, procure equipment, and construct the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades (or portions thereof) using Good Utility Practice and using standards and specifications provided in advance by the Participating TO;

(2) The Interconnection Customer's engineering, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades shall comply with all requirements of law to which the Participating TO would be subject in the engineering, procurement or construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades;

(3) the Participating TO shall review, and the Interconnection Customer shall obtain the Participating TO's approval of, the engineering design, equipment acceptance tests, and the construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, which approval shall not be unreasonably withheld, and the CAISO may, at its option, review the engineering design, equipment acceptance tests, and the construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades;

(4) prior to commencement of construction, the Interconnection Customer shall provide to the Participating TO, with a copy to the CAISO for informational purposes, a schedule for construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, and shall promptly respond to requests for information from the Participating TO;

(5) at any time during construction, the Participating TO shall have the right to gain unrestricted access to the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades and to conduct inspections of the same;

(6) at any time during construction, should any phase of the engineering, equipment procurement, or construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades not meet the standards and specifications provided by the Participating TO, the Interconnection Customer shall be obligated to remedy deficiencies in that portion of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades;

(7) the Interconnection Customer shall indemnify the CAISO and Participating TO for claims arising from the Interconnection Customer's construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades under the terms and procedures applicable to Article 18.1 Indemnity;

(8) The Interconnection Customer shall transfer control of the Participating TO's Interconnection Facilities to the Participating TO and shall transfer Operational Control of Stand Alone Network Upgrades to the CAISO;

(9) Unless the Parties otherwise agree, the Interconnection Customer shall transfer ownership of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades to the Participating TO. As soon as reasonably practicable, but within twelve months after completion of the construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, the Interconnection Customer shall provide an invoice of the final cost of the construction of the Participating TO's Interconnection Facilities and Stand Alone

Network Upgrades to the Participating TO, which invoice shall set forth such costs in sufficient detail to enable the Participating TO to reflect the proper costs of such facilities in its transmission rate base and to identify the investment upon which refunds will be provided;

(10) the Participating TO shall accept for operation and maintenance the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades to the extent engineered, procured, and constructed in accordance with this Article 5.2; and

(11) The Interconnection Customer's engineering, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades shall comply with all requirements of the "Option to Build" conditions set forth in Appendix C. Interconnection Customer shall deliver to the Participating TO "as-built" drawings, information, and any other documents that are reasonably required by the Participating TO to assure that the Interconnection Facilities and Stand-Alone Network Upgrades are built to the standards and specifications required by the Participating TO.

**5.3 Liquidated Damages.** The actual damages to the Interconnection Customer, in the event the Participating TO's Interconnection Facilities or Network Upgrades are not completed by the dates designated by the Interconnection Customer and accepted by the Participating TO pursuant to subparagraphs 5.1.2 or 5.1.4, above, may include Interconnection Customer's fixed operation and maintenance costs and lost opportunity costs. Such actual damages are uncertain and impossible to determine at this time. Because of such uncertainty, any liquidated damages paid by the Participating TO to the Interconnection Customer in the event that the Participating TO does not complete any portion of the Participating TO's Interconnection Facilities or Network Upgrades by the applicable dates, shall be an amount equal to ½ of 1 percent per day of the actual cost of the Participating TO's Interconnection Facilities and Network Upgrades, in the aggregate, for which the Participating TO has assumed responsibility to design, procure and construct.

However, in no event shall the total liquidated damages exceed 20 percent of the actual cost of the Participating TO's Interconnection Facilities and Network Upgrades for which the Participating TO has assumed responsibility to design, procure, and construct. The foregoing payments will be made by the Participating TO to the Interconnection Customer as just compensation for the damages caused to the Interconnection Customer, which actual damages are uncertain and impossible to determine at this time, and as reasonable liquidated damages, but not as a penalty or a method to secure performance of this LGIA. Liquidated damages, when the Parties agree to them, are the exclusive remedy for the Participating TO's failure to meet its schedule.

No liquidated damages shall be paid to the Interconnection Customer if: (1) the Interconnection Customer is not ready to commence use of the Participating TO's Interconnection Facilities or Network Upgrades to take the delivery of power for the Electric Generating Unit's Trial Operation or to export power from the Electric Generating Unit on the specified dates, unless the Interconnection Customer would have been able to commence use of the Participating TO's Interconnection Facilities or Network Upgrades to take the delivery of power for Electric Generating Unit's Trial Operation or to export power from the Electric Generating Unit, but for the Participating TO's delay; (2) the Participating TO's failure to meet the specified dates is the result of the action or inaction of the Interconnection Customer or any other interconnection customer who has entered into an interconnection agreement with the CAISO and/or Participating TO, action or inaction by the CAISO, or any cause beyond the Participating TO's reasonable control or reasonable ability to cure; (3) the Interconnection Customer has assumed

responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades; or (4) the Parties have otherwise agreed.

In no event shall the CAISO have any responsibility or liability to the Interconnection Customer for liquidated damages pursuant to the provisions of this Article 5.3.

**5.4 Power System Stabilizers.** The Interconnection Customer shall procure, install, maintain and operate Power System Stabilizers in accordance with Applicable Reliability Standards, the guidelines and procedures established by the Applicable Reliability Council, and the provisions of Section 4.6.5.1 of the CAISO Tariff. The CAISO reserves the right to establish reasonable minimum acceptable settings for any installed Power System Stabilizers, subject to the design and operating limitations of the Large Generating Facility. If the Large Generating Facility's Power System Stabilizers are removed from service or not capable of automatic operation, the Interconnection Customer shall immediately notify the CAISO and the Participating TO and restore the Power System Stabilizers to operation as soon as possible. The CAISO shall have the right to order the reduction in output or disconnection of the Large Generating Facility if the reliability of the CAISO Controlled Grid would be adversely affected as a result of improperly tuned Power System Stabilizers. The requirements of this Article 5.4 shall apply to Asynchronous Generating Facilities in accordance with Appendix H.

**5.5 Equipment Procurement.** If responsibility for construction of the Participating TO's Interconnection Facilities or Network Upgrades is to be borne by the Participating TO, then the Participating TO shall commence design of the Participating TO's Interconnection Facilities or Network Upgrades and procure necessary equipment as soon as practicable after all of the following conditions are satisfied, unless the Parties otherwise agree in writing:

**5.5.1** The CAISO, in coordination with the applicable Participating TO(s), has completed the Phase II Interconnection Study or Governing Independent Study Interconnection Study pursuant to the applicable Generator Interconnection Study Process Agreement or other applicable study process agreement;

**5.5.2** The Participating TO has received written authorization to proceed with design and procurement from the Interconnection Customer by the date specified in Appendix B, Milestones; and

**5.5.3** The Interconnection Customer has provided security to the Participating TO in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

**5.6 Construction Commencement.** The Participating TO shall commence construction of the Participating TO's Interconnection Facilities and Network Upgrades for which it is responsible as soon as practicable after the following additional conditions are satisfied:

**5.6.1** Approval of the appropriate Governmental Authority has been obtained for any facilities requiring regulatory approval;

**5.6.2** Necessary real property rights and rights-of-way have been obtained, to the extent required for the construction of a discrete aspect of the Participating TO's Interconnection Facilities and Network Upgrades;

**5.6.3** The Participating TO has received written authorization to proceed with construction from the Interconnection Customer by the date specified in Appendix B, Milestones; and

**5.6.4** The Interconnection Customer has provided payment and security to the Participating TO in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

**5.7 Work Progress.** The Parties will keep each other advised periodically as to the progress of their respective design, procurement and construction efforts. Any Party may, at any time, request a progress report from another Party. If, at any time, the Interconnection Customer determines that the completion of the Participating TO's Interconnection Facilities will not be required until after the specified In-Service Date, the Interconnection Customer will provide written notice to the Participating TO and CAISO of such later date upon which the completion of the Participating TO's Interconnection Facilities will be required.

**5.8 Information Exchange.** As soon as reasonably practicable after the Effective Date, the Parties shall exchange information regarding the design and compatibility of the Interconnection Customer's Interconnection Facilities and Participating TO's Interconnection Facilities and compatibility of the Interconnection Facilities with the Participating TO's Transmission System, and shall work diligently and in good faith to make any necessary design changes.

**5.9 Limited Operation.** If any of the Participating TO's Interconnection Facilities or Network Upgrades are not reasonably expected to be completed prior to the Commercial Operation Date of the Electric Generating Unit, the Participating TO and/or CAISO, as applicable, shall, upon the request and at the expense of the Interconnection Customer, perform operating studies on a timely basis to determine the extent to which the Electric Generating Unit and the Interconnection Customer's Interconnection Facilities may operate prior to the completion of the Participating TO's Interconnection Facilities or Network Upgrades consistent with Applicable Laws and Regulations, Applicable Reliability Standards, Good Utility Practice, and this LGIA. The Participating TO and CAISO shall permit Interconnection Customer to operate the Electric Generating Unit and the Interconnection Customer's Interconnection Facilities in accordance with the results of such studies.

**5.10 Interconnection Customer's Interconnection Facilities.** The Interconnection Customer shall, at its expense, design, procure, construct, own and install the Interconnection Customer's Interconnection Facilities, as set forth in Appendix A.

**5.10.1 Large Generating Facility and Interconnection Customer's Interconnection Facilities Specifications.** In addition to the Interconnection Customer's responsibility to submit technical data with its Interconnection Request as required by Section 3.5.1 of the GIP, the Interconnection Customer shall submit all remaining necessary specifications for the Interconnection Customer's Interconnection Facilities and Large Generating Facility, including System Protection Facilities, to the Participating TO and the CAISO at least one hundred eighty (180) Calendar Days prior to the Initial Synchronization Date; and final specifications for review and comment at least ninety (90) Calendar Days prior to the Initial Synchronization Date. The Participating TO and the CAISO shall review such specifications pursuant to this LGIA and the GIP to ensure that the Interconnection Customer's Interconnection Facilities and Large Generating Facility are compatible with the technical specifications, operational control, safety requirements, and any other applicable requirements of the Participating TO and the CAISO and comment on such specifications within thirty (30) Calendar Days of the Interconnection Customer's submission. All specifications provided hereunder shall be deemed confidential.

**5.10.2 Participating TO's and CAISO's Review.** The Participating TO's and the CAISO's review of the Interconnection Customer's final specifications shall not be construed as confirming, endorsing, or providing a warranty as to the design, fitness, safety, durability or reliability of the Large Generating Facility, or the Interconnection Customer's Interconnection Facilities. Interconnection Customer shall make such changes to the Interconnection Customer's Interconnection Facilities as may reasonably be required by the Participating TO or the CAISO, in accordance with Good Utility Practice, to ensure that the Interconnection Customer's Interconnection Facilities are compatible with the technical specifications, Operational Control, and safety requirements of the Participating TO or the CAISO.

**5.10.3 Interconnection Customer's Interconnection Facilities Construction.** The Interconnection Customer's Interconnection Facilities shall be designed and constructed in accordance with Good Utility Practice. Within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Participating TO and Interconnection Customer agree on another mutually acceptable deadline, the Interconnection Customer shall deliver to the Participating TO and CAISO "as-built" drawings, information and documents for the Interconnection Customer's Interconnection Facilities and the Electric Generating Unit(s), such as: a one-line diagram, a site plan showing the Large Generating Facility and the Interconnection Customer's Interconnection Facilities, plan and elevation drawings showing the layout of the Interconnection Customer's Interconnection Facilities, a relay functional diagram, relaying AC and DC schematic wiring diagrams and relay settings for all facilities associated with the Interconnection Customer's step-up transformers, the facilities connecting the Large Generating Facility to the step-up transformers and the Interconnection Customer's Interconnection Facilities, and the impedances (determined by factory tests) for the associated step-up transformers and the Electric Generating Units. The Interconnection Customer shall provide the Participating TO and the CAISO specifications for the excitation system, automatic voltage regulator, Large Generating Facility control and protection settings, transformer tap settings, and communications, if applicable. Any deviations from the relay settings, machine specifications, and other specifications originally submitted by the Interconnection Customer shall be assessed by the Participating TO and the CAISO pursuant to the appropriate provisions of this LGIA and the GIP.

**5.10.4 Interconnection Customer to Meet Requirements of the Participating TO's Interconnection Handbook.** The Interconnection Customer shall comply with the Participating TO's Interconnection Handbook.

**5.11 Participating TO's Interconnection Facilities Construction.** The Participating TO's Interconnection Facilities shall be designed and constructed in accordance with Good Utility Practice. Upon request, within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Participating TO and Interconnection Customer agree on another mutually acceptable deadline, the Participating TO shall deliver to the Interconnection Customer and the CAISO the following "as-built" drawings, information and documents for the Participating TO's Interconnection Facilities [include appropriate drawings and relay diagrams].

The Participating TO will obtain control for operating and maintenance purposes of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades upon completion of such facilities. Pursuant to Article 5.2, the CAISO will obtain Operational Control of the Stand Alone Network Upgrades prior to the Commercial Operation Date.

**5.12 Access Rights.** Upon reasonable notice and supervision by a Party, and subject to any required or necessary regulatory approvals, a Party ("Granting Party") shall furnish at no cost to the other Party ("Access Party") any rights of use, licenses, rights of way and easements with respect to lands owned or controlled by the Granting Party, its agents (if allowed under the applicable agency agreement), or any Affiliate, that are necessary to enable the Access Party to obtain ingress and egress to construct, operate, maintain, repair, test (or witness testing), inspect, replace or remove facilities and equipment to: (i) interconnect the Large Generating Facility with the Participating TO's Transmission System; (ii) operate and maintain the Large Generating Facility, the Interconnection Facilities and the Participating TO's Transmission System; and (iii) disconnect or remove the Access Party's facilities and equipment upon termination of this LGIA. In exercising such licenses, rights of way and easements, the Access Party shall not unreasonably disrupt or interfere with normal operation of the Granting Party's business and shall adhere to the safety rules and procedures established in advance, as may be changed from time to time, by the Granting Party and provided to the Access Party.

**5.13 Lands of Other Property Owners.** If any part of the Participating TO's Interconnection Facilities and/or Network Upgrades are to be installed on property owned by persons other than the Interconnection Customer or Participating TO, the Participating TO shall at the Interconnection Customer's expense use efforts, similar in nature and extent to those that it typically undertakes on its own behalf or on behalf of its Affiliates, including use of its eminent domain authority, and to the extent consistent with state law, to procure from such persons any rights of use, licenses, rights of way and easements that are necessary to construct, operate, maintain, test, inspect, replace or remove the Participating TO's Interconnection Facilities and/or Network Upgrades upon such property.

**5.14 Permits.** Participating TO and Interconnection Customer shall cooperate with each other in good faith in obtaining all permits, licenses and authorization that are necessary to accomplish the interconnection in compliance with Applicable Laws and Regulations. With respect to this paragraph, the Participating TO shall provide permitting assistance to the Interconnection Customer comparable to that provided to the Participating TO's own, or an Affiliate's generation.

**5.15 Early Construction of Base Case Facilities.** The Interconnection Customer may request the Participating TO to construct, and the Participating TO shall construct, using Reasonable Efforts to accommodate Interconnection Customer's In-Service Date, all or any portion of any Network Upgrades required for Interconnection Customer to be interconnected to the Participating TO's Transmission System which are included in the Base Case of the Interconnection Studies for the Interconnection Customer, and which also are required to be constructed for another interconnection customer, but where such construction is not scheduled to be completed in time to achieve Interconnection Customer's In-Service Date.

**5.16 Suspension.** The Interconnection Customer may request to suspend at any time all work associated with the construction and installation of the Participating TO's Interconnection Facilities, Network Upgrades, and/or Distribution Upgrades required under this LGIA, other than Network Upgrades identified in the Phase II Interconnection Study as common to multiple generating facilities. Interconnection Customers seeking to suspend construction will provide the CAISO and Participating TO a request for assessment pursuant to Section 6.9.2 of the GIP, a modification assessment deposit, and an anticipated end date of the suspension. Interconnection Customers may request a suspension for the maximum amount of time in lieu of providing an anticipated end date. The CAISO and Participating TO will approve suspension requests where:

(a) the Participating TO's electrical system and the CAISO Controlled Grid can be left in a safe and reliable condition in accordance with Good Utility Practice, the Participating TO's safety and reliability criteria, and Applicable Reliability Standards; and

(b) the CAISO and Participating TO determine the suspension will not result in a Material Modification.

During suspension, the Interconnection Customer may request to extend or shorten their suspension period, consistent with the maximum period provided in this Article. The CAISO and Participating TO will approve such requests where they meet criteria (a) and (b), above. Requests to extend or shorten extensions will require a new modification assessment request and deposit. The Interconnection Customer shall be responsible for all reasonable and necessary costs for suspension for which the Participating TO (i) has incurred pursuant to this LGIA prior to the suspension and (ii) incurs in suspending such work, including any costs incurred to perform such work as may be necessary to ensure the safety of persons and property and the integrity of the Participating TO's electric system during such suspension and, if applicable, any costs incurred in connection with the cancellation or suspension of material, equipment and labor contracts which the Participating TO cannot reasonably avoid; provided, however, that prior to canceling or suspending any such material, equipment or labor contract, the Participating TO shall obtain Interconnection Customer's authorization to do so.

Network Upgrades common to multiple generating facilities, and to which the Interconnection Customer's right of suspension shall not extend, consist of Network Upgrades identified for:

(i) generating facilities which are the subject of all Interconnection Requests made prior to the Interconnection Customer's Interconnection Request;
(ii) generating facilities which are the subject of Interconnection Requests within the Interconnection Customer's queue cluster; and
(iii) generating facilities that are the subject of Interconnection Requests that were made after the Interconnection Customer's Interconnection Request but no later than the date on which the Interconnection Customer's Phase II Interconnection Study Report is issued, and have been modeled in the Base Case at the time the Interconnection Customer seeks to exercise its suspension rights under this Article.

The Participating TO shall invoice the Interconnection Customer for such costs pursuant to Article 12 and shall use due diligence to minimize its costs. In the event Interconnection Customer suspends work required under this LGIA pursuant to this Article 5.16, and has not requested the Participating TO to recommence the work or has not itself recommenced work required under this LGIA in time to ensure that the new projected Commercial Operation Date for the full Generating Facility Capacity of the Large Generating Facility is no more than three (3) years from the Commercial Operation Date identified in Appendix B hereto, this LGIA shall be deemed terminated and the Interconnection Customer's responsibility for costs will be determined in accordance with Article 2.4. The suspension period shall begin on the date the Interconnection Customer provides in its request, if approved. Ninety (90) days before the anticipated end date of the suspension, the Participating TO and the CAISO will tender an amended draft LGIA with new construction milestones. The Parties agree to negotiate the amended draft LGIA in good faith such that it can be executed by the end of the suspension.

**5.17 Taxes.**

**5.17.1 Interconnection Customer Payments Not Taxable.** The Parties intend that all payments or property transfers made by the Interconnection Customer to the Participating TO for the installation of the Participating TO's Interconnection Facilities and the Network Upgrades shall be non-taxable, either as contributions to capital, or as a refundable advance, in accordance with the Internal Revenue Code and any applicable state income tax laws and shall not be taxable as contributions in aid of construction or otherwise under the Internal Revenue Code and any applicable state income tax laws.

**5.17.2 Representations And Covenants.** In accordance with IRS Notice 2001-82 and IRS Notice 88-129, the Interconnection Customer represents and covenants that (i) ownership of the electricity generated at the Large Generating Facility will pass to another party prior to the transmission of the electricity on the CAISO Controlled Grid, (ii) for income tax purposes, the amount of any payments and the cost of any property transferred to the Participating TO for the Participating TO's Interconnection Facilities will be capitalized by the Interconnection Customer as an intangible asset and recovered using the straight-line method over a useful life of twenty (20) years, and (iii) any portion of the Participating TO's Interconnection Facilities that is a "dual-use intertie," within the meaning of IRS Notice 88-129, is reasonably expected to carry only a de minimis amount of electricity in the direction of the Large Generating Facility. For this purpose, "de minimis amount" means no more than 5 percent of the total power flows in both directions, calculated in accordance with the "5 percent test" set forth in IRS Notice 88-129. This is not intended to be an exclusive list of the relevant conditions that must be met to conform to IRS requirements for non-taxable treatment.

At the Participating TO's request, the Interconnection Customer shall provide the Participating TO with a report from an independent engineer confirming its representation in clause (iii), above. The Participating TO represents and covenants that the cost of the Participating TO's Interconnection Facilities paid for by the Interconnection Customer without the possibility of refund or credit will have no net effect on the base upon which rates are determined.

**5.17.3 Indemnification for the Cost Consequence of Current Tax Liability Imposed Upon the Participating TO.** Notwithstanding Article 5.17.1, the Interconnection Customer shall protect, indemnify and hold harmless the Participating TO from the cost consequences of any current tax liability imposed against the Participating TO as the result of payments or property transfers made by the Interconnection Customer to the Participating TO under this LGIA for Interconnection Facilities, as well as any interest and penalties, other than interest and penalties attributable to any delay caused by the Participating TO.

The Participating TO shall not include a gross-up for the cost consequences of any current tax liability in the amounts it charges the Interconnection Customer under this LGIA unless (i) the Participating TO has determined, in good faith, that the payments or property transfers made by the Interconnection Customer to the Participating TO should be reported as income subject to taxation or (ii) any Governmental Authority directs the Participating TO to report payments or property as income subject to taxation; provided, however, that the Participating TO may require the Interconnection Customer to provide security for Interconnection Facilities, in a form reasonably acceptable to the Participating TO (such as a parental guarantee or a letter of credit), in an amount equal to the cost consequences of any current tax liability under this Article 5.17. The

Interconnection Customer shall reimburse the Participating TO for such costs on a fully grossed-up basis, in accordance with Article 5.17.4, within thirty (30) Calendar Days of receiving written notification from the Participating TO of the amount due, including detail about how the amount was calculated.

The indemnification obligation shall terminate at the earlier of (1) the expiration of the ten year testing period and the applicable statute of limitation, as it may be extended by the Participating TO upon request of the IRS, to keep these years open for audit or adjustment, or (2) the occurrence of a subsequent taxable event and the payment of any related indemnification obligations as contemplated by this Article 5.17.

**5.17.4 Tax Gross-Up Amount.** The Interconnection Customer's liability for the cost consequences of any current tax liability under this Article 5.17 shall be calculated on a fully grossed-up basis. Except as may otherwise be agreed to by the parties, this means that the Interconnection Customer will pay the Participating TO, in addition to the amount paid for the Interconnection Facilities and Network Upgrades, an amount equal to (1) the current taxes imposed on the Participating TO ("Current Taxes") on the excess of (a) the gross income realized by the Participating TO as a result of payments or property transfers made by the Interconnection Customer to the Participating TO under this LGIA (without regard to any payments under this Article 5.17) (the "Gross Income Amount") over (b) the present value of future tax deductions for depreciation that will be available as a result of such payments or property transfers (the "Present Value Depreciation Amount"), plus (2) an additional amount sufficient to permit the Participating TO to receive and retain, after the payment of all Current Taxes, an amount equal to the net amount described in clause (1).

For this purpose, (i) Current Taxes shall be computed based on the Participating TO's composite federal and state tax rates at the time the payments or property transfers are received and the Participating TO will be treated as being subject to tax at the highest marginal rates in effect at that time (the "Current Tax Rate"), and (ii) the Present Value Depreciation Amount shall be computed by discounting the Participating TO's anticipated tax depreciation deductions as a result of such payments or property transfers by the Participating TO's current weighted average cost of capital. Thus, the formula for calculating the Interconnection Customer's liability to the Participating TO pursuant to this Article 5.17.4 can be expressed as follows: (Current Tax Rate x (Gross Income Amount – Present Value of Tax Depreciation))/(1-Current Tax Rate). Interconnection Customer's estimated tax liability in the event taxes are imposed shall be stated in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades.

**5.17.5 Private Letter Ruling or Change or Clarification of Law.** At the Interconnection Customer's request and expense, the Participating TO shall file with the IRS a request for a private letter ruling as to whether any property transferred or sums paid, or to be paid, by the Interconnection Customer to the Participating TO under this LGIA are subject to federal income taxation. The Interconnection Customer will prepare the initial draft of the request for a private letter ruling, and will certify under penalties of perjury that all facts represented in such request are true and accurate to the best of the Interconnection Customer's knowledge. The Participating TO and Interconnection Customer shall cooperate in good faith with respect to the submission of such request, provided, however, the Interconnection Customer and the Participating TO explicitly acknowledge (and nothing herein is intended to alter) Participating TO's obligation under law to certify that the facts presented in the ruling request are true, correct and complete.

The Participating TO shall keep the Interconnection Customer fully informed of the status of such request for a private letter ruling and shall execute either a privacy act waiver or a limited power of attorney, in a form acceptable to the IRS, that authorizes the Interconnection Customer to participate in all discussions with the IRS regarding such request for a private letter ruling. The Participating TO shall allow the Interconnection Customer to attend all meetings with IRS officials about the request and shall permit the Interconnection Customer to prepare the initial drafts of any follow-up letters in connection with the request.

**5.17.6 Subsequent Taxable Events.** If, within 10 years from the date on which the relevant Participating TO's Interconnection Facilities are placed in service, (i) the Interconnection Customer Breaches the covenants contained in Article 5.17.2, (ii) a "disqualification event" occurs within the meaning of IRS Notice 88-129, or (iii) this LGIA terminates and the Participating TO retains ownership of the Interconnection Facilities and Network Upgrades, the Interconnection Customer shall pay a tax gross-up for the cost consequences of any current tax liability imposed on the Participating TO, calculated using the methodology described in Article 5.17.4 and in accordance with IRS Notice 90-60.

**5.17.7 Contests.** In the event any Governmental Authority determines that the Participating TO's receipt of payments or property constitutes income that is subject to taxation, the Participating TO shall notify the Interconnection Customer, in writing, within thirty (30) Calendar Days of receiving notification of such determination by a Governmental Authority. Upon the timely written request by the Interconnection Customer and at the Interconnection Customer's sole expense, the Participating TO may appeal, protest, seek abatement of, or otherwise oppose such determination. Upon the Interconnection Customer's written request and sole expense, the Participating TO may file a claim for refund with respect to any taxes paid under this Article 5.17, whether or not it has received such a determination. The Participating TO reserve the right to make all decisions with regard to the prosecution of such appeal, protest, abatement or other contest, including the selection of counsel and compromise or settlement of the claim, but the Participating TO shall keep the Interconnection Customer informed, shall consider in good faith suggestions from the Interconnection Customer about the conduct of the contest, and shall reasonably permit the Interconnection Customer or an Interconnection Customer representative to attend contest proceedings.

The Interconnection Customer shall pay to the Participating TO on a periodic basis, as invoiced by the Participating TO, the Participating TO's documented reasonable costs of prosecuting such appeal, protest, abatement or other contest, including any costs associated with obtaining the opinion of independent tax counsel described in this Article 5.17.7. The Participating TO may abandon any contest if the Interconnection Customer fails to provide payment to the Participating TO within thirty (30) Calendar Days of receiving such invoice.

At any time during the contest, the Participating TO may agree to a settlement either with the Interconnection Customer's consent or, if such consent is refused, after obtaining written advice from independent nationally-recognized tax counsel, selected by the Participating TO, but reasonably acceptable to the Interconnection Customer, that the proposed settlement represents a reasonable settlement given the hazards of litigation. The Interconnection Customer's obligation shall be based on the amount of the settlement agreed to by the Interconnection Customer, or if a higher amount, so much of the settlement that is supported by the written advice from nationally-recognized tax counsel selected under the terms of the preceding paragraph. The settlement amount

shall be calculated on a fully grossed-up basis to cover any related cost consequences of the current tax liability. The Participating TO may also settle any tax controversy without receiving the Interconnection Customer's consent or any such written advice; however, any such settlement will relieve the Interconnection Customer from any obligation to indemnify the Participating TO for the tax at issue in the contest (unless the failure to obtain written advice is attributable to the Interconnection Customer's unreasonable refusal to the appointment of independent tax counsel).

**5.17.8 Refund.** In the event that (a) a private letter ruling is issued to the Participating TO which holds that any amount paid or the value of any property transferred by the Interconnection Customer to the Participating TO under the terms of this LGIA is not subject to federal income taxation, (b) any legislative change or administrative announcement, notice, ruling or other determination makes it reasonably clear to the Participating TO in good faith that any amount paid or the value of any property transferred by the Interconnection Customer to the Participating TO under the terms of this LGIA is not taxable to the Participating TO, (c) any abatement, appeal, protest, or other contest results in a determination that any payments or transfers made by the Interconnection Customer to the Participating TO are not subject to federal income tax, or (d) if the Participating TO receives a refund from any taxing authority for any overpayment of tax attributable to any payment or property transfer made by the Interconnection Customer to the Participating TO pursuant to this LGIA, the Participating TO shall promptly refund to the Interconnection Customer the following:

(i) any payment made by Interconnection Customer under this Article 5.17 for taxes that is attributable to the amount determined to be non-taxable, together with interest thereon,

(ii) interest on any amounts paid by the Interconnection Customer to the Participating TO for such taxes which the Participating TO did not submit to the taxing authority, calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date payment was made by the Interconnection Customer to the date the Participating TO refunds such payment to the Interconnection Customer, and

(iii) with respect to any such taxes paid by the Participating TO, any refund or credit the Participating TO receives or to which it may be entitled from any Governmental Authority, interest (or that portion thereof attributable to the payment described in clause (i), above) owed to the Participating TO for such overpayment of taxes (including any reduction in interest otherwise payable by the Participating TO to any Governmental Authority resulting from an offset or credit); provided, however, that the Participating TO will remit such amount promptly to the Interconnection Customer only after and to the extent that the Participating TO has received a tax refund, credit or offset from any Governmental Authority for any applicable overpayment of income tax related to the Participating TO's Interconnection Facilities.

The intent of this provision is to leave the Parties, to the extent practicable, in the event that no taxes are due with respect to any payment for Interconnection Facilities and Network Upgrades hereunder, in the same position they would have been in had no such tax payments been made.

**5.17.9 Taxes Other Than Income Taxes.** Upon the timely request by the Interconnection Customer, and at the Interconnection Customer's sole expense, the CAISO or Participating TO may appeal, protest, seek abatement of, or otherwise contest any tax (other than federal or state income tax) asserted or assessed against the CAISO or Participating TO for which the Interconnection Customer may be required to reimburse the CAISO or Participating TO under the terms of this LGIA. The Interconnection Customer shall pay to the Participating TO on a periodic basis, as invoiced by the Participating TO, the Participating TO's documented reasonable costs of prosecuting such appeal, protest, abatement, or other contest. The Interconnection Customer, the CAISO, and the Participating TO shall cooperate in good faith with respect to any such contest. Unless the payment of such taxes is a prerequisite to an appeal or abatement or cannot be deferred, no amount shall be payable by the Interconnection Customer to the CAISO or Participating TO for such taxes until they are assessed by a final, non-appealable order by any court or agency of competent jurisdiction. In the event that a tax payment is withheld and ultimately due and payable after appeal, the Interconnection Customer will be responsible for all taxes, interest and penalties, other than penalties attributable to any delay caused by the Participating TO.

**5.18 Tax Status.** Each Party shall cooperate with the others to maintain the other Parties' tax status. Nothing in this LGIA is intended to adversely affect the CAISO's or any Participating TO's tax exempt status with respect to the issuance of bonds including, but not limited to, Local Furnishing Bonds.

**5.19 Modification.**

**5.19.1 General.** The Interconnection Customer or the Participating TO may undertake modifications to its facilities, subject to Section 25.1(c) and Section 25 of the CAISO Tariff if the Interconnection Customer has achieved its Commercial Operation Date, and subject to Section 6.9.2 of the GIP if it has not.

If a Party plans to undertake a modification that reasonably may be expected to affect the other Parties' facilities, that Party shall provide to the other Parties sufficient information regarding such modification so that the other Parties may evaluate the potential impact of such modification prior to commencement of the work. Such information shall be deemed to be confidential hereunder and shall include information concerning the timing of such modifications and whether such modifications are expected to interrupt the flow of electricity from the Large Generating Facility. The Party desiring to perform such work shall provide the relevant drawings, plans, and specifications to the other Parties at least ninety (90) Calendar Days in advance of the commencement of the work or such shorter period upon which the Parties may agree, which agreement shall not unreasonably be withheld, conditioned or delayed.

Notwithstanding Section 7.5 of Appendix DD, at any time after achieving its Commercial Operation Date, the Interconnection Customer may reduce the megawatt generating capacities of its Generating Facilities, subject to Section 25.1(c) of the CAISO Tariff. Section 7.5.11 of Appendix DD will still apply to such requests to reduce capacity.

**5.19.2 Standards.** Any additions, modifications, or replacements made to a Party's facilities shall be designed, constructed and operated in accordance with this LGIA and Good Utility Practice.

**5.19.3 Modification Costs.** The Interconnection Customer shall not be directly assigned the costs of any additions, modifications, or replacements that the Participating TO makes to the Participating TO's Interconnection Facilities or the Participating TO's Transmission System to facilitate the interconnection of a third party to the Participating TO's Interconnection Facilities or the Participating TO's Transmission System, or to provide transmission service to a third party under the CAISO Tariff. The Interconnection Customer shall be responsible for the costs of any additions, modifications, or replacements to the Interconnection Facilities that may be necessary to maintain or upgrade such Interconnection Facilities consistent with Applicable Laws and Regulations, Applicable Reliability Standards or Good Utility Practice.

## ARTICLE 6. TESTING AND INSPECTION

**6.1 Pre-Commercial Operation Date Testing and Modifications.** Prior to the Commercial Operation Date, the Participating TO shall test the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades and the Interconnection Customer shall test the Large Generating Facility and the Interconnection Customer's Interconnection Facilities to ensure their safe and reliable operation. Similar testing may be required after initial operation. Each Party shall make any modifications to its facilities that are found to be necessary as a result of such testing. The Interconnection Customer shall bear the cost of all such testing and modifications. The Interconnection Customer shall not commence initial parallel operation of an Electric Generating Unit with the Participating TO's Transmission System until the Participating TO provides prior written approval, which approval shall not be unreasonably withheld, for operation of such Electric Generating Unit. The Interconnection Customer shall generate test energy at the Large Generating Facility only if it has arranged for the delivery of such test energy.

**6.2 Post-Commercial Operation Date Testing and Modifications.** Each Party shall at its own expense perform routine inspection and testing of its facilities and equipment in accordance with Good Utility Practice as may be necessary to ensure the continued interconnection of the Large Generating Facility with the Participating TO's Transmission System in a safe and reliable manner. Each Party shall have the right, upon advance written notice, to require reasonable additional testing of the other Party's facilities, at the requesting Party's expense, as may be in accordance with Good Utility Practice.

**6.3 Right to Observe Testing.** Each Party shall notify the other Parties at least fourteen (14) Calendar Days in advance of its performance of tests of its Interconnection Facilities or Generating Facility. The other Parties have the right, at their own expense, to observe such testing.

**6.4 Right to Inspect.** Each Party shall have the right, but shall have no obligation to: (i) observe another Party's tests and/or inspection of any of its System Protection Facilities and other protective equipment, including Power System Stabilizers; (ii) review the settings of another Party's System Protection Facilities and other protective equipment; and (iii) review another Party's maintenance records relative to the Interconnection Facilities, the System Protection Facilities and other protective equipment. A Party may exercise these rights from time to time as it deems necessary upon reasonable notice to the other Party. The exercise or non-exercise by a Party of any such rights shall not be construed as an endorsement or confirmation of any element or condition of the Interconnection Facilities or the System Protection Facilities or other protective equipment or the operation thereof, or as a warranty as to the fitness, safety, desirability, or reliability of same. Any information that a Party obtains through the exercise of any of its rights under this Article 6.4 shall be deemed to be Confidential Information and treated pursuant to Article 22 of this LGIA.

## ARTICLE 7. METERING

**7.1 General.** Each Party shall comply with any Applicable Reliability Standards and the Applicable Reliability Council requirements. The Interconnection Customer and CAISO shall comply with the provisions of the CAISO Tariff regarding metering, including Section 10 of the CAISO Tariff. Unless otherwise agreed by the Participating TO and the Interconnection Customer, the Participating TO may install additional Metering Equipment at the Point of Interconnection prior to any operation of any Electric Generating Unit and shall own, operate, test and maintain such Metering Equipment. Power flows to and from the Large Generating Facility shall be measured at or, at the CAISO's or Participating TO's option for its respective Metering Equipment, compensated to, the Point of Interconnection. The CAISO shall provide metering quantities to the Interconnection Customer upon request in accordance with the CAISO Tariff by directly polling the CAISO's meter data acquisition system. The Interconnection Customer shall bear all reasonable documented costs associated with the purchase, installation, operation, testing and maintenance of the Metering Equipment.

**7.2 Check Meters.** The Interconnection Customer, at its option and expense, may install and operate, on its premises and on its side of the Point of Interconnection, one or more check meters to check the CAISO-polled meters or the Participating TO's meters. Such check meters shall be for check purposes only and shall not be used for the measurement of power flows for purposes of this LGIA, except in the case that no other means are available on a temporary basis at the option of the CAISO or the Participating TO. The check meters shall be subject at all reasonable times to inspection and examination by the CAISO or Participating TO or their designees. The installation, operation and maintenance thereof shall be performed entirely by the Interconnection Customer in accordance with Good Utility Practice.

**7.3 Participating TO Retail Metering.** The Participating TO may install retail revenue quality meters and associated equipment, pursuant to the Participating TO's applicable retail tariffs.

## ARTICLE 8. COMMUNICATIONS

**8.1 Interconnection Customer Obligations.** The Interconnection Customer shall maintain satisfactory operating communications with the CAISO in accordance with the provisions of the CAISO Tariff and with the Participating TO's dispatcher or representative designated by the Participating TO. The Interconnection Customer shall provide standard voice line, dedicated voice line and facsimile communications at its Large Generating Facility control room or central dispatch facility through use of either the public telephone system, or a voice communications system that does not rely on the public telephone system. The Interconnection Customer shall also provide the dedicated data circuit(s) necessary to provide Interconnection Customer data to the CAISO and Participating TO as set forth in Appendix D, Security Arrangements Details. The data circuit(s) shall extend from the Large Generating Facility to the location(s) specified by the CAISO and Participating TO. Any required maintenance of such communications equipment shall be performed by the Interconnection Customer. Operational communications shall be activated and maintained under, but not be limited to, the following events: system paralleling or separation, scheduled and unscheduled shutdowns, equipment clearances, and hourly and daily load data.

**8.2 Remote Terminal Unit.** Prior to the Initial Synchronization Date of each Electric Generating Unit, a Remote Terminal Unit, or equivalent data collection and transfer equipment acceptable to the Parties, shall be installed by the Interconnection Customer, or by the Participating TO at the Interconnection Customer's expense, to gather accumulated and instantaneous data to be telemetered to the location(s) designated by

the CAISO and by the Participating TO through use of a dedicated point-to-point data circuit(s) as indicated in Article 8.1.

Telemetry to the CAISO shall be provided in accordance with the CAISO's technical standards for direct telemetry. For telemetry to the Participating TO, the communication protocol for the data circuit(s) shall be specified by the Participating TO. Instantaneous bi-directional real power and reactive power flow and any other required information must be telemetered directly to the location(s) specified by the Participating TO.

Each Party will promptly advise the other Parties if it detects or otherwise learns of any metering, telemetry or communications equipment errors or malfunctions that require the attention and/or correction by another Party. The Party owning such equipment shall correct such error or malfunction as soon as reasonably feasible.

**8.3 No Annexation.** Any and all equipment placed on the premises of a Party shall be and remain the property of the Party providing such equipment regardless of the mode and manner of annexation or attachment to real property, unless otherwise mutually agreed by the Parties.

## ARTICLE 9. OPERATIONS

**9.1 General.** Each Party shall comply with Applicable Reliability Standards and the Applicable Reliability Council requirements. Each Party shall provide to the other Party all information that may reasonably be required by the other Party to comply with Applicable Laws and Regulations and Applicable Reliability Standards.

**9.2 Balancing Authority Area Notification.** At least three months before Initial Synchronization Date, the Interconnection Customer shall notify the CAISO and Participating TO in writing of the Balancing Authority Area in which the Large Generating Facility intends to be located. If the Interconnection Customer intends to locate the Large Generating Facility in a Balancing Authority Area other than the Balancing Authority Area within whose electrically metered boundaries the Large Generating Facility is located, and if permitted to do so by the relevant transmission tariffs, all necessary arrangements, including but not limited to those set forth in Article 7 and Article 8 of this LGIA, and remote Balancing Authority Area generator interchange agreements, if applicable, and the appropriate measures under such agreements, shall be executed and implemented prior to the placement of the Large Generating Facility in the other Balancing Authority Area.

**9.3 CAISO and Participating TO Obligations.** The CAISO and Participating TO shall cause the Participating TO's Transmission System to be operated and controlled in a safe and reliable manner and in accordance with this LGIA. The Participating TO at the Interconnection Customer's expense shall cause the Participating TO's Interconnection Facilities to be operated, maintained and controlled in a safe and reliable manner and in accordance with this LGIA. The CAISO and Participating TO may provide operating instructions to the Interconnection Customer consistent with this LGIA and Participating TO and CAISO operating protocols and procedures as they may change from time to time. The Participating TO and CAISO will consider changes to their operating protocols and procedures proposed by the Interconnection Customer.

**9.4 Interconnection Customer Obligations.** The Interconnection Customer shall at its own expense operate, maintain and control the Large Generating Facility and the Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA. The Interconnection Customer shall operate the Large Generating Facility and the Interconnection Customer's Interconnection Facilities in accordance with all applicable requirements of the Balancing Authority Area of which it is

part, including such requirements as set forth in Appendix C, Interconnection Details, of this LGIA. Appendix C, Interconnection Details, will be modified to reflect changes to the requirements as they may change from time to time. A Party may request that another Party provide copies of the requirements set forth in Appendix C, Interconnection Details, of this LGIA. The Interconnection Customer shall not commence Commercial Operation of an Electric Generating Unit with the Participating TO's Transmission System until the Participating TO provides prior written approval, which approval shall not be unreasonably withheld, for operation of such Electric Generating Unit.

**9.5 Start-Up and Synchronization.** Consistent with the Parties' mutually acceptable procedures, the Interconnection Customer is responsible for the proper synchronization of each Electric Generating Unit to the CAISO Controlled Grid.

**9.6 Reactive Power and Primary Frequency Response.**

**9.6.1 Power Factor Design Criteria.** For all Generating Facilities other than Asynchronous Generating Facilities, the Interconnection Customer shall design the Large Generating Facility to maintain a composite power delivery at continuous rated power output at the terminals of the Electric Generating Unit at a power factor within the range of 0.95 leading to 0.90 lagging, unless the CAISO has established different requirements that apply to all generators in the Balancing Authority Area on a comparable basis. For Asynchronous Generating Facilities, the Interconnection Customer shall design the Large Generating Facility to maintain power factor criteria in accordance with Appendix H of this LGIA.

**9.6.2 Voltage Schedules.** Once the Interconnection Customer has synchronized an Electric Generating Unit with the CAISO Controlled Grid, the CAISO or Participating TO shall require the Interconnection Customer to maintain a voltage schedule by operating the Electric Generating Unit to produce or absorb reactive power within the design limitations of the Electric Generating Unit set forth in Article 9.6.1 (Power Factor Design Criteria). CAISO's voltage schedules shall treat all sources of reactive power in the Balancing Authority Area in an equitable and not unduly discriminatory manner. The Participating TO shall exercise Reasonable Efforts to provide the Interconnection Customer with such schedules at least one (1) day in advance, and the CAISO or Participating TO may make changes to such schedules as necessary to maintain the reliability of the CAISO Controlled Grid or the Participating TO's electric system. The Interconnection Customer shall operate the Electric Generating Unit to maintain the specified output voltage or power factor within the design limitations of the Electric Generating Unit set forth in Article 9.6.1 (Power Factor Design Criteria), and as may be required by the CAISO to operate the Electric Generating Unit at a specific voltage schedule within the design limitations set forth in Article 9.6.1. If the Interconnection Customer is unable to maintain the specified voltage or power factor, it shall promptly notify the CAISO and the Participating TO.

**9.6.2.1 Voltage Regulators.** Whenever an Electric Generating Unit is operated in parallel with the CAISO Controlled Grid and voltage regulators are capable of operation, the Interconnection Customer shall operate the Electric Generating Unit with its voltage regulators in automatic operation. If the Electric Generating Unit's voltage regulators are not capable of such automatic operation, the Interconnection Customer shall immediately notify the CAISO and the Participating TO and ensure that the Electric Generating Unit operates as specified in Article 9.6.2 through manual operation and that such Electric Generating Unit's reactive power production or absorption (measured in MVARs) are within the design

capability of the Electric Generating Unit(s) and steady state stability limits. The Interconnection Customer shall restore the speed governors and voltage regulators to automatic operation as soon as possible. If the Large Generating Facility's speed governors and voltage regulators are improperly tuned or malfunctioning, the CAISO shall have the right to order the reduction in output or disconnection of the Large Generating Facility if the reliability of the CAISO Controlled Grid would be adversely affected. The Interconnection Customer shall not cause its Large Generating Facility to disconnect automatically or instantaneously from the CAISO Controlled Grid or trip any Electric Generating Unit comprising the Large Generating Facility for an under or over frequency condition unless the abnormal frequency condition persists for a time period beyond the limits set forth in ANSI/IEEE Standard C37.106, or such other standard as applied to other generators in the Balancing Authority Area on a comparable basis.

**9.6.3 Payment for Reactive Power.** CAISO is required to pay the Interconnection Customer for reactive power that Interconnection Customer provides or absorbs from an Electric Generating Unit when the CAISO requests the Interconnection Customer to operate its Electric Generating Unit outside the range specified in Article 9.6.1, provided that if the CAISO pays other generators for reactive power service within the specified range, it must also pay the Interconnection Customer. Payments shall be pursuant to Article 11.6 or such other agreement to which the CAISO and Interconnection Customer have otherwise agreed.

**9.6.4 Primary Frequency Response**. Interconnection Customer shall ensure the primary frequency response capability of its Electric Generating Unit(s) by installing, maintaining, and operating a functioning governor or equivalent controls. The term "functioning governor or equivalent controls" as used herein shall mean the required hardware and/or software that provides frequency responsive real power control with the ability to sense changes in system frequency and autonomously adjust the Electric Generating Unit's real power output in accordance with the droop and deadband parameters and in the direction needed to correct frequency deviations. Interconnection Customer is required to install a governor or equivalent controls with the capability of operating: (1) with a maximum 5 percent droop and ±0.036 Hz deadband; or (2) in accordance with the relevant droop, deadband, and timely and sustained response settings from Applicable Reliability Standards providing for equivalent or more stringent parameters. The droop characteristic shall be: (1) based on the nameplate capacity of the Electric Generating Unit(s), and shall be linear in the range of frequencies between 59 to 61 Hz that are outside of the deadband parameter; or (2) based on Applicable Reliability Standards providing for an equivalent or more stringent parameter. The deadband parameter shall be: the range of frequencies above and below nominal (60 Hz) in which the governor or equivalent controls is not expected to adjust the Electric Generating Unit's real power output in response to frequency deviations. The deadband shall be implemented: (1) without a step to the droop curve, that is, once the frequency deviation exceeds the deadband parameter, the expected change in the Electric Generating Unit's real power output in response to frequency deviations shall start from zero and then increase (for under-frequency deviations) or decrease (for over-frequency deviations) linearly in proportion to the magnitude of the frequency deviation; or (2) in accordance with Applicable Reliability Standards providing for an equivalent or more stringent parameter. Interconnection Customer shall notify the CAISO that the primary frequency response capability of the Electric Generating Unit(s) has been tested and confirmed during commissioning. Once Interconnection Customer has synchronized the Electric

Generating Unit(s) with the CAISO Controlled Grid, Interconnection Customer shall operate the Electric Generating Unit(s) consistent with the provisions specified in Sections 9.6.4.1 and 9.6.4.2 of this LGIA. The primary frequency response requirements contained herein shall apply to both synchronous and non-synchronous Large Generating Facilities.

**9.6.4.1 Governor or Equivalent Controls.** Whenever the Electric Generating Unit(s) is operated in parallel with the CAISO Controlled Grid, Interconnection Customer shall operate the Electric Generating Unit(s) with its governor or equivalent controls in service and responsive to frequency. Interconnection Customer shall, in coordination with the CAISO, set the deadband parameter to: (1) a maximum of ±0.036 Hz and set the droop parameter to a maximum of 5 percent; or (2) implement the relevant droop and deadband settings from Applicable Reliability Standards that provides for equivalent or more stringent parameters. Interconnection Customer shall be required to provide the status and settings of the governor or equivalent controls to the CAISO upon request. If Interconnection Customer needs to operate the Electric Generating Unit(s) with its governor or equivalent controls not in service, Interconnection Customer shall immediately notify the CAISO, and provide the following information: (1) the operating status of the governor or equivalent controls (i.e., whether it is currently out of service or when it will be taken out of service); (2) the reasons for removing the governor or equivalent controls from service; and (3) a reasonable estimate of when the governor or equivalent controls will be returned to service. Interconnection Customer shall make Reasonable Efforts to return its governor or equivalent controls into service as soon as practicable. Interconnection Customer shall make Reasonable Efforts to keep outages of the Electric Generating Unit's governor or equivalent controls to a minimum whenever the Electric Generating Unit(s) is operated in parallel with the CAISO Controlled Grid.

**9.6.4.2 Timely and Sustained Response.** Interconnection Customer shall ensure that the Electric Generating Unit's real power response to sustained frequency deviations outside of the deadband setting is automatically provided and shall begin immediately after frequency deviates outside of the deadband, and to the extent the Electric Generating Unit(s) has operating capability in the direction needed to correct the frequency deviation. Interconnection Customer shall not block or otherwise inhibit the ability of the governor or equivalent controls to respond and shall ensure that the response is not inhibited, except under certain operational constraints including, but not limited to, ambient temperature limitations, physical energy limitations, outages of mechanical equipment, or regulatory requirements. The Electric Generating Unit(s) shall sustain the real power response at least until system frequency returns to a value within the deadband setting of the governor or equivalent controls. A FERC-approved Applicable Reliability Standard with equivalent or more stringent requirements shall supersede the above requirements.

**9.6.4.3 Exemptions.** Large Generating Facilities that are regulated by the Nuclear Regulatory Commission shall be exempt from Sections 9.6.4, 9.6.4.1, and 9.6.4.2 of this LGIA. Large Generating Facilities that are behind-the-meter generation that is sized-to-load (i.e., the thermal load and the generation are near-balanced in real-time operation and the generation is primarily controlled to maintain the unique thermal,

chemical, or mechanical output necessary for the operating requirements of its host facility) shall be required to install primary frequency response capability in accordance with the droop and deadband capability requirements specified in Section 9.6.4, but shall be otherwise exempt from the operating requirements in Sections 9.6.4, 9.6.4.1, 9.6.4.2, and 9.6.4.4 of this LGIA.

**9.6.4.4 Electric Storage Resources.** Interconnection Customer interconnecting an electric storage resource shall establish an operating range in Appendix C of this LGIA that specifies a minimum state of charge and a maximum state of charge between which the electric storage resource will be required to provide primary frequency response consistent with the conditions set forth in Sections 9.6.4, 9.6.4.1, 9.6.4.2, and 9.6.4.3 of this LGIA. Appendix C shall specify whether the operating range is static or dynamic, and shall consider: (1) the expected magnitude of frequency deviations in the interconnection; (2) the expected duration that system frequency will remain outside of the deadband parameter in the interconnection; (3) the expected incidence of frequency deviations outside of the deadband parameter in the interconnection; (4) the physical capabilities of the electric storage resource; (5) operational limitations of the electric storage resource due to manufacturer specifications; and (6) any other relevant factors agreed to by the CAISO and Interconnection Customer, and in consultation with the relevant transmission owner or balancing authority as appropriate. If the operating range is dynamic, then Appendix C must establish how frequently the operating range will be reevaluated and the factors that may be considered during its reevaluation.

Interconnection Customer's electric storage resource is required to provide timely and sustained primary frequency response consistent with Section 9.6.4.2 of this LGIA when it is online and dispatched to inject electricity to the CAISO Controlled Grid and/or receive electricity from the Participating TO's Transmission System or the CAISO Controlled Grid. This excludes circumstances when the electric storage resource is not dispatched to inject electricity to the CAISO Controlled Grid and/or dispatched to receive electricity from the Participating TO's Transmission system or the CAISO Controlled Grid. If Interconnection Customer's electric storage resource is charging at the time of a frequency deviation outside of its deadband parameter, it is to increase (for over-frequency deviations) or decrease (for under-frequency deviations) the rate at which it is charging in accordance with its droop parameter. Interconnection Customer's electric storage resource is not required to change from charging to discharging, or vice versa, unless the response necessitated by the droop and deadband settings requires it to do so and it is technically capable of making such a transition.

## 9.7 Outages and Interruptions.

### 9.7.1 Outages.

**9.7.1.1 Outage Authority and Coordination.** Each Party may in accordance with Good Utility Practice in coordination with the other Parties remove from service any of its respective Interconnection Facilities or Network Upgrades that may impact another Party's facilities as necessary to perform maintenance or testing or to install or replace equipment. Absent an Emergency Condition, the Party scheduling a removal of such

facility(ies) from service will use Reasonable Efforts to schedule such removal on a date and time mutually acceptable to all Parties. In all circumstances any Party planning to remove such facility(ies) from service shall use Reasonable Efforts to minimize the effect on the other Parties of such removal.

**9.7.1.2 Outage Schedules.** The CAISO shall post scheduled outages of CAISO Controlled Grid facilities in accordance with the provisions of the CAISO Tariff. The Interconnection Customer shall submit its planned maintenance schedules for the Large Generating Facility to the CAISO in accordance with the CAISO Tariff. The Interconnection Customer shall update its planned maintenance schedules in accordance with the CAISO Tariff. The CAISO may request the Interconnection Customer to reschedule its maintenance as necessary to maintain the reliability of the CAISO Controlled Grid in accordance with the CAISO Tariff. Such planned maintenance schedules and updates and changes to such schedules shall be provided by the Interconnection Customer to the Participating TO concurrently with their submittal to the CAISO. The CAISO shall compensate the Interconnection Customer for any additional direct costs that the Interconnection Customer incurs as a result of having to reschedule maintenance in accordance with the CAISO Tariff. The Interconnection Customer will not be eligible to receive compensation, if during the twelve (12) months prior to the date of the scheduled maintenance, the Interconnection Customer had modified its schedule of maintenance activities.

**9.7.1.3 Outage Restoration.** If an outage on a Party's Interconnection Facilities or Network Upgrades adversely affects another Party's operations or facilities, the Party that owns or controls the facility that is out of service shall use Reasonable Efforts to promptly restore such facility(ies) to a normal operating condition consistent with the nature of the outage. The Party that owns or controls the facility that is out of service shall provide the other Parties, to the extent such information is known, information on the nature of the Emergency Condition, if the outage is caused by an Emergency Condition, an estimated time of restoration, and any corrective actions required. Initial verbal notice shall be followed up as soon as practicable with written notice explaining the nature of the outage, if requested by a Party, which may be provided by e-mail or facsimile.

**9.7.2 Interruption of Service.** If required by Good Utility Practice to do so, the CAISO or the Participating TO may require the Interconnection Customer to interrupt or reduce deliveries of electricity if such delivery of electricity could adversely affect the CAISO's or the Participating TO's ability to perform such activities as are necessary to safely and reliably operate and maintain the Participating TO's electric system or the CAISO Controlled Grid. The following provisions shall apply to any interruption or reduction permitted under this Article 9.7.2:

**9.7.2.1** The interruption or reduction shall continue only for so long as reasonably necessary under Good Utility Practice;

**9.7.2.2** Any such interruption or reduction shall be made on an equitable, non-discriminatory basis with respect to all generating facilities directly connected to the CAISO Controlled Grid, subject to any conditions specified in this LGIA;

**9.7.2.3** When the interruption or reduction must be made under circumstances which do not allow for advance notice, the CAISO or Participating TO, as applicable, shall notify the Interconnection Customer by telephone as soon as practicable of the reasons for the curtailment, interruption, or reduction, and, if known, its expected duration. Telephone notification shall be followed by written notification, if requested by the Interconnection Customer, as soon as practicable;

**9.7.2.4** Except during the existence of an Emergency Condition, the CAISO or Participating TO shall notify the Interconnection Customer in advance regarding the timing of such interruption or reduction and further notify the Interconnection Customer of the expected duration. The CAISO or Participating TO shall coordinate with the Interconnection Customer using Good Utility Practice to schedule the interruption or reduction during periods of least impact to the Interconnection Customer, the CAISO, and the Participating TO;

**9.7.2.5** The Parties shall cooperate and coordinate with each other to the extent necessary in order to restore the Large Generating Facility, Interconnection Facilities, the Participating TO's Transmission System, and the CAISO Controlled Grid to their normal operating state, consistent with system conditions and Good Utility Practice.

**9.7.3 Under-Frequency and Over Frequency Conditions.** The CAISO Controlled Grid is designed to automatically activate a load-shed program as required by Applicable Reliability Standards and the Applicable Reliability Council in the event of an under-frequency system disturbance. The Interconnection Customer shall implement under-frequency and over-frequency protection set points for the Large Generating Facility as required by Applicable Reliability Standards and the Applicable Reliability Council to ensure "ride through" capability. Large Generating Facility response to frequency deviations of pre-determined magnitudes, both under-frequency and over-frequency deviations, shall be studied and coordinated with the Participating TO and CAISO in accordance with Good Utility Practice. The term "ride through" as used herein shall mean the ability of a Generating Facility to stay connected to and synchronized with the CAISO Controlled Grid during system disturbances within a range of under-frequency and over-frequency conditions, in accordance with Good Utility Practice. . Asynchronous Generating Facilities shall be subject to frequency ride through capability requirements in accordance with Appendix H to this LGIA.

**9.7.4 System Protection and Other Control Requirements.**

**9.7.4.1 System Protection Facilities.** The Interconnection Customer shall, at its expense, install, operate and maintain System Protection Facilities as a part of the Large Generating Facility or the Interconnection Customer's Interconnection Facilities. The Participating TO shall install at the Interconnection Customer's expense any System Protection Facilities that may be required on the Participating TO's Interconnection Facilities or the Participating TO's Transmission System as a result of the interconnection of the Large Generating Facility and the Interconnection Customer's Interconnection Facilities.

**9.7.4.2** The Participating TO's and Interconnection Customer's protection facilities shall be designed and coordinated with other systems in accordance with Applicable Reliability Standards, Applicable Reliability Council criteria, and Good Utility Practice.

**9.7.4.3** The Participating TO and Interconnection Customer shall each be responsible for protection of its facilities consistent with Good Utility Practice.

**9.7.4.4** The Participating TO's and Interconnection Customer's protective relay design shall incorporate the necessary test switches to perform the tests required in Article 6. The required test switches will be placed such that they allow operation of lockout relays while preventing breaker failure schemes from operating and causing unnecessary breaker operations and/or the tripping of the Interconnection Customer's Electric Generating Units.

**9.7.4.5** The Participating TO and Interconnection Customer will test, operate and maintain System Protection Facilities in accordance with Good Utility Practice and, if applicable, the requirements of the Participating TO's Interconnection Handbook.

**9.7.4.6** Prior to the in-service date, and again prior to the Commercial Operation Date, the Participating TO and Interconnection Customer or their agents shall perform a complete calibration test and functional trip test of the System Protection Facilities. At intervals suggested by Good Utility Practice, the standards and procedures of the Participating TO, including, if applicable, the requirements of the Participating TO's Interconnection Handbook, and following any apparent malfunction of the System Protection Facilities, each Party shall perform both calibration and functional trip tests of its System Protection Facilities. These tests do not require the tripping of any in-service generation unit. These tests do, however, require that all protective relays and lockout contacts be activated.

**9.7.5 Requirements for Protection.** In compliance with Good Utility Practice and, if applicable, the requirements of the Participating TO's Interconnection Handbook, the Interconnection Customer shall provide, install, own, and maintain relays, circuit breakers and all other devices necessary to remove any fault contribution of the Large Generating Facility to any short circuit occurring on the Participating TO's Transmission System not otherwise isolated by the Participating TO's equipment, such that the removal of the fault contribution shall be coordinated with the protective requirements of the Participating TO's Transmission System. Such protective equipment shall include, without limitation, a disconnecting device with fault current-interrupting capability located between the Large Generating Facility and the Participating TO's Transmission System at a site selected upon mutual agreement (not to be unreasonably withheld, conditioned or delayed) of the Parties. The Interconnection Customer shall be responsible for protection of the Large Generating Facility and the Interconnection Customer's other equipment from such conditions as negative sequence currents, over- or under-frequency, sudden load rejection, over- or under-voltage, and generator loss-of-field. The Interconnection Customer shall be solely responsible to disconnect the Large Generating Facility and the Interconnection Customer's other equipment if conditions on the CAISO Controlled Grid could adversely affect the Large Generating Facility.

**9.7.6 Power Quality.** Neither the Participating TO's nor the Interconnection Customer's facilities shall cause excessive voltage flicker nor introduce excessive distortion to the sinusoidal voltage or current waves as defined by ANSI Standard C84.1-1989, in accordance with IEEE Standard 519, any

applicable superseding electric industry standard, or any alternative Applicable Reliability Standard or Applicable Reliability Council standard. In the event of a conflict among ANSI Standard C84.1-1989, any applicable superseding electric industry standard, or any alternative Applicable Reliability Standard or Applicable Reliability Council standard, the alternative Applicable Reliability Standard or Applicable Reliability Council standard shall control.

**9.8 Switching and Tagging Rules.** Each Party shall provide the other Parties a copy of its switching and tagging rules that are applicable to the other Parties' activities. Such switching and tagging rules shall be developed on a non-discriminatory basis. The Parties shall comply with applicable switching and tagging rules, as amended from time to time, in obtaining clearances for work or for switching operations on equipment.

**9.9 Use of Interconnection Facilities by Third Parties.**

**9.9.1 Purpose of Interconnection Facilities.** Except as may be required by Applicable Laws and Regulations, or as otherwise agreed to among the Parties, the Interconnection Facilities shall be constructed for the sole purpose of interconnecting the Large Generating Facility to the Participating TO's Transmission System and shall be used for no other purpose.

**9.9.2 Third Party Users.** If required by Applicable Laws and Regulations or if the Parties mutually agree, such agreement not to be unreasonably withheld, to allow one or more third parties to use the Participating TO's Interconnection Facilities, or any part thereof, the Interconnection Customer will be entitled to compensation for the capital expenses it incurred in connection with the Interconnection Facilities based upon the pro rata use of the Interconnection Facilities by the Participating TO, all third party users, and the Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually-agreed upon methodology. In addition, cost responsibility for ongoing costs, including operation and maintenance costs associated with the Interconnection Facilities, will be allocated between the Interconnection Customer and any third party users based upon the pro rata use of the Interconnection Facilities by the Participating TO, all third party users, and the Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually agreed upon methodology. If the issue of such compensation or allocation cannot be resolved through such negotiations, it shall be submitted to FERC for resolution.

**9.10 Disturbance Analysis Data Exchange.** The Parties will cooperate with one another in the analysis of disturbances to either the Large Generating Facility or the CAISO Controlled Grid by gathering and providing access to any information relating to any disturbance, including information from oscillography, protective relay targets, breaker operations and sequence of events records, and any disturbance information required by Good Utility Practice.

## ARTICLE 10. MAINTENANCE

**10.1 Participating TO Obligations.** The Participating TO shall maintain the Participating TO's Transmission System and the Participating TO's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA.

**10.2 Interconnection Customer Obligations.** The Interconnection Customer shall maintain the Large Generating Facility and the Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA.

**10.3 Coordination.** The Parties shall confer regularly to coordinate the planning, scheduling and performance of preventive and corrective maintenance on the Large Generating Facility and the Interconnection Facilities.

**10.4 Secondary Systems.** The Participating TO and Interconnection Customer shall cooperate with the other Parties in the inspection, maintenance, and testing of control or power circuits that operate below 600 volts, AC or DC, including, but not limited to, any hardware, control or protective devices, cables, conductors, electric raceways, secondary equipment panels, transducers, batteries, chargers, and voltage and current transformers that directly affect the operation of a Party's facilities and equipment which may reasonably be expected to impact the other Parties. Each Party shall provide advance notice to the other Parties before undertaking any work on such circuits, especially on electrical circuits involving circuit breaker trip and close contacts, current transformers, or potential transformers.

**10.5 Operating and Maintenance Expenses.** Subject to the provisions herein addressing the use of facilities by others, and except for operations and maintenance expenses associated with modifications made for providing interconnection or transmission service to a third party and such third party pays for such expenses, the Interconnection Customer shall be responsible for all reasonable expenses including overheads, associated with: (1) owning, operating, maintaining, repairing, and replacing the Interconnection Customer's Interconnection Facilities; and (2) operation, maintenance, repair and replacement of the Participating TO's Interconnection Facilities.

## ARTICLE 11. PERFORMANCE OBLIGATION

**11.1 Interconnection Customer's Interconnection Facilities.** The Interconnection Customer shall design, procure, construct, install, own and/or control the Interconnection Customer's Interconnection Facilities described in Appendix A at its sole expense.

**11.2 Participating TO's Interconnection Facilities.** The Participating TO shall design, procure, construct, install, own and/or control the Participating TO's Interconnection Facilities described in Appendix A at the sole expense of the Interconnection Customer. Unless the Participating TO elects to fund the capital for the Participating TO's Interconnection Facilities, they shall be solely funded by the Interconnection Customer.

**11.3 Network Upgrades and Distribution Upgrades.** The Participating TO shall design, procure, construct, install, and own the Network Upgrades and Distribution Upgrades described in Appendix A. The Interconnection Customer shall be responsible for all costs related to Distribution Upgrades. Unless the Participating TO elects to fund the capital for the Distribution Upgrades and Network Upgrades, they shall be funded by the Interconnection Customer, which for Interconnection Customers processed under Section 6 of the GIP (in Queue Clusters) shall be in an amount determined pursuant to the methodology set forth in Section 6.5 of the GIP. This specific amount is set forth in Appendix G to this LGIA.

**11.4 Transmission Credits.** No later than thirty (30) Calendar Days prior to the Commercial Operation Date, the Interconnection Customer may make a one-time election by written notice to the CAISO and the Participating TO to receive Congestion Revenue Rights as defined in and as available under the CAISO Tariff at the time of the election in accordance with the CAISO Tariff, in lieu of a refund of the cost of Network Upgrades in accordance with Article 11.4.1.

**11.4.1 Repayment of Amounts Advanced for Network Upgrades.**

Upon the Commercial Operation Date of a Generating Facility that is not a Phased Generating Facility, the Interconnection Customer shall be entitled to a repayment, equal to the total amount paid to the Participating TO for the costs of Network Upgrades for which it is responsible, as set forth in Appendix G. Such amount shall include any tax gross-up or other tax-related payments associated with Network Upgrades not refunded to the Interconnection Customer pursuant to Article 5.17.8 or otherwise, and shall be paid to the Interconnection Customer by the Participating TO on a dollar-for-dollar basis either through (1) direct payments made on a levelized basis over the five-year period commencing on the Commercial Operation Date; or (2) any alternative payment schedule that is mutually agreeable to the Interconnection Customer and Participating TO, provided that such amount is paid within five (5) years from the Commercial Operation Date. Notwithstanding the foregoing, if this LGIA terminates within five (5) years from the Commercial Operation Date, the Participating TO's obligation to pay refunds to the Interconnection Customer shall cease as of the date of termination.

**11.4.1.1 [Not Used]**

**11.4.1.2 Repayment of Amounts Advanced Regarding Phased Generating Facilities**

Upon the Commercial Operation Date of each phase of a Phased Generating Facility, the Interconnection Customer shall be entitled to a repayment equal to the Interconnection Customer's contribution to the cost of Network Upgrades for that completed phase for which the Interconnection Customer is responsible, as set forth in Appendix G, if all of the following conditions are satisfied:

(a) The Generating Facility is capable of being constructed in phases;

(b) The Generating Facility is specified in the LGIA as being constructed in phases;

(c) The completed phase corresponds to one of the phases specified in the LGIA;

(d) The phase has achieved Commercial Operation and the Interconnection Customer has tendered notice of the same pursuant to this LGIA;

(e) All Parties to the LGIA have confirmed that the completed phase meets the requirements set forth in this LGIA and any other operating, metering, and interconnection requirements to permit generation output of the entire capacity of the completed phase as specified in this LGIA;

(f) The Network Upgrades necessary for the completed phase to meet the desired level of deliverability are in service; and

(g) The Interconnection Customer has posted one hundred (100) percent of the Interconnection Financial Security required for the Network Upgrades for all the phases of the Generating Facility (or if less than one hundred (100) percent has been posted, then all required Financial Security Instruments to the date of commencement of repayment).

Upon satisfaction of these conditions (a) through (g), the Interconnection Customer shall be entitled to receive a partial repayment of its financed cost responsibility in an amount equal to the percentage of the Generating Facility

declared to be in Commercial Operation multiplied by the cost of the Network Upgrades associated with the completed phase. The Interconnection Customer shall be entitled to repayment in this manner for each completed phase until the entire Generating Facility is completed.

A reduction in the electrical output (MW capacity) of the Generating Facility pursuant to the CAISO Tariff shall not diminish the Interconnection Customer's right to repayment pursuant to this LGIA Article 11.4.1. If the LGIA includes a partial termination provision and the partial termination right has been exercised with regard to a phase that has not been built, then the Interconnection Customer's eligibility for repayment under this Article as to the remaining phases shall not be diminished. If the Interconnection Customer completes one or more phases and then breaches the LGIA, the Participating TO and the CAISO shall be entitled to offset any losses or damages resulting from the Breach against any repayments made for Network Upgrades related to the completed phases.

Any repayment amount for completion of a phase shall include any tax gross-up or other tax-related payments associated with Network Upgrades not refunded to the Interconnection Customer pursuant to Article 5.17.8 or otherwise, and shall be paid to the Interconnection Customer by the Participating TO on a dollar-for-dollar basis either through (1) direct payments made on a levelized basis over the five-year period commencing on the date by which the requirements of items (a) through (g) have been fulfilled; or (2) any alternative payment schedule that is mutually agreeable to the Interconnection Customer and Participating TO, provided that such amount is paid within five (5) years from the Commercial Operation Date. Notwithstanding the foregoing, if this LGIA terminates within five (5) years from the Commercial Operation Date, the Participating TO's obligation to pay refunds to the Interconnection Customer shall cease as of the date of termination.

**11.4.1.3 Interest Payments and Assignment Rights**

Any phased or non-phased repayment shall include interest calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date of any payment for Network Upgrades through the date on which the Interconnection Customer receives a repayment of such payment. Interest shall continue to accrue on the repayment obligation so long as this LGIA is in effect. The Interconnection Customer may assign such repayment rights to any entity.

**11.4.1.4 Failure to Achieve Commercial Operation**

If the Large Generating Facility fails to achieve Commercial Operation, but it or another Generating Facility is later constructed and makes use of the Network Upgrades, the Participating TO shall at that time reimburse Interconnection Customer for the amounts advanced for the Network Upgrades. Before any such reimbursement can occur, the Interconnection Customer, or the entity that ultimately constructs the generating facility, if different, is responsible for identifying and demonstrating to the Participating TO the appropriate entity to which reimbursement must be made in order to implement the intent of this reimbursement obligation.

**11.4.2 Special Provisions for Affected Systems.** The Interconnection Customer shall enter into an agreement with the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid, as applicable, in accordance with the GIP. Such agreement shall specify the terms governing payments to be made by the Interconnection Customer to the owner of the

Affected System and/or other affected owners of portions of the CAISO Controlled Grid as well as the repayment by the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid. In no event shall the Participating TO be responsible for the repayment for any facilities that are not part of the Participating TO's Transmission System. In the event the Participating TO is a joint owner with an Affected System or with any other co-owner of a facility affected by the Large Generating Facility, the Participating TO's obligation to reimburse the Interconnection Customer for payments made to address the impacts of the Large Generating Facility on the system shall not exceed the proportionate amount of the cost of any upgrades attributable to the proportion of the jointly-owned facility owned by the Participating TO.

**11.4.3** Notwithstanding any other provision of this LGIA, nothing herein shall be construed as relinquishing or foreclosing any rights, including but not limited to firm transmission rights, capacity rights, Congestion Revenue Rights, or transmission credits, that the Interconnection Customer shall be entitled to, now or in the future under any other agreement or tariff as a result of, or otherwise associated with, the transmission capacity, if any, created by the Network Upgrades, including the right to obtain cash reimbursements, merchant transmission Congestion Revenue Rights in accordance with Section 36.11 of the CAISO Tariff, or transmission credits for transmission service that is not associated with the Large Generating Facility.

**11.5 Provision of Interconnection Financial Security.** The Interconnection Customer is obligated to provide all necessary Interconnection Financial Security required under Section 9 of the GIP in a manner acceptable under Section 9 of the GIP. Failure by the Interconnection Customer to timely satisfy the GIP's requirements for the provision of Interconnection Financial Security shall be deemed a breach of this Agreement and a condition of Default of this Agreement.

**11.5.1** Notwithstanding any other provision of this Agreement for notice of Default and opportunity to cure such Default, the CAISO or the Participating TO shall provide the Interconnection Customer with written notice of any Default due to timely failure to post Interconnection Financial Security, and the Interconnection Customer shall have five (5) Business Days from the date of such notice to cure such Default by posting the required Interconnection Financial Security. If the Interconnection Customer fails to cure the Default, then this Agreement shall be deemed terminated.

**11.6 Interconnection Customer Compensation.** If the CAISO requests or directs the Interconnection Customer to provide a service pursuant to Articles 9.6.3 (Payment for Reactive Power) or 13.5.1 of this LGIA, the CAISO shall compensate the Interconnection Customer in accordance with the CAISO Tariff.

**11.6.1 Interconnection Customer Compensation for Actions During Emergency Condition.** The CAISO shall compensate the Interconnection Customer in accordance with the CAISO Tariff for its provision of real and reactive power and other Emergency Condition services that the Interconnection Customer provides to support the CAISO Controlled Grid during an Emergency Condition in accordance with Article 11.6.

## ARTICLE 12. INVOICE

**12.1 General.** The Participating TO shall submit to the Interconnection Customer, on a monthly basis, invoices of amounts due pursuant to this LGIA for the preceding month. Each invoice shall state the month to which the invoice applies and fully describe the

services and equipment provided. The Parties may discharge mutual debts and payment obligations due and owing to each other on the same date through netting, in which case all amounts a Party owes to the other Party under this LGIA, including interest payments or credits, shall be netted so that only the net amount remaining due shall be paid by the owing Party. Notwithstanding the foregoing, any invoices between the CAISO and another Party shall be submitted and paid in accordance with the CAISO Tariff.

**12.2 Final Invoice.** As soon as reasonably practicable, but within twelve months after completion of the construction of the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades, the Participating TO shall provide an invoice of the final cost of the construction of the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades, and shall set forth such costs in sufficient detail to enable the Interconnection Customer to compare the actual costs with the estimates and to ascertain deviations, if any, from the cost estimates. With respect to costs associated with the Participating TO's Interconnection Facilities and Distribution Upgrades, the Participating TO shall refund to the Interconnection Customer any amount by which the actual payment by the Interconnection Customer for estimated costs exceeds the actual costs of construction within thirty (30) Calendar Days of the issuance of such final construction invoice; or, in the event the actual costs of construction exceed the Interconnection Customer's actual payment for estimated costs, then the Interconnection Customer shall pay to the Participating TO any amount by which the actual costs of construction exceed the actual payment by the Interconnection Customer for estimated costs within thirty (30) Calendar Days of the issuance of such final construction invoice. With respect to costs associated with Network Upgrades, the Participating TO shall refund to the Interconnection Customer any amount by which the actual payment by the Interconnection Customer for estimated costs exceeds the actual costs of construction multiplied by the Interconnection Customer's percentage share of those costs, as set forth in Appendix G to this LGIA within thirty (30) Calendar Days of the issuance of such final construction invoice. In the event the actual costs of construction multiplied by the Interconnection Customer's percentage share of those costs exceed the Interconnection Customer's actual payment for estimated costs, then the Participating TO shall recover such difference through its transmission service rates.

**12.3 Payment.** Invoices shall be rendered to the Interconnection Customer at the address specified in Appendix F. The Interconnection Customer shall pay, or Participating TO shall refund, the amounts due within thirty (30) Calendar Days of the Interconnection Customer's receipt of the invoice. All payments shall be made in immediately available funds payable to the Interconnection Customer or Participating TO, or by wire transfer to a bank named and account designated by the invoicing Interconnection Customer or Participating TO. Payment of invoices by any Party will not constitute a waiver of any rights or claims any Party may have under this LGIA.

**12.4 Disputes.** In the event of a billing dispute between the Interconnection Customer and the Participating TO, the Participating TO and the CAISO shall continue to provide Interconnection Service under this LGIA as long as the Interconnection Customer: (i) continues to make all payments not in dispute; and (ii) pays to the Participating TO or into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If the Interconnection Customer fails to meet these two requirements for continuation of service, then the Participating TO may provide notice to the Interconnection Customer of a Default pursuant to Article 17. Within thirty (30) Calendar Days after the resolution of the dispute, the Party that owes money to the other Party shall pay the amount due with interest calculated in accordance with the methodology set forth in FERC's Regulations at 18 C.F.R. § 35.19a(a)(2)(iii). Notwithstanding the foregoing, any billing dispute between the CAISO and another Party shall be resolved in accordance with the provisions of Article 27 of this LGIA.

## ARTICLE 13. EMERGENCIES

**13.1 [Reserved]**

**13.2 Obligations.** Each Party shall comply with the Emergency Condition procedures of the CAISO, NERC, the Applicable Reliability Council, Applicable Reliability Standards, Applicable Laws and Regulations, and any emergency procedures set forth in this LGIA.

**13.3 Notice.** The Participating TO or the CAISO shall notify the Interconnection Customer promptly when it becomes aware of an Emergency Condition that affects the Participating TO's Interconnection Facilities or Distribution System or the CAISO Controlled Grid, respectively, that may reasonably be expected to affect the Interconnection Customer's operation of the Large Generating Facility or the Interconnection Customer's Interconnection Facilities. The Interconnection Customer shall notify the Participating TO and the CAISO promptly when it becomes aware of an Emergency Condition that affects the Large Generating Facility or the Interconnection Customer's Interconnection Facilities that may reasonably be expected to affect the CAISO Controlled Grid or the Participating TO's Interconnection Facilities. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of the Interconnection Customer's or Participating TO's facilities and operations, its anticipated duration and the corrective action taken and/or to be taken. The initial notice shall be followed as soon as practicable with written notice, if requested by a Party, which may be provided by electronic mail or facsimile, or in the case of the CAISO may be publicly posted on the CAISO's internet web site.

**13.4 Immediate Action.** Unless, in the Interconnection Customer's reasonable judgment, immediate action is required, the Interconnection Customer shall obtain the consent of the CAISO and the Participating TO, such consent to not be unreasonably withheld, prior to performing any manual switching operations at the Large Generating Facility or the Interconnection Customer's Interconnection Facilities in response to an Emergency Condition declared by the Participating TO or CAISO or in response to any other emergency condition.

**13.5 CAISO and Participating TO Authority.**

**13.5.1 General.** The CAISO and Participating TO may take whatever actions or inactions, including issuance of dispatch instructions, with regard to the CAISO Controlled Grid or the Participating TO's Interconnection Facilities or Distribution System they deem necessary during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the CAISO Controlled Grid or the Participating TO's Interconnection Facilities or Distribution System, (iii) limit or prevent damage, and (iv) expedite restoration of service.

The Participating TO and the CAISO shall use Reasonable Efforts to minimize the effect of such actions or inactions on the Large Generating Facility or the Interconnection Customer's Interconnection Facilities. The Participating TO or the CAISO may, on the basis of technical considerations, require the Large Generating Facility to mitigate an Emergency Condition by taking actions necessary and limited in scope to remedy the Emergency Condition, including, but not limited to, directing the Interconnection Customer to shut-down, start-up, increase or decrease the real or reactive power output of the Large Generating Facility; implementing a reduction or disconnection pursuant to Article 13.5.2; directing the Interconnection Customer to assist with black start (if available) or restoration efforts; or altering the outage schedules of the Large Generating Facility and the Interconnection Customer's Interconnection Facilities.

Interconnection Customer shall comply with all of the CAISO's Dispatch Instructions and Operating Instructions and Participating TO's dispatch instructions or Operating Instructions concerning Large Generating Facility real power and reactive power output within the manufacturer's design limitations of the Large Generating Facility's equipment that is in service and physically available for operation at the time, in compliance with Applicable Laws and Regulations.

**13.5.2 Reduction and Disconnection.** The Participating TO or the CAISO may reduce Interconnection Service or disconnect the Large Generating Facility or the Interconnection Customer's Interconnection Facilities when such reduction or disconnection is necessary under Good Utility Practice due to Emergency Conditions. These rights are separate and distinct from any right of curtailment of the CAISO pursuant to the CAISO Tariff. When the CAISO or Participating TO can schedule the reduction or disconnection in advance, the CAISO or Participating TO shall notify the Interconnection Customer of the reasons, timing and expected duration of the reduction or disconnection. The CAISO or Participating TO shall coordinate with the Interconnection Customer using Good Utility Practice to schedule the reduction or disconnection during periods of least impact to the Interconnection Customer and the CAISO and Participating TO. Any reduction or disconnection shall continue only for so long as reasonably necessary under Good Utility Practice. The Parties shall cooperate with each other to restore the Large Generating Facility, the Interconnection Facilities, and the CAISO Controlled Grid to their normal operating state as soon as practicable consistent with Good Utility Practice.

**13.6 Interconnection Customer Authority.** Consistent with Good Utility Practice, this LGIA, and the CAISO Tariff, the Interconnection Customer may take actions or inactions with regard to the Large Generating Facility or the Interconnection Customer's Interconnection Facilities during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the Large Generating Facility or the Interconnection Customer's Interconnection Facilities, (iii) limit or prevent damage, and (iv) expedite restoration of service. Interconnection Customer shall use Reasonable Efforts to minimize the effect of such actions or inactions on the CAISO Controlled Grid and the Participating TO's Interconnection Facilities. The CAISO and Participating TO shall use Reasonable Efforts to assist Interconnection Customer in such actions.

**13.7 Limited Liability.** Except as otherwise provided in Article 11.6.1 of this LGIA, no Party shall be liable to any other Party for any action it takes in responding to an Emergency Condition so long as such action is made in good faith and is consistent with Good Utility Practice.

## ARTICLE 14. REGULATORY REQUIREMENTS AND GOVERNING LAW

**14.1 Regulatory Requirements.** Each Party's obligations under this LGIA shall be subject to its receipt of any required approval or certificate from one or more Governmental Authorities in the form and substance satisfactory to the applying Party, or the Party making any required filings with, or providing notice to, such Governmental Authorities, and the expiration of any time period associated therewith. Each Party shall in good faith seek and use its Reasonable Efforts to obtain such other approvals. Nothing in this LGIA shall require the Interconnection Customer to take any action that could result in its inability to obtain, or its loss of, status or exemption under the Federal Power Act or the Public Utility Holding Company Act of 1935, as amended, or the Public Utility Regulatory Policies Act of 1978, or the Energy Policy Act of 2005.

**14.2 Governing Law.**

**14.2.1** The validity, interpretation and performance of this LGIA and each of its provisions shall be governed by the laws of the state where the Point of Interconnection is located, without regard to its conflicts of law principles.

**14.2.2** This LGIA is subject to all Applicable Laws and Regulations.

**14.2.3** Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, rules, or regulations of a Governmental Authority.

## ARTICLE 15. NOTICES

**15.1 General.** Unless otherwise provided in this LGIA, any notice, demand or request required or permitted to be given by a Party to another and any instrument required or permitted to be tendered or delivered by a Party in writing to another shall be effective when delivered and may be so given, tendered or delivered, by recognized national courier, or by depositing the same with the United States Postal Service with postage prepaid, for delivery by certified or registered mail, addressed to the Party, or personally delivered to the Party, at the address set out in Appendix F, Addresses for Delivery of Notices and Billings.

A Party must update the information in Appendix F as information changes. A Party may change the notice information in this LGIA by giving five (5) Business Days written notice prior to the effective date of the change. Such changes shall not constitute an amendment to this LGIA.

**15.2 Billings and Payments.** Billings and payments shall be sent to the addresses set out in Appendix F.

**15.3 Alternative Forms of Notice.** Any notice or request required or permitted to be given by a Party to another and not required by this LGIA to be given in writing may be so given by telephone, facsimile or e-mail to the telephone numbers and e-mail addresses set out in Appendix F.

**15.4 Operations and Maintenance Notice.** Each Party shall notify the other Parties in writing of the identity of the person(s) that it designates as the point(s) of contact with respect to the implementation of Articles 9 and 10.

## ARTICLE 16. FORCE MAJEURE

**16.1 Force Majeure.**

**16.1.1** Economic hardship is not considered a Force Majeure event.

**16.1.2** No Party shall be considered to be in Default with respect to any obligation hereunder, (including obligations under Article 4), other than the obligation to pay money when due, if prevented from fulfilling such obligation by Force Majeure. A Party unable to fulfill any obligation hereunder (other than an obligation to pay money when due) by reason of Force Majeure shall give notice and the full particulars of such Force Majeure to the other Party in writing or by telephone as soon as reasonably possible after the occurrence of the cause relied upon. Telephone notices given pursuant to this Article shall be confirmed in writing as soon as reasonably possible and shall specifically state full particulars of the Force Majeure, the time and date when the Force Majeure occurred and when the Force Majeure is reasonably expected to cease. The Party affected shall exercise due diligence to remove such disability with reasonable dispatch, but

shall not be required to accede or agree to any provision not satisfactory to it in order to settle and terminate a strike or other labor disturbance.

## ARTICLE 17. DEFAULT

**17.1 Default.**

**17.1.1 General.** No Default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of Force Majeure as defined in this LGIA or the result of an act or omission of the other Party. Upon a Breach, the affected non-Breaching Party(ies) shall give written notice of such Breach to the Breaching Party. Except as provided in Articles 11.5.1 and 17.1.2, the Breaching Party shall have thirty (30) Calendar Days from receipt of the Default notice within which to cure such Breach; provided however, if such Breach is not capable of cure within thirty (30) Calendar Days, the Breaching Party shall commence such cure within thirty (30) Calendar Days after notice and continuously and diligently complete such cure within ninety (90) Calendar Days from receipt of the Default notice; and, if cured within such time, the Breach specified in such notice shall cease to exist.

**17.1.2 Right to Terminate.** If a Breach is not cured as provided in this Article, or if a Breach is not capable of being cured within the period provided for herein, the affected non-Breaching Party(ies) shall have the right to declare a Default and terminate this LGIA by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not such Party(ies) terminates this LGIA, to recover from the Breaching Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this Article will survive termination of this LGIA.

## ARTICLE 18. INDEMNITY, CONSEQUENTIAL DAMAGES AND INSURANCE

**18.1 Indemnity.** Each Party shall at all times indemnify, defend, and hold the other Parties harmless from, any and all Losses arising out of or resulting from another Party's action or inactions of its obligations under this LGIA on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the Indemnified Party.

**18.1.1 Indemnified Party.** If an Indemnified Party is entitled to indemnification under this Article 18 as a result of a claim by a third party, and the Indemnifying Party fails, after notice and reasonable opportunity to proceed under Article 18.1, to assume the defense of such claim, such Indemnified Party may at the expense of the Indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

**18.1.2 Indemnifying Party.** If an Indemnifying Party is obligated to indemnify and hold any Indemnified Party harmless under this Article 18, the amount owing to the Indemnified Party shall be the amount of such Indemnified Party’s actual Loss, net of any insurance or other recovery.

**18.1.3 Indemnity Procedures.** Promptly after receipt by an Indemnified Party of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in Article 18.1 may apply, the Indemnified Party shall notify the Indemnifying Party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying Party.

The Indemnifying Party shall have the right to assume the defense thereof with counsel designated by such Indemnifying Party and reasonably satisfactory to the Indemnified Party. If the defendants in any such action include one or more Indemnified Parties and the Indemnifying Party and if the Indemnified Party reasonably concludes that there may
be legal defenses available to it and/or other Indemnified Parties which are different from or additional to those available to the Indemnifying Party, the Indemnified Party shall have the right to select separate counsel to assert such legal defenses and to otherwise participate in the defense of such action on its own behalf. In such instances, the Indemnifying Party shall only be required to pay the fees and expenses of one additional attorney to represent an Indemnified Party or Indemnified Parties having such differing or additional legal defenses.

The Indemnified Party shall be entitled, at its expense, to participate in any such action, suit or proceeding, the defense of which has been assumed by the Indemnifying Party. Notwithstanding the foregoing, the Indemnifying Party (i) shall not be entitled to assume and control the defense of any such action, suit or proceedings if and to the extent that, in the opinion of the Indemnified Party and its counsel, such action, suit or proceeding involves the potential imposition of criminal liability on the Indemnified Party, or there exists a conflict or adversity of interest between the Indemnified Party and the Indemnifying Party, in such event the Indemnifying Party shall pay the reasonable expenses of the Indemnified Party, and (ii) shall not settle or consent to the entry of any judgment in any action, suit or proceeding without the consent of the Indemnified Party, which shall not be unreasonably withheld, conditioned or delayed.

**18.2 Consequential Damages.** Other than the liquidated damages heretofore described in Article 5.3, in no event shall any Party be liable under any provision of this LGIA for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to another Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

**18.3 Insurance.** As indicated below, the designated Party shall, at its own expense, maintain in force throughout the periods noted in this LGIA, and until released by the other Parties, the following minimum insurance coverages, with insurers rated no less than A- (with a minimum size rating of VII) by Bests' Insurance Guide and Key Ratings and authorized to do business in the state where the Point of Interconnection is located, except in the case of any insurance required to be carried by the CAISO, the State of California:

**18.3.1 Workers' Compensation Insurance and Employers' Liability.** The Participating TO and the Interconnection Customer shall maintain such coverage from the commencement of any Construction Activities providing statutory benefits for Workers Compensation coverage and coverage amounts of no less than One Million Dollars ($1,000,000) for employer's liability for each employee for bodily injury by accident and One Million Dollars ($1,000,000) for each employee for bodily injury by disease in accordance with the laws and regulations of the state in which the Point of Interconnection is located. The Participating TO shall provide the Interconnection Customer with evidence of such insurance coverage within thirty (30) Calendar Days of any request by the Interconnection Customer. The Interconnection Customer shall provide evidence of such insurance thirty (30) Calendar Days prior to entry by any employee or contractor or other person acting on the Interconnection

Customer's behalf onto any construction site to perform any work related to the Interconnection Facilities or Generating Facility.

**18.3.2 Commercial General Liability Insurance**. The Participating TO and the Interconnection Customer shall maintain commercial general liability insurance coverage commencing within thirty (30) Calendar Days of the Effective Date of this LGIA, including coverage for premises and operations, bodily injury (including death), personal injury, property damage, products and completed operations coverage, coverage for explosion, collapse and underground hazards, independent contractors coverage, and (i) liability of Participating TO and the Interconnection Customer that would be imposed without the LGIA, or (ii) liability assumed by the Participating TO and the Interconnection Customer in a contract or agreement that is an "insured contract" under commercial general liability insurance policy. Such insurance shall include no cross liability exclusions or separation of insured clause endorsement exclusions, with minimum limits of One Million Dollars ($1,000,000) per occurrence/One Million Dollars ($1,000,000). If the activities of the Interconnection Customer are being conducted through the actions of an Affiliate, then the Interconnection Customer may satisfy the insurance requirements of this Section 18.3.2 by providing evidence of insurance coverage carried by such Affiliate and showing the Participating TO and the CAISO as additional insured only with respect to the LGIA, together with the Interconnection Customer's written representation to the Participating TO and the CAISO that the insured Affiliate is conducting all of the necessary pre-construction work. Within thirty (30) Calendar Days prior to the entry of any person on behalf of the Interconnection Customer onto any construction site to perform work related to the Interconnection Facilities or Generating Facility, the Interconnection Customer shall replace any evidence of Affiliate Insurance with evidence of such insurance carried by the Interconnection Customer, naming the Participating TO and the CAISO as additional insured only with respect to the LGIA.

**18.3.3 Business Automobile Liability Insurance**. Prior to the entry of any such vehicles on any construction site in connection with work done by or on behalf of the Interconnection Customer, the Interconnection Customer shall provide evidence of coverage of owned and non-owned and hired vehicles, trailers or semi-trailers designed for travel on public roads, with a minimum, combined single limit of One Million Dollars ($1,000,000) per occurrence for bodily injury, including death, and property damage. The Interconnection Customer shall include the Participating TO and the CAISO as additional insured with respect to the LGIA on any such policies.

**18.3.4 Excess Liability Insurance**. Commencing at the time of entry of any person on its behalf upon any construction site for the Network Upgrades, Interconnection Facilities, or Generating Facility, the Participating TO and the Interconnection Customer shall maintain Excess Liability insurance over and above the Employer's Liability, Commercial General Liability, and Business Automobile Liability Insurance coverage, with a minimum limit of Twenty Million Dollars ($20,000,000) per occurrence/Twenty Million Dollars ($20,000,000) aggregate. Such insurance carried by the Participating TO shall include the Interconnection Customer and the CAISO as additional insured with respect to the LGIA, and such insurance carried by the Interconnection Customer shall include the Participating TO and the CAISO as additional insured with respect to the LGIA. The requirements of Section 18.3.2 and 18.3.4 may be met by any combination of general and excess liability insurance.

**18.3.5** The Commercial General Liability Insurance, Business Automobile Insurance and Excess Liability Insurance policies shall include the other Parties identified in the sections above, their parents, their subsidiaries, respective directors, officers, agents, servants and employees ("Other Party Group") as additional insured. All policies shall contain provisions whereby the insurers waive all rights of subrogation in accordance with the provisions of this LGIA against the Other Party Group. If any Party can reasonably demonstrate that coverage policies containing provisions for insurer waiver of subrogation rights, or advance notice are not commercially available, then the Parties shall meet and confer and mutually determine to (i) establish replacement or equivalent terms in lieu of subrogation or notice or (ii) waive the requirements that coverage(s) include such subrogation provision or require advance written notice from such insurers.

**18.3.6** The Commercial General Liability Insurance, Business Automobile Liability Insurance and Excess Liability Insurance policies shall contain provisions that specify that the policies are primary and non-contributory. Each Party shall be responsible for its respective deductibles or self-insured retentions.

**18.3.7** The Commercial General Liability Insurance, Business Automobile Liability Insurance and Excess Liability Insurance policies, if written on a Claims First Made Basis, shall be maintained in full force and effect for two (2) years after termination of this LGIA, which coverage may be in the form of extended reporting period coverage if agreed by the Parties.

**18.3.8** [Not Used.]

**18.3.9** Thirty (30) Calendar Days prior to the start of any work at the construction site related to Interconnection Facilities or Generating Facility under this LGIA, and as soon as practicable after the end of each fiscal year or at the renewal of the insurance policy and in any event within ninety (90) Calendar Days thereafter, the Participating TO and the Interconnection Customer shall provide a certificate of insurance for all insurance required in this LGIA, executed by each insurer or by an authorized representative of each insurer.

**18.3.10** Notwithstanding the foregoing, each Party may self-insure

a) to meet the minimum insurance requirements of Article 18.3.1, to the extent that it maintains a self-insurance program that is a qualified self insurer within the state in which the Point of Interconnection is located, under the laws and regulations of such state; and

b) to meet the minimum insurance requirements of Articles 18.3.2 through 18.3.8 to the extent it maintains a self-insurance program; provided that, such Party's senior unsecured debt or issuer rating is BBB-, or better, as rated by Standard & Poor's and that its self-insurance program meets the minimum insurance requirements of Articles 18.3.2 through 18.3.8. For any period of time that a Party's senior unsecured debt rating and issuer rating are both unrated by Standard & Poor's or are both rated at less than BBB- by Standard & Poor's, such Party shall comply with the insurance requirements applicable to it under Articles 18.3.2 through 18.3.9.

c) in the event that a Party is permitted to self-insure pursuant to this Article 18.3.10, it shall notify the other Parties that it meets the requirements to self-insure and that its self-insurance program meets the minimum insurance requirements in a manner consistent with that specified in Article 18.3.9.

**18.3.11** The Parties agree to report to each other in writing as soon as practical all accidents or occurrences resulting in injuries to any person, including death, and any property damage greater than $25,000, including within the scope of coverage of such insurance whether or not such coverage is sought.

## ARTICLE 19. ASSIGNMENT

**19.1 Assignment.** This LGIA may be assigned by a Party only with the written consent of the other Parties; provided that a Party may assign this LGIA without the consent of the other Parties to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this LGIA; and provided further that the Interconnection Customer shall have the right to assign this LGIA, without the consent of the CAISO or Participating TO, for collateral security purposes to aid in providing financing for the Large Generating Facility, provided that the Interconnection Customer will promptly notify the CAISO and Participating TO of any such assignment. Any financing arrangement entered into by the Interconnection Customer pursuant to this Article will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify the CAISO and Participating TO of the date and particulars of any such exercise of assignment right(s), including providing the CAISO and Participating TO with proof that it meets the requirements of Articles 11.5 and 18.3. Any attempted assignment that violates this Article is void and ineffective. Any assignment under this LGIA shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

## ARTICLE 20. SEVERABILITY

**20.1 Severability.** If any provision in this LGIA is finally determined to be invalid, void or unenforceable by any court or other Governmental Authority having jurisdiction, such determination shall not invalidate, void or make unenforceable any other provision, agreement or covenant of this LGIA; provided that if the Interconnection Customer (or any third party, but only if such third party is not acting at the direction of the Participating TO or CAISO) seeks and obtains such a final determination with respect to any provision of the Alternate Option (Article 5.1.2), or the Negotiated Option (Article 5.1.4), then none of the provisions of Article 5.1.2 or 5.1.4 shall thereafter have any force or effect and the Parties' rights and obligations shall be governed solely by the Standard Option (Article 5.1.1).

## ARTICLE 21. COMPARABILITY

**21.1 Comparability.** The Parties will comply with all applicable comparability and code of conduct laws, rules and regulations, as amended from time to time.

## ARTICLE 22. CONFIDENTIALITY

**22.1 Confidentiality.** Confidential Information shall include, without limitation, all information relating to a Party's technology, research and development, business affairs, and pricing, and any information supplied by any of the Parties to the other Parties prior to the execution of this LGIA.

Information is Confidential Information only if it is clearly designated or marked in writing as confidential on the face of the document, or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Parties receiving the information that the information is confidential.

If requested by any Party, the other Parties shall provide in writing, the basis for asserting that the information referred to in this Article 22 warrants confidential treatment, and the requesting Party
may disclose such writing to the appropriate Governmental Authority. Each Party shall be responsible for the costs associated with affording confidential treatment to its information.

**22.1.1 Term.** During the term of this LGIA, and for a period of three (3) years after the expiration or termination of this LGIA, except as otherwise provided in this Article 22, each Party shall hold in confidence and shall not disclose to any person Confidential Information.

**22.1.2 Scope.** Confidential Information shall not include information that the receiving Party can demonstrate: (1) is generally available to the public other than as a result of a disclosure by the receiving Party; (2) was in the lawful possession of the receiving Party on a non-confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a third party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the disclosing Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the disclosing Party; (5) is, or becomes, publicly known, through no wrongful act or omission of the receiving Party or Breach of this LGIA; or (6) is required, in accordance with Article 22.1.7 of this LGIA, Order of Disclosure, to be disclosed by any Governmental Authority or is otherwise required to be disclosed by law or subpoena, or is necessary in any legal proceeding establishing rights and obligations under this LGIA. Information designated as Confidential Information will no longer be deemed confidential if the Party that designated the information as confidential notifies the other Parties that it no longer is confidential.

**22.1.3 Release of Confidential Information.** No Party shall release or disclose Confidential Information to any other person, except to its employees, consultants, Affiliates (limited by the Standards of Conduct requirements set forth in Part 358 of FERC's Regulations, 18 C.F.R. 358), subcontractors, or to parties who may be or considering providing financing to or equity participation with the Interconnection Customer, or to potential purchasers or assignees of the Interconnection Customer, on a need-to-know basis in connection with this LGIA, unless such person has first been advised of the confidentiality provisions of this Article 22 and has agreed to comply with such provisions. Notwithstanding the foregoing, a Party providing Confidential Information to any person shall remain primarily responsible for any release of Confidential Information in contravention of this Article 22.

**22.1.4 Rights.** Each Party retains all rights, title, and interest in the Confidential Information that each Party discloses to the other Parties. The disclosure by each Party to the other Parties of Confidential Information shall not be deemed a waiver by a Party or any other person or entity of the right to protect the Confidential Information from public disclosure.

**22.1.5 No Warranties.** The mere fact that a Party has provided Confidential Information does not constitute a warranty or representation as to its accuracy or completeness. In addition, by supplying Confidential Information, no Party obligates itself to provide any particular information or Confidential Information to the other Parties nor to enter into any further agreements or proceed with any other relationship or joint venture.

**22.1.6 Standard of Care.** Each Party shall use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from unauthorized disclosure, publication or dissemination. Each Party may use Confidential Information solely to fulfill its obligations to the other Parties under this LGIA or its regulatory requirements.

**22.1.7 Order of Disclosure.** If a court or a Government Authority or entity with the right, power, and apparent authority to do so requests or requires any Party, by subpoena, oral
deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party shall provide the other Parties with prompt notice of such request(s) or requirement(s) so that the other Parties may seek an appropriate protective order or waive compliance with the terms of this LGIA. Notwithstanding the absence of a protective order or waiver, the Party may disclose such Confidential Information which, in the opinion of its counsel, the Party is legally compelled to disclose. Each Party will use Reasonable Efforts to obtain reliable assurance that confidential treatment will be accorded any Confidential Information so furnished.

**22.1.8 Termination of Agreement.** Upon termination of this LGIA for any reason, each Party shall, within ten (10) Calendar Days of receipt of a written request from another Party, use Reasonable Efforts to destroy, erase, or delete (with such destruction, erasure, and deletion certified in writing to the other Party) or return to the other Party, without retaining copies thereof, any and all written or electronic Confidential Information received from the other Party.

**22.1.9 Remedies.** The Parties agree that monetary damages would be inadequate to compensate a Party for another Party's Breach of its obligations under this Article 22. Each Party accordingly agrees that the other Parties shall be entitled to equitable relief, by way of injunction or otherwise, if the first Party Breaches or threatens to Breach its obligations under this Article 22, which equitable relief shall be granted without bond or proof of damages, and the receiving Party shall not plead in defense that there would be an adequate remedy at law. Such remedy shall not be deemed an exclusive remedy for the Breach of this Article 22, but shall be in addition to all other remedies available at law or in equity. The Parties further acknowledge and agree that the covenants contained herein are necessary for the protection of legitimate business interests and are reasonable in scope. No Party, however, shall be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with this Article 22.

**22.1.10 Disclosure to FERC, its Staff, or a State.** Notwithstanding anything in this Article 22 to the contrary, and pursuant to 18 C.F.R. section 1b.20, if FERC or its staff, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to this LGIA, the Party shall provide the requested information to FERC or its staff, within the time provided for in the request for information. In providing the information to FERC or its staff, the Party must, consistent with 18 C.F.R. section 388.112, request that the information be treated as confidential and non-public by FERC and its staff and that the information be withheld from public disclosure. Parties are prohibited from notifying the other Parties to this LGIA prior to the release of the Confidential Information to FERC or its staff. The Party shall notify the other Parties to the LGIA when it is notified by FERC or its staff that a request to release Confidential Information has been received by FERC, at which time any of the Parties may respond before such information would be

made public, pursuant to 18 C.F.R. section 388.112. Requests from a state regulatory body conducting a confidential investigation shall be treated in a similar manner if consistent with the applicable state rules and regulations.

**22.1.11** Subject to the exception in Article 22.1.10, Confidential Information shall not be disclosed by the other Parties to any person not employed or retained by the other Parties, except to the extent disclosure is (i) required by law; (ii) reasonably deemed by the disclosing Party to be required to be disclosed in connection with a dispute between or among the Parties, or the defense of litigation or dispute; (iii) otherwise permitted by consent of the other Parties, such consent not to be unreasonably withheld; or (iv) necessary to fulfill its obligations under this LGIA or as a transmission service provider or a Balancing Authority including disclosing the Confidential Information to an RTO or ISO or to a regional or national reliability organization. The Party asserting confidentiality shall notify the other Parties in writing of the information it claims is confidential. Prior to any disclosures of another Party's Confidential Information under this subparagraph, or if any third party or Governmental Authority makes any request or demand for any of the information described in this subparagraph, the disclosing Party agrees to promptly notify the other Party in writing and agrees to assert confidentiality and cooperate with the other Party in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order or other reasonable measures.

## ARTICLE 23. ENVIRONMENTAL RELEASES

**23.1** Each Party shall notify the other Parties, first orally and then in writing, of the release of any Hazardous Substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Large Generating Facility or the Interconnection Facilities, each of which may reasonably be expected to affect the other Parties. The notifying Party shall: (i) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than twenty-four hours after such Party becomes aware of the occurrence; and (ii) promptly furnish to the other Parties copies of any publicly available reports filed with any Governmental Authorities addressing such events.

## ARTICLE 24. INFORMATION REQUIREMENTS

**24.1 Information Acquisition.** The Participating TO and the Interconnection Customer shall submit specific information regarding the electrical characteristics of their respective facilities to each other as described below and in accordance with Applicable Reliability Standards.

**24.2 Information Submission by Participating TO.** The initial information submission by the Participating TO shall occur no later than one hundred eighty (180) Calendar Days prior to Trial Operation and shall include the Participating TO's Transmission System information necessary to allow the Interconnection Customer to select equipment and meet any system protection and stability requirements, unless otherwise agreed to by the Participating TO and the Interconnection Customer. On a monthly basis the Participating TO shall provide the Interconnection Customer and the CAISO a status report on the construction and installation of the Participating TO's Interconnection Facilities and Network Upgrades, including, but not limited to, the following information: (1) progress to date; (2) a description of the activities since the last report; (3) a description of the action items for the next period; and (4) the delivery status of equipment ordered.

**24.3 Updated Information Submission by Interconnection Customer.** The updated information submission by the Interconnection Customer, including manufacturer

information, shall occur no later than one hundred eighty (180) Calendar Days prior to the Trial Operation. The Interconnection Customer shall submit a completed copy of the Electric Generating Unit data requirements contained in Appendix 1 to the GIP. It shall also include any additional information provided to the Participating TO and the CAISO for the Interconnection Studies. Information in this submission shall be the most current Electric Generating Unit design or expected performance data. Information submitted for stability models shall be compatible with the Participating TO and CAISO standard models. If there is no compatible model, the Interconnection Customer will work with a consultant mutually agreed to by the Parties to develop and supply a standard model and associated information.

If the Interconnection Customer's data is materially different from what was originally provided to the Participating TO and the CAISO for the Interconnection Studies, then the Participating TO and the CAISO will conduct appropriate studies pursuant to the GIP to determine the impact on the Participating TO's Transmission System and affected portions of the CAISO Controlled Grid based on the actual data submitted pursuant to this Article 24.3. The Interconnection Customer shall not begin Trial Operation until such studies are completed and all other requirements of this LGIA are satisfied.

**24.4 Information Supplementation.** Prior to the Trial Operation date, the Parties shall supplement their information submissions described above in this Article 24 with any and all "as-built" Electric Generating Unit information or "as-tested" performance information that differs from the initial submissions or, alternatively, written confirmation that no such differences exist. The Interconnection Customer shall conduct tests on the Electric Generating Unit as required by Good Utility Practice such as an open circuit "step voltage" test on the Electric Generating Unit to verify proper operation of the Electric Generating Unit's automatic voltage regulator.

Unless otherwise agreed, the test conditions shall include: (1) Electric Generating Unit at synchronous speed; (2) automatic voltage regulator on and in voltage control mode; and (3) a five percent (5 percent) change in Electric Generating Unit terminal voltage initiated by a change in the voltage regulators reference voltage. The Interconnection Customer shall provide validated test recordings showing the responses of Electric Generating Unit terminal and field voltages. In the event that direct recordings of these voltages is impractical, recordings of other voltages or currents that mirror the response of the Electric Generating Unit's terminal or field voltage are acceptable if information necessary to translate these alternate quantities to actual Electric Generating Unit terminal or field voltages is provided. Electric Generating Unit testing shall be conducted and results provided to the Participating TO and the CAISO for each individual Electric Generating Unit in a station.

Subsequent to the Commercial Operation Date, the Interconnection Customer shall provide the Participating TO and the CAISO any information changes due to equipment replacement, repair, or adjustment. The Participating TO shall provide the Interconnection Customer any information changes due to equipment replacement, repair or adjustment in the directly connected substation or any adjacent Participating TO-owned substation that may affect the Interconnection Customer's Interconnection Facilities equipment ratings, protection or operating requirements. The Parties shall provide such information pursuant to Article 5.19.

## ARTICLE 25. INFORMATION ACCESS AND AUDIT RIGHTS

**25.1 Information Access.** Each Party (the "disclosing Party") shall make available to the other Party information that is in the possession of the disclosing Party and is necessary in order for the other Party to: (i) verify the costs incurred by the disclosing Party for which the other Party is responsible under this LGIA; and (ii) carry out its obligations and

responsibilities under this LGIA. The Parties shall not use such information for purposes other than those set forth in this Article 25.1 and to enforce their rights under this LGIA. Nothing in this Article 25 shall obligate the CAISO to make available to a Party any third party information in its possession or control if making such third party information available would violate a CAISO Tariff restriction on the use or disclosure of such third party information.

**25.2 Reporting of Non-Force Majeure Events.** Each Party (the "notifying Party") shall notify the other Parties when the notifying Party becomes aware of its inability to comply with the provisions of this LGIA for a reason other than a Force Majeure event. The Parties agree to cooperate with each other and provide necessary information regarding such inability to comply, including the date, duration, reason for the inability to comply, and corrective actions taken or planned to be taken with respect to such inability to comply. Notwithstanding the foregoing, notification, cooperation or information provided under this Article shall not entitle the Party receiving such notification to allege a cause for anticipatory breach of this LGIA.

**25.3 Audit Rights.** Subject to the requirements of confidentiality under Article 22 of this LGIA, the Parties' audit rights shall include audits of a Party's costs pertaining to such Party's performance or satisfaction of obligations owed to the other Party under this LGIA, calculation of invoiced amounts, the CAISO's efforts to allocate responsibility for the provision of reactive support to the CAISO Controlled Grid, the CAISO's efforts to allocate responsibility for interruption or reduction of generation on the CAISO Controlled Grid, and each such Party's actions in an Emergency Condition.

**25.3.1** The Interconnection Customer and the Participating TO shall each have the right, during normal business hours, and upon prior reasonable notice to the other Party, to audit at its own expense the other Party's accounts and records pertaining to either such Party's performance or either such Party's satisfaction of obligations owed to the other Party under this LGIA. Subject to Article 25.3.2, any audit authorized by this Article shall be performed at the offices where such accounts and records are maintained and shall be limited to those portions of such accounts and records that relate to each such Party's performance and satisfaction of obligations under this LGIA. Each such Party shall keep such accounts and records for a period equivalent to the audit rights periods described in Article 25.4.

**25.3.2** Notwithstanding anything to the contrary in Article 25.3, each Party's rights to audit the CAISO's accounts and records shall be as set forth in Section 22.1 of the CAISO Tariff.

**25.4 Audit Rights Periods.**

**25.4.1 Audit Rights Period for Construction-Related Accounts and Records.** Accounts and records related to the design, engineering, procurement, and construction of Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades constructed by the Participating TO shall be subject to audit for a period of twenty-four months following the Participating TO's issuance of a final invoice in accordance with Article 12.2. Accounts and records related to the design, engineering, procurement, and construction of Participating TO's Interconnection Facilities and/or Stand Alone Network Upgrades constructed by the Interconnection Customer shall be subject to audit and verification by the Participating TO and the CAISO for a period of twenty-four months following the Interconnection Customer's issuance of a final invoice in accordance with Article 5.2(8).

**25.4.2 Audit Rights Period for All Other Accounts and Records.** Accounts and records related to a Party's performance or satisfaction of all obligations under this LGIA other than those described in Article 25.4.1 shall be subject to audit as follows: (i) for an audit relating to cost obligations, the applicable audit rights period shall be twenty-four months after the auditing Party's receipt of an invoice giving rise to such cost obligations; and (ii) for an audit relating to all other obligations, the applicable audit rights period shall be twenty-four months after the event for which the audit is sought; provided that each Party's rights to audit the CAISO's accounts and records shall be as set forth in Section 22.1 of the CAISO Tariff.

**25.5 Audit Results.** If an audit by the Interconnection Customer or the Participating TO determines that an overpayment or an underpayment has occurred with respect to the other Party, a notice of such overpayment or underpayment shall be given to the other Party together with those records from the audit which supports such determination. The Party that is owed payment shall render an invoice to the other Party and such invoice shall be paid pursuant to Article 12 hereof.

**25.5.1** Notwithstanding anything to the contrary in Article 25.5, the Interconnection Customer's and Participating TO's rights to audit the CAISO's accounts and records shall be as set forth in Section 22.1 of the CAISO Tariff, and the CAISO's process for remedying an overpayment or underpayment shall be as set forth in the CAISO Tariff.

## ARTICLE 26. SUBCONTRACTORS

**26.1 General.** Nothing in this LGIA shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this LGIA; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this LGIA in providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

**26.2 Responsibility of Principal.** The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this LGIA. The hiring Party shall be fully responsible to the other Parties for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall the CAISO or Participating TO be liable for the actions or inactions of the Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under Article 5 of this LGIA. Any applicable obligation imposed by this LGIA upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

**26.3 No Limitation by Insurance.** The obligations under this Article 26 will not be limited in any way by any limitation of subcontractor's insurance.

## ARTICLE 27. DISPUTES

All disputes arising out of or in connection with this LGIA whereby relief is sought by or from the CAISO shall be settled in accordance with the provisions of Article 13 of the CAISO Tariff, except that references to the CAISO Tariff in such Article 13 of the CAISO Tariff shall be read as references to this LGIA. Disputes arising out of or in connection with this LGIA not subject to provisions of Article 13 of the CAISO Tariff shall be resolved as follows:

**27.1 Submission.** In the event either Party has a dispute, or asserts a claim, that arises out of or in connection with this LGIA or its performance, such Party (the "disputing Party") shall provide the other Party with written notice of the dispute or claim ("Notice of Dispute"). Such dispute or claim shall be referred to a designated senior representative

of each Party for resolution on an informal basis as promptly as practicable after receipt of the Notice of Dispute by the other Party. In the event the designated representatives are unable to resolve the claim or dispute through unassisted or assisted negotiations within thirty (30) Calendar Days of the other Party's receipt of the Notice of Dispute, such claim or dispute may, upon mutual agreement of the Parties, be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below. In the event the Parties do not agree to submit such claim or dispute to arbitration, each Party may exercise whatever rights and remedies it may have in equity or at law consistent with the terms of this LGIA.

**27.2 External Arbitration Procedures.** Any arbitration initiated under this LGIA shall be conducted before a single neutral arbitrator appointed by the Parties. If the Parties fail to agree upon a single arbitrator within ten (10) Calendar Days of the submission of the dispute to arbitration, each Party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty (20) Calendar Days select a third arbitrator to chair the arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the Parties an opportunity to be heard and, except as otherwise provided herein, shall conduct the arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("Arbitration Rules") and
any applicable FERC regulations; provided, however, in the event of a conflict between the Arbitration Rules and the terms of this Article 27, the terms of this Article 27 shall prevail.

**27.3 Arbitration Decisions.** Unless otherwise agreed by the Parties, the arbitrator(s) shall render a decision within ninety (90) Calendar Days of appointment and shall notify the Parties in writing of such decision and the reasons therefor. The arbitrator(s) shall be authorized only to interpret and apply the provisions of this LGIA and shall have no power to modify or change any provision of this Agreement in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in the Federal Arbitration Act or the Administrative Dispute Resolution Act. The final decision of the arbitrator(s) must also be filed with FERC if it affects jurisdictional rates, terms and conditions of service, Interconnection Facilities, or Network Upgrades.

**27.4 Costs.** Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable: (1) the cost of the arbitrator chosen by the Party to sit on the three member panel and one half of the cost of the third arbitrator chosen; or (2) one half the cost of the single arbitrator jointly chosen by the Parties.

## ARTICLE 28. REPRESENTATIONS, WARRANTIES AND COVENANTS

**28.1 General.** Each Party makes the following representations, warranties and covenants:

**28.1.1 Good Standing.** Such Party is duly organized, validly existing and in good standing under the laws of the state in which it is organized, formed, or incorporated, as applicable; that it is qualified to do business in the state or states in which the Large Generating Facility, Interconnection Facilities and Network Upgrades owned by such Party, as applicable, are located; and that it has the corporate power and authority to own its properties, to carry on its business as now being conducted and to enter into this LGIA and carry out

the transactions contemplated hereby and perform and carry out all covenants and obligations on its part to be performed under and pursuant to this LGIA.

**28.1.2** **Authority.** Such Party has the right, power and authority to enter into this LGIA, to become a Party hereto and to perform its obligations hereunder. This LGIA is a legal, valid and binding obligation of such Party, enforceable against such Party in accordance with its terms, except as the enforceability thereof may be limited by applicable bankruptcy, insolvency, reorganization or other similar laws affecting creditors' rights generally and by general equitable principles (regardless of whether enforceability is sought in a proceeding in equity or at law).

**28.1.3** **No Conflict.** The execution, delivery and performance of this LGIA does not violate or conflict with the organizational or formation documents, or bylaws or operating agreement, of such Party, or any judgment, license, permit, order, material agreement or instrument applicable to or binding upon such Party or any of its assets.

**28.1.4** **Consent and Approval.** Such Party has sought or obtained, or, in accordance with this LGIA will seek or obtain, each consent, approval, authorization, order, or acceptance by any Governmental Authority in connection with the execution, delivery and performance of this LGIA, and it will provide to any Governmental Authority notice of any actions under this LGIA that are required by Applicable Laws and Regulations.

## ARTICLE 29. [RESERVED]

## ARTICLE 30. MISCELLANEOUS

**30.1** **Binding Effect.** This LGIA and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

**30.2** **Conflicts.** In the event of a conflict between the body of this LGIA and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this LGIA shall prevail and be deemed the final intent of the Parties.

**30.3** **Rules of Interpretation.** This LGIA, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this LGIA, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this LGIA), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any Applicable Laws and Regulations means such Applicable Laws and Regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article of this LGIA or such Appendix to this LGIA, or such Section to the GIP or such Appendix to the GIP, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this LGIA as a whole and not to any particular Article or other provision hereof or thereof; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from

and including", "to" means "to but excluding" and "through" means "through and including".

**30.4 Entire Agreement.** This LGIA, including all Appendices and Schedules attached hereto, constitutes the entire agreement among the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between or among the Parties with respect to the subject matter of this LGIA. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this LGIA.

**30.5 No Third Party Beneficiaries.** This LGIA is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

**30.6 Waiver.** The failure of a Party to this LGIA to insist, on any occasion, upon strict performance of any provision of this LGIA will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this LGIA shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this LGIA. Termination or Default of this LGIA for any reason by the Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Participating TO. Any waiver of this LGIA shall, if requested, be provided in writing.

**30.7 Headings.** The descriptive headings of the various Articles of this LGIA have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this LGIA.

**30.8 Multiple Counterparts.** This LGIA may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

**30.9 Amendment.** The Parties may by mutual agreement amend this LGIA by a written instrument duly executed by all of the Parties. Such amendment shall become effective and a part of this LGIA upon satisfaction of all Applicable Laws and Regulations.

**30.10 Modification by the Parties.** The Parties may by mutual agreement amend the Appendices to this LGIA by a written instrument duly executed by all of the Parties. Such amendment shall become effective and a part of this LGIA upon satisfaction of all Applicable Laws and Regulations.

**30.11 Reservation of Rights.** The CAISO and Participating TO shall each have the right to make a unilateral filing with FERC to modify this LGIA pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following Articles and Appendices of this LGIA and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these Articles and Appendices:

Recitals, 1, 2.1, 2.2, 2.3, 2.4, 2.6, 3.1, 3.3, 4.1, 4.2, 4.3, 4.4, 5 preamble, 5.4, 5.7, 5.8, 5.9, 5.12, 5.13, 5.18, 5.19.1, 7.1, 7.2, 8, 9.1, 9.2, 9.3, 9.5, 9.6, 9.7, 9.8, 9.10, 10.3, 11.4, 12.1, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24.3, 24.4, 25.1, 25.2, 25.3 (excluding subparts), 25.4.2, 26, 28, 29, 30, Appendix D, Appendix F, Appendix G, and any other Article not reserved exclusively to the Participating TO or the CAISO below.

The Participating TO shall have the exclusive right to make a unilateral filing with FERC to modify this LGIA pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following Articles and Appendices of this LGIA and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these Articles and Appendices:

2.5, 5.1, 5.2, 5.3, 5.5, 5.6, 5.10, 5.11, 5.14, 5.15, 5.16, 5.17, 5.19 (excluding 5.19.1), 6, 7.3, 9.4, 9.9, 10.1, 10.2, 10.4, 10.5, 11.1, 11.2, 11.3, 11.5, 12.2, 12.3, 12.4, 24.1, 24.2, 25.3.1, 25.4.1, 25.5 (excluding 25.5.1), 27 (excluding preamble), Appendix A, Appendix B, Appendix C, and Appendix E.

The CAISO shall have the exclusive right to make a unilateral filing with FERC to modify this LGIA pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following Articles of this LGIA and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these Articles:

3.2, 4.5, 11.6, 25.3.2, 25.5.1, and 27 preamble.

The Interconnection Customer, the CAISO, and the Participating TO shall have the right to make a unilateral filing with FERC to modify this LGIA pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this LGIA shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**30.12 No Partnership.** This LGIA shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership among the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

**30.13 Joint and Several Obligations.** Except as otherwise provided in this LGIA, the obligations of the CAISO, the Participating TO, and the Interconnection Customer are several, and are neither joint nor joint and several.

**IN WITNESS WHEREOF,** the Parties have executed this LGIA in multiple originals, each of which shall constitute and be an original effective agreement among the Parties.

**[Insert name of Interconnection Customer]**

By: _____

Name: _____

Title: _____

Date:

**[Insert name of Participating TO]**

By: _____

Name: _____

Title:

Date:

**California Independent System Operator Corporation**

By:

Name: _____

Title:

Date:

**Appendices to LGIA**

Appendix A Interconnection Facilities, Network Upgrades and Distribution Upgrades

Appendix B Milestones

Appendix C Interconnection Details

Appendix D Security Arrangements Details

Appendix E Commercial Operation Date

Appendix F Addresses for Delivery of Notices and Billings

Appendix G Interconnection Customer's Proportional Share of Costs of Network Upgrades for Applicable Project Group

Appendix H Interconnection Requirements for an Asynchronous Generating Facility

**Appendix A**
**To LGIA**

**Interconnection Facilities, Network Upgrades and Distribution Upgrades**

**1. Interconnection Facilities:**

**(a) [insert Interconnection Customer's Interconnection Facilities]:**

**(b) [insert Participating TO's Interconnection Facilities]:**

**2. Network Upgrades:**

**(a) [insert Stand Alone Network Upgrades]:**

**(b) [insert Other Network Upgrades]:**

**(i) [insert Participating TO's Reliability Network Upgrades]**

**(ii) [insert Participating TO's Delivery Network Upgrades]**

**3. Distribution Upgrades:**

**Appendix B**
**To LGIA**

**Milestones**

**Appendix C**
**To LGIA**

**Interconnection Details**

**Appendix D**
**To LGIA**

**Security Arrangements Details**

Infrastructure security of CAISO Controlled Grid equipment and operations and control hardware and software is essential to ensure day-to-day CAISO Controlled Grid reliability and operational security. FERC will expect the CAISO, all Participating TOs, market participants, and Interconnection Customers interconnected to the CAISO Controlled Grid to comply with Applicable Reliability Criteria. All public utilities will be expected to meet basic standards for system infrastructure and operational security, including physical, operational, and cyber-security practices.

The Interconnection Customer shall meet the requirements for security implemented pursuant to the CAISO Tariff, including the CAISO's standards for information security posted on the CAISO's internet web site at the following internet address: http://www.caiso.com/pubinfo/info-security/index.html.

**Appendix E**
**To LGIA**

**Commercial Operation Date**

[This Appendix E sets forth a form of letter to be provided by the Interconnection Customer to the CAISO and Participating TO to provide formal notice of the Commercial Operation of an Electric Generating Unit.]

**[Date]**

**[CAISO Address]**

**[Participating TO Address]**

Re: _____ Electric Generating Unit

Dear _____:

On **[Date] [Interconnection Customer]** has completed Trial Operation of Unit No. ___. This letter confirms that [Interconnection Customer] commenced Commercial Operation of Unit No. ___ at the Electric Generating Unit, effective as of **[Date plus one day]** and that [Interconnection Customer] provided the CAISO's operations personnel advance notice of its intended Commercial Operation Date no less than five Business Days prior to that date.

Thank you.

**[Signature]**

**[Interconnection Customer Representative]**

**Appendix F**
**To LGIA**

**Addresses for Delivery of Notices and Billings**

**Notices:**

Participating TO:

[To be supplied.]

Interconnection Customer:

[To be supplied.]

CAISO:

[To be supplied.]

**Billings and Payments:**

Participating TO:

[To be supplied.]

Interconnection Customer:

[To be supplied.]

CAISO:

[To be supplied.]

**Alternative Forms of Delivery of Notices (telephone, facsimile or e-mail):**

Participating TO:

[To be supplied.]

Interconnection Customer:

[To be supplied.]

CAISO:

[To be supplied.]

**Appendix G**
**To LGIA**

**Interconnection Customer's Proportional Share of Costs of Network Upgrades for Applicable Project Group**

**Appendix H**
**To LGIA**

## INTERCONNECTION REQUIREMENTS FOR AN ASYNCHRONOUS GENERATING FACILITY

Appendix H sets forth interconnection requirements specific to all Asynchronous Generating Facilities. Existing individual generating units of an Asynchronous Generating Facility that are, or have been, interconnected to the CAISO Controlled Grid at the same location are exempt from the requirements of this Appendix H for the remaining life of the existing generating unit. Generating units that are replaced, however, shall meet the requirements of this Appendix H.

### A. Technical Requirements Applicable to Asynchronous Generating Facilities

#### i. Low Voltage Ride-Through (LVRT) Capability

An Asynchronous Generating Facility shall be able to remain online during voltage disturbances up to the time periods and associated voltage levels set forth in the requirements below.

1. An Asynchronous Generating Facility shall remain online for the voltage disturbance caused by any fault on the transmission grid, or within the Asynchronous Generating Facility between the Point of Interconnection and the high voltage terminals of the Asynchronous Generating Facility's step up transformer, having a duration equal to the lesser of the normal three-phase fault clearing time (4-9 cycles) or one-hundred fifty (150) milliseconds, plus any subsequent post-fault voltage recovery to the final steady-state post-fault voltage unless clearing the fault effectively disconnects the generator from the system. Clearing time shall be based on the maximum normal clearing time associated with any three-phase fault location that reduces the voltage at the Asynchronous Generating Facility's Point of Interconnection to 0.2 per-unit of nominal voltage or less, independent of any fault current contribution from the Asynchronous Generating Facility.

2. An Asynchronous Generating Facility shall remain online for any voltage disturbance caused by a single-phase fault on the transmission grid, or within the Asynchronous Generating Facility between the Point of Interconnection and the high voltage terminals of the Asynchronous Generating Facility's step up transformer, with delayed clearing, plus any subsequent post-fault voltage recovery to the final steady-state post-fault voltage unless clearing the fault effectively disconnects the generator from the system. Clearing time shall be based on the maximum backup clearing time associated with a single point of failure (protection or breaker failure) for any single-phase fault location that reduces any phase-to-ground or phase-to-phase voltage at the Asynchronous Generating Facility's Point of Interconnection to 0.2 per-unit of nominal voltage or less, independent of any fault current contribution from the Asynchronous Generating Facility.

3. Remaining on-line shall be defined as continuous connection between the Point of Interconnection and the Asynchronous Generating Facility's units, without any mechanical isolation. Asynchronous Generating Facilities may cease to inject current into the transmission grid during a fault.

4. The Asynchronous Generating Facility is not required to remain on line during multi-phased faults exceeding the duration described in Section A.i.1 of this Appendix H or single-phase faults exceeding the duration described in Section A.i.2 of this Appendix H.

5. The requirements of this Section A.i. of this Appendix H do not apply to faults that occur between the Asynchronous Generating Facility's terminals and the high side of the step-up transformer to the high-voltage transmission system.

6. Asynchronous Generating Facilities may be tripped after the fault period if this action is intended as part of a Remedial Action Scheme.

7. Asynchronous Generating Facilities may meet the requirements of this Section A.i of this Appendix H through the performance of the generating units or by installing additional equipment within the Asynchronous Generating Facility, or by a combination of generating unit performance and additional equipment.

8. The provisions of this Section A.i of this Appendix H apply only if the voltage at the Point of Interconnection has remained within the range of 0.9 and 1.10 per-unit of nominal voltage for the preceding two seconds, excluding any sub-cycle transient deviations.

The requirements of this Section A.i in this Appendix H shall not apply to any Asynchronous Generating Facility that can demonstrate to the CAISO a binding commitment, as of July 3, 2010, to purchase inverters for thirty (30) percent or more of the Generating Facility's maximum Generating Facility Capacity that are incapable of complying with the requirements of this Section A.i in this Appendix H. The Interconnection Customer must include a statement from the inverter manufacturer confirming the inability to comply with this requirement in addition to any information requested by the CAISO to determine the applicability of this exemption.

**ii. Frequency Disturbance Ride-Through Capability**

An Asynchronous Generating Facility shall comply with the off nominal frequency requirements set forth in the WECC Under Frequency Load Shedding Relay Application Guide or successor requirements as they may be amended from time to time.

**iii. Power Factor Design Criteria (Reactive Power)**

An Asynchronous Generating Facility shall operate within a power factor within the range of 0.95 leading to 0.95 lagging, measured at the Point of Interconnection as defined in this LGIA in order to maintain a specified voltage schedule, if the Phase II Interconnection Study shows that such a requirement is necessary to ensure safety or reliability. The power factor range standard can be met by using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors, or a combination of the two, if agreed to by the Participating TO and CAISO. The Interconnection Customer shall not disable power factor equipment while the Asynchronous Generating Facility is in operation. Asynchronous Generating Facilities shall also be able to provide sufficient dynamic voltage support in lieu of the power system stabilizer and automatic voltage regulation at the generator excitation system if the Phase II Interconnection Study shows this to be required for system safety or reliability.

**iv. Supervisory Control and Data Acquisition (SCADA) Capability**

An Asynchronous Generating Facility shall provide SCADA capability to transmit data and receive instructions from the Participating TO and CAISO to protect system reliability. The Participating TO and CAISO and the Asynchronous Generating Facility Interconnection Customer shall determine what SCADA information is essential for the proposed Asynchronous Generating Facility, taking into account the size of the plant and its characteristics, location, and importance in maintaining generation resource adequacy and transmission system reliability.

**v. Power System Stabilizers (PSS)**

Power system stabilizers are not required for Asynchronous Generating Facilities.

# Appendix DD

## Generator Interconnection and Deliverability Allocation Procedures (GIDAP)

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## Section 1 Objectives And Applicability

### 1.1 Objectives and Applicability

The objective of this Generation Interconnection and Deliverability Allocation Procedures (GIDAP) is to implement the requirements for both Small and Large Generating Facility interconnections to the CAISO Controlled Grid and to provide a process for allocating Transmission Plan Deliverability for Interconnection Requests starting with Queue Cluster 5 and for subsequent Queue Clusters. This GIDAP applies to Interconnection Requests that are either assigned to Queue Cluster 5 and subsequent Queue Clusters, or submitted for the Independent Study Process, or Fast Track Process after July 25, 2012. The exception to this rule of limited applicability is the annual reassessment process set forth in Section 7.4, which shall apply to all CAISO Interconnection Customers in Queue Clusters.

### 1.2 Definitions

Unless the context otherwise requires, any word or expression defined in the Master Definitions Supplement, Appendix A to the CAISO Tariff, will have the same meaning where used in this GIDAP. References to the GIDAP are to this Appendix DD.

### 1.3 Pre-Application

**1.3.1** An Interconnection Customer with a proposed Small Generating Facility may submit a formal written request form along with a non-refundable fee of $300 to the CAISO for a pre-application report on a proposed project at a specific site. The CAISO shall provide the pre-application data described in Section 1.3.2 to the Interconnection Customer within twenty (20) Business Days of receipt of the completed request form and payment of the $300 fee. The CAISO shall coordinate with the Participating TO to complete the pre-application report. At the request of the CAISO, the Participating TO shall provide any readily available information necessary to complete the pre-application report. Readily available information shall mean information that the Participating TO currently has on hand. The Participating TO is not required to create new information but is required to compile, gather, and summarize information that it has on hand in a format that presents the information in a manner that informs the Interconnection Customer regarding issues related to its proposed Small Generating Facility. If providing any item in the pre-application report would require the Participating TO to perform a study or analysis beyond gathering and presenting existing information, then the information shall be deemed not readily available. The pre-application report produced by the CAISO is non-binding, does not confer any rights, and the Interconnection Customer must still successfully apply to interconnect to the CAISO's system. The written pre-application report request form shall include the information in Sections 1.3.1.1 through 1.3.1.8 below to clearly and sufficiently identify the location of the proposed Point of Interconnection that is under CAISO operational control.

**1.3.1.1** Project contact information, including name, address, phone number, and email address.

**1.3.1.2** Project location (street address with nearby cross streets and town).

**1.3.1.3** Single proposed Point of Interconnection that is either an existing substation or a transmission line under CAISO operational control.

**1.3.1.4** Generator Type (e.g., solar, wind, combined heat and power, etc.)

**1.3.1.5** Size (alternating current kW/MW)

**1.3.1.6** Single or three phase generator configuration

**1.3.1.7** Stand-alone generator (no onsite load, not including station service – Yes or No?)

**1.3.1.8** Is new service requested? Yes or No? If there is existing service, include the customer account number, site minimum and maximum current or proposed electric loads in kW/MW (if available) and specify if the load is expected to change.

**1.3.2** Subject to Section 1.3.1, the pre-application report will include the following information:

**1.3.2.1** Electrical configuration of the substation, including information of transmission lines terminating in the substation, transformers, buses and other devices, if the proposed Point of Interconnection is a substation.

**1.3.2.2** Existing aggregate generation capacity (in MW) interconnected to a substation or circuit (i.e., amount of generation online) likely to serve the proposed Point of Interconnection.

**1.3.2.3** Aggregate queued generation capacity (in MW) for a substation or circuit (i.e., amount of generation in the queue) likely to serve the proposed Point of Interconnection.

**1.3.2.4** Based on the proposed Point of Interconnection, existing or known constraints such as, but not limited to, electrical dependencies at that location, short circuit issues, instability issues, facility loading issues, or voltage issues.

**1.3.2.5** Available capacity on a substation or circuit likely to serve the proposed Point of Interconnection.

**1.3.3** The pre-application report need only include existing data. A pre-application report request does not obligate the CAISO to conduct a study or other analysis of the proposed generator in the event that data is not readily available. If the CAISO cannot complete all or some of a pre-application report due to lack of available data, the CAISO shall provide the Interconnection Customer with a pre-application report that includes the data that is available. There are many variables studied as part of the interconnection review process, and data provided in the pre-application report may become outdated at the time of the submission of the complete Interconnection Request. Notwithstanding any of the provisions of this section, the CAISO shall, in good faith, include data in the pre-application report that represents the best available information at the time of reporting.

## Section 2 Scope and Application

### 2.1 Application of Generator Interconnection Procedures

Sections 2 through 15 apply to processing an Interconnection Request pertaining to a Generating Facility that is either: (i) assigned to Queue Clusters 5 and subsequent Queue Clusters, or (ii) included in the Independent Study Process, or (iii) included in the Fast Track Process, after July 25, 2012 pursuant to the terms of this CAISO Tariff for the performance of its Interconnection Studies.

### 2.2 Comparability

The CAISO shall receive, process, and analyze Interconnection Requests in a timely manner as

set forth in this GIDAP. The CAISO will use the same Reasonable Efforts in processing and analyzing Interconnection Requests from all Interconnection Customers as set forth in this GIDAP, whether the Generating Facilities are owned by a Participating TO, its subsidiaries, or Affiliates or others.

## 2.3 Interconnection Base Case Data

For each Interconnection Study Cycle, the CAISO, in coordination with applicable Participating TO(s), shall maintain updated Interconnection Base Case Data, including, as applicable, separate Interconnection Base Case Data for each Group Study to reflect system conditions particular to the Group Study, to a secured section of the CAISO Website. Interconnection Base Case Data will represent the network model and underlying assumptions used during the most recent Interconnection Study and represent system conditions in the near term planning horizon.

The CAISO will update and publish the Interconnection Base Case Data:

(1) prior to the Phase I Interconnection Study with the Generation reflected in valid Interconnection Requests for the Interconnection Study Cycle, as well as all Generation reflected in the Interconnection Requests in the Independent Study Process that entered the CAISO's interconnection queue prior to the creation of the Base Case, along with any associated transmission upgrades or additions;

(2) after the Phase I Interconnection Study with the Generation reflected in valid Interconnection Requests submitted in the Cluster Application Window for the Interconnection Study Cycle, and the identified preliminary transmission upgrades or additions, as well as all Generation reflected in the Interconnection Requests in the Independent Study Process that entered the CAISO's interconnection queue prior to the creation of the Base Case, along with any associated transmission upgrades or additions;

(3) prior to the Phase II Interconnection Study, including all remaining Generation from the Phase I Interconnection Study for the Interconnection Study Cycle, as well as all Generation reflected in the Interconnection Requests in the Independent Study Process that entered the CAISO's interconnection queue prior to the creation of the Base Case, along with any associated transmission upgrades or additions; and

(4) after the Phase II Interconnection Study, including all remaining Generation from the applicable Phase I Interconnection Study and the identified transmission upgrades and additions for the Interconnection Study Cycle, as well as all Generation reflected in the Interconnection Requests in the Independent Study Process that entered the CAISO's interconnection queue prior to the creation of the Base Case, along with any associated transmission upgrades or additions.

Interconnection Base Case Data shall include information subject to the confidentiality provisions in Section 15.1.

The CAISO shall require current and former Interconnection Customers, Market Participants, and electric utility regulatory agencies within California to sign a CAISO confidentiality agreement and, where the current or former Interconnection Customer or Market Participant is not a member of WECC, or its successor, an appropriate form of agreement with WECC, or its successor, as necessary. All other entities or persons seeking Interconnection Base Case Data must satisfy the foregoing requirements as well as all requirements under 18 C.F.R. Section 388.113 for obtaining the release of Critical Energy Infrastructure Information (as that term is defined by FERC). The CAISO will maintain a link on OASIS to the secured section of the CAISO website with the Interconnection Base Case Data.

## 2.4 Interconnection Service and Studies

### 2.4.1 No Applicability to Transmission Service.

Nothing in this GIDAP shall constitute a request for transmission service or confer upon an Interconnection Customer any right to receive transmission service.

### 2.4.2 The Product.

Interconnection Service allows the Interconnection Customer to connect the Generating Facility to the CAISO Controlled Grid and be eligible to deliver the Generating Facility's output using the available capacity of the CAISO Controlled Grid. Interconnection Service does not in and of itself convey any right to deliver electricity to any specific customer or point of delivery or rights to any specific MW of available capacity on the CAISO Controlled Grid.

### 2.4.3 The Interconnection Studies.

For Interconnection Requests in Queue Cluster 5 and subsequent Queue Clusters, the Interconnection Studies consist of a Phase I Interconnection Study, a reassessment conducted prior to the commencement of a Phase II Interconnection Study, a Phase II Interconnection Study, and an update to the Phase II Interconnection Study report to reflect the results of a reassessment conducted after the TP Deliverability allocation process for the Queue Cluster.

For Interconnection Requests processed under the Independent Study Process, the Interconnection Studies consist of a system impact and facilities study, and, as applicable to Full Capacity or Partial Capacity Deliverability Status, Phase I and Phase II Interconnection Studies and a reassessment.

#### 2.4.3.1 The Phase I Interconnection Studies

The Phase I Interconnection Studies for Queue Cluster Generating Facilities will include, but not be limited to, short circuit/fault duty, steady state (thermal and voltage) and stability analyses. The Phase I Interconnection Studies will identify direct Interconnection Facilities and required Reliability Network Upgrades necessary to interconnect the Generating Facility, mitigate thermal overloads and voltage violations, and address short circuit, stability, and reliability issues associated with the requested Interconnection Service. The Phase I Interconnection Studies will also identify LDNUs and LOPNUs for Generating Facilities, including those being processed under the Independent Study Process, that have selected Full Capacity, Partial Capacity Deliverability Status, and Off-Peak Deliverability Status, as applicable. Such Network Upgrades shall be identified in accordance with the Deliverability Assessments set forth in Section 6.3.2. The Phase I Interconnection Studies will also provide cost estimates for ADNUs and AOPNUs, as described in Section 6.3.2. The Phase I Interconnection Study report shall include cost estimates for RNUs, LDNUs, ADNUs, LOPNUs, AOPNUs, and Participating TO Interconnection Facilities that shall, as applicable, establish the basis for the initial Interconnection Financial Security postings under Section 11.2.

#### 2.4.3.2 The Reassessment Prior to Phase II Interconnection Studies

Before undertaking the Phase II Interconnection Studies, the CAISO will conduct a reassessment, as specified in Section 7.4, to conform the Base Case and

Interconnection Base Case Data to account for later conditions since the CAISO performed the Phase II Interconnection Study in the prior Interconnection Study Cycle.

#### 2.4.3.3 The Phase II Interconnection Studies

The Phase II Interconnection Studies will include, but not be limited to, short circuit/fault duty, steady state (thermal and voltage) and stability analyses, and will identify direct Interconnection Facilities and required RNUs necessary to interconnect the Generating Facility, mitigate thermal overloads and voltage violations, and address short circuit, stability, and reliability issues associated with the requested Interconnection Service. The Phase II Interconnection Studies shall identify LDNUs and LOPNUs for Generating Facilities participating in Phase II (including those being processed under the Independent Study Process) that have elected Full Capacity, Partial Capacity Deliverability Status, and Off-Peak Deliverability Status, as applicable, and ADNUs for Interconnection Customers selecting Option (B) in accordance with Section 7.2.

The Phase II Interconnection Study report shall also set forth the applicable cost estimates for RNUs, LDNUs, ADNUs, LOPNUs, and AOPNUs, and Participating TO Interconnection Facilities that shall, as applicable, establish the basis for the second and third Interconnection Financial Security postings under Section 11.3.

Where an Interconnection Study report identifies specific transmission facilities for Network Upgrade or Interconnection Facilities, the cost estimates determined in accordance with Section 6.4 will be set forth in present dollar costs as well as time-adjusted dollar costs, adjusted to the estimated year of expenditure for construction of the components being constructed.

#### 2.4.3.4 Update Following TP Deliverability Allocation Process

Following the completion of Phase II Interconnection Studies for the Queue Cluster and provision by the ISO of the results to Interconnection Customers in the Queue Cluster, the ISO will perform the allocation of TP Deliverability to eligible Generating Facilities in accordance with Section 8.9. Based on the results of the allocation process and the responses to those results as reported by affected Interconnection Customers to the ISO, the ISO will provide updates where needed to the Phase II Interconnection Study reports of affected Interconnection Customers. The update to the Phase II Interconnection Study report provided under this section shall not extend the time for the second Interconnection Financial Security posting under Section 11.3.

## Section 3 Interconnection Requests

### 3.1 General

Pursuant to CAISO Tariff Section 25.1, a duly authorized officer or agent of the Interconnection Customer will submit to the CAISO (1) an Interconnection Request consistent with Appendix 1 to this GIDAP, including (2) an executed Generator Interconnection Study Process Agreement consistent with Appendix 3 to this GIDAP. All forms may be submitted electronically as provided on the CAISO website. Interconnection customers will submit Appendix B to the Generator Interconnection Study Process Agreement pursuant to Section 7 of this GIDAP. The CAISO will forward a copy of the Interconnection Request to the applicable Participating TO within five (5) Business Days of receipt.

The Interconnection Customer shall submit a separate Interconnection Request for each site and

may submit multiple Interconnection Requests for a single site. The Interconnection Customer must submit a deposit with each Interconnection Request even when more than one request is submitted for a single site. An Interconnection Request to evaluate one site at two different voltage levels shall be treated as two Interconnection Requests.

Interconnection Customers may request Interconnection Service Capacity below the Generating Facility Capacity. The CAISO will study these requests for Interconnection Service at the level of Interconnection Service Capacity requested for purposes of Interconnection Studies, Network Upgrades, and associated costs. If the Generating Facility Capacity requires additional Network Upgrades beyond the Interconnection Service Capacity, the CAISO will provide a detailed explanation of why the additional Network Upgrades are necessary. Any Interconnection Facility and/or Network Upgrade cost required for safety and reliability will be assigned to the Interconnection Customer and eligible for reimbursement consistent with the treatment of Interconnection Facilities and Network Upgrade provided in this GIDAP. Interconnection Customers may be subject to additional control technologies, as well as testing and validation of those technologies consistent with Article 6 of the GIA and Article 2 of the SGIA. The necessary control technologies and protection systems shall be established in Appendix C of that executed, or requested to be filed unexecuted, GIA.

## 3.2 Roles and Responsibilities

(a) Each Interconnection Request will be subject to the direction and oversight of the CAISO. The CAISO will conduct or cause to be performed the required Interconnection Studies and any additional studies the CAISO determines to be reasonably necessary, and will direct the applicable Participating TO to perform portions of studies where the Participating TO has specific and non-transferable expertise or data and can conduct the studies more efficiently and cost effectively than the CAISO. The CAISO will coordinate with Affected System Operators in accordance with Section 3.7.

(b) The CAISO will complete or cause to be completed all studies as required within the timelines provided in this. Any portion of the studies performed at the direction of the CAISO by the Participating TOs or by a third party shall also be completed within timelines provided in this GIDAP.

(c) The CAISO has established a pro forma Roles and Responsibilities Agreement, attached hereto as Appendix 4 and incorporated herein by reference, for execution by the CAISO and the applicable Participating TOs.

(d) Each Interconnection Customer shall pay the actual costs of all Interconnection Studies, and any additional studies the CAISO determines to be reasonably necessary in response to the Interconnection Request. The CAISO shall reimburse the Participating TO for the actual cost of any portion of all Interconnection Studies that such Participating TO performs at the direction of the CAISO.

## 3.3 Timing for Submitting Interconnection Requests

### 3.3.1 Timing for Submitting Interconnection Requests for a Queue Cluster

The CAISO will not accept new Interconnection Requests pursuant to this GIDAP. New Interconnection Requests must be submitted consistent with the RIS.

### 3.3.2 Timing for Submitting Interconnection Requests for Independent Study Process and Fast Track Process

Interconnection Customers may submit Interconnection Requests for processing under the Independent Study Process or the Fast Track Process at any time during the year.

### 3.3.3 Timing for Wholesale Distribution Transfers

After the Cluster Application Window, the CAISO will accept Interconnection Requests from Utility Distribution Companies that accepted interconnection requests for wholesale participation the Interconnection Customer reasonably believed were to the distribution grid based on available information, but should have been to the CAISO Controlled Grid. The CAISO will only accept those Interconnection Requests it can include in the Phase I Interconnection Study without delaying that Queue Cluster. The CAISO will not accept any Interconnection Request transfers after the commencement of the Phase I Interconnection Study.

After the Utility Distribution Company has transferred the Interconnection Request to the CAISO, the CAISO will notify the Interconnection Customer whether it can be included in the Phase I Interconnection Study and request any data still required under Section 3.5.1.

## 3.4 Surplus Interconnection Service

The CAISO will allow an Interconnection Customer to utilize or transfer Surplus Interconnection Service. The Interconnection Customer will notify the CAISO that it has transferred its Surplus Interconnection Service to another entity. The total Interconnection Service Capacity of the original Interconnection Customer and the assignee of the Surplus Interconnection Capacity may not exceed the original Interconnection Customer's constructed Generating Facility Capacity, regardless of the Interconnection Service Capacity it requested in its Interconnection Request or memorialized in its GIA. The Generating Facility of the assignee must interconnect at the same Point of Interconnection as the original Interconnection Customer.

If the assignee's Generating Facility would not require a new Interconnection Request pursuant to Section 25.1.1 of the CAISO Tariff, the original Interconnection Customer may transfer Surplus Interconnection Service, and the CAISO will study the transfer, as a modification under Section 6.7.2. Otherwise, the assignee of the Surplus Interconnection Service will submit an Interconnection Request under the Independent Study Process pursuant to Section 3.5 of this GIDAP. The CAISO and Participating TO will study and treat the use of the Surplus Interconnection Service and any capacity beyond the Interconnection Service Capacity as a behind-the-meter capacity expansion consistent with Section 4.2 of this GIDAP. The Independent Study Process for Surplus Interconnection Service will identify any additional Interconnection Facilities and/or Network Upgrades necessary. Reimbursement for additional Reliability Network Upgrades will be capped pursuant to Section 14.3.2 of this GIDAP. The CAISO will use the constructed Generating Facility Capacity of the original Interconnection Customer for the MW value of the RNU reimbursement cap, and will subtract the costs of the original Interconnection Customer's Reliability Network Upgrades to determine any remaining eligible reimbursement under the cap for the assignee's Reliability Network Upgrades, if any.

Notwithstanding any other provision in this GIDAP, if the original Interconnection Customer has Full or Partial Capacity Deliverability Status, it will notify the CAISO whether its transfer of Surplus Interconnection Service includes any Deliverability currently associated with the constructed Generating Facility capacity. The transfer amount of Deliverability may not exceed the transfer amount of Surplus Interconnection Service. The transfer amount of Surplus Interconnection Service will not operate as a basis to increase the Net Qualifying Capacity of the Generating Facility (including the expansion) that pre-existed the transfer. In all cases, the original Generating Facility and the behind-the-meter capacity expansion will be metered separately from one another and be assigned separate Resource IDs. If the original Interconnection Customer's Generating Facility permanently retires, or ceases operation for three (3) years without having begun active construction of a repowered Generating Facility, both the original Interconnection Customer and the assignee of the Surplus Interconnection Service will be converted to Energy Only. At any point, the assignee may seek its own TP Deliverability allocation pursuant to

Section 8.9 of this GIDAP. If the assignee receives its own TP Deliverability allocation, it will exist completely independent of the original Interconnection Customer and will not be converted to Energy Only due to the retirement or inoperability of the original Interconnection Customer, notwithstanding any other provision herein.

The CAISO, Participating TO, and original Interconnection Customer will work in good faith to amend the original Interconnection Customer's GIA to reflect the transfer of Surplus Interconnection Service before the execution of the assignee's GIA.

## 3.5 Processing of Interconnection Requests

### 3.5.1 Initiating an Interconnection Request.

To initiate an Interconnection Request, except as set forth for the Fast Track Process in Section 5, and have the Interconnection Request considered for validation under Section 3.5.2, the Interconnection Customer must submit all of the following during the Cluster Application Window, or at any time during the year for proposed Generating Facilities applying for processing under the Independent Study Process:

(i) An Interconnection Study Deposit of $150,000.

(ii) A completed application in the form of Appendix 1, including requested Deliverability statuses, requested study process (either Queue Cluster or Independent Study Process), preferred Point of Interconnection and voltage level, and all other required technical data, including all data requested in Attachment A to Appendix 1 in Excel format.

(iii) Demonstration of Site Exclusivity or, for Interconnection Requests in a Queue Cluster, a posting of a Site Exclusivity Deposit of $250,000 for a Small Generating Facility or $500,000 for a Large Generating Facility. The demonstration of Site Exclusivity, at a minimum, must be through the Commercial Operation Date of the new Generating Facility or increase in capacity of the existing Generating Facility.

(iv) A load flow model.

(v) A dynamic data file.

(vi) A reactive power capability document.

(vii) A site drawing.

(viii) A single-line diagram.

(ix) A flat run plot and a bump test plot from the positive sequence transient stability simulation application.

(x) A plot showing the requested MW at the Point of Interconnection from the positive sequence load flow application.

The CAISO requires the foregoing information to be complete and specific to the Interconnection Request. The CAISO will first determine whether a submitted Interconnection Request is complete. The CAISO will not initiate any review of an Interconnection Request for completeness until the Interconnection Study Deposit is received by the CAISO. Consistent with Section 3.5.3, the CAISO will review each

Interconnection Request and notify the Interconnection Customer whether it is complete or contains omissions within five (5) Business Days of submission. Any Interconnection Customer that has not submitted a complete Interconnection Request by April 15 (or the next Business Day if April 15 is not a Business Day) will be deemed incomplete with no opportunity to cure or otherwise be included in that year's Queue Cluster.

The CAISO requires Interconnection Study Deposits to review and validate the Interconnection Request. Notwithstanding Section 3.5.2 of this GIDAP or any other provision regarding validation or the ability to cure deficiencies, the CAISO will not review, process, or validate an Interconnection Request absent the Interconnection Study Deposit. Any interconnection Customer that has not submitted a complete Interconnection Study Deposit by April 15 (or the next Business Day if April 15 is not a Business Day) will be deemed invalid with no opportunity to cure or otherwise be included in that year's Queue Cluster.

The CAISO will include examples of how Interconnection Customers can demonstrate Site Exclusivity, including on public sites, in its Business Practice Manual.

#### 3.5.1.1 Use of Interconnection Study Deposit.

The CAISO shall deposit all Interconnection Study Deposits in an interest bearing account at a bank or financial institution designated by the CAISO. The Interconnection Study Deposit shall be applied to pay for prudent costs incurred by the CAISO, the Participating TOs, or third parties at the direction of the CAISO or Participating TOs, as applicable, to perform and administer the Interconnection Studies and to meet and otherwise communicate with Interconnection Customers with respect to their Interconnection Requests.

Except for proposed Generating Facilities processed under the Fast Track Process set forth in Section 5, the Interconnection Study Deposits shall be refundable as follows:

(a) Should an Interconnection Request be withdrawn by the Interconnection Customer or be deemed withdrawn by the CAISO by written notice under Section 3.8 on or before thirty (30) calendar days following the Scoping Meeting, the CAISO shall refund to the Interconnection Customer any portion of the Interconnection Customer's Interconnection Study Deposit, including interest earned at the rate provided for in the interest-bearing account from the date of deposit to the date of withdrawal, that exceed the costs the CAISO, Participating TOs, and third parties have incurred on the Interconnection Customer's behalf.

(b) Should an Interconnection Request made under Section 3.5.1 be withdrawn by the Interconnection Customer or be deemed withdrawn by the CAISO by written notice under Section 3.8 more than thirty (30) calendar days after the Scoping Meeting, but on or before thirty (30) calendar days following the Results Meeting (or the latest date permitted under this GIDAP for a Results Meeting if a customer elects not to have a Results Meeting) for the Phase I Interconnection Study or the system impact and facilities study for Generating Facilities processed under the Independent Study Process, the CAISO shall refund to the Interconnection Customer the difference between (i) the Interconnection Customer's Interconnection Study Deposit and (ii) the greater of the costs the CAISO and Participating TOs have incurred on the Interconnection Customer's behalf or one-half of the original

Interconnection Study Deposit up to a maximum of $75,000, including interest earned at the rate provided for in the interest-bearing account from the date of deposit to the date of withdrawal.

Interconnection Customers in Queue Cluster 5 who have provided the Study Deposit may receive a refund of the Interconnection Study Deposit, less actual costs expended on the Interconnection Studies to date, by withdrawing from the Queue within ten (10) calendar days after July 25, 2012.

(c) Should an Interconnection Request be withdrawn by the Interconnection Customer or be deemed withdrawn by the CAISO by written notice under Section 3.8 at any time more than thirty (30) calendar days after the Results Meeting (or the latest date permitted for a Results Meeting if a customer elects not to have a Results Meeting) for the Phase I Interconnection Study, or the system impact and facilities study for proposed Generating Facilities processed under the Independent Study Process, the Interconnection Study Deposit shall be non-refundable.

(d) Upon execution of a GIA by an Interconnection Customer, the CAISO and the applicable Participating TOs, or the approval by FERC of an unexecuted GIA, the CAISO shall refund to the Interconnection Customer any portion of the Interconnection Customer's Interconnection Study Deposit, including interest earned at the rate provided for in the interest-bearing account from the date of deposit to the date of withdrawal, that exceeds the costs the CAISO, Participating TOs, and third parties have incurred on the Interconnection Customer's behalf.

Notwithstanding the foregoing, an Interconnection Customer that withdraws or is deemed to have withdrawn its Interconnection Request during an Interconnection Study Cycle shall be obligated to pay to the CAISO all costs in excess of the Interconnection Study Deposit that have been prudently incurred or irrevocably have been committed to be incurred with respect to that Interconnection Request prior to withdrawal. The CAISO will reimburse the applicable Participating TO(s) or third parties, as applicable, for all work performed on behalf of the withdrawn Interconnection Request at the CAISO's direction. The Interconnection Customer must pay all monies due before it is allowed to obtain any Interconnection Study data or results.

All non-refundable portions of the Interconnection Study Deposit that exceed the costs the CAISO, Participating TOs, or third parties have incurred on the Interconnection Customer's behalf, and any non-refundable interconnection study deposit funds that are received by the CAISO from a Participating TO, pursuant to a requirement in the Participating TO's wholesale distribution tariff for such funds to be distributed by the CAISO, shall be treated in accordance with Section 7.6.

Notwithstanding any other provision, all refunds pursuant to this Appendix DD will be processed in accordance with the CAISO's generally accepted accounting practices, including monthly batched deposit refund disbursements. Any CAISO deadline will be tolled to the extent the Interconnection Customer has not provided the CAISO with the appropriate documents to facilitate the Interconnection Customer's refund, or if the Interconnection Customer has any outstanding invoice balance due to the CAISO on another project owned by the same Interconnection Customer.

**3.5.1.2 Obligation for Study Costs.**

Except as otherwise provided in Section 3.5.1.1, the CAISO shall charge and the Interconnection Customer(s) shall pay the actual costs of the Interconnection Studies. Where an Interconnection Study is performed by means of a Group Study, the cost of the Group Study will be charged pro rata to each Interconnection Request assigned to the Group Study. The cost of Interconnection Studies performed for an individual Interconnection Request, not part of a Group Study, will be charged solely to the Interconnection Customer that submitted the Interconnection Request.

Following offsets from non-refundable Site Exclusivity Deposit funds, the actual costs of each reassessment, as set forth in Section 7.4, will be divided and allocated equally amongst the following Interconnection Customers:

(1) Interconnection Customers whose Generating Facilities' Phase II Interconnection Studies were completed in the most recent Interconnection Study Cycle prior to the applicable reassessment;

(2) Interconnection Customers whose Generating Facilities are parked pursuant to this GIDAP at the time of the applicable reassessment process; and

(3) Interconnection Customers with Interconnection Requests for Generating Facilities in Queue Clusters for whose Interconnection Studies the results of the applicable annual reassessment process will be used to establish the Base Case.

An Interconnection Customer will be allocated a single share of the actual costs of the reassessment per Generating Facility in these four categories, even if a Generating Facility falls within more than one of these categories.

The Participating TO and any third parties performing work on the Interconnection Customer's behalf shall invoice the CAISO for such work, and the CAISO shall issue invoices for Interconnection Studies that shall include a detailed and itemized accounting of the cost of each Interconnection Study. The CAISO shall draw from the Interconnection Study Deposit any undisputed costs within thirty (30) calendar days of issuance of an invoice. Whenever the actual cost of performing the Interconnection Studies exceeds the Interconnection Study Deposit, the Interconnection Customer shall pay the undisputed difference in accordance with the CAISO issued invoice within thirty (30) calendar days. The CAISO shall not be obligated to continue to have any studies conducted unless the Interconnection Customer has paid all undisputed amounts in compliance herewith. In the event an Interconnection Study, or portions thereof, is performed by the CAISO, the Interconnection Customer shall pay only the costs of those activities performed by the Participating TO to adequately review or validate that Interconnection Study or portions thereof.

**3.5.1.3 Use of Site Exclusivity Deposit.**

The CAISO shall deposit all Site Exclusivity Deposits in an interest bearing account at a bank or financial institution designated by the CAISO. The Site Exclusivity Deposit and all interest shall be refundable to the Interconnection Customer at any time upon demonstration of Site Exclusivity. For Site Exclusivity Deposits provided after September 1, 2022, if the Interconnection Request is

withdrawn by the Interconnection Customer or deemed withdrawn by the CAISO by written notice under Section 3.8 thirty (30) calendar days after the Scoping Meeting and before demonstrating Site Exclusivity, fifty percent (50%) of the Site Exclusivity will be non-refundable and subject to Section 7.6 of this GIDAP. The refund of the Site Exclusivity Deposit shall include interest earned at the rate provided for in the interest-bearing account from the date of deposit to the date of withdrawal on the refundable portion only.

Interconnection Customers in Clusters 15 and thereafter may not use Site Exclusivity Deposits after the Phase I Interconnection Study. Interconnection Customers must demonstrate Site Exclusivity for the Generating Facility at least ten (10) Business Days prior to the initial Interconnection Financial Security posting is required. Interconnection Customers that fail to demonstrate Site Exclusivity prior to this deadline will be deemed withdrawn.

#### 3.5.1.4 Proposed Commercial Operation Date.

The proposed Commercial Operation Date of the new Generating Facility or increase in capacity of the existing Generating Facility shall not exceed seven years from the date the Interconnection Request is received by the CAISO, unless the Interconnection Customer demonstrates, and the applicable Participating TO(s) and the CAISO agree, such agreement not to be unreasonably withheld, that engineering, permitting and construction of the new Generating Facility or increase in capacity of the existing Generating Facility will take longer than the seven year period. The CAISO's agreement to an extension of the proposed Commercial Operation Date does not relieve the Interconnection Customer from compliance with the requirements of any of the criteria in Section 8.9.3 for retention of TP Deliverability.

#### 3.5.1.5 Third-party Interconnection Facilities.

Interconnection Customers proposing to use third-party Interconnection Facilities must provide documentation to the CAISO demonstrating they are negotiating or have secured rights on those Interconnection Facilities to be deemed valid pursuant to Section 3.5.2. On or before their initial Interconnection Financial Security posting, such Interconnection Customers must provide documentation to the CAISO demonstrating they have secured rights on those Interconnection Facilities through their Commercial Operation Date.

### 3.5.2 Validation of Interconnection Request.

For each Interconnection Request that is deemed complete pursuant to Section 3.5.1, the CAISO and Participating TO will determine whether the Interconnection Request is valid. An Interconnection Request will be deemed valid if it does not contain deficiencies that would prevent its inclusion in the Phase I Interconnection Studies. Deficiencies include but are not limited to modeling errors, inaccurate data, and unusable files.

#### 3.5.2.1 Validation Process.

The CAISO and Participating TO will notify the Interconnection Customer whether its Interconnection Request is valid or contains deficiencies within ten (10) Business Days of April 15 or when the Interconnection Request is deemed complete, whichever is later. All Interconnection Requests must be deemed valid by June 30 to be included in that year's Queue Cluster.

#### 3.5.2.2 Deficiencies in Interconnection Request.

If an Interconnection Request has deficiencies, the CAISO shall include in its notification to the Interconnection Customer that the Interconnection Request does not constitute a valid request and explain the deficiencies. The Interconnection Customer shall provide the CAISO the corrected requested information needed to constitute a valid request. Consistent with Section 3.5, whenever corrected requested information is provided by the Interconnection Customer, the CAISO shall notify the Interconnection Customer within five (5) Business Days of receipt of the corrected requested information whether the Interconnection Request is valid. If the Interconnection Request continues to provide deficient information, the CAISO shall include in its notification to the Interconnection Customer the reasons for such failure. If an Interconnection Request is not deemed valid, the Interconnection Customer must cure all deficiencies no later than June 30 or the next Business Day if June 30 is not a Business Day. Interconnection Requests with deficiencies after that date will be deemed invalid and will not be included in an Interconnection Study Cycle or otherwise studied.

Interconnection Requests deemed invalid under this Section 3.5.2.2 are not subject to Section 3.8. Interconnection Customers with invalid Interconnection Request under this Section 3.5.2.2 may seek relief under Section 15.5 by so notifying the CAISO within two (2) Business Days of the notice of invalidity.

### 3.5.3 Day-for-day Extensions

The CAISO and Participating TO will use Reasonable Efforts to meet all deadlines in this Section 3.5.3 of the GIDAP. To the extent the CAISO and Participating TO cannot meet any deadline, the Interconnection Customer will receive a day-for-day extension on all remaining deadlines requiring its response until May 31.

Pursuant to Section 3.5.1, Interconnection Customers that submit their Interconnection Requests more than five (5) Business Days before April 15 will receive a notification from the CAISO regarding their Interconnection Request's completion, and will have an opportunity to provide any missing information by April 15. To the extent the CAISO and Participating TO cannot meet the five (5) Business Day response time for Interconnection Requests submitted or corrected more than five (5) Business Days before April 15, the Interconnection Customer will receive a day-for-day extension on the April 15 completion deadline and the June 30 validation deadline. Interconnection Customers that submit or correct their Interconnection Requests within five (5) Business Days of April 15 may not receive a notification by April 15, will not receive an extension of the April 15 deadline, and must have submitted a complete Interconnection Request to be validated pursuant to Section 3.5.2.

Pursuant to Section 3.5.2, the CAISO and Participating TO will notify the Interconnection Customer whether its Interconnection Request is valid or contains deficiencies within ten (10) Business Days of April 15 or when the Interconnection Request is deemed complete, whichever is later. The CAISO will notify an Interconnection Customer within five (5) Business Days whether its Interconnection Request is now valid when an Interconnection Customer attempts to cure a deficiency. For all information submitted prior to May 31, to the extent the CAISO and Participating TO cannot meet the deadlines described here, the Interconnection Customer will receive a day-for-day extension on the June 30 deadline for validation. If an Interconnection Customer does not respond to a deficiency notice until after May 31, it will not receive any extension beyond the June 30 deadline for validation.

## 3.6 Internet Posting

The CAISO will maintain on the CAISO Website a list of all Interconnection Requests. The list will identify, for each Interconnection Request: (i) the maximum summer and winter megawatt electrical output; (ii) the location by county and state; (iii) the station or transmission line or lines where the interconnection will be made; (iv) the most recent projected Commercial Operation Date; (v) the status of the Interconnection Request, including whether it is active or withdrawn; (vi) the availability of any studies related to the Interconnection Request; (vii) the date of the Interconnection Request; (viii) the type of Generating Facility to be constructed (e.g., combined cycle, combustion turbine, wind turbine, and fuel type); (ix) requested Deliverability statuses, and (x) project name.

Except in the case of an Affiliate, the list will not disclose the identity of the Interconnection Customer until the Interconnection Customer executes a GIA or requests that the applicable Participating TO(s) and the CAISO file an unexecuted GIA with FERC. The CAISO shall post on the CAISO Website an advance notice whenever a Scoping Meeting will be held with an Affiliate of a Participating TO.

The CAISO shall post to the CAISO Website any deviations from the study timelines set forth herein. The CAISO shall further post to the secure CAISO Website portions of the Phase I Interconnection Study that do not contain customer-specific information following the final Results Meeting and portions of the Phase II Interconnection Study that do not contain customer-specific information no later than publication of the final Transmission Plan under CAISO Tariff Section 24.2.5.2 (such posted information to be placed on the secure CAISO Website to protect any Critical Energy Infrastructure Information contained therein). The CAISO shall post to the secure CAISO Website any documents or other materials posted pursuant to this or a Business Practice Manual that contain Critical Energy Infrastructure Information.

### 3.6.1 Interconnection Studies Statistics

The CAISO will maintain on its website summary statistics related to processing Interconnection Studies pursuant to Interconnection Requests, updated quarterly. The CAISO will maintain a link on OASIS to the CAISO website with the interconnection statistics. These statistics will include:

#### 3.6.1.1 Phase I Interconnection Studies

(A) The number of Interconnection Requests to the CAISO Controlled Grid that had Phase I Interconnection Studies completed;

(B) The number of Interconnection Requests to the CAISO Controlled Grid that had Phase I Interconnection Studies completed beyond the one hundred seventy (170) days planned for the Phase I Interconnection Study pursuant to Section 6.6 of this GIDAP;

(C) The number of active, valid Interconnection Requests with ongoing incomplete Phase I Interconnection Studies that have exceeded the one hundred seventy (170) days planned for the Phase I Interconnection Study pursuant to Section 6.6 of this GIDAP;

(D) The mean time (in days) of Phase I Interconnection Studies completed from the date when the CAISO began the annual Phase I Interconnection Study pursuant to Section 6.6 of this GIDAP to the date the CAISO provided the completed Phase I Interconnection Study to the Interconnection Customer;

(E) The percentage of Phase I Interconnection Studies exceeding the one hundred seventy (170) days planned for the Phase I Interconnection Study pursuant to Section 6.6 of this GIDAP, calculated as the sum of (B) plus (C), divided by the sum of (A) plus (C).

#### 3.6.1.2 Phase II Interconnection Studies

(A) The number of Interconnection Requests to the CAISO Controlled Grid that had Phase II Interconnection Studies completed;

(B) The number of Interconnection Requests to the CAISO Controlled Grid that had Phase II Interconnection Studies completed beyond the two hundred and five (205) days planned for the Phase II Interconnection Study pursuant to Section 8.5 of this GIDAP;

(C) The number of active, valid Interconnection Requests with ongoing incomplete Phase II Interconnection Studies that have exceeded the two hundred and five (205) days planned for the Phase II Interconnection Study pursuant to Section 8.5 of this GIDAP;

(D) The mean time (in days) of Phase II Interconnection Studies completed from the date when the CAISO began the annual Phase II Interconnection Study pursuant to Section 8.5 of this GIDAP to the date the CAISO provided the completed Phase II Interconnection Study to the Interconnection Customer;

(E) The percentage of Phase II Interconnection Studies exceeding the two hundred and five (205) days planned for the Phase II Interconnection Study pursuant to Section 8.5 of this GIDAP, calculated as the sum of (B) plus (C), divided by the sum of (A) plus (C).

#### 3.6.1.3 Interconnection Requests Withdrawn

(A) The number of Interconnection Requests withdrawn;

(B) The number of Interconnection Requests withdrawn before completion of any Interconnection Studies;

(C) The number of Interconnection Requests withdrawn before completion of their Phase II Interconnection Study;

(D) The number of Interconnection Requests withdrawn after executing a GIA or before the Interconnection Customer requests filing an unexecuted, new GIA;

(E) Mean time (in days), for all withdrawals, from the date when the request was determined to be valid to when the CAISO received the request to withdraw from the queue.

### 3.6.2 Retention

The CAISO will keep the quarterly interconnection studies statistics on the CAISO Website for three (3) calendar years, commencing in the first quarter of 2020.

### 3.6.3 FERC Reporting

In the event that any of the percentages calculated in any subparagraph E of Section 3.6.1.1 and 3.6.1.2 exceeds twenty five (25) percent for two (2) consecutive quarters, the CAISO will, for the next four quarters and until those percentages fall below twenty five (25) percent for two (2) consecutive quarters:

(i) submit a report to FERC describing the reason for each study or group of clustered studies pursuant to an Interconnection Request that exceeded its deadline for completion (excluding any allowance for Reasonable Efforts). The CAISO will describe the reasons for each study delay and any steps taken to remedy these specific issues and, if applicable, prevent such delays in the future. The CAISO will file the report with FERC within forty five (45) days of the end of the calendar quarter.

(ii) aggregate and publish on the CAISO Website the total number of employee-hours and third party consultant hours expended towards its Interconnection Studies. The CAISO will publish these figures within thirty (30) days of the end of the calendar quarter.

## 3.7 Coordination with Affected Systems

Pursuant to Section 3.7.1, the CAISO will notify the Affected System Operators that are potentially affected by the Interconnection Customer's Interconnection Request or Group Study within which the Interconnection Customer's Interconnection Request will be studied. The CAISO will coordinate the conduct of any studies required to determine the impact of the Interconnection Request on Affected Systems with Affected System Operators, to the extent possible, and, if possible, the CAISO will include those results (if available) in its applicable Interconnection Study within the time frame specified in this GIDAP. The CAISO will include Affected System Operators in all meetings held with the Interconnection Customer as required by this GIDAP.

The Interconnection Customer will cooperate with the CAISO in all matters related to the conduct of studies and the determination of modifications to Affected Systems, including providing consent to CAISO's identification of Interconnection Customer's name, Generating Facility project name, and release of information that the Interconnection Customer provided as part of its Interconnection Request to the Affected System, and participating in any coordinating activities and communications undertaken by the Affected System or CAISO. If required by an Identified Affected System, the Interconnection Customer will sign separate study agreements with the Identified Affected System and pay for necessary studies. Identified Affected Systems will cooperate with the CAISO in all matters related to the Identified Affected System Operators' determination of modifications to Identified Affected Systems.

### 3.7.1 Timing for Identification of Identified Affected Systems

The CAISO will provide notice to the Affected System Operators that are potentially affected by the Interconnection Customer's Interconnection Request or Group Study within thirty (30) calendar days after determining which projects in each study cluster have posted their initial Interconnection Financial Security.

The CAISO may later notify Affected Systems if (i) the CAISO failed to identify the Affected System initially; (ii) the Interconnection Customer modifies its project such that an electric system becomes a potentially Affected System; or (iii) the Interconnection Customer converts from a Wholesale Distribution Access Tariff to the CAISO Tariff and the same Affected Systems were not notified previously or the conversion was due to a system change. In such cases, the CAISO will coordinate with the Interconnection Customer and the potentially Affected System Operator to develop an expedited timeline to determine whether the Affected System is an Identified Affected System. The CAISO will then notify the Interconnection Customer as soon as practical of the new Identified Affected System.

Within sixty (60) calendar days of notification from the CAISO, the Affected System Operator will advise the CAISO in writing that either: (i) the CAISO should consider the electric system to be an Identified Affected System; or (ii) the electric system should not be considered an Identified Affected System. If the Affected System Operator fails to advise the CAISO within (60) calendar days of notification, the CAISO will assume that the electric system is not an Affected System.

If an electric system operator advises the CAISO that it is an Identified Affected System after the 60-day notification period, the CAISO will not delay the synchronization or Commercial Operation of the Generating Facility for mitigation required by the Affected System unless the Affected System identifies, and the CAISO confirms, a legitimate reliability issue. Where legitimate reliability issues are present, the CAISO will work with

the Affected System and the Interconnection Customer to establish temporary mitigations, if possible, for the identified reliability issue. An Affected System's mitigation remedies that may be available outside the CAISO Tariff are unaffected by these provisions.

### 3.8 Withdrawal

The Interconnection Customer may withdraw its Interconnection Request at any time by written notice of such withdrawal to the CAISO, and the CAISO will notify the applicable Participating TO(s) and Affected System Operators, if any, within three (3) Business Days of receipt of such a notice. In addition, after confirmation by the CAISO of a valid Interconnection Request under Section 3.5.2, if the Interconnection Customer fails to adhere to all requirements of this GIDAP, except as provided in Section 15.5 (Disputes), the CAISO shall deem the Interconnection Request to be withdrawn and shall provide written notice to the Interconnection Customer within five (5) Business Days of the deemed withdrawal and an explanation of the reasons for such deemed withdrawal. Upon receipt of such written notice, the Interconnection Customer shall have five (5) Business Days in which to respond with information or action that either cures the deficiency or supports its position that the deemed withdrawal was erroneous and notifies the CAISO of its intent to pursue Dispute Resolution.

Withdrawal shall result in the removal of the Interconnection Request from the Interconnection Study Cycle. If an Interconnection Customer disputes the withdrawal and removal from the Interconnection Study Cycle and has elected to pursue Dispute Resolution, the Interconnection Customer's Interconnection Request will not be considered in any ongoing Interconnection Study during the Dispute Resolution process.

In the event of such withdrawal, the CAISO, subject to the provisions of Sections 15.1 and 3.5.1.1, shall provide, at the Interconnection Customer's request, all information that the CAISO developed for any completed study conducted up to the date of withdrawal of the Interconnection Request.

### 3.9 Transferability of Interconnection Request

An Interconnection Customer may transfer its Interconnection Request to another entity only if such entity acquires the specific Generating Facility identified in the Interconnection Request and the Point of Interconnection does not change.

### 3.10 Emergency Interconnection Process

The CAISO and Participating TO(s) may conduct expedited studies to approve emergency interconnections when all of the following conditions are satisfied:

(a) The State of California Governor declared an emergency that requires capacity on an expedited basis;

(b) The CPUC, the CEC, or a California agency specifically identified the interconnection as needed to respond to the State of California Governor's emergency declaration;

(c) The interconnection would not have a negative impact on the cost or timing of any existing Interconnection Request unless the impacted Interconnection Request belongs to the same developer and the developer consents to the impact;

(d) The interconnection does not require Network Upgrades above $1 million. The CAISO will publish an annual inflation factor and adjusted amount for this figure with the per unit cost publication on the CAISO Website pursuant to Section 6.4 of this GIDAP;

(e) The Reliability Network Upgrades required will be constructed in fewer than six (6) months;

(f) The GIA or amendment for the emergency interconnection will expressly terminate the interconnection for the emergency capacity within three (3) years of the Commercial Operation Date of the emergency capacity. The Interconnection Customer may obtain standard Interconnection Service for the emergency capacity by submitting a subsequent Interconnection Request pursuant to Sections 3.5 or 5.1 of this GIDAP and supplanting the emergency GIA or amendment;

(g) The emergency interconnection will be ineligible for Delivery Network Upgrades or TP Deliverability except Interim Deliverability consistent with Section 4.6 of this GIDAP, or until it can obtain TP Deliverability by submitting a subsequent Interconnection Request pursuant to Sections 3.5 or 5.1 of this GIDAP;

(h) The emergency interconnection will not impact Affected Systems; and

(i) The expedited studies confirm the interconnection may mitigate the emergency.

The Interconnection Customer will provide the CAISO a $50,000 deposit and all necessary technical information to assess the interconnection. The Interconnection Customer will be responsible for the actual costs incurred by the CAISO and applicable Participating TO(s) in conducting the assessment. If the actual costs of the assessment are less than the deposit provided by the Interconnection Customer, the Interconnection Customer will be refunded the balance. If the actual costs of the assessment are greater than the deposit provided by the Interconnection Customer, the Interconnection Customer shall pay the balance within 30 days of being invoiced. The CAISO shall coordinate the assessment with the Participating TO(s). The Participating TO(s) shall invoice the CAISO for any assessment work within seventy-five (75) calendar days of completion of the assessment, and, within thirty (30) days thereafter, the CAISO shall issue an invoice or refund to the Interconnection Customer, as applicable, based upon such submitted Participating TO invoices and the CAISO's own costs for the assessment.

The CAISO and Participating TO(s) will conduct all necessary studies, publish study results, and tender a draft GIA or amendment to the Interconnection Customer.

Notwithstanding any other provision, all refunds pursuant to this section will be processed in accordance with the CAISO's generally accepted accounting practices, including monthly batched deposit refund disbursements. Any CAISO deadline will be tolled to the extent the Interconnection Customer has not provided the CAISO with the appropriate documents to facilitate the Interconnection Customer's refund, or if the Interconnection Customer has any outstanding invoice balance due to the CAISO on another project owned by the same Interconnection Customer.

**Section 4 Independent Study Process**

The CAISO, in coordination with the applicable Participating TO(s), will study Interconnection Requests eligible for treatment under this Independent Study Process independently from other Interconnection Requests.

In the event of a conflict between this Section 4 and another provision of this GIDAP, Section 4 shall govern.

**4.1 Criteria for Independent Study Process Eligibility**

Any Interconnection Request that meets the following criteria will be processed under the

Independent Study Process:

**4.1.1** The Interconnection Customer must provide, along with its Interconnection Request, an objective demonstration that inclusion in a Queue Cluster will not accommodate the desired Commercial Operation Date for the Generating Facility. As part of this demonstration, the Interconnection Customer must show that the desired Commercial Operation Date is physically and commercially achievable, by demonstrating all of the following:

(i) The Interconnection Customer has obtained, or has demonstrated the ability to obtain, all regulatory approvals and permits needed to complete construction in time to meet the Generating Facility's requested Commercial Operation Date.

(ii) The Interconnection Customer is able to provide, or has demonstrated the ability to obtain, a purchase order for generating equipment specific to the proposed Generating Facility, or a statement signed by an officer or authorized agent of the Interconnection Customer demonstrating that the Interconnection Customer has a commitment for the supply of its major generating equipment in time to meet the Commercial Operation Date through a purchase agreement to which the Interconnection Customer is a party.

(iii) The Interconnection Customer can provide reasonable evidence of adequate financing or other financial resources necessary to make the Interconnection Financial Security postings required in Sections 11.2 and 11.3.

(iv) The Point of Interconnection proposed by the Interconnection Customer must be to either: (1) an existing facility on the CAISO Controlled Grid that does not require any expansion in order to accommodate the interconnection of the Generating Facility; or (2) a facility approved in the Transmission Planning Process or identified as necessary through Interconnection Studies performed for other Interconnection Customers that is fully permitted, is under construction at the time the Interconnection Request is made, and is expected to be in service by the requested Commercial Operation Date of the Generating Facility.

(v) With respect to any Reliability Network Upgrades that are anticipated to be needed to interconnect the Generating Facility, and that are already part of an existing plan of service or have been identified as necessary through Interconnection Studies performed for other Interconnection Customers, or have been identified in the Transmission Planning Process, such Reliability Network Upgrades must be either in service or under construction and have a completion date no later than the requested Commercial Operation Date of the Generating Facility.

**4.1.2** The Interconnection Customer must demonstrate Site Exclusivity.

**4.1.3** The proposed Generating Facility must be electrically independent of Interconnection Requests included in an existing Queue Cluster, pursuant to Section 4.2. In addition, the proposed Generating Facility must be electrically independent of any other Generating Facility that is currently being studied under an earlier-queued Independent Study Process Interconnection Request.

**4.1.4** The CAISO will inform an Interconnection Customer whether it has satisfied the requirements set forth in Sections 4.1.1 and 4.1.2 within thirty (30) calendar days of receiving the Interconnection Request.

**4.1.5** The CAISO will inform an Interconnection Customer whether it has satisfied the requirements set forth in Sections 4.1.3 within thirty (30) calendar days of receiving the

data necessary to determine whether the Interconnection Customer has satisfied such requirements. For a proposed Generating Facility in a study area with active Interconnection Requests in the current Queue Cluster or the Independent Study Process, such 30-calendar day period will commence when the Phase I Interconnection Study results are available for the current Queue Cluster and all system impact studies (or combined system impact and facilities studies) have been completed for all earlier-queued Independent Study Process Interconnection Requests in the same study area.

**4.1.6** Any Interconnection Request that does not satisfy the criteria set forth in Sections 4.1.1, 4.1.2, and 4.1.3 shall be deemed withdrawn, without prejudice to the Interconnection Customer submitting a request at a later date, unless the Interconnection Customer notifies the CAISO in writing within ten (10) Business Days that it wishes the CAISO to hold the Interconnection Request for inclusion in the next Queue Cluster Window, in which event the CAISO will do so.

## 4.2 Determination of Electrical Independence

An Interconnection Request will qualify for the Independent Study Process without having to demonstrate electrical independence pursuant to this Section 4.2 if, at the time the Interconnection Request is submitted, there are no other active Interconnection Requests in the same study area in the current Queue Cluster or in the Independent Study Process.

Otherwise, an Interconnection Request submitted under the Independent Study Process must pass all of the tests for determining electrical independence set forth in this Section 4.2 in order to qualify for the Independent Study Process. These tests will utilize study results for active Interconnection Requests in the same study area, including Phase I Interconnection study results for Generating Facilities in the current Queue Cluster and any system impact study (or combined system impact and facilities study) results for earlier queued Generating Facilities being studied in the Independent Study Process.

### 4.2.1 Flow Impact Test

An Interconnection Request shall have satisfied the requirements of this Section if it satisfies, alternatively, either the set of requirements set forth in Section 4.2.1.1 or the set of requirements set forth in Section 4.2.1.2.

#### 4.2.1.1 Requirement Set Number One: General Independent Study Requests

The CAISO, in coordination with the applicable Participating TO(s), will perform the flow impact test for an Interconnection Request requesting to be processed under the Independent Study Process as follows:

(i) Identify the transmission facility closest, in terms of electrical distance, to the proposed Point of Interconnection of the Generating Facility being tested that will be electrically impacted, either as a result of Reliability Network Upgrades identified or reasonably expected to be needed in order to alleviate power flow concerns caused by Generating Facilities currently being studied in a Queue Cluster, or as a result of Reliability Network Upgrades identified or reasonably expected to be needed to alleviate power flow concerns caused by earlier queued Generating Facilities currently being studied through the Independent Study Process. If the current Queue Cluster studies or earlier queued Independent Study Process studies have not yet determined which transmission facilities electrically impacted by the Generating Facility being tested require Reliability Network Upgrades to alleviate power flow concerns, and the CAISO cannot reasonably anticipate whether such

transmission facilities will require such Reliability Network Upgrades from other data, then the CAISO will wait to conduct the independence analysis under this section until sufficient information exists in order to make this determination. If the flow impact on a Reliability Network Upgrade identified pursuant to these criteria cannot be tested due to the nature of the Upgrade, then the flow impact test will be performed on the limiting element(s) causing the need for the Reliability Network Upgrade.

(ii) The incremental power flow on the transmission facility identified in Section 4.2.1.1(i) that is caused by the Generating Facility being tested will be divided by the lesser of the Generating Facility's size or the transmission facility capacity. If the result is five percent (5%) or less, the Generating Facility shall pass the flow impact test. If the Generating Facility being tested is tested against the nearest transmission facility and that transmission facility has been impacted by a cluster that required an upgrade as a result of a contingency, then that contingency will be used when applying the flow impact test.

(iii) If the Generating Facility being tested under the flow impact test is reasonably expected to impact transmission facilities that were identified, per Section 4.2.1.1(i), when testing one or more earlier queued Generating Facilities currently being studied through the Independent Study Process, then an additional aggregate power flow test shall be performed on these earlier identified transmission facilities. The aggregate power flow test shall require that the aggregated power flow of the Generating Facility being tested, plus the flow of all earlier queued Generating Facilities currently being studied under the Independent Study Process that were tested against the transmission facilities described in the previous sentence, must be five (5) percent or less of those transmission facilities' capacity.
However, even if the aggregate power flow on any transmission facility tested pursuant to this section (iii) is greater than five (5) percent of the transmission facility's capacity but the incremental power flow as a result of the Generating Facility being tested is one (1) percent or less than of the transmission facility's capacity, the Generating Facility shall pass the test.

If the Generating Facility being tested is tested against the nearest transmission facility and that transmission facility has been impacted by a cluster that required an upgrade as a result of a contingency, then that contingency will be used when applying the flow impact test.
The Generating Facility being tested must pass both this aggregate test as well as the individual flow test described in Section 4.2.1.1(ii), in no particular order.

**4.2.1.2 Requirement Set Number Two: for Requests for Independent Study of Behind-the-Meter Capacity Expansion of Generating Facilities**

This Section 4.2.1.2 applies to an Interconnection Request relating to a behind-the-meter capacity expansion of a Generating Facility. Such an Interconnection Request submitted under the Independent Study Process will satisfy the requirements of Section 4.2.1 if it satisfies all of the following technical and business criteria:

(i) Technical criteria.

1) The behind-the-meter capacity expansion shall not take place until after the original Generating Facility has achieved Commercial Operation and all Reliability Network Upgrades for the original Generating Facility have been placed in service. An Interconnection Request for behind-the-meter capacity expansion may be submitted prior to the Commercial Operation Date of the original Generating Facility.

2) The Interconnection Customer must install an automatic generator tripping scheme sufficient to ensure that the total output of the Generating Facility, including the behind-the-meter capacity expansion, does not at any time exceed the capacity studied in the Generating Facility's original Interconnection Request. The CAISO will have the authority to trip the generating equipment subject to the automatic generator tripping scheme or take any other actions necessary to limit the output of the Generating Facility so that the total output of the Generating Facility does not exceed the originally studied capacity.

(ii) Business criteria.

1) The Deliverability Status (Full Capacity, Partial Capacity or Energy-Only, and Off-Peak Deliverability Status or Off-Peak Energy Only) of the original Generating Facility will remain the same after the behind-the-meter capacity expansion. The capacity expansion will have Energy-Only, Off-Peak Energy Only Deliverability Statuses unless otherwise specified in this GIDAP, and the original Generating Facility and the behind-the-meter capacity expansion will be metered separately from one another and be assigned separate Resource IDs, except as set forth in (2) below.

2) If the original Generating Facility has Full Capacity Deliverability Status and/or Off-Peak Deliverability Status and the behind-the-meter capacity expansion will use the same technology as the original Generating Facility, the Interconnection Customer may elect to have the original Generating Facility and the behind-the-meter capacity expansion metered together, in which case both the original Generating Facility and the behind-the-meter capacity expansion may have Partial Capacity Deliverability Status and Off-Peak Deliverability Status, as applicable, pursuant to CAISO study results to determine Deliverability, and a separate Resource ID will not be established for the behind-the-meter capacity expansion.

3) A request for behind-the-meter expansion shall not operate as a basis under the CAISO Tariff to increase the Deliverability of the Generating Facility beyond what was or would have been allocated to the original Generating Facility before the Interconnection Request for behind-the-meter capacity expansion, unless the expansion has received a separate TP Deliverability allocation pursuant to Section 8.9.2.

4) The GIA will be amended to reflect the revised operational features of the Generating Facility's behind-the-meter capacity expansion.

5) An active Interconnection Customer may at any time request that the CAISO convert the Interconnection Request for behind-the-meter capacity expansion to an Independent Study Process Interconnection Request to evaluate an incremental increase in electrical output (MW generating capacity) for the existing Generating Facility. The Interconnection Customer must accompany such a conversion request with an appropriate Interconnection Study Deposit and agree to comply with other sections of Section 4 applicable to an Independent Study Process Interconnection Request.

#### 4.2.2 Short Circuit Test

The Generating Facility shall pass the short circuit test if (i) the combined short circuit contribution from all the active Interconnection Requests in the Independent Study Process in the same study area is less than five (5) percent of the available capacity of the circuit breaker upgrade identified in Section 4.2.1.1 and; (ii) total fault duty on each circuit breaker upgrade identified for the current Queue Cluster and active Independent Study Process Interconnection Requests in the same study area is less than eighty (80) percent of the nameplate capacity of the respective circuit breaker upgrade.

#### 4.2.3 Transient Stability Test

The Generating Facility shall pass the transient stability test if the Generating Facility has requested interconnection in a study area where transient stability issues are not identified for active Interconnection Requests in the current Queue Cluster or Independent Study Process.

#### 4.2.4 Reactive Support Test

The Generating Facility shall pass the reactive support test if the Generating Facility has requested interconnection in a study area where reactive support needs are not identified as requiring Reliability Network Upgrades for active Interconnection Requests in the current Queue Cluster or Independent Study Process.

### 4.3 Scoping Meeting

Within five (5) Business Days after the CAISO notifies the Interconnection Customer that the Generating Facility associated with its Interconnection Request has satisfied the electrical independence test set forth in Section 4.2, the CAISO shall establish a date agreeable to the Interconnection Customer and the applicable Participating TO(s) for the Scoping Meeting. With input from the Participating TO, the CAISO shall evaluate whether the Interconnection Request is at or near the boundary of an affected Participating TO(s)' service territory or of any other Affected System(s) so as to potentially affect such third parties, and, if such is the case, the CAISO shall invite the affected Participating TO(s) and/or Affected System Operator(s), in accordance with Section 3.7, to the Scoping Meeting by informing such third parties, as soon as practicable, of the time and place of the scheduled Scoping Meeting.

The purpose of the Scoping Meeting shall be to discuss the Interconnection Request and review existing studies relevant to the Interconnection Request. The applicable Participating TO(s) and the CAISO will bring to the meeting, as reasonably necessary to accomplish its purpose,

technical data, including, but not limited to, (i) general facility loadings, (ii) general instability issues, (iii) general short circuit issues, (iv) general voltage issues, and (v) general reliability issues. The Interconnection Customer will bring to the Scoping Meeting, in addition to the technical data in Attachment A to Appendix 1, any system studies previously performed. The applicable Participating TO(s), the CAISO, and the Interconnection Customer will also bring to the meeting personnel and other resources as may be reasonably required to accomplish the purpose of the meeting in the time allocated for the meeting. The CAISO shall prepare minutes from the meeting, and provide an opportunity for other attendees and the Interconnection Customer to confirm the accuracy thereof. The Scoping Meeting may be omitted by agreement of the Interconnection Customer, Participating TO, and the CAISO.

The CAISO shall, no later than five (5) Business Days after the Scoping Meeting (or agreement to forego such Scoping Meeting), provide the Interconnection Customer with an Independent Study Process Study Agreement (in the form set forth in Appendix 6 to the GIDAP), which shall contain an outline of the scope of the system impact and facilities study and a non-binding good-faith estimate of the cost to perform the study. The Interconnection Customer shall return the executed Independent Study Process Study Agreement or request an extension of time for good cause within thirty (30) Business Days thereafter, or the Interconnection Request shall be deemed withdrawn.

## 4.4 System Impact and Facilities Study

**4.4.1** The system impact and facilities study will consist of a short circuit analysis, a stability analysis, a power flow analysis, an assessment of the potential magnitude of financial impacts, if any, on Local Furnishing Bonds, and a proposed resolution, and any other studies that are deemed necessary.

**4.4.2** The system impact and facilities study shall state the assumptions upon which it is based, state the results of the analyses, and provide the requirement or potential impediments to providing the requested Interconnection Service. The system impact and facilities study shall specify and estimate the cost of the equipment, engineering, procurement, and construction work (including overheads) needed to implement the conclusions of the study, including, if applicable, the cost of remedial measures that address the financial impacts, if any, on Local Furnishing Bonds. The system impact and facilities study shall also identify (1) the electrical switching configuration of the equipment, including, without limitation, transformer, switchgear, meters, and other station equipment, (2) the nature and estimated cost of the Participating TO's Interconnection Facilities and Reliability Network Upgrades necessary to accomplish the Interconnection, and (3) an estimate of the time required to complete the construction and installation of such facilities or for effecting remedial measures that address the financial impacts, if any, on Local Furnishing Bonds.

**4.4.3** The system impact and facilities study will be completed and the results transmitted to the Interconnection Customer within one hundred twenty (120) calendar days after the execution of an Independent Study Process Study Agreement. The Interconnection Customer shall execute the agreement(s) and deliver them to the CAISO, and shall make its initial posting of Interconnection Financial Security in accordance with Section 11.2, or its Interconnection Request shall be deemed withdrawn.

**4.4.4** If requested by the Interconnection Customer, a Results Meeting shall be held among the CAISO, the applicable Participating TO(s), and the Interconnection Customer to discuss the results of the system impact and facilities study report, including assigned cost responsibility. The CAISO shall prepare minutes from the meeting. Any such Results Meeting will be held within twenty (20) Business Days of the date the system impact and facilities study report is provided to the Interconnection Customer.

Should the Interconnection Customer provide written comments on the system impact and facilities study report within ten (10) Business Days of receipt of the report, but in no event fewer than three (3) Business Days before the Results Meeting conducted to discuss the report, whichever is sooner, the CAISO will address the written comments in the Results Meeting. Should the Interconnection Customer provide comments at any later time (up to the time of the Results Meeting), then such comments shall be considered informal inquiries to which the CAISO will provide informal, informational responses at the Results Meeting, to the extent possible. The Interconnection Customer may submit, in writing, additional comments on the final system impact and facilities study report up to three (3) Business Days following the Results Meeting. The CAISO shall include any written comments received from the Interconnection Customer in the final system impact and facilities study report.

Based on any discussion at the Results Meeting and any comments received, the CAISO (in consultation with the applicable Participating TO(s)) will determine whether it is necessary to follow the final system impact and facilities study report with a revised study report or an addendum. The CAISO will issue any such revised report or addendum to the Interconnection Customer no later than fifteen (15) Business Days following the Results Meeting.

Upon request, the CAISO shall provide the Interconnection Customer all supporting documentation, workpapers, and relevant pre-Interconnection Request and post-Interconnection Request power flow, short circuit, and stability databases for the final system impact or facilities study, subject to confidentiality arrangements consistent with Section 15.1.

**4.4.5** For Interconnection Requests under the Independent Study Process, the postings of Interconnection Financial Security described in Section 11.3 will be based on the cost responsibility for Network Upgrades, and Participating TO's Interconnection Facilities set forth in the system impact and facilities study.

### 4.5 Intentionally left blank.

### 4.6 Deliverability Assessments

Interconnection Customers under the Independent Study Process that request Partial Capacity, Full Capacity Deliverability Status, or Off-Peak Deliverability Status will be deemed to have selected Option (A) under Section 7.2 and will have Deliverability Assessments performed as part of the next scheduled Phase I and Phase II Interconnection Studies for the Queue Cluster study performed for the next Queue Cluster Window that opens after the CAISO received the request. If the Deliverability Assessment identifies any Network Upgrades that are triggered by the Interconnection Request, the Interconnection Customer will be responsible to pay its proportionate share of the costs of those Upgrades, pursuant to Sections 6, 7, and 8, and for posting Interconnection Financial Security pursuant to the rules for Interconnection Customers in Queue Clusters pursuant to Section 11. If the Generating Facility (or increase in capacity of an existing Generating Facility) achieves its Commercial Operation Date before the Deliverability Assessment is completed or before any necessary Delivery Network Upgrades are in service, the CAISO will determine whether Interim Deliverability is available, and will award it to the Generating Facility. The CAISO will make this determination as soon as practical, but no later than the calendar month before the Generating Facility or capacity increase achieves its Commercial Operation Date. The Generating Facility will maintain any Interim Deliverability until (1) the Interconnection Customer to which that Deliverability was originally allocated achieves its Commercial Operation Date; or (2) the CAISO completes the next scheduled Deliverability Assessment and the Generating Facility's Delivery Network Upgrades are complete, enabling Partial Capacity or Full Capacity Deliverability Status. If the CAISO determines Interim Deliverability is not available, the Generating Facility or capacity increase will be Energy Only

until the CAISO completes the next scheduled Deliverability Assessment and the Generating Facility's Delivery Network Upgrades are complete. This Section shall not apply to Interconnection Customers requesting behind-the-meter capacity expansion under Section 4.2.1.2. Separate rules regarding the Deliverability Status of such requests are set forth in that Section.

### 4.7 Extensions of Commercial Operation Date

Extensions of the Commercial Operation Date for Interconnection Requests under the Independent Study Process will not be granted except for circumstances beyond the control of the Interconnection Customer.

### 4.8 Generator Interconnection Agreement

An Interconnection Customer in the Independent Study Process that requests Off-Peak Deliverability Status, Partial Capacity or Full Capacity Deliverability Status must still negotiate and execute a GIA reflecting Off-Peak Energy Only and Energy-Only Deliverability Status pursuant to the requirements and timelines set forth in Section 13. Upon the completion of the Deliverability Assessments per Section 4.6, the Interconnection Customer's GIA will be amended as appropriate to reflect the results thereof.

## Section 5 Fast Track Process

### 5.1 Applicability and Initiation of Fast Track Process Request

Applicability to a proposed Generating Facility. An Interconnection Customer may request interconnection of a proposed Generating Facility to the CAISO Controlled Grid under the Fast Track Process if the Generating Facility is no larger than 5 MW and is requesting Energy-Only Deliverability Status and if the Interconnection Customer's proposed Generating Facility meets the codes, standards, and certification requirements of Appendices 9 and 10 of this GIDAP, or if the applicable Participating TO notifies the CAISO that it has reviewed the design for or tested the proposed Small Generating Facility and has determined that the proposed Generating Facility may interconnect consistent with Reliability Criteria and Good Utility Practice.

Applicability to an existing Generating Facility. If the Interconnection of an existing Generating Facility meets the qualifications for Interconnection under CAISO Tariff Section 25.1(d) or (e) but, at the same time, the Interconnection Customer also seeks to repower or reconfigure the existing Generating Facility in a manner that increases the gross generating capacity by not more than 5 MW, then the Interconnection Customer may request that the Fast Track Process be applied with respect to the repowering or reconfiguration of the existing Generating Facility that results in the incremental increase in MW.

Initiating the Fast Track Interconnection Request. To initiate an Interconnection Request under the Fast Track Process, and have the Interconnection Request considered for validation the Interconnection Customer must provide the CAISO with:

(i) a completed Interconnection Request as set forth in Appendix 1;

(ii) a non-refundable processing fee of $500; and

(iii) a demonstration of Site Exclusivity. For the Fast Track Process, such demonstration may include documentation reasonably demonstrating a right to locate the Generating Facility on real estate or real property improvements owned, leased, or otherwise legally held by another.

The CAISO shall review and validate the Fast Track Process Interconnection Request pursuant to Section 5.2.

In the event of a conflict between this Section 5 and another provision of this GIDAP, Section 5 shall govern.

## 5.2 Initial Review

Within thirty (30) Calendar Days after the CAISO notifies the Interconnection Customer that the Interconnection Request is deemed complete, valid, and ready to be studied, the applicable Participating TO shall perform an initial review using the screens set forth in Section 5.2.1 below, and shall notify the Interconnection Customer of the results in a report that provides the details of and data underlying the Participating TO's determinations under the screens.

### 5.2.1 Screens

**5.2.1.1** The proposed Generating Facility's Point of Interconnection must be on the CAISO Controlled Grid.

**5.2.1.2** For interconnection of a proposed Generating Facility to a radial transmission circuit on the CAISO controlled grid, the aggregated generation on the circuit, including the proposed Generating Facility, shall not exceed 15 percent of the line section annual peak load as most recently measured at the substation. For purposes of this Section 5.2.1.2, a line section shall be considered as that portion of a Participating TO's electric system connected to a customer bounded by automatic sectionalizing devices or the end of the transmission line.

This screen will not be required for a proposed interconnection of a Generating Facility to a radial transmission circuit with no load.

In cases where the circuit lacks the telemetry needed to provide the annual peak load measurement data, the CAISO shall use power flow cases from the latest completed Queue Cluster studies (either Phase I or Phase II) to perform this screen.

**5.2.1.3** For Generating Facilities requesting Off-Peak Deliverability Status, the CAISO can determine that the Generating Facility can receive Off-Peak Deliverability Status without participating in the Off-Peak Deliverability Assessment and without Off-Peak Network Upgrades.

**5.2.1.4** The proposed Generating Facility, in aggregate with other Generating Facilities on the transmission circuit, shall not contribute more than 10 percent to the transmission circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed point of change of ownership.

The CAISO shall use the short circuit study data from the latest completed Queue Cluster studies (either Phase I or Phase II) to test this screen.

**5.2.1.5** The proposed Generating Facility, in aggregate with other Generating Facilities on the transmission circuit, shall not cause any transmission protective devices and equipment (including, but not limited to, substation breakers, fuse cutouts, and line reclosers), or Interconnection Customer equipment on the system to exceed 87.5 percent of the short circuit interrupting capability; nor shall the interconnection be proposed for a circuit that already exceeds 87.5 percent of the short circuit interrupting capability.

The CAISO shall use the short circuit study data from the most recently completed Queue Cluster studies (either Phase I or Phase II) to test this screen.

**5.2.1.6** A Generating Facility will fail this initial review, but will be eligible for a supplemental review, if it proposes to interconnect in an area where there are known transient stability, voltage, or thermal limitations identified in the most recently completed Queue Cluster studies or transmission planning process.

**5.2.1.7** No construction of facilities by a Participating TO on its own system shall be required to accommodate the proposed Generating Facility.

**5.2.2** If the proposed interconnection passes the screens, the Interconnection Request shall be approved. Within fifteen (15) Business Days thereafter, the Participating TO will provide the Interconnection Customer with a Small Generator Interconnection Agreement for execution.

**5.2.3** If the proposed interconnection fails the screens, but the CAISO and Participating TO determine that the Generating Facility may nevertheless be interconnected consistent with safety, reliability, and power quality standards under these procedures, the Participating TO shall, within fifteen (15) Business Days, provide the Interconnection Customer with a Small Generator Interconnection Agreement for execution

**5.2.4** If the proposed interconnection fails the screens and the CAISO and Participating TO do not or cannot determine from the initial review that the Generating Facility may nevertheless be interconnected consistent with safety, reliability, and power qualify standards unless the Interconnection Customer is willing to consider minor modifications or further study, the Participating TO shall provide the Interconnection Customer with the opportunity to attend a customer options meeting as described in Section 5.4.

## 5.3 [Not Used]

## 5.4 Customer Options Meeting

If the CAISO and Participating TO determine the Interconnection Request cannot be approved without (1) minor modifications at minimal cost; (2) a supplemental study or other additional studies or actions; or (3) incurring significant cost to address safety, reliability, or power quality problems, the CAISO and Participating TO shall notify the Interconnection Customer within five (5) Business Days of that determination and provide copies of all data and analyses underlying their conclusion. Within ten (10) Business Days of the CAISO and Participating TO's determination, the CAISO and Participating TO shall offer to convene a customer options meeting with the CAISO and Participating TO to review possible Interconnection Customer facility modifications or the screen analysis and related results, to determine what further steps are needed to permit the Generating Facility to be connected safely and reliably. At the time of notification of the CAISO and Participating TO's determination, or at the customer options meeting, the CAISO and Participating TO shall:

**5.4.1** Offer to perform facility modifications or modifications to the Participating TO's electric system (*e.g.*, changing meters, fuses, relay settings) and provide a non-binding good faith estimate of the limited cost to make such modifications to the Participating TO's electric system. If the Interconnection Customer agrees to pay for the modifications to the Participating TO's electric system, the Participating TO will provide the Interconnection Customer with an executable interconnection agreement within ten (10) Business Days of the customer options meeting; or

**5.4.2** Offer to perform a supplemental review in accordance with Section 5.5 and provide a non-binding good faith estimate of the costs of such review; or

**5.4.3** Offer to include the Interconnection Request in either the next Queue Cluster Window or the Independent Study Process, subject to the eligibility criteria set forth in Section 4.1, and the provision of the study deposit set forth in Section 3.5. Within fifteen (15) Business Days of the customer options meeting the Interconnection Customer shall provide the CAISO, in writing, with its election on how to proceed with its Interconnection Request. If the Interconnection Customer does not make an election within this time period, the CAISO will deem the Interconnection Request withdrawn.

## 5.5 Supplemental Review

**5.5.1** To accept the offer of a supplemental review, the Interconnection Customer shall agree in writing and submit a deposit for the estimated costs of the supplemental review in the amount of the good faith estimate determined by the CAISO and Participating TO, both within fifteen (15) Business Days of the offer, or elect one of the options set forth in Section 5.4.3.

**5.5.2** The Interconnection Customer may specify the order in which the CAISO and Participating TO will complete the screens in Section 5.5.4.

**5.5.3** The Interconnection Customer shall be responsible for the CAISO and Participating TO's actual costs for conducting the supplemental review. The Interconnection Customer must pay any review costs that exceed the deposit within twenty (20) Business Days of receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced costs, the CAISO and Participating TO will return such excess, without interest, within twenty (20) Business Days of the invoice.

**5.5.4** Within thirty (30) Business Days following receipt of the deposit for a supplemental review, or some longer period agreed to by the Interconnection Customer, CAISO, and Participating TO, the CAISO and Participating TO shall (1) perform a supplemental review using the screens set forth below; (2) notify in writing the Interconnection Customer of the results; and (3) include with the notification copies of the analysis and data underlying the CAISO and Participating TO's determinations under the screens. Unless the Interconnection Customer provided instructions for how to respond to the failure of any of the supplemental review screens below at the time the Interconnection Customer accepted the offer of supplemental review, the CAISO and Participating TO shall notify the Interconnection Customer following the failure of any of the screens, or if they are unable to perform the screen in Section 5.5.4.1, within two (2) Business Days of making such determination to obtain the Interconnection Customer's permission to: (1) continue evaluating the proposed interconnection under this Section 5.5.4; (2) terminate the supplemental review and offer the Interconnection Customer the options set forth in Section 5.4.3; or (3) terminate the supplemental review upon withdrawal of the Interconnection Request by the Interconnection Customer.

In conducting these screens, the CAISO and Participating TO will use power flow or short circuit study data from the most recently completed Queue Cluster studies (either Phase I or Phase II).

**5.5.4.1** Minimum Load Screen: Where 12 months of line section minimum load data (including onsite load but not station service load served by the proposed Generating Facility) are available, can be calculated, can be estimated from existing data, or determined from a power flow model, the aggregate Generating Facility capacity on the line section is less than 100 percent of the minimum load for all line sections bounded by automatic sectionalizing devices upstream of the proposed Generating Facility. If minimum load data is not available, or cannot be calculated, estimated or determined, the CAISO and Participating TO shall include the reason(s) that they are unable to calculate, estimate or determine minimum load in their supplemental review results notification under Section

5.5.4.

**5.5.4.1.1** The type of generation used by the proposed Generating Facility will be taken into account when calculating, estimating, or determining circuit or line section minimum load relevant for the application of screen 5.5.4.1. Solar photovoltaic (PV) generation systems with no battery storage use daytime minimum load (i.e. 10 a.m. to 4 p.m. for fixed panel systems and 8 a.m. to 6 p.m. for PV systems utilizing tracking systems), while all other generation uses absolute minimum load.

**5.5.4.1.2** When this screen is being applied to a Generating Facility that serves some station service load, only the net injection into the Participating TO's electric system will be considered as part of the aggregate generation.

**5.5.4.1.3** The CAISO and Participating TO will not consider as part of the aggregate generation for purposes of this screen generating facility capacity known to be already reflected in the minimum load data.

**5.5.4.2** Voltage and Power Quality Screen: In aggregate with existing generation on the line section, the proposed Generating Facility shall not cause the violation of voltage standards, as set forth in the CAISO's Planning Standards, on any part of the CAISO Controlled Grid.

**5.5.4.3** Safety and Reliability Screen: The location of the proposed Generating Facility and the aggregate generation capacity on the line section do not create impacts to safety or reliability that cannot be adequately addressed without studying the Generating Facility in either the Queue Cluster or Independent Study processes. The CAISO and Participating TO shall give due consideration to the following and other factors in determining potential impacts to safety and reliability in applying this screen.

**5.5.4.3.1** Whether the line section has significant minimum loading levels dominated by a small number of customers (e.g., several large commercial customers).

**5.5.4.3.2** Whether the loading along the line section uniform or even.

**5.5.4.3.3** Whether the proposed Generating Facility is located in close proximity to the substation (i.e., less than 2.5 electrical circuit miles), and whether the line section from the substation to the Point of Interconnection is a Mainline rated for normal and emergency ampacity. For purposes of this screen, a Mainline is the three-phase backbone of a circuit and will typically constitute lines with wire sizes of 4/0 American wire gauge, 336.4 kcmil, 397.5 kcmil, 477 kcmil and 795 kcmil.

**5.5.4.3.4** Whether the proposed Generating Facility incorporates a time delay function to prevent reconnection of the generator to the system until system voltage and frequency are within normal limits for a prescribed time.

**5.5.4.3.5** Whether operational flexibility is reduced by the proposed Generating Facility, such that transfer of the line section(s) of the Generating Facility to a neighboring circuit/substation may trigger overloads or

voltage issues.

**5.5.4.3.6** Whether the proposed Generating Facility employs equipment or systems certified by a recognized standards organization to address technical issues such as, but not limited to, islanding, reverse power flow, or voltage quality.

**5.5.5** If the proposed interconnection passes the supplemental screens in Sections 5.5.4.1, 5.5.4.2, and 5.5.4.3 above, the Interconnection Request shall be approved and the Participating TO will provide the Interconnection Customer with an executable interconnection agreement within the timeframes established in Sections 5.5.5.1 and 5.5.5.2 below. If the proposed interconnection fails any of the supplemental review screens and the Interconnection Customer does not withdraw its Interconnection Request, it shall be treated in accordance with Section 5.5.5.3 below.

**5.5.5.1** If the proposed interconnection passes the supplemental screens in Sections 5.5.4.1, 5.5.4.2, and 5.5.4.3 above and does not require construction of facilities by the Participating TO on its own system, the interconnection agreement shall be provided within ten (10) Business Days after the notification of the supplemental review results.

**5.5.5.2** If interconnection facilities or minor modifications to the Participating TO's system are required for the proposed interconnection to pass the supplemental screens in Sections 5.5.4.1, 5.5.4.2, and 5.5.4.3 above, and the Interconnection Customer agrees to pay for the modifications to the Participating TO's electric system, the interconnection agreement, along with a non-binding good faith estimate for the interconnection facilities and/or minor modifications, shall be provided to the Interconnection Customer within fifteen (15) Business Days after receiving written notification of the supplemental review results.

**5.5.5.3** If the proposed interconnection would require more than interconnection facilities or minor modifications to the Participating TO's system to pass the supplemental screens in Sections 5.5.4.1, 5.5.4.2, and 5.5.4.3 above, the CAISO and Participating TO shall notify the Interconnection Customer, at the same time they notify the Interconnection Customer with the supplemental review results, and offer the options set forth in Section 5.4.3 above. If the Interconnection Customer does not make an election within fifteen (15) Business Days, the CAISO will deem the Interconnection Request withdrawn.

## Section 6 Initial Activities and Phase I of the Interconnection Study Process for Queue Clusters

The provisions of this Section 6 shall apply to all Interconnection Requests except those processed under the Independent Study Process selecting Energy Only Deliverability Status, the Fast Track Process, or the 10 kW inverter process as set forth in Appendix 7.

### 6.1 Initial Activities Following the Close of the Cluster Application Window

#### 6.1.1 [Intentionally Omitted]

#### 6.1.2 Scoping Meeting

The CAISO shall establish a date agreeable to the Interconnection Customer and the applicable Participating TO(s) for the Scoping Meeting. All Scoping Meetings shall occur no later than June 30, unless otherwise mutually agreed upon by the Parties. The CAISO shall evaluate whether the Interconnection Request is at or near the boundary of an affected Participating TO(s) service territory or of any other Affected System(s) so as

to potentially affect such third parties, and, in such case, the CAISO shall invite the affected Participating TO(s), and/or Affected System Operator(s) in accordance with Section 3.7, to the Scoping Meeting by informing such third parties of the time and place of the scheduled Scoping Meeting as soon as practicable.

The purpose of the Scoping Meeting shall be to discuss reasonable Commercial Operation Dates and alternative interconnection options, to exchange information including any transmission data that would reasonably be expected to impact such interconnection options, to analyze such information and to determine the potential feasible Points of Interconnection and eliminate alternatives given resources and available information. The applicable Participating TO(s) and the CAISO will bring to the meeting, as reasonably necessary to accomplish its purpose, the following: (a) such already available technical data, including, but not limited to, (i) general facility loadings, (ii) general instability issues, (iii) general short circuit issues, (iv) general voltage issues, and (v) general reliability issues, and (b) general information regarding the number, location, and capacity of other Interconnection Requests in the Interconnection Study Cycle that may potentially form a Group Study with the Interconnection Customer's Interconnection Request.

The Interconnection Customer will bring to the Scoping Meeting, in addition to the technical data in Attachment A to Appendix 1, any system studies previously performed. The applicable Participating TO(s), the CAISO and the Interconnection Customer will also bring to the meeting personnel and other resources as may be reasonably required to accomplish the purpose of the meeting in the time allocated for the meeting. On the basis of the meeting, the Interconnection Customer shall designate its Point of Interconnection. The Point of Interconnection and any resultant site change must remain within the same study area as the Point of Interconnection submitted in the original Interconnection Request. The duration of the meeting shall be sufficient to accomplish its purpose.

The CAISO shall prepare minutes from the meeting, and provide the Interconnection Customer and the other attendees an opportunity to confirm the accuracy thereof, that will include, at a minimum, discussions among the applicable Participating TO(s) and the CAISO of the expected results and a good faith estimate of the costs for the Phase I Interconnection Study.

### 6.1.3 Grouping Interconnection Requests

At the CAISO's option, and in coordination with the applicable Participating TO(s), Interconnection Requests received during the Cluster Application Window for a particular year may be studied individually or in a Group Study for the purpose of conducting one or more of the analyses forming the Interconnection Studies. For each Interconnection Study within an Interconnection Study Cycle, the CAISO may develop one or more Group Studies. A Group Study will include, at the CAISO's sole judgment after coordination with the applicable Participating TO(s), Interconnection Requests that electrically affect one another with respect to the analysis being performed and the annual Transmission Plan, without regard to the nature of the underlying Interconnection Service. The CAISO may also, in its sole judgment after coordination with the applicable Participating TO(s), conduct an Interconnection Study for an Interconnection Request separately to the extent warranted by Good Utility Practice based upon the electrical remoteness of the proposed Generating Facility from other Generating Facilities with Interconnection Requests in the Cluster Application Window for a particular year.

An Interconnection Request's inclusion in a Group Study will not relieve the CAISO or Participating TO(s) from meeting the timelines for conducting the Phase I Interconnection Study provided in the GIDAP. Group Studies shall be conducted in such a manner to

ensure the efficient implementation of the annual CAISO Transmission Plan in light of the transmission system's capabilities at the time of each study.

**6.2. Scope and Purpose of Phase I Interconnection Study**

The Phase I Interconnection Study shall:

(i) evaluate the impact of all Interconnection Requests received during the Cluster Application Window for a particular year on the CAISO Controlled Grid;

(ii) preliminarily identify all LDNUs, LOPNUs, and RNUs needed to address the impacts on the CAISO Controlled Grid of the Interconnection Requests, as Assigned Network Upgrades or Conditionally Assigned Network Upgrades;

(iii) preliminarily identify for each Interconnection Request required Interconnection Facilities;

(iv) assess the Point of Interconnection selected by each Interconnection Customer and potential alternatives to evaluate potential efficiencies in overall transmission upgrades costs;

(v) establish the Current Cost Responsibility, Maximum Cost Responsibility, and Maximum Cost Exposure for each Interconnection Request, until the issuance of the Phase II Interconnection Study report;

(vi) provide a good faith estimate of the cost of Interconnection Facilities for each Interconnection Request;

(vii) provide a cost estimate of ADNUs and AOPNUs for each Generating Facility in a Queue Cluster Group Study;

(viii) identify controls required for each Interconnection Request where the Interconnection Customer requested Interconnection Service Capacity lower than the Generating Facility Capacity;

(ix) identify any Precursor Network Upgrades; and

(x) identify RNUs as GRNUs or IRNUs.

The Phase I Interconnection Study will consist of a short circuit analysis, a stability analysis to the extent the CAISO and applicable Participating TO(s) reasonably expect transient or voltage stability concerns, a power flow analysis, including off-peak analysis, an On-Peak Deliverability Assessment, and an Off-Peak Deliverability Assessment for the purpose of identifying LDNUs and LOPNUs and estimating the cost of ADNUs and AOPNUs, as applicable.

The Phase I Interconnection Study will state for each Group Study or Interconnection Request studied individually (i) the assumptions upon which it is based, (ii) the results of the analyses, and (iii) the requirements or potential impediments to providing the requested Interconnection Service to all Interconnection Requests in a Group Study or to the Interconnection Request studied individually.

The Phase I Interconnection Study will provide, without regard to the requested Commercial Operation Dates of the Interconnection Requests, a list of RNUs, LOPNUs, and LDNUs to the CAISO Controlled Grid that are preliminarily identified as Assigned Network Upgrades or Conditionally Assigned Network Upgrades required as a result of the Interconnection Requests in a Group Study or as a result of any Interconnection Request studied individually and Participating TO's Interconnection Facilities associated with each Interconnection Request, the estimated

costs of ADNUs and AOPNUs, if applicable, and an estimate of any other financial impacts (i.e., on Local Furnishing Bonds). For purposes of determining necessary Interconnection Facilities and Network Upgrades, the Phase I Interconnection Study will consider the level of Interconnection Service Capacity requested by the Interconnection Customer, unless otherwise required to study the full Generating Facility Capacity due to safety or reliability concerns.

## 6.3 Identification of and Cost Allocation for Network Upgrades

### 6.3.1 Reliability Network Upgrades (RNUs).

The CAISO, in coordination with the applicable Participating TO(s), will perform short circuit and stability analyses for each Interconnection Request either individually or as part of a Group Study to preliminarily identify the RNUs needed to interconnect the Generating Facilities to the CAISO Controlled Grid. The CAISO, in coordination with the applicable Participating TO(s), shall also perform power flow analyses, under a variety of system conditions, for each Interconnection Request either individually or as part of a Group Study to identify Reliability Criteria violations, including applicable thermal overloads, that must be mitigated by RNUs.

The cost of all RNUs identified in the Phase I Interconnection Study shall be estimated in accordance with Section 6.4. The estimated costs of short circuit related GRNUs identified through a Group Study shall be assigned to all Interconnection Requests in that Group Study pro rata on the basis of the short circuit duty contribution of each Generating Facility. The estimated costs of all other GRNUs identified through a Group Study shall be assigned to all Interconnection Requests in that Group Study pro rata on the basis of the maximum megawatt electrical output of each proposed new Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request. The estimated costs of RNUs identified as a result of an Interconnection Request studied separately shall be assigned solely to that Interconnection Request.

Pursuant to Section 8.3, Interconnection Customers assigned IRNUs in their Phase I Interconnection Study will be allocated the full cost of the IRNUs in their Maximum Cost Responsibility. The Maximum Cost Exposure will include the full costs of conditionally assigned IRNUs. The Current Cost Responsibility will include their allocated share of IRNU costs as determined for RNUs in Section 8.3.

### 6.3.2 Delivery Network Upgrades.

#### 6.3.2.1 The On-Peak Deliverability Assessment.

The CAISO, in coordination with the applicable Participating TO(s), shall perform On-Peak Deliverability Assessments for Interconnection Customers selecting Full Capacity or Partial Capacity Deliverability Status in their Interconnection Requests. Interconnection Customers may request Full or Partial Capacity Deliverability Status regardless of their requested Off-Peak Deliverability Status. The On-Peak Deliverability Assessment shall determine the Interconnection Customer's Generating Facility's ability to deliver its Energy to the CAISO Controlled Grid under peak load conditions, and identify preliminary Delivery Network Upgrades required to provide the Generating Facility with Full Capacity or Partial Capacity Deliverability Status. The Deliverability Assessment will consist of two rounds, the first of which will identify any transmission constraints that limit the Deliverability of the Generating Facilities in the Group Study and will identify LDNUs to relieve the local constraints, and second of which will determine ADNUs to relieve the area constraints. The On-Peak Deliverability

Assessment does not convey any right to deliver electricity to any specific customer or Delivery Point, nor guarantee any level of deliverability, or transmission capacity, or avoided curtailment.

**6.3.2.1.1 Local Delivery Network Upgrades**

The On-Peak Deliverability Assessment will be used to establish the Maximum Cost Responsibility and Maximum Cost Exposure for LDNUs for each Interconnection Customer selecting Full Capacity or Partial Capacity Deliverability Status. Deliverability of a new Generating Facility will be assessed on the same basis as all existing resources interconnected to the CAISO Controlled Grid.

The methodology for the On-Peak Deliverability Assessment will be published on the CAISO Website or, when effective, included in a CAISO Business Practice Manual. The On-Peak Deliverability Assessment does not convey any right to deliver electricity to any specific customer or Delivery Point.

The cost of LDNUs identified in the On-Peak Deliverability Assessment as part of a Phase I Interconnection Study shall be estimated in accordance with Section 6.4. The estimated costs of Delivery Network Upgrades identified in the On-Peak Deliverability Assessment shall be assigned to all Interconnection Requests selecting Full Capacity or Partial Capacity Deliverability Status based on the flow impact of each such Generating Facility on the Delivery Network Upgrades as determined by the Generation distribution factor methodology set forth in the On-Peak Deliverability Assessment methodology.

**6.3.2.1.2 Area Delivery Network Upgrades**

The On-Peak Deliverability Assessment will be used in the Phase I Interconnection Studies to identify those facilities necessary to provide the incremental Deliverability between the level of TP Deliverability and such additional amount of Deliverability as is necessary for the MW capacity amount of generation targeted in the Phase I Interconnection Studies. Based on such facility cost estimates, the CAISO will calculate a rate for ADNU costs equal to the facility cost estimate divided by the additional amount of Deliverability targeted in the study. The Phase I Interconnection Studies shall provide a cost estimate for each Interconnection Customer which equals the rate multiplied by the requested deliverable MW capacity of the Generating Facility in the Interconnection Request.

**6.3.2.1.3 [Intentionally Omitted]**

**6.3.2.2 Off-Peak Deliverability Assessment.**

The CAISO, in coordination with the applicable Participating TO(s), shall perform an Off-Peak Deliverability Assessment for Interconnection Customers selecting Off-Peak Deliverability Status. The Off-Peak Deliverability Assessment will identify transmission upgrades in addition to those Delivery Network Upgrades identified in the On-Peak Deliverability Assessment, if any, for a Group Study or

individual Phase I Interconnection Study that includes one or more Location Constrained Resource Interconnection Generators (LCRIG), where the fuel source or source of energy for the LCRIG substantially occurs during off-peak conditions. Interconnection Customers that (i) are not LCRIGs whose fuel source or source of energy substantially occurs off-peak, and (ii) have Full or Partial Capacity Deliverability Status, will receive Off-Peak Deliverability Status without triggering Off-Peak Network Upgrades. Energy Only Interconnection Customers that are not LCRIGs whose fuel source or source of energy substantially occurs off-peak will be Off-Peak Energy Only. LCRIGs whose fuel source or source of energy substantially occurs off-peak will receive Off-Peak Deliverability Status based upon the Off-Peak Deliverability Assessment, regardless of their On-Peak Deliverability Status.

The transmission upgrades identified under this Section shall comprise those needed for the expected output of each proposed new LCRIG or the amount of megawatt increase in the generating capacity of each existing LCRIG as listed by the Interconnection Customer in its Interconnection Request, whether studied individually or as a Group Study, to be deliverable to the aggregate of Load on the CAISO Controlled Grid under the Generation dispatch conditions studied without excessive curtailment. The methodology for the Off-Peak Deliverability Assessment will be published on the CAISO Website or, if applicable, included in a CAISO Business Practice Manual.

The CAISO will perform the Off-Peak Deliverability Assessment to identify Off-Peak Network Upgrades required for Generating Facilities to achieve Off-Peak Deliverability Status, and any such upgrades identified in the Off-Peak Deliverability Assessment as part of the Phase I Interconnection Study shall be estimated in accordance with Section 6.4. The Off-Peak Deliverability Assessment does not convey any right to deliver electricity to any specific customer or Delivery Point, nor guarantee any level of deliverability, or transmission capacity, or avoided curtailment.

The estimated costs of Local Off-Peak Network Upgrades identified in the Off-Peak Deliverability Assessment will be assigned or conditionally assigned to Interconnection Requests selecting Off-Peak Deliverability Status based on the flow impact of each such Generating Facility on the Off-Peak Network Upgrades as determined by the Generation distribution factor methodology set forth in the Off-Peak Deliverability Assessment methodology.

The estimated costs of Area Off-Peak Network Upgrades are for information only and not assigned to any Interconnection Requests.

#### 6.3.2.3 Transition to Off-Peak Deliverability Status

Active CAISO Interconnection Requests received before March 3, 2020 for Energy Only Generating Facilities that would be eligible to receive Off-Peak Deliverability Status pursuant to this Section 6.3.2 will have a one-time opportunity to request Off-Peak Deliverability Status. Notwithstanding any provision of this GIDAP, if such Interconnection Customers request Off-Peak Deliverability Status, the CAISO will study those requests in the next Interconnection Study, and assign any required Local Off-Peak Network Upgrades to them pursuant to this Section 6.3.2, and their Interconnection Studies will be amended to include the assigned costs for those Network Upgrades. Such Interconnection Customers' GIAs, Current Cost Responsibilities, Maximum Cost Responsibilities, and Maximum Cost Exposures also will be amended to reflect the additional costs of assigned Local Off-Peak

Network Upgrades.

All CAISO Interconnection Requests for Full Capacity Deliverability Status or Partial Capacity Deliverability Status received before March 3, 2020 will automatically receive Off-Peak Deliverability Status. All CAISO Interconnection Requests received before March 3, 2020 for Generating Facilities that are not Location Constrained Resource Interconnection Generators, regardless of Deliverability Status, will automatically receive Off-Peak Deliverability Status.

### 6.4 Use of Per Unit Costs to Estimate Network Upgrade and PTO Interconnection Facilities Costs

Each Participating TO, under the direction of the CAISO, shall publish per unit costs for facilities generally required to interconnect Generation to their respective systems.

These per unit costs shall reflect the anticipated cost of procuring and installing such facilities during the current Interconnection Study Cycle, and may vary among Participating TOs and within a Participating TO Service Territory based on geographic and other cost input differences, and should include an annual adjustment for the following ten (10) years to account for the anticipated timing of procurement to accommodate a potential range of Commercial Operation Dates of Interconnection Requests in the Interconnection Study Cycle. The per unit costs will be used to develop the cost of Network Upgrades and Participating TO's Interconnection Facilities. Deviations from a Participating TO's benchmark per unit costs will be permitted if a reasonable explanation for the deviation is provided and there is no undue discrimination.

Prior to adoption and publication of final per unit costs for use in the Interconnection Study Cycle, the CAISO shall publish to the CAISO Website draft per unit costs, including non-confidential information regarding the bases therefore, hold a stakeholder meeting to address the draft per unit costs, and permit stakeholders to provide comments on the draft per unit costs. A schedule for the release and review of per unit costs is set forth in Appendix 5.

### 6.5 Assigned and Contingent Facilities

The CAISO and Participating TO will provide, upon request of the Interconnection Customer, its estimated Interconnection Facility and/or Network Upgrade costs and estimated in-service completion time of each Assigned Network Upgrade, Conditionally Assigned Network Upgrade, or Precursor Network Upgrade when this information is readily available and not commercially sensitive.

### 6.6 Phase I Interconnection Study Procedures

The CAISO shall coordinate the Phase I Interconnection Study with applicable Participating TO(s) pursuant to Section 3.2 and any Affected System that is affected by the Interconnection Request pursuant to Section 3.7. Existing studies shall be used to the extent practicable when conducting the Phase I Interconnection Study. The CAISO will coordinate Base Case development with the applicable Participating TOs to ensure the Base Cases are accurately developed. The CAISO shall use Reasonable Efforts to complete and issue to Interconnection Customers the Phase I Interconnection Study report within two hundred (200) days after the commencement of the Phase I Interconnection Study for Queue Cluster 5 and within one hundred seventy (170) days after the annual commencement of the Phase I Interconnection Study beginning with Queue Cluster 6; however, each individual study or Group Studies may be completed prior to this maximum time where practicable based on factors, including, but not limited to, the number of Interconnection Requests in the Cluster Application Window, study complexity, and reasonable availability of subcontractors as provided under Section 15.2. The CAISO will share applicable study results with the applicable Participating TO(s) for review and comment and will incorporate comments into the study report. The CAISO will issue a final Phase I Interconnection Study

report to the Interconnection Customer. At the time of completion of the Phase I Interconnection Study, the CAISO may, at the Interconnection Customer's request, determine whether the provisions of Section 8.6 apply.

At any time the CAISO determines that it will not meet the required time frame for completing the Phase I Interconnection Study due to the large number of Interconnection Requests in the associated Cluster Application Window, study complexity, or unavailability of subcontractors on a reasonable basis to perform the study in the required time frame, the CAISO shall notify the Interconnection Customers as to the schedule status of the Phase I Interconnection Study and provide an estimated completion date with an explanation of the reasons why additional time is required.

Upon request, the CAISO shall provide the Interconnection Customer all supporting documentation, workpapers and relevant pre-Interconnection Request and post-Interconnection Request power flow, short circuit and stability databases for the Phase I Interconnection Study, subject to confidentiality arrangements consistent with Section 15.1.

## 6.7 Phase I Interconnection Study Results Meeting

Within thirty (30) calendar days of issuing the Phase I Interconnection Study report to the Interconnection Customer, the applicable Participating TO(s), the CAISO and the Interconnection Customer shall hold a Results Meeting to discuss the results of the Phase I Interconnection Study, including assigned cost responsibility. The CAISO shall prepare the minutes from the meetings, and provide the Interconnection Customer and the other attendees an opportunity to confirm the accuracy thereof.

Should the Interconnection Customer provide written comments on the final Phase I Interconnection Study report within ten (10) Business Days of receipt of the report, but in no event less than three (3) Business Days before the Results Meeting conducted to discuss the report, whichever is sooner, the CAISO will address the written comments in the Phase I Interconnection Study Results Meeting. Should the Interconnection Customer provide comments at any later time (up to the time of the Results Meeting), then such comments shall be considered informal inquiries to which the CAISO will provide informal, informational responses at the Results Meeting, to the extent possible.

The Interconnection Customer may submit, in writing, additional comments on the final Phase I Interconnection Study report up to (3) Business Days following the Results Meeting. Based on any discussion at the Results Meeting and any comments received, the CAISO (in consultation with the applicable Participating TO(s)) will determine, in accordance with Section 6.8, whether it is necessary to follow the final Phase I Interconnection Study report with a revised study report or an addendum. The CAISO will issue any such revised report or addendum to the Interconnection Customer no later than fifteen (15) Business Days following the Results Meeting.

### 6.7.1 Commercial Operation Date.

At the Results Meeting, the Interconnection Customer shall provide a schedule outlining key milestones including environmental survey start date, expected environmental permitting submittal date, expected procurement date of project equipment, back-feed date for project construction, and expected project construction date. This will assist the parties in determining if Commercial Operation Dates are reasonable. If major Interconnection Customer's Interconnection Facilities for the Generating Facility have been identified in the Phase I Interconnection Study, such as telecommunications equipment to support a possible Remedial Action Scheme, distribution feeders to support back feed, new substation, and/or expanded substation work, permitting and material procurement lead times may result in the need to alter the proposed Commercial Operation Date. The Parties may agree to a new Commercial Operation Date. In

addition, where an Interconnection Customer intends to establish Commercial Operation separately for different Electric Generating Units or project phases at its Generating Facility, it may only do so in accordance with an implementation plan agreed to in advance by the CAISO and Participating TO, which agreement shall not be unreasonably withheld. Where the parties cannot agree, the Commercial Operation Date determined reasonable by the CAISO, in coordination with the applicable Participating TO(s), will be used for the Phase II Interconnection Study where the changed Commercial Operation Date is needed to accommodate the anticipated completion, assuming Reasonable Efforts by the applicable Participating TO(s), of necessary Reliability Network Upgrades and/or Participating TO's Interconnection Facilities, pending the outcome of any relief sought by the Interconnection Customer under Section 15.5. The Interconnection Customer must notify the CAISO within five (5) Business Days following the Results Meeting that it is initiating dispute procedures under Section 15.5.

**6.7.2 Modifications.**

**6.7.2.1** At any time during the course of the Interconnection Studies, the Interconnection Customer, the applicable Participating TO(s), or the CAISO may identify changes to the planned interconnection that may improve the costs and benefits (including reliability) of the interconnection, and the ability of the proposed change to accommodate the Interconnection Request. To the extent the identified changes are acceptable to the applicable Participating TO(s), the CAISO, and Interconnection Customer, such acceptance not to be unreasonably withheld, the CAISO shall modify the Point of Interconnection and/or configuration in accordance with such changes without altering the Interconnection Request's eligibility for participating in Interconnection Studies.

**6.7.2.2** At the Phase I Interconnection Study Results Meeting, the Interconnection Customer should be prepared to discuss any desired modifications to the Interconnection Request. After the issuance of the final Phase I Interconnection Study, but no later than ten (10) Business Days following the Phase I Interconnection Study Results Meeting, the Interconnection Customer shall submit to the CAISO, in writing, modifications to any information provided in the Interconnection Request. The CAISO will forward the Interconnection Customer's modification to the applicable Participating TO(s) within one (1) Business Day of receipt.

Modifications permitted under this Section shall include specifically:

(a) a decrease in the electrical output (MW) of the proposed project; through either (1) a decrease in Generating Facility Capacity or (2) a decrease in Interconnection Service Capacity (consistent with the process described in Section 3.1) accomplished by CAISO-approved limiting equipment;

(b) modifying the technical parameters associated with the Generating Facility technology or the Generating Facility step-up transformer impedance characteristics;

(c) modifying the interconnection configuration;

(d) modifying the In-Service Date, Initial Synchronization Date, Trial Operation Date, and/or Commercial Operation Date that meets the criteria set forth in Section 3.5.1.4 and is acceptable to the applicable Participating TO(s) and the CAISO, such acceptance not to be unreasonably withheld;

(e) change in Point of Interconnection as set forth in Section 6.7.2.1;

(f) change in Deliverability Status to Energy Only Deliverability Status, Partial Capacity Deliverability Status, or a lower fraction of Partial Capacity Deliverability Status;

(g) Permissible Technological Advancements consistent with Section 6.7.2.4; and

(h) change from Off-Peak Deliverability Status to Off-Peak Energy Only.

For any modification other than these, the Interconnection Customer must first request that the CAISO evaluate whether such modification is a Material Modification. In response to the Interconnection Customer's request, the CAISO, in coordination with the affected Participating TO(s) and, if applicable, any Affected System Operator, shall evaluate the proposed modifications prior to making them and the CAISO shall inform the Interconnection Customer in writing of whether the modifications would constitute a Material Modification. The CAISO may engage the services of the applicable Participating TO to assess the modification. Costs incurred by the Participating TO and CAISO (if any) shall be borne by the party making the request under Section 6.7.2, and such costs shall be included in any CAISO invoice for modification assessment activities. Any change to the Point of Interconnection, except for that specified by the CAISO in an Interconnection Study or otherwise allowed under this Section, shall constitute a Material Modification. The Interconnection Customer may then withdraw the proposed modification or proceed with a new Interconnection Request for such modification.

The Interconnection Customer shall remain eligible for the Phase II Interconnection Study if the modifications are in accordance with this Section.

If any Interconnection Customer requested modification after the Phase II Interconnection Study report would change the scope, schedule, or cost of the Interconnection Facilities or Network Upgrades, the CAISO will issue a report to the Interconnection Customer. Potential adjustments to the Maximum Cost Responsibility or Maximum Cost Exposure for Network Upgrades for the Interconnection Customer will be determined in accordance with Section 7.4.3.

**6.7.2.3** The Interconnection Customer shall provide the CAISO a $30,000 deposit for the modification assessment at the time the request is submitted. Except as provided below, any modification assessment will be concluded, and a response provided to the Interconnection Customer in writing, within sixty (60) calendar days from the date the CAISO receives all of the following: the Interconnection Customer's written notice to modify the project, technical data required to assess the request and payment of the $30,000 deposit. If the modification request results in a change to the Interconnection Facilities or Network Upgrades the modification assessment could take up to one hundred twenty (120) total calendar days. If the modification assessment cannot be completed within that time period, the CAISO shall notify the Interconnection Customer and provide an estimated completion date with an explanation of the reasons why additional time is required.

The Interconnection Customer will be responsible for the actual costs incurred by the CAISO and applicable Participating TO(s) in conducting the modification assessment. If the actual costs of the modification assessment are less than the deposit provided by the Interconnection Customer, the Interconnection Customer

will be refunded the balance. If the actual costs of the modification assessment are greater than the deposit provided by the Interconnection Customer, the Interconnection Customer shall pay the balance within 30 days of being invoiced. The CAISO shall coordinate the modification request with the Participating TO(s). The Participating TO(s) shall invoice the CAISO for any assessment work within seventy-five (75) calendar days of completion of the assessment, and, within thirty (30) days thereafter, the CAISO shall issue an invoice or refund to the Interconnection Customer, as applicable, based upon such submitted Participating TO invoices and the CAISO's own costs for the assessment.

The CAISO will publish cost data regarding modification assessments in accordance with the terms set forth in a Business Practice Manual.

Notwithstanding any other provision, all refunds pursuant to this Appendix DD will be processed in accordance with the CAISO's generally accepted accounting practices, including monthly batched deposit refund disbursements. Any CAISO deadline will be tolled to the extent the Interconnection Customer has not provided the CAISO with the appropriate documents to facilitate the Interconnection Customer's refund, or if the Interconnection Customer has any outstanding invoice balance due to the CAISO on another project owned by the same Interconnection Customer.

**6.7.2.4** Interconnection Customers may request Permissible Technological Advancements. Permissible Technological Advancements may include, for example, removing equipment; aligning the Commercial Operation Date with an executed power purchase agreement; adding less than 5 MW of energy storage once without increasing the net output at the Point of Interconnection; and other changes that have little or no potential to affect other Interconnection Customers or Affected Systems, require a new Interconnection Request, or otherwise require a re-study or evaluation. The CAISO will update its Business Practice Manual to list any additional Permissible Technological Advancement approved but not specifically enumerated here when identified. The Interconnection Customer's written request to evaluate technological advancements must include the technical data required to assess the request.

For all Permissible Technological Advancement requests not expressly enumerated in this Section or the Business Practice Manual, the CAISO and Participating TO will determine whether such change would constitute a Material Modification. Such evaluation will include an analysis of the short circuit capability limits, steady-state thermal and voltage limits, or dynamic system stability, and impact on other Interconnection Customers. The CAISO will determine whether a Permissible Technological Advancement request is a Material Modification within thirty (30) calendar days of receipt of the request. Interconnection Customers requesting Permissible Technological Advancements must pay a non-refundable fee of $2,500.

**6.7.2.5** Notwithstanding any other provisions in this GIDAP or the Interconnection Customer's GIA, the Interconnection Customer may not modify its fuel type, including through the addition or replacement of Generating Units, by more than the greater of five percent (5%) of its capacity or 10 MW (but by no more than twenty-five percent (25%) of its capacity), where:

(a) the Interconnection Customer has exceeded seven (7) years from the date the CAISO received its Interconnection Request without achieving its Commercial Operation Date;

(b) the Interconnection Customer's current Commercial Operation Date exceeds seven (7) years from the date the CAISO received its Interconnection Request; or

(c) the change in fuel type will require the Interconnection Customer's Commercial Operation Date to exceed seven (7) years from the date the CAISO received its Interconnection Request.

The CAISO will not consider the addition of energy storage; changes to the type, number, or manufacturer of inverters; or insubstantial changes to the Generating Facility as fuel-type modifications. Interconnection Customers may request such modifications pursuant to this GIDAP.

**6.7.2.6** In addition to the options provided in this GIDAP, an Interconnection Customer may convert to Energy Only, Partial Capacity Deliverability Status, or a lower fraction of Partial Capacity Deliverability Status after the completion of its Phase II Interconnection Study. This conversion will become effective through the reassessment process described in Section 7.4. Except (i) as provided in Section 8.9.3.2 (ii) due to not receiving the requested TP Deliverability allocation, or (iii) due to declining a TP Deliverability allocation, Interconnection Customers that become Energy Only after their Phase II Interconnection Study may not reduce their cost responsibility or Interconnection Financial Security for any assigned Delivery Network Upgrades as a result of converting to Energy Only unless the CAISO and Participating TO(s) determine that the Interconnection Customer's assigned Delivery Network Upgrade(s) is no longer needed for current Interconnection Customers.

**6.7.2.7** Interconnection Customers may request to downsize their Interconnection Service Capacity pursuant to Section 6.7.2.3. Interconnection Customers with Network Upgrades requesting to downsize will not see the impacts to their Network Upgrades or cost responsibility until the CAISO publishes the reassessment results that include the downsized capacity pursuant to Section 7.4 unless the CAISO can determine the impacts prior to the reassessment. Interconnection Customers with Network Upgrades must submit downsizing requests, including the $30,000 deposit, by November 30 to be included in the following annual reassessment. Once the CAISO publishes the reassessment results, the Participating TO will tender a draft amendment to the Interconnection Customer's Generator Interconnection Agreement to incorporate any required changes. If an Interconnection withdraws or is deemed withdrawn, any partial recovery of the Interconnection Financial Security for Network Upgrades under Sections 11.4.2.1 and 11.4.2.2 will be calculated based on the Generating Facility's most recent MW capacity prior to its downsizing request.

A downsizing generator will continue to be obligated to finance the costs of (1) Network Upgrades that its Generating Facility previously triggered, and (2) Network Upgrades that are alternatives to the previously triggered Network Upgrades, if such previously triggered Network Upgrades or alternative Network Upgrades are needed by Interconnection Customers in the same Queue Cluster or later-queued Interconnection Customers, up to the Maximum Cost Exposure of the downsizing generator as determined by the CAISO Tariff interconnection study procedures applicable to the downsizing generator. For determining any changes to a downsizing generator's Network Upgrade cost responsibilities as a result of a reassessment process conducted pursuant to Section 7.4, the CAISO will reallocate the costs of Network Upgrades that are still needed based on the downsizing generator's pre-downsizing share of the original cost allocation.

### 6.7.3 Re-calculation of Initial Financial Security Posting

The CAISO, in coordination with the applicable Participating TO(s), may determine, based on best engineering judgment, whether modifications, withdrawals, or system changes eliminate the need for any Network Upgrades identified in the Phase I Interconnection Study report. The CAISO and applicable Participating TO(s) will not conduct any re-studies in making this determination.

If the CAISO and applicable Participating TO(s) should determine that one or more Network Upgrades identified in the Phase I Interconnection Study are no longer needed, then, solely for purposes of calculating the amount of the Interconnection Customer's initial Financial Security Posting under Section 11.2, such Network Upgrade(s) will be considered to be removed from the plan of service described in the Interconnection Customer's Phase I Interconnection Study report and the cost estimates for such upgrades shall not be included in the calculation of Interconnection Financial Security in Section 11.2. The CAISO will inform in a timely manner any Interconnection Customers so affected, and provide the Interconnection Customers with written notice of the revised initial Interconnection Financial Security posting amounts. No determination under this Section shall affect either (i) the timing for the initial Interconnection Financial Security posting or (ii) the maximum value for the Interconnection Customer's total cost responsibility for Network Upgrades established by the Phase I Interconnection Study report.

### 6.7.4 Commercial Viability Criteria

The CAISO's agreement to modifications requested by the Interconnection Customer pursuant to Section 6.7.2.3 for a Generating Facility or Generating Unit with a Commercial Operation Date that has exceeded or will exceed seven (7) years from the date the Interconnection Request is received by the CAISO will be predicated upon the Interconnection Customer's ability to meet and maintain the following commercial viability criteria:

a) Providing proof of having, at a minimum, applied for the necessary governmental permits or authorizations, and that the permitting authority has deemed such documentation as data adequate for the authority to initiate its review process;

b) Providing proof of having an executed power purchase agreement. Power purchase agreements must have the point of interconnection, capacity, fuel type, technology, site location, and deliverability status in common with the Interconnection Customer and GIA;

c) Demonstrating Site Exclusivity for 100% of the property necessary to construct the facility through the Commercial Operation Date requested in the modification request. A Site Exclusivity Deposit does not satisfy this criterion;

d) Having an executed Generator Interconnection Agreement ("GIA"); and

e) Being in good standing with the GIA such that neither the Participating TO nor the CAISO has provided a Notice of Breach that has not been cured and the Interconnection Customer has not commenced sufficient curative actions.

Interconnection Customers that satisfied these commercial viability criteria before November 27, 2018 on the basis of balance-sheet or binding financing may continue to do so in their annual review. The CAISO's agreement to an extension of the proposed

Commercial Operation Date does not relieve the Interconnection Customer from compliance with this GIDAP or the GIA, including without limitation the criteria in Section 8.9.3 to retain TP Deliverability. The CAISO will not consider the addition of energy storage; changes to the type, number, or manufacturer of inverters; or insubstantial changes to the Generating Facility as modifications under this Section. Interconnection Customers may request such modifications pursuant to this GIDAP.

If an Interconnection Customer satisfies all the commercial viability criteria except criterion (b), the CAISO will postpone withdrawing the Generating Facility for one year from the day the Interconnection Customer submits the modification request, or eight years after the CAISO received the Interconnection Request, whichever occurs later. Interconnection Customers may exercise this provision only once. Interconnection Customers exercising this provision must continue to meet all other commercial viability criteria.

If an Interconnection Customer has declared Commercial Operation for a portion of a Generating Facility, or one or more Phases of a Phased Generating Facility, the CAISO will not withdraw the portion of the Generating Facility that is in service and operating in the CAISO markets. Instead, the portion of the Generating Facility that has not been developed will be withdrawn.

Where the Generating Facility has multiple Resource IDs for the Generating Facility, each Resource ID will have its own Deliverability Status independent from the Generating Facility. Any individual Resource ID may have Full Capacity Deliverability Status where the Generating Facility as a whole would have Partial Capacity Deliverability Status. If the Generating Facility downsizes to the amount in service and operating in the CAISO markets, it will be Full Capacity Deliverability Status.

Interconnection Customers in Queue Cluster 7 and beyond whose Phase II Interconnection Study reports require a timeline beyond the seven-year threshold are exempt from the commercial viability criteria in this section provided that they modify their Commercial Operation Dates within six (6) months of the CAISO's publishing the Phase II Interconnection Study report. This exemption is inapplicable to report addenda or revisions required by a request from an Interconnection Customer for any reason.

#### 6.7.4.1 Annual Review

For Interconnection Customers extending their Commercial Operation Date beyond the seven-year threshold pursuant to Section 6.7.4, the CAISO will perform an annual review of commercial viability. If any Interconnection Customer fails to maintain its level of commercial viability, the CAISO will deem them withdrawn pursuant to Section 3.8. Interconnection Customers will not be subject to annual review requirements in any year the Participating TO unilaterally extends their Commercial Operation Date, but will resume compliance the following year.

### 6.7.5 Alignment with Power Purchase Agreements

An Interconnection Customer with an executed GIA and an executed power purchase agreement may request to automatically extend the GIA Commercial Operation Date to align with its power purchase agreement for that Generating Facility, including any extension or amendment. Interconnection Customers requesting alignment must (1) provide a copy of the power purchase agreement, and (2) confirm the power purchase agreement's standing and details in the annual TP Deliverability affidavit process. Requests to align the Commercial Operation Date with power purchase agreements are

not exempt from the commercial viability criteria provisions in Section 6.7.4, where applicable.

## 6.8 Revisions and Addenda to Final Interconnection Study Reports

### 6.8.1 Substantial Revisions; Revised Study Report

Should the CAISO discover, through written comments submitted by an Interconnection Customer or otherwise, that a final Phase I or Phase II Interconnection Study Report (which can mean a final Phase I or Phase II Interconnection Study Report for cluster studies or a final system impact and facilities report for the Independent Study Process) contains a substantial revision, the CAISO will cause a revised final report to be issued to the Interconnection Customer.

A substantial revision shall mean a revision that results in one or more of the following:

(i) an increase of the Interconnection Customer's Current Cost Responsibility, Maximum Cost Responsibility, Maximum Cost Exposure, and Participating TO Interconnection Facilities by more than five (5) percent or one million dollars ($1,000,000), whichever is greater;

(ii) delay of the Commercial Operation Date, In-Service Date, or requested Deliverability Status by more than one year; or

(iii) termination of the Interconnection Customer's power purchase agreement by the counterparty.

The CAISO will include examples of how Interconnection Customers can demonstrate power purchase agreement terminations in the Business Practice Manual. The CAISO will confirm power purchase agreement terminations with the Interconnection Customer's counterparty.

A dispute over the plan of service by an Interconnection Customer shall not be considered a substantial revision unless the Interconnection Customer demonstrates that the plan of service was based on an invalid or erroneous study assumption that meets the criteria set forth above. Changes to Interconnection Studies resulting from Interconnection Customer requests, including without limitation, modifications, suspensions, or failures to meet GIA milestones, are not considered revisions.

### 6.8.2 Other Revisions; Addendum

If a revision in an Interconnection Study report (for either the cluster process or Independent Study Process) is not a substantial revision, the CAISO shall not issue a revised final Interconnection Study report, although the revision may result in an adjustment of the corresponding Interconnection Financial Security. Rather, the CAISO shall document such revision and make any appropriate correction by issuing an addendum to the final report.

The CAISO and applicable Participating TO shall also incorporate, as needed, any corrected information pertinent to the terms or conditions of the GIA in the draft GIA provided to an Interconnection Customer pursuant to Section 13.

### 6.8.3 Only Substantial Revisions Adjust Posting Dates

Any revision found after the second Interconnection Financial Security posting will not

increase the Interconnection Customer's Current Cost Responsibility, Maximum Cost Responsibility, or Maximum Cost Exposure.

### 6.8.4 Substantial Revisions Allowing Refunds

Notwithstanding Sections 3.5.1 and 11.4, after the Interconnection Customer has posted its Initial Interconnection Financial Security, it is eligible for a one-hundred percent (100%) refund of its remaining, unspent Interconnection Financial Security and all remaining, unspent Interconnection Study Deposit funds if:

(i) it receives a substantial revision; and

(ii) it withdraws its Interconnection Request within sixty (60) days of the publication of the revised Study Report or the termination of its power purchase agreement by the counterparty resulting from the revision, as applicable.

## Section 7 Activities in Preparation for Phase II

Within ten (10) Business Days following the Phase I Interconnection Study Results Meeting, the Interconnection Customer shall submit to the CAISO the completed form of Appendix B (Data Form to Be Provided by the Interconnection Customer Prior to Commencement of the Phase II Interconnection Study) to the Generator Interconnection Study Process Agreement. The CAISO and Participating TO will determine whether the Appendix B data is valid. Appendix B data will be deemed valid if it does not contain deficiencies that would prevent inclusion in the Phase II Interconnection Studies. Deficiencies include but are not limited to modeling errors, inaccurate data, and unusable files. The CAISO and Participating TO will notify the Interconnection Customer whether its Appendix B data is valid or contains deficiencies within ten (10) Business Days of the initial and any subsequent submission. Interconnection Customers must cure any deficiency within five (5) Business Days. All Appendices B must be deemed valid within seventy (70) days of the publication of the Phase I Interconnection Study to be included in the Phase II Interconnection Studies. Within such Appendix B, Interconnection Customers seeking Full or Partial Deliverability Capacity will provide the information in 7.2 below:

### 7.1 [Not Used]

### 7.2 Full/Partial Capacity Deliverability Options for Interconnection Customers

This section applies to Interconnection Requests for which the Generating Facility Deliverability Status is either Full Capacity or Partial Capacity.

Within such Appendix B, the Interconnection Customer must select one of two options with respect to its Generating Facility:
Option (A), which means that the Generating Facility requires TP Deliverability to be able to continue to Commercial Operation. If the Interconnection Customer selects Option (A), then the Interconnection Customer shall be required to make an initial posting of Interconnection Financial Security under Section 11.2 for the cost responsibility assigned to it in the Phase I Interconnection Study for RNUs, LOPNUs, and LDNUs; or,

Option (B), which means that the Interconnection Customer will assume cost responsibility for Delivery Network Upgrades (both ADNUs and LDNUs, to the extent applicable) without cash repayment under Section 14.2.1 to the extent that sufficient TP Deliverability is not allocated to the Generating Facility to provide its requested Deliverability Status. If the Interconnection Customer selects Option (B) then the Interconnection Customer shall be required to make an initial posting of Interconnection Financial Security under Section 11.2 for the cost responsibility assigned to it in the Phase I Interconnection Study for RNUs, LDNUs, LOPNUs, and ADNUs. To qualify to receive any allocation of TP Deliverability, Interconnection Customers selecting Option

(B) must still meet the minimum criteria identified in Section 8.9.2.

### 7.3 Postings and Cost Estimates for Network Upgrades

Notwithstanding the Interconnection Customer's Maximum Cost Responsibility and Maximum Cost Exposure, until such time as the Phase II Interconnection Study report is issued to the Interconnection Customer, the allocated costs for Assigned Network Upgrades for each Interconnection Customer for RNUs, LOPNUs, and LDNUs in the Phase I Interconnection Study report shall establish the value for

(i) each Interconnection Customer's Current Cost Responsibility; and

(ii) the initial posting of Interconnection Financial Security required from each Interconnection Customer under Section 11.2 for such Network Upgrades.

### 7.4 Reassessment Process

**7.4.1** The CAISO will perform a reassessment of the Phase I Interconnection Study base case prior to the beginning of the GIDAP Phase II Interconnection Studies. The reassessment will evaluate the impacts on those Network Upgrades identified in previous interconnection studies and assumed in the Phase I Interconnection Study of:

(a) Interconnection Request withdrawals occurring after the completion of the Phase II Interconnection Studies for the immediately preceding Queue Cluster;

(b) downsizing requests from Interconnection Customers pursuant to Section 6.7.2.3;

(c) the performance of earlier queued Interconnection Customers with executed GIAs with respect to required milestones and other obligations;

(d) changes in TP Deliverability allocations or Deliverability Status;

(e) the results of the TP Deliverability allocation from the prior Interconnection Study cycle; and,

(f) transmission additions and upgrades approved or removed in the most recent TPP cycle.

The reassessment will be used to develop the base case for the Phase II Interconnection Study

**7.4.2** Where, as a consequence of the reassessment, the CAISO determines that changes to the previously identified Network Upgrades in Queue Clusters earlier than the current Interconnection Study Cycle will cause changes to plans of service set out in executed GIAs, such changes will serve as a basis for amendments to GIAs.

**7.4.3** Effective with the effective date of the RIS, the CAISO will conduct the annual reassessment under the timelines set forth in the RIS. Any changes to plans of service in Queue Clusters earlier than the current Interconnection Study Cycle will also serve as the basis for potential adjustments to the Current Cost Responsibility, Maximum Cost Responsibility, and Maximum Cost Exposure, as applicable, for Network Upgrades for Interconnection Customers in such earlier Queue Clusters, as follows:

(i) An Interconnection Customer shall be eligible for an adjustment to its Maximum

Cost Responsibility for Network Upgrades if a reassessment undertaken pursuant to this Section 7.4 reduces its estimated cost responsibility for Network Upgrades by at least twenty (20) percent and $1 million, as compared to its current Maximum Cost Responsibility for Network Upgrades based on its Interconnection Studies or a previous reassessment.

The Maximum Cost Responsibility for an Interconnection Customer who meets this eligibility criterion will be the lesser of (a) its current Maximum Cost Responsibility and (b) 100 percent of the costs of all remaining Assigned Network Upgrades included in the Interconnection Customer's plan of service.

(ii) If an Interconnection Customer's Maximum Cost Responsibility for Network Upgrades is adjusted downward pursuant to (i) above, and a subsequent reassessment identifies a change on the CAISO's system that occurs after the completion of the Interconnection Customer's Interconnection Studies and requires additional or expanded Network Upgrades, resulting in an increase in the Interconnection Customer's estimated cost responsibility for Network Upgrades above the Maximum Cost Responsibility as adjusted based on the results of a prior reassessment, then the Interconnection Customer's Maximum Cost Responsibility for Network Upgrades will be the estimated cost responsibility determined in the subsequent reassessment, so long as this amount does not exceed the Maximum Cost Exposure established by the Interconnection Customer's Phase II Interconnection Study. In such cases, where the Current Cost Responsibility determined in the subsequent reassessment exceeds the Maximum Cost Responsibility as adjusted based on the results of a prior reassessment, the Interconnection Customer's Maximum Cost Responsibility for Network Upgrades shall not exceed the Maximum Cost Exposure established by its Interconnection Studies. For Interconnection Customers with complete Phase II Interconnection Studies, the CAISO will publish advisory, non-binding updates to those studies in the reassessment, and binding updates in the following Interconnection Facilities Study.

(iii) To the extent the CAISO determines that previously identified Conditionally Assigned Network Upgrades become Precursor Network Upgrades pursuant to Section 14.2.2, or are otherwise removed, the CAISO will adjust the Interconnection Customer's Maximum Cost Exposure, as applicable.

(iv) To the extent the CAISO determines that a Conditionally Assigned Network Upgrade becomes an Assigned Network Upgrade, the CAISO will adjust the Interconnection Customer's Current Cost Responsibility and Maximum Cost Responsibility, as applicable.

(v) The posted Interconnection Financial Security required of the Interconnection Customer for Network Upgrades shall be adjusted to correspond to any increase in the Interconnection Customer's Current Cost Responsibility any time after but no later than sixty (60) calendar days after issuance of a reassessment report. The CAISO will notify an Interconnection Customer that receives a downward adjustment to its Current Cost Responsibility pursuant to this Section, and the Interconnection Customer may choose to adjust its posted Interconnection Financial Security within sixty (60) calendar days of the issuance of the reassessment report.

**7.5 [Not Used]**

**7.6 Application of Non-Refundable Amounts**

In conjunction with each reassessment, the CAISO will calculate and disburse non-refundable interconnection study deposit and interconnection financial security amounts in accordance with the provisions of Appendix Y to the CAISO Tariff and this GIDAP as follows:

(a) Withdrawal Period

The CAISO shall calculate non-refundable interconnection study deposit and interconnection financial security amounts based on the period during which the interconnection customer withdrew its interconnection request or terminated its generator interconnection agreement. The first such withdrawal period shall be from January 1, 2013 through the last day that the CAISO is able to incorporate withdrawals into the 2015 annual reassessment. Subsequently, each withdrawal period shall be the approximate twelve-month period between the last day that the CAISO is able to incorporate withdrawals into an annual reassessment and the last day that the CAISO is able to incorporate withdrawals into the subsequent year's reassessment.

For each withdrawal period, the CAISO shall calculate and disburse available non-refundable interconnection study deposits and interconnection financial security in conjunction with the annual reassessment performed during the year that the withdrawal period ends.

(b) Calculation and Disbursement of Non-Refundable Interconnection Financial Security for Still-Needed Network Upgrades At or Above $100,000 Threshold

For each interconnection customer that withdrew its interconnection request or terminated its generator interconnection agreement, the CAISO shall calculate the proportion of the non-refundable Interconnection Financial Security that is attributable to Network Upgrades that the CAISO determines will still be needed by remaining Interconnection Customers. For each such still-needed Network Upgrade, the CAISO will divide the Interconnection Customer's Current Cost Responsibility for the Network Upgrade by the Interconnection Customer's total Current Cost Responsibility for all Network Upgrades and multiply this result by the Interconnection Customer's total amount of non-refundable Interconnection Financial Security.

If the amount of non-refundable security attributable to a still-needed Network Upgrade, for all Interconnection Customers that withdrew during the same withdrawal period, is equal to or greater than $100,000, then the portion of such amount held or received by the CAISO prior to the stage of the applicable annual reassessment in which the CAISO reallocates cost responsibility for remaining Network Upgrades shall: (a) be disbursed to the applicable Participating TO(s) as a contribution in aid of construction of the still-needed Network Upgrade, and (b) be reflected as a reduction in the cost of this Network Upgrade for purposes of reallocating the cost responsibility for this Network Upgrade. Any portions of such amounts that the CAISO receives after reallocating cost responsibility for remaining Network Upgrades during the applicable annual reassessment shall be disbursed by the CAISO in the same manner in a subsequent reassessment, based on the date of collection, unless the applicable Network Upgrade is no longer needed, in which case such amounts will be disbursed pursuant to Section 7.6(c).

If a Network Upgrade for which the CAISO disburses funds as a contribution in aid of construction under this Section 7.6(b) is determined, in a subsequent reassessment, to be no longer needed, such funds will be promptly returned to the CAISO by the applicable Participating TO and re-disbursed by the CAISO pursuant to Section 7.6(c).

(c) Calculation and Disbursement of Other Non-Refundable Security and Study Deposits

For each Interconnection Customer that withdrew its Interconnection Request or terminated its Generator Interconnection Agreement during a withdrawal period, any non-refundable Interconnection Study Deposits, as well as any non-refundable Interconnection Financial Security not disbursed pursuant to subsection (b) above, shall be applied to offset Regional Transmission Revenue Requirements, as recovered through the CAISO's Transmission Access Charge, and to offset Local Transmission Revenue Requirements. Any non-refundable Interconnection Financial Security and Interconnection Study Deposits relating to withdrawals or terminations that occurred prior to January 1, 2013 that are collected by the CAISO during a withdrawal period, as defined in Section 7.6(a), will also be disbursed in accordance with this provision.

This offset shall be performed by first allocating these non-refundable Interconnection Study Deposit and Interconnection Financial Security amounts to the following three categories in proportion to the Interconnection Customer's most recent Current Cost Responsibility, prior to withdrawal or termination, for Network Upgrades whose costs would be recovered through each of the following categories: (1) a Regional Transmission Revenue Requirement, (2) the Local Transmission Revenue Requirement of the Participating TO to which the interconnection customer had proposed to interconnect, and (3) the Local Transmission Revenue Requirement of any other Participating TO on whose system the interconnection customer was responsible for funding Network Upgrades recovered through a Local Transmission Revenue Requirement.

Each year, prior to the cutoff date for including annual regional TRBA adjustments in Regional Transmission Revenue Requirements, the CAISO will disburse to each Participating TO's Transmission Revenue Balancing Account: (a) a share of the total funds held or received by the CAISO from category (1) above in proportion to the ratio of each Participating TO's most recent Regional Transmission Revenue Requirement to the total of all Participating TOs' most recent Regional Transmission Revenue Requirements, and (b) all funds held or received by the CAISO in categories (2) and (3) applicable to that Participating TO.

(d) Disbursement of Funds by CAISO; Participating TO Responsibility for Collection

The CAISO shall disburse, in accordance with the rules set forth in this Section 7.6, only those non-refundable Interconnection Financial Security and Study Deposit amounts that it holds or has received. The applicable Participating TO shall have the exclusive obligation to administer the collection of any non-refundable financial security where the applicable Participating TO is a beneficiary. The applicable Participating TO has the responsibility to manage the financial security and to transmit to the CAISO the non-refundable amounts in cash or equivalent within 75 days of the CAISO's submission to the Participating TO of the financial security liquidation form. This deadline can be modified by mutual agreement of the CAISO and applicable Participating TO.

(e) The CAISO shall, upon receipt, deposit all non-refundable Interconnection Financial Security and Interconnection Study Deposit amounts in an interest-bearing account at a bank or financial institution designated by the CAISO. Any interest earned on such amounts, based on the actual rate of the account, shall be allocated and disbursed in the same manner as the principal, in accordance with the methodology set forth in this Section 7.6.

(f) Disbursement of Non-Refundable Site Exclusivity Deposits

The CAISO will first apply non-refundable portions of Site Exclusivity Deposits, including interest earned thereon, to offset the costs of the annual reassessment performed under Section 7.4 of this GIDAP. Any remaining non-refundable portions of Site Exclusivity

Deposits that exceed the costs of the annual reassessment will be disbursed pursuant to Section 7.6(c).

## Section 8 Phase II Interconnection Study and TP Deliverability Allocation Processes

The provisions of this Section 8 shall apply to all Interconnection Requests under this GIDAP except those processed under the Independent Study Process selecting Energy Only Deliverability Status, the Fast Track Process, or the 10 kW inverter process.

### 8.1 Scope of Phase II Interconnection Study

#### 8.1.1 Purpose of the Phase II Interconnection Study

The CAISO, in coordination with the applicable Participating TO(s), will conduct a Phase II Interconnection Study that will incorporate eligible Interconnection Requests from the previous Phase I Interconnection Study. The Phase II Interconnection Study shall:

(i) update, as necessary, analyses performed in the Phase I Interconnection Studies to account for the withdrawal of Interconnection Requests from the current Queue Cluster;

(ii) identify final GRNUs and IRNUs needed in order to achieve Commercial Operation status for the Generating Facilities and provide final cost estimates;

(iii) identify final LDNUs needed to interconnect those Generating Facilities selecting Full Capacity or Partial Capacity Deliverability Status and provide final cost estimates;

(iv) identify final ADNUs for Interconnection Customers selecting Option (B), as provided below and provide revised cost estimates;

(v) identify, for each Interconnection Request, the Participating TO's Interconnection Facilities for the final Point of Interconnection and provide a +/-20% cost estimate;

(vi) coordinate in-service timing requirements based on operational studies in order to facilitate achievement of the Commercial Operation Dates of the Generating Facilities;

(vii) update the Interconnection Customer's Current Cost Responsibility, Maximum Cost Responsibility, and Maximum Cost Exposure, as applicable;

(viii) provide updated Precursor Network Upgrades needed to achieve the Commercial Operation status and Deliverability Status for the Generating Facilities;

(ix) identify any potential control equipment for each Interconnection Request where the Interconnection Customer requested Interconnection Service Capacity lower than the Generating Facility Capacity; and

(x) identify LOPNUs needed for Generating Facilities selecting Off-Peak Deliverability Status, and provide final cost estimates.

The Phase II Interconnection Study report shall set forth the applicable cost estimates for Network Upgrades and Participating TOs Interconnection Facilities that shall be the basis for Interconnection Financial Security Postings under Section 11.3. Where the Maximum

Cost Responsibility is based upon the Phase I Interconnection Study (because it is lower under Section 10.1), the Phase II Interconnection Study report shall recite this fact.

To the extent the CAISO determines that previously identified Conditionally Assigned Network Upgrades become Precursor Network Upgrades pursuant to Section 14.2.2, or are otherwise removed, the CAISO will reduce the Interconnection Customer's Maximum Cost Exposure, as applicable. To the extent the CAISO determines that a Conditionally Assigned Network Upgrade becomes an Assigned Network Upgrade, the CAISO will adjust the Interconnection Customer's Current Cost Responsibility and Maximum Cost Responsibility.

### 8.1.2 Interim Energy-Only Interconnection until DNUs Completed

If it is determined that the Delivery Network Upgrades cannot be completed by the Interconnection Customer's identified Commercial Operation Date, the Interconnection Study will include interim mitigation measures necessary to allow the Generating Facility to interconnect as an energy-only resource until the Delivery Network Upgrades for the Generating Facility are completed and placed into service, unless interim partial capacity deliverability measures are developed pursuant to Section 8.1.4.

### 8.1.3 Cost Estimation Detail

With respect to the items detailed in 8.1.1, he Phase II Interconnection Study shall specify and estimate the cost of the equipment, engineering, procurement and construction work, including the financial impacts (i.e., on Local Furnishing Bonds), if any, and schedule for effecting remedial measures that address such financial impacts, needed on the CAISO Controlled Grid to implement the conclusions of the updated Phase II Interconnection Study technical analyses in accordance with Good Utility Practice to physically and electrically connect the Interconnection Customer's Interconnection Facilities to the CAISO Controlled Grid. The Phase II Interconnection Study shall also identify the electrical switching configuration of the connection equipment, including, without limitation: the transformer, switchgear, meters, and other station equipment; the nature and estimated cost of any Participating TO's Interconnection Facilities and Network Upgrades necessary to accomplish the interconnection; and an estimate of the time required to complete the construction and installation of such facilities.

### 8.1.4 Operational Deliverability Assessment

The CAISO will perform an operational partial and interim Deliverability Assessment (operational Deliverability Assessment) as part of the Phase II Interconnection Study. The operational Deliverability Assessment will be performed for each applicable Queue Cluster Group Study group for each applicable study year through the prior year before all of the required Delivery Network Upgrades are in-service. The CAISO will consider operational Deliverability Assessment results stated for the first year in the pertinent annual Net Qualifying Capacity process that the CAISO performs for the next Resource Adequacy Compliance Year. The study results for any other years studied in operational Deliverability Assessment will be advisory and provided to the Interconnection Customer for its use only and for informational purposes only.

The CAISO will publish the methodology under which the CAISO will perform the operational Deliverability assessment on the ISO Website or within a Business Practice Manual.

## 8.2 Determining Phase II Network Upgrades

### 8.2.1 Reliability Network Upgrades, Local Delivery Network Upgrades, and Local Off-Peak Network Upgrades

RNUs, LOPNUs, and LDNUs will be identified on the basis of all Interconnection Customers in the current Queue Cluster regardless of whether they have selected Option (A) or (B).

### 8.2.2 Area Delivery Network Upgrades

The Phase II Interconnection Study will identify ADNUs for Interconnection Customers who have selected Option (B). The Deliverability Assessment Base Case for the Phase II Interconnection Study will include Option (A) Generating Facilities in the current Interconnection Study Cycle and earlier queued Generating Facilities that will utilize TP Deliverability in a total amount that fully utilizes but does not exceed the available TP Deliverability.

If the MW capacity of the Option (A) Generating Facilities and earlier queued Generating Facilities utilizing TP Deliverability in an area is less than or equal to the total TP Deliverability in any electrical area, the Deliverability Assessment Base Case will include all Option (A) and earlier queued Generating Facilities in the electrical area.

If the MW capacity of the Option (A) Generating Facilities and earlier queued Generating Facilities utilizing TP Deliverability in an area exceeds the TP Deliverability in any electrical area, the Deliverability Assessment Base Case will include a representative subset of Generating Facilities that fully utilizes but does not exceed the TP Deliverability.

After the CAISO has modeled the Option (A) Generating Facilities, as described above, the CAISO will add Option (B) Generating Facilities to the Deliverability Assessment Base Case. ADNUs that are identified as needed for each electrical area shall be assigned to Option (B) Generating Facilities based upon their flow impacts.

## 8.3 Cost Responsibility for Reliability Network Upgrades

Cost responsibility for final Reliability Network Upgrades identified in the Phase II Interconnection Study of an Interconnection Request shall be assigned to Interconnection Customers regardless of whether the Interconnection Customer has selected Option (A) or (B) or Energy Only Deliverability Status, as follows:

(i) The cost responsibility for final short circuit related General Reliability Network Upgrades shall be assigned to all Interconnection Requests in the Group Study proportional to the short circuit duty contribution of each Generating Facility.

(ii) The cost responsibility for all other final General Reliability Network Upgrades shall be assigned to all Interconnection Requests in that Group Study proportional to the basis of the maximum megawatt electrical output of each proposed new Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request.

(iii) The Interconnection Customer's Current Cost Responsibility will include its allocated cost share for Interconnection Reliability Network Upgrades that are Assigned Network Upgrades. The CAISO will allocate assigned Interconnection Reliability Network Upgrade costs proportional to the number of Interconnection Requests that have been assigned the Interconnection Reliability Network Upgrade in the current Queue Cluster.

(iv) The Interconnection Customer's Maximum Cost Responsibility will include the full cost of Assigned Network Upgrades that are Interconnection Reliability Network Upgrades

unless another Interconnection Customer in the same Queue makes its third Interconnection Financial Security posting for the same assigned Interconnection Reliability Network Upgrade, in which case the CAISO will reduce the Interconnection Customer's Maximum Cost Responsibility to its allocated share pursuant to subsection (iii).

(v) The Maximum Cost Exposure will include the full cost of Interconnection Reliability Network Upgrades that are Assigned Network Upgrades and Conditionally Assigned Network Upgrades. The CAISO may reduce the Maximum Cost Exposure consistent with subsection (iv).

## 8.4 Cost Responsibility for Delivery Network Upgrades

The cost responsibility for Local Delivery Network Upgrades identified in the On-Peak Deliverability Assessment as part of the Phase II Interconnection Study shall be assigned to all Interconnection Requests selecting Full Capacity or Partial Capacity Deliverability Status, regardless of whether the Interconnection Customer has selected Option (A) or (B), based on the flow impact of each such Generating Facility on each Local Delivery Network Upgrade as determined by the Generation distribution factor methodology set forth in the On-Peak Deliverability Assessment methodology.

The cost responsibility for Area Delivery Network Upgrades identified in the On-Peak Deliverability Assessment as part of Phase II Interconnection Study shall be assigned to Interconnection Customers who have selected Option (B) Full Capacity or Partial Capacity Deliverability Status based on the flow impact of each such Generating Facility on each Area Delivery Network Upgrade as determined by the Generation distribution factor methodology set forth in the On-Peak Deliverability Assessment methodology.

The Current Cost Responsibility provided in the Phase II Interconnection Study shall establish the basis for the second Interconnection Financial Security Posting for Interconnection Customers selecting Option (B).

### 8.4.1 Cost Responsibility for Local Off-Peak Network Upgrades

The estimated costs of Local Off-Peak Network Upgrades identified in the Off-Peak Deliverability Assessment will be assigned or conditionally assigned to Interconnection Requests selecting Off-Peak Deliverability Status based on the flow impact of each such Generating Facility on the Off-Peak Network Upgrades as determined by the Generation distribution factor methodology set forth in the Off-Peak Deliverability Assessment methodology.

## 8.5 Phase II Interconnection Study Procedures

The CAISO shall coordinate the Phase II Interconnection Study with applicable Participating TO(s) and any Affected System that is affected by the Interconnection Request pursuant to Section 3.7. Existing studies shall be used to the extent practicable when conducting the Phase II Interconnection Study. The CAISO will coordinate Base Case development with the applicable Participating TOs to ensure the Base Cases are accurately developed. The CAISO shall use Reasonable Efforts to commence the Phase II Interconnection Study by May 1 of each year, and to complete and issue to Interconnection Customers the Phase II Interconnection Study report within two hundred and five (205) calendar days after the annual commencement of the Phase II Interconnection Study. The CAISO will share applicable study results with the applicable Participating TO(s), for review and comment, and will incorporate comments into the study report. The CAISO will issue a final Phase II Interconnection Study report to the Interconnection Customer.

At the request of the Interconnection Customer or at any time the CAISO determines that it will not meet the required time frame for completing the Phase II Interconnection Study, the CAISO shall notify the Interconnection Customer as to the schedule status of the Phase II Interconnection Study and provide an estimated completion date with an explanation of the reasons why additional time is required.

Upon request, the CAISO shall provide the Interconnection Customer all supporting documentation, workpapers and relevant pre-Interconnection Request and post-Interconnection Request power flow, short circuit and stability databases for the Phase II Interconnection Study, subject to confidentiality arrangements consistent with Section 15.1.

### 8.6 Accelerated Phase II Interconnection Study Process

The Phase II Interconnection Study shall be completed within one hundred fifty (150) calendar days following the later of (1) the posting of the initial Interconnection Financial Security or (2) the completion of the re-assessment in preparation for the Phase II Interconnection Study under Section 7.4, where the Interconnection Request meets the following criteria: (i) the Interconnection Request was not grouped with any other Interconnection Requests during the Phase I Interconnection Study or was identified as interconnecting to a point of available transmission during the Phase I Interconnection Study, and (ii) the Interconnection Customer is able to demonstrate that the general Phase II Interconnection Study timeline under GIDAP Section 8.5 is not sufficient to accommodate the Commercial Operation Date of the Generating Facility.

In addition to the above criteria, the CAISO may apply to FERC in coordination with the Interconnection Customer for a waiver of the timelines in this GIDAP to meet the schedule required by an order, ruling, or regulation of the Governor of the State of California, the CPUC, or the CEC.

### 8.7 Results Meeting With the CAISO and Applicable PTO(s)

Within thirty (30) calendar days of providing the final Phase II Interconnection Study report to the Interconnection Customer, the applicable Participating TO(s), the CAISO and the Interconnection Customer shall meet to discuss the results of the Phase II Interconnection Study, including selection of the final Commercial Operation Date.

Should the Interconnection Customer provide written comments on the final Phase II Interconnection Study report within ten (10) Business Days of receipt of the report, but in no case less than three (3) Business Days before the Results Meeting, whichever is sooner, then the ISO will address the written comments in the Phase II Interconnection Study Results Meeting. Should the Interconnection Customer provide comments at any later time (up to the time of the Results Meeting), then such comments shall be considered informal inquiries to which the CAISO will provide informal, informational responses at the Results Meeting, to the extent possible.

The Interconnection Customer may submit, in writing, additional comments on the final Phase II Interconnection Study report up to three (3) Business Days following the Results Meeting. Based on any discussion at the Results Meeting and any comments received, the CAISO (in consultation with the applicable Participating TO(s)) will determine, in accordance with Section 6.8, whether it is necessary to follow the final Phase II Interconnection Study Report with a revised study report or an addendum to the report. The CAISO will issue any such revised report or addendum no later than fifteen (15) Business Days following the Results Meeting.

### 8.8 [Intentionally Omitted]

### 8.9 Allocation Process for TP Deliverability

After the Phase II Interconnection Study reports are issued, the CAISO will perform the allocation of the TP Deliverability to Option (A) and Option (B) Generating Facilities that meet the eligibility criteria set forth in Section 8.9.2. The TP Deliverability available for allocation will be determined from the most recent Transmission Plan. Once a Generating Facility is allocated TP Deliverability, the facility will be required to comply with retention criteria specific in Section 8.9.3 in order to retain the allocation.

Allocation of TP Deliverability shall not provide any Interconnection Customer or Generating Facility with any right to a specific MW of capacity on the CAISO Controlled Grid or any other rights (such as title, ownership, rights to lease, transfer or encumber).

The CAISO will issue a market notice to inform interested parties as to the timeline for commencement of allocation activities, for Interconnection Customer submittal of eligibility status and retention information, and anticipated release of allocation results to Interconnection Customers. There are two components to the allocation process.

### 8.9.1 First Component: Representing TP Deliverability Used by Prior Commitments

The CAISO will identify the following commitments that will utilize MW quantities of TP Deliverability:

(a) The proposed Generating Facilities corresponding to earlier queued Interconnection Requests meeting the criteria set forth below:

(i) proposed Generating Facilities in Queue Cluster 4 or earlier that have executed PPAs with Load-Serving Entities and have GIAs that are in good standing.

(ii) proposed Generating Facilities in Queue Cluster 5 and subsequent Queue Clusters that were previously allocated TP Deliverability and have met the criteria to retain the allocation set forth in Section 8.9.3.

(b) any Maximum Import Capability included as a planning objective in the Transmission Plan and a Subscriber Participating TO that is a non-contiguous portion of the CAISO BAA can use Maximum Import Capability made available by Participating Generators and System Resources if such allocation is made available in accordance with Section 40.4.6.2.1 (Step 13) of the CAISO Tariff; the available Maximum Import Capability made available by the Load Serving Entities that have access to Subscriber Rights until the Load Serving Entity(ies) cease using this Maximum Import Capability allocation or Delivery Network Upgrade(s) pursuant to Section 4.3A4.2(b) of the CAISO Tariff is completed to support the Subscriber Rights and then the TP Deliverability will be awarded to such Subscriber consistent with Section 8.9.1(c) of this GIDAP;

(c) any other commitments having a basis in the Transmission Plan, including without limitation, long lead-time resources with corresponding transmission solutions, and any commitments established due to a Subscriber's exercise of its first option to acquire Deliverability made possible by Delivery Network Upgrades pursuant to Section 4.3A.4.2(a) of the CAISO Tariff, provided this first option has been exercised before the Subscriber is no longer eligible to apply for TP Deliverability allocation under Section 8.9 of this GIDAP. Generating Units possessing Subscriber Rights seeking to receive TP Deliverability must submit a request and will be subject to Sections 8.9.2 and 8.9.3 of this GIDAP. For each Subscriber that submits a TP Deliverability request, the CAISO will provide the Subscriber with a Queue Position. The CAISO will reserve TP Deliverability for long lead-time resources specified in the Transmission Plan up to the lower of (a)

the capacity of deliverable long lead-time resources in the approved Local Regulatory Authority portfolios submitted to the CAISO for the most recent Transmission Plan, or (b) the transmission capacity created by the Category 1 policy-driven transmission solutions and available on existing transmission for the long lead-time resources.

This first component is performed for the purpose of determining the amount of TP Deliverability available for allocation to the current queue cluster in accordance with section 8.9.2, and shall not affect the rights and obligations of proposed Generating Facilities in Queue Cluster 4 or earlier with respect to the construction and funding of Network Upgrades identified for such Generating Facilities, or their requested Deliverability Status. Such rights and obligations will continue to be determined pursuant to the GIP and the Generating Facility's GIA.

### 8.9.2 Second Component: Allocating Remaining TP Deliverability

Following the process set forth in Section 8.9.1, the CAISO will allocate any remaining TP Deliverability in the following order.

The CAISO shall allocate available TP Deliverability to all or a portion of the full MW capacity of the Generating Facility as specified in the Interconnection Request. Where a criterion is met by a portion of the full MW generating capacity of the Generating Facility, the eligibility score associated with that criterion shall apply to the portion that meets the criterion. The demonstration must relate to the same proposed Generating Facility as described in the Interconnection Request.

(A) To Interconnection Customers that have executed power purchase agreements, and to Interconnection Customers in the current Queue Cluster that are Load Serving Entities serving their own Load.

(B) To Interconnection Customers that are actively negotiating a power purchase agreement or on an active short list to receive a power purchase agreement.

(C) To Interconnection Customers that have achieved Commercial Operation for the capacity seeking TP Deliverability.

(D) To Interconnection Customers electing to be subject to Section 8.9.2.3.

Energy Only capacity seeking TP Deliverability may not trigger the construction of Delivery Network Upgrades pursuant to Section 6.3.2. This includes, without limitation, capacity expansions effected through modification requests and capacity converted to Energy Only after failing to receive or retain a TP Deliverability allocation. The CAISO will allocate TP Deliverability to Energy Only Interconnection Customers requesting Deliverability after FCDS and PCDS Interconnection Customers within its allocation group and solely based on TP Deliverability available from existing transmission facilities, from already planned upgrades in the CAISO Transmission Planning Process, or upgrades assigned to an interconnection project that has an executed GIA and currently has a TP Deliverability allocation.

Interconnection Customers requesting Deliverability for Energy Only capacity must submit to the CAISO a non-refundable $5,000 fee for each Interconnection Request seeking TP Deliverability.

Beginning with new awards in the 2023-2024 TP Deliverability allocation cycle, for an Interconnection Customer seeking to receive or retain TP Deliverability to represent that it

has, is negotiating, or is shortlisted for a power purchase agreement under this GIDAP, the agreement must meet the following criteria:

(1) the agreement has a term of no less than five (5) years. Interconnection Customers with multiple, short-term agreements for the same capacity may meet this criterion where the combined terms are five (5) years or more; and

(2) the counterparty must:

(a) be a Load Serving Entity procuring the capacity to meet its own Resource Adequacy obligation; or
(b) demonstrate it has a contract to provide the capacity for at least one (1) year to a Load Serving Entity for a Resource Adequacy obligation.

Interconnection Customers may seek or retain a TP Deliverability allocation if they meet all tariff criteria except the counterparty criterion (2); however, within thirty (30) days of receiving a TP Deliverability allocation, they must demonstrate they meet the counterparty criterion or provide a deposit of $10,000 per MW of allocated TP Deliverability, but in no case less than $500,000. The CAISO will deposit these funds in an interest-bearing account at a bank or financial institution designated by the CAISO. The CAISO will refund the deposit when the Generating Facility begins Commercial Operation or meets the counterparty criterion, whichever is earlier. To the extent the Interconnection Customer withdraws, is deemed withdrawn, converts to Energy Only, or otherwise downsizes or eliminates the capacity allocated TP Deliverability, the deposit or commensurate portion thereof will be non-refundable, and the CAISO will process it and any accrued interest pursuant to Section 7.6.

Interconnection Customers that received and retained TP Deliverability allocations before the 2023-2024 cycle are not subject to the minimum term or counterparty requirements for those allocations, including under Section 6.7.4 and this Section 8.9. If they re-seek TP Deliverability for any reason during or after the 2023-2024 cycle, they would be subject to these requirements in seeking a new allocation or retaining a new allocation.

For all TP Deliverability allocations based upon having, negotiating, or being shortlisted for power purchase agreements, the CAISO will allocate TP Deliverability up to the amount of deliverable MW capacity procured by the power purchase agreement. All Load Serving Entities building Generating Facilities to serve their own Load must be doing so to fulfill a regulatory requirement that warrants Deliverability. Load Serving Entities acting as Interconnection Customers are otherwise eligible for all other attestations.

Notwithstanding any other provision, all refunds pursuant to this Appendix DD will be processed in accordance with the CAISO's generally accepted accounting practices, including monthly batched deposit refund disbursements. Any CAISO deadline will be tolled to the extent the Interconnection Customer has not provided the CAISO with the appropriate documents to facilitate the Interconnection Customer's refund, or if the Interconnection Customer has any outstanding invoice balance due to the CAISO on another project owned by the same Interconnection Customer.

**8.9.2.1 Deliverability Affidavits**

To determine TP Deliverability allocation order, Interconnection Customers will be

assigned a numerical score reflecting the its demonstration of having met the criteria below under the methodology set forth in the Business Practice Manual.

(1) Permitting status. An Interconnection Customer's Generating Facility must meet at least one of the following:

a. The Interconnection Customer has received its final governmental permit or authorization allowing the Generating Facility to commence construction.

b. The Interconnection Customer has received a draft environmental report document (or equivalent environmental permitting document) indicating likely approval of the requested permit and/or which indicates that the permitting authority has not found an environmental impact which would likely prevent the permit approval.

c. The Interconnection Customer has applied for the necessary governmental permits or authorizations and the authority has deemed such documentation as data adequate for the authority to initiate its review process.

d. The Interconnection Customer has applied for the necessary governmental permit or authorization for the construction.

(2) Project financing status. An Interconnection Customer's Generating Facility must meet at least one of the following criteria:

a. The Interconnection Customer has an executed and regulator-approved power purchase agreement.

b. The Interconnection Customer has an executed power purchase agreement but such agreement has not yet received regulatory approval.

c. The Interconnection Customer is on an active short list or other commercially recognized method of preferential ranking of power providers by a prospective purchaser Load Serving Entity or procuring entity, or is currently negotiating a power purchase agreement.

d. The Interconnection Customer is a Load Serving Entity constructing its project to serve its own Load pursuant to a regulatory requirement.

e. The Interconnection Customer is proceeding to commercial operation without a power purchase agreement pursuant to Section 8.9.2.2, attested to balance-sheet financing before November 27, 2018, or attests to being balance-sheet financed or otherwise received a commitment of project financing pursuant to Section 8.9.3.1

(3) Land acquisition

a. The Interconnection Customer demonstrates a present legal right to begin construction of the Generation Facility on one hundred percent (100%) of the real property footprint necessary for the entire Generating facility.

b. The Interconnection Customer demonstrates Site Exclusivity.

In allocating TP Deliverability under this section, in a situation where the TP Deliverability cannot accommodate all of the Interconnection Customers in a qualifying group, the CAISO will allocate TP Deliverability based on the highest numerical score. In a situation where the available amount of TP Deliverability can accommodate all Interconnection Customers with equal scores, the CAISO will allocate the TP Deliverability to the Interconnection Customers with the lowest LDNU cost estimates. For all TP Deliverability allocations based upon having, negotiating, or being shortlisted for power purchase agreements, the CAISO will allocate TP Deliverability up to the amount of deliverable MW capacity procured by the power purchase agreement.

All power purchase agreements must require Deliverability above zero for the Interconnection Customer to represent that it has, is negotiating, or is shortlisted for a power purchase agreement. All Load Serving Entities building Generating Facilities to serve their own Load must be doing so to fulfill a regulatory requirement that warrants Deliverability.

#### 8.9.2.2 Proceeding without a Power Purchase Agreement prior to September 1, 2022

Interconnection Customers that received TP Deliverability in this group and parked portions of their Interconnection Request that did not receive TP Deliverability may receive TP Deliverability in subsequent allocation cycles from any group for which they qualify. Interconnection Customers that received TP Deliverability allocations for less than requested may elect to reduce their capacity to the amount of TP Deliverability received following the allocation.

If an Interconnection Customer received TP Deliverability on the basis that it is proceeding without a power purchase agreement, it may not request suspension under its GIA, delay providing its notice to proceed as specified in its GIA, or modify its Commercial Operation Date beyond the earlier of (a) the date established in its Interconnection Request when it requests TP Deliverability or (b) seven (7) years from the date the CAISO received its Interconnection Request. Extensions due to Participating TO construction delays will extend these deadlines equally. Where the Interconnection Customer has executed a power purchase agreement, it may request to align its construction timeline and Commercial Operation Date for the deliverable MW capacity procured by the power purchase agreement consistent with Section 6.7.5. This change in milestones cannot impact the timing of shared Interconnection Facilities or Network Upgrades. Interconnection Customers that fail to proceed toward their Commercial Operation Date under these requirements and as specified in their GIA will be converted to Energy Only. Interconnection Customers that become Energy Only for this or any reason may not reduce their Maximum Cost Responsibility, Current Cost Responsibility, or Interconnection Financial Security for any assigned Delivery Network Upgrades unless the CAISO and Participating TO(s) determine that the Interconnection Customer's assigned Delivery Network Upgrade(s) is no longer needed for current Interconnection Customers.

This Section 8.9.2.2 does not apply to Interconnection Customers that attested to balance-sheet financing or otherwise receiving a commitment of project financing before November 27, 2018, or that do so pursuant to Section 8.9.3.1.

#### 8.9.2.3 TP Deliverability Group D

This section applies to any Interconnection Customer that seeks a TP Deliverability allocation under group D, regardless of whether the Interconnection Customer receives an allocation from group D or later converts to Energy Only. For the entire Generating Facility, including Energy Only portions, the Interconnection Customer may not request suspension under its GIA, delay providing its notice to proceed as specified in its GIA, or

delay its Commercial Operation Date beyond the date established in its Interconnection Request when it requested TP Deliverability. Extensions due to Participating TO construction delays will extend these deadlines equally. Interconnection Customers that fail to proceed toward their Commercial Operation Dates under these requirements and as specified in their GIAs will be withdrawn.

If an Interconnection Customer demonstrates it has received a power purchase agreement, the portion of the Generating Facility procured by the power purchase agreement is not subject to this Section. For any portion of the Generating Facility that is Energy Only, the CAISO will not accept power purchase agreements that require Deliverability or include a Resource Adequacy obligation to exempt that capacity from the restrictions in this Section. Notwithstanding Section 8.9.4, if an Interconnection Customer receives a TP Deliverability allocation in the amount it requested, it must accept the allocation or withdraw.

Beginning with the 2023-2024 TP Deliverability allocation process, Interconnection Customers may not seek TP Deliverability through this group D for any capacity that is Energy Only. This includes, without limitation, capacity expansions effected through modification requests and capacity converted to Energy Only after failing to receive or retain a TP Deliverability allocation.

For Interconnection Customers in Cluster 13 or earlier, this Section 8.9.2.3 does not apply to their Generating Facility except for any portion of the Generating Facility that seeks TP Deliverability from Group D.

### 8.9.3 Retaining TP Deliverability Allocation

Interconnecting Customers that received TP Deliverability must provide documentation demonstrating they meet the following requirements by the annual due date established via Market Notice pursuant to Section 8.9:

(1) Interconnection Customers that received TP Deliverability on the basis of negotiating or being shortlisted for a power purchase agreement must execute the agreement.

(2) Interconnection Customers that received TP Deliverability from group D, must demonstrate that they executed a power purchase agreement, are actively negotiating a power purchase agreement, or on an active short list to receive a power purchase agreement. Interconnection Customers that retain TP Deliverability by demonstrating they are actively negotiating or shortlisted for a power purchase agreement must demonstrate they executed the power purchase agreement in the following year. Interconnection Customers that received TP Deliverability from group D in the 2025 allocation process must demonstrate they executed a power purchase agreement by the next TP Deliverability retention due date.

Failure to meet the requirements of this Section by the annual due date established via Market Notice will result in conversion to Energy Only. To the extent TP Deliverability has been allocated, lost, or relinquished only for a portion of the Interconnection Customer's project, this section 8.9.3 will apply to that portion of the project only. An Interconnection Customer's failure to retain its TP Deliverability will not be considered a Breach of its GIA. Except as provided in Section 8.9.3.2, Interconnection Customers that become Energy Only for failure to retain their TP Deliverability allocation may not reduce their Maximum Cost Responsibility, Current Cost Responsibility, or Interconnection Financial Security for any assigned Delivery Network Upgrades unless the CAISO and Participating TO(s) determine that the Interconnection Customer's assigned Delivery Network Upgrade(s) is

no longer needed for current Interconnection Customers.

**8.9.3.1 [Not Used]**

**8.9.3.2 Loss of Power Purchase Agreement or Short List Status**

Notwithstanding any provision of this GIDAP, if an Interconnection Customer receives or retains TP Deliverability for all or a portion of its project by attesting that:

(a) it had a power purchase agreement, and the Load Serving Entity or procuring entity unilaterally terminates that power purchase agreement through no fault of the Interconnection Customer; or

(b) it was actively negotiating a power purchase agreement or on an active short list to receive a power purchase agreement, and then did not finalize a power purchase agreement.

The Interconnection Customer may park its Interconnection Request, and re-seek TP Deliverability with its Queue Cluster. Alternatively, if such an Interconnection Customer's Queue Cluster is no longer eligible to park and has already completed the TP Deliverability allocation cycle after its parking opportunities, the Interconnection Customer will be converted to Energy Only but will not retain cost responsibility for its assigned Delivery Network Upgrades. Such an Interconnection Customers may elect to reduce its Interconnection Financial Security as a result.

**8.9.4 Parking for Option (A) Generating Facilities**

For an Option (A) Generating Facility in the current Interconnection Study Cycle that either was allocated less TP Deliverability than requested or does not desire to accept the amount allocated the Interconnection Customer shall select one of the following options:

(1) Withdraw its Interconnection Request

(2) Enter into a GIA, in which case the Interconnection Request shall automatically convert to Energy Only Deliverability Status. In such circumstances, upon execution of the GIA, any Interconnection Financial Security shall be adjusted to remove the obligation for Interconnection Financial Security pertaining to LDNUs

(3) Park the Interconnection Request; in which case the Interconnection Request may remain in the Interconnection queue until the next allocation of TP Deliverability in which it may participate in accordance with the requirements of Section 8.9.2. Parking an Interconnection Request does not confer a preference with respect to any other Interconnection Request with respect to allocation of TP Deliverability.

An Interconnection Customer that selects option (2) or (3) above may, at the time it selects the option, elect to reduce the generating capacity of its Generating Facility. An Interconnection Customer that has elected to park its Interconnection Request (option (3)) will not be tendered a GIA until it concludes its parking by accepting a TP Deliverability allocation or converting to Energy Only Deliverability Status and has made its second Interconnection Financial Security posting pursuant to Section 11.3. Parked Interconnection Customers may not submit modification requests except for the following modifications:

(1) reducing the Interconnection Service Capacity;

(2) changing fuel type or technology;

(3) Permissible Technological Advancements; or

(4) changing the Point of Interconnection.

Parked Interconnection Customers must post their second Interconnection Financial Security prior to submitting any of these modification requests, and submit a modification request pursuant to Section 6.7.2.3 of this GIDAP.

#### 8.9.4.1 Extended Parking for Option (A) Generating Facilities

An Option (A) Generating Facility that parked its Interconnection Request and participated in a second allocation of TP Deliverability may remain parked for one final (third) allocation of TP Deliverability where: (a) the most recent TP Deliverability allocation shows that TP Deliverability will still be available to the Generating Facility; and (b) the Generating Facility has not been assigned Network Upgrades identified as needed by other Interconnection Customers in the Generating Facility's cluster study group or later cluster study groups. Criterion (b) will not apply where the Generating Facility has been assigned Network Upgrades identified as needed only by other Interconnection Customers in the Generating Facility's own cluster study group and all of those active Interconnection Customers also elect to remain parked.

### 8.9.5 Partial Allocations of Transmission Based Deliverability to Option (A) and Option (B) Generating Facilities

If a Generating Facility is allocated TP Deliverability in the current Interconnection Study Cycle in an amount less than the amount of Deliverability requested, then the Interconnection Customer must choose one of the following options:

(i) Accept the allocated amount of TP Deliverability and reduce the MW generating capacity of the proposed Generating Facility such that the allocated amount of TP Deliverability will provide Full Capacity Deliverability Status to the reduced generating capacity;

(ii) Accept the allocated amount of TP Deliverability and adjust the Deliverability status of the proposed Generating Facility to achieve Partial Capacity Deliverability corresponding to the allocated TP Deliverability;

(iii) For Option (A) Generating Facilities, accept the allocated amount of TP Deliverability and seek additional TP Deliverability for the remainder of the requested Deliverability of the Interconnection Request in the next allocation cycle. In such instance, the Interconnection Customer shall execute a GIA for the entire Generating Facility having Partial Capacity Deliverability corresponding to the allocated amount of TP Deliverability. Following the next cycle of TP Deliverability allocation, the GIA shall be amended as needed to adjust its Deliverability status to reflect any additional allocation of TP Deliverability. At this time the Interconnection Customer may also adopt options (i) or (ii) above based on the final amount of TP Deliverability allocated to the Generating Facility. There will be no further opportunity for this Generating Facility to participate in any subsequent cycle of TP Deliverability allocation; or

(iv) Decline the allocated amount of TP Deliverability and either withdraw the Interconnection Request or convert to Energy Only Deliverability Status. An

Interconnection Customer having an Option (A) Generating Facility that has not previously parked may decline the allocation of TP Deliverability and park until the next cycle of TP Deliverability allocation in the next Interconnection Study Cycle.

An Interconnection Customer that selects option (iii) or (iv) above may, at the time it selects the option, elect to reduce the generating capacity of its Generating Facility.

Interconnection Customers accepting a partial allocation of TP Deliverability may pursue additional deliverability as described in Section 8.9.2.

### 8.9.6 Declining TP Deliverability Allocation

An Interconnection Customer having an Option (A) Generating Facility and allocated the entire amount of requested TP Deliverability may decline all or a portion of the TP Deliverability allocation and park the Generating Facility Request as described in Section 8.9.4(3). An Interconnection Customer that selects this option may, at the time it selects the option, elect to reduce the generating capacity of its Generating Facility.

### 8.9.7 [Intentionally Omitted]

### 8.9.8 Updates to Phase II Interconnection Study Results

Upon completion of the allocation of TP Deliverability in accordance with Section 8.9.2, the ISO will provide the allocation results to the Interconnection Customers for eligible Generating Facilities in the current Queue Cluster and eligible parked Generating Facilities. Each of these Interconnection Customers will then have seven (7) calendar days to inform the ISO of its decisions in accordance with Sections 8.9.4, 8.9.5, and 8.9.6. Following the ISO's receipt of this information from all affected Interconnection Customers, the ISO will provide updates where needed to the Phase II Interconnection Study reports for all Generating Facilities whose Network Upgrades have been affected.

### 8.9.9 Deliverability Transfers

Deliverability may not be assigned or otherwise transferred except as expressly provided by the CAISO Tariff. An Interconnection Customer may reallocate its Generating Facility's Deliverability among its own Generating Units or Resource IDs at the Generating Facility and to other Interconnection Customers interconnected at the same substation and at the same voltage level. The Generating Facility's aggregate output as evaluated in the Deliverability Assessment cannot increase as the result of any transfer, but may decrease based on the assignee's characteristics and capacity. Unless the Interconnection Customer provides the CAISO with an executed Energy Only power purchase agreement for the capacity losing Deliverability at the time it requests the Deliverability transfer, the assignor capacity must be removed from queue by withdrawal or downsizing the Generating Facility. The CAISO will not accept Energy Only power purchase agreements that require Deliverability or include a Resource Adequacy obligation. The CAISO will inform the Interconnection Customer of each Generating Unit's Deliverability Status and associated capacity as the result of any transfer. The results will be based on the current Deliverability Assessment methodology.

An Interconnection Customer may request to reallocate its Deliverability among its Generating Units and to other Interconnection Customers interconnected at the same substation and at the same voltage level pursuant to Section 6.7.2.2 of this GIDAP, Article 5.19 of the LGIA, and Article 3.4.5 of the SGIA, as applicable. A repowering Interconnection Customer may transfer Deliverability as part of the repowering process pursuant to Section 25.1.2 of the CAISO Tariff. An Interconnection Customer expanding

its capacity behind-the-meter pursuant to Section 4.2.1.2 also may transfer Deliverability as part of that process, or subsequently under the other processes in this Section. The assignee of a Deliverability transfer does not need to submit a modification request to receive a transfer.

Following a Deliverability transfer, the assignee inherits any requirements, restrictions, or obligations the assignor had as a result of receiving the Deliverability allocation or to retain the Deliverability, including without limitation requirements under Sections 6.7.4, 8.9.2.2, 8.9.2.3, and 8.9.3.

## Section 9 Additional Deliverability Assessment Options

### 9.1 [Intentionally Omitted]

### 9.2 [Intentionally Omitted]

### 9.3 PTO Tariff Option for Full Capacity Deliverability Status

To the extent that a Participating TO's tariff provides the option for customers taking interconnection service under the Participating TO's tariff to obtain Full Capacity Deliverability Status, the CAISO will, in coordination with the applicable Participating TO, perform the necessary Deliverability studies to determine the Deliverability of customers electing such option. The CAISO shall execute any necessary agreements for reimbursement of study costs it incurs and to assure cost attribution for any Network Upgrades relating to any Deliverability status conferred to such customers under the Participating TO's tariff.

### 9.4 Deliverability from Non-Participating TOs

This process applies to Generating Facilities that interconnect to the transmission facilities of a Non-Participating TO located within the CAISO Balancing Authority Area that wish to obtain Full Capacity Deliverability Status or Partial Capacity Deliverability Status under the CAISO Tariff. Such Generating Facilities will be eligible to be studied by the CAISO for Full or Partial Capacity Deliverability Status pursuant to the following provisions:

(a) The Generating Facility seeking Full or Partial Capacity Deliverability Status under the CAISO Tariff must submit a request to the CAISO to study it for such Status. Such study request will be in the form of the CAISO's pro forma Interconnection Request, must include the Generating Facility's intended Point of Delivery to the CAISO Controlled Grid, and must be submitted during a Cluster Application Window. The Generating Facility will be required to satisfy the same study deposit and Interconnection Financial Security posting requirements as an Interconnection Customer.

(b) The Non-Participating TO that serves as the interconnection provider to the Generating Facility must treat the CAISO as an Affected System in the interconnection study process for the Generating Facility.

(c) As part of the Non-Participating TO's interconnection study process, the CAISO, in its sole discretion and on a case-by-case basis, will determine the adequacy of transmission on the Non-Participating TO's system for the Generating Facility to be deemed fully deliverable to the elected Point of Delivery to the CAISO Controlled Grid. Only those proposed Generating Facilities (or proposed increases in Generating Facility capacity) for which the CAISO has determined there is adequate transmission capacity on the Non-Participating TO system to provide full Deliverability to the applicable Point of Delivery will be eligible to be assessed for Full or Partial Capacity Deliverability Status under the CAISO Tariff.

(d) If the Generating Facility is eligible for study for Full or Partial Capacity Deliverability Status, the CAISO will include the Generating Facility in the Interconnection Study process for the Queue Cluster associated with the Cluster Application Window in which the Generating Facility has submitted its study request. The Point of Delivery with the CAISO will be treated as the Point of Interconnection for purposes of including the Generating Facility in a Group Study with any applicable CAISO Interconnection Customers in the relevant Queue Cluster. Pursuant to the Queue Cluster Interconnection Study process the Generating Facility will be allocated its cost responsibility share of any applicable LDNUs or ADNUs.

The Generating Facility shall be permitted to select an Option (A) or Option (B) Deliverability option under Section 7.2 (and will be treated as an Option (B) Generating Facility if a selection is not provided to the CAISO) and permitted to participate in TP Deliverability allocation under Section 8.

(e) The CAISO, Participating TO, and Interconnection Customer will execute any necessary agreements for reimbursement of study costs incurred it to assure cost attribution for any Network Upgrades relating to any Deliverability status conferred to each such interconnection customer under the Non-Participating TO's tariff.

(f) The Non-Participating TO's interconnection customer will receive repayment of funds expended for the construction of the LDNUs , and, as applicable, ADNUs, on the CAISO Controlled Grid in the same manner as CAISO Interconnection Customers, as specified in Section 14.3.2.

**Section 10 Cost Responsibility for Interconnection Customers**

**10.1 Interconnection Customers in a Queue Cluster.**

(a) RNUs, LOPNUs and LDNUs. The Interconnection Studies will establish Interconnection Customers' Current Cost Responsibility, Maximum Cost Responsibility, and Maximum Cost Exposure consistent with the cost allocations described in Section 8. The CAISO will adjust Interconnection Customers' cost responsibilities as described in this GIDAP. Interconnection Customers will post Interconnection Financial Security based on their Current Cost Responsibility.

(b) AOPNUs and ADNUs. Interconnection Customers selecting Option (A) do not post Interconnection Financial Security for ADNUs. Interconnection Customers do not post Interconnection Financial Security for AOPNUs. The Current Cost Responsibility provided in the Phase I Interconnection Studies establishes the basis for the initial Interconnection Financial Security Posting under Section 11.2. For Interconnection Customers selecting Option (B), the Phase II Interconnection Studies shall refresh the Current Cost Responsibility for ADNUs and shall provide the basis for second and third Interconnection Financial Postings as specified in Section 11.

The ADNU and AOPNU cost estimates provided in any Interconnection Study report are estimates only and do not provide a maximum value for cost responsibility to an Interconnection Customer for ADNUs or AOPNUs. However, subsequent to the Interconnection Customer's receipt of its Phase II Interconnection Study report, an Interconnection Customer having selected Option (B) may have its ADNUs adjusted in the reassessment process undertaken under Section 7.4. Accordingly, for such Interconnection Customers, the most recent annual reassessment undertaken under Section 7.4 shall provide the most recent cost estimates for the Interconnection Customer's ADNUs.

**10.2 Interconnection Customers in the Independent Study Process.**

(a) Assigned Network Upgrades. The Current Cost Responsibility for the Interconnection Customer's Financial Security for RNUs shall be established by the costs for such Network Upgrades assigned to the Interconnection Customer in the final system impact and facilities study report.

For such Interconnection Customers choosing Full Capacity or Partial Capacity Deliverability status, the maximum value of LDNUs shall be established by the lesser of the costs for such Network Upgrades assigned to the Interconnection Customer in the final Phase I Interconnection Study or the final Phase II Interconnection Study.

For such Interconnection Customers choosing Off-Peak Deliverability Status, the maximum value of LOPNUs will be established by the lesser of the costs for such Network Upgrades assigned to the Interconnection Customer in the final Phase I Interconnection Study or the final Phase II Interconnection Study.

The Interconnection Customer's Maximum Cost Responsibility shall be subject to further adjustment based on the results of the annual reassessment process, as set forth in Section 7.4.

(b) ADNUs and AOPNUs. Interconnection Customers selecting Option (A) do not post Interconnection Financial Security for ADNUs. The Current Cost Responsibility provided in the Phase I Interconnection Studies establishes the basis for the initial Interconnection Financial Security posting under Section 11.2. For Interconnection Customers selecting Option (B), the Phase II Interconnection Studies shall refresh the Current Cost Responsibility for ADNUs and shall provide the basis for second and third Interconnection Financial Postings as specified in Section 11.

The ADNU cost estimates provided in any study report are estimates only and do not provide a maximum value for cost responsibility to an Interconnection Customer for ADNUs However, subsequent to the Interconnection Customer's receipt of its Phase II Interconnection Study report, an Interconnection Customer having selected Option (B) may have its ADNU adjusted in the reassessment process undertaken under Section 7.4.

Interconnection Customers do not post Interconnection Financial Security for AOPNUs.

**Section 11 Interconnection Financial Security**

**11.1 Types of Interconnection Financial Security**

The Interconnection Financial Security posted by an Interconnection Customer may be any combination of the following types of Interconnection Financial Security provided in favor of the applicable Participating TO(s):

(a) an irrevocable and unconditional letter of credit issued by a bank or financial institution that has a credit rating of A or better by Standard and Poors or A2 or better by Moody's;

(b) an irrevocable and unconditional surety bond issued by an insurance company that has a credit rating of A or better by Standard and Poors or A2 or better by Moody's;

(c) an unconditional and irrevocable guaranty issued by a company has a credit rating of A or better by Standard and Poors or A2 or better by Moody's;

(d) a cash deposit standing to the credit of the applicable Participating TO(s) in an interest-bearing escrow account maintained at a bank or financial institution that is reasonably acceptable to the applicable Participating TO(s);

(e) a certificate of deposit in the name of the applicable Participating TO(s) issued by a bank or financial institution that has a credit rating of A or better by Standard and Poors or A2 or better by Moody's; or

(f) a payment bond certificate in the name of the applicable Participating TO(s) issued by a bank or financial institution that has a credit rating of A or better by Standard and Poors or A2 or better by Moody's.

Interconnection Financial Security instruments as listed above shall be in such form as the CAISO and applicable Participating TO(s) may reasonably require from time to time by notice to Interconnection Customers or in such other form as has been evaluated and approved as reasonably acceptable by the CAISO and applicable Participating TO(s).

The CAISO shall publish and maintain standardized forms related to the types of Interconnection Financial Security listed above which shall be accessible on the CAISO Website. The CAISO shall require the use of standardized forms of Interconnection Financial Security to the greatest extent possible. If at any time the guarantor of the Interconnection Financial Security fails to maintain the credit rating required by this Section, the Interconnection Customer shall provide to the applicable Participating TO(s) replacement Interconnection Financial Security meeting the requirements of this Section within five (5) Business Days of the change in credit rating.

Interest on a cash deposit standing to the credit of the applicable Participating TO(s) in an interest-bearing escrow account under subpart (d) of this Section will accrue to the Interconnection Customer's benefit and will be added to the Interconnection Customer's account on a monthly basis.

## 11.2 Interconnection Financial Security-Initial Posting for Queue Cluster Customers

**11.2.1** Each Interconnection Customer in a Queue Cluster shall post, with notice to the CAISO, two separate Interconnection Financial Security instruments: (i) a posting relating to the applicable Network Upgrades; (ii) a posting relating to the Participating TO's Interconnection Facilities.

Interconnection Customers owned by Participating Transmission Owners are not required to post Interconnection Financial Security to themselves. Notwithstanding this exemption, Interconnection Customers owned by Participating Transmission Owners (i) must post Interconnection Financial Security required for Network Upgrades or Participating TO's Interconnection Facilities on other Participating Transmission Owner's systems where required for interconnection; and (ii) must remit to the CAISO an amount equal to any non-fundable portion of the Interconnection Financial Security that would have been forfeited upon withdrawal or termination absent this exemption pursuant to Sections 7.6 and 11.4.

**11.2.2** Timing of Postings. The postings set forth in this Section shall be made any time after the issuance of the final Phase I Interconnection Study report but no later than ninety (90) calendar days after issuance of the final Phase I Interconnection Study report for Interconnection Customers in a Queue Cluster.

Revised Cluster Study Reports. If the CAISO revises a final Phase I Interconnection Study report pursuant to Section 6.8, the initial postings will be due from the Interconnection Customer by the later of ninety (90) calendar days after issuance of the original final Phase I Interconnection Study Report or forty (40) calendar days after

issuance of the revised final Phase I Interconnection Study Report.

**11.2.3 Posting Amount for Network Upgrades.**

**11.2.3.1 Small Generator Interconnection Customers**

Each Interconnection Customer for a Small Generating Facility assigned to a Queue Cluster shall post an Interconnection Financial Security instrument as follows:

1) Interconnection Customers selecting Energy Only Deliverability Status must post for assigned RNUs and assigned LOPNUs, if any.

   The posting amount for such RNUs and LOPNUs shall equal the lesser of fifteen percent (15%) of the Current Cost Responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study for Network Upgrades or (ii) $20,000 per megawatt of electrical output of the Small Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, but in no event less than $50,000.

2) Interconnection Customers selecting Option (A) Full Capacity or Partial Capacity Deliverability Status must post for assigned RNUs, LOPNUs, and LDNUs, if any.

   The posting amount for such RNUs, LOPNUs, and LDNUs shall equal the lesser of fifteen percent (15%) of the Current Cost Responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study for Network Upgrades or (ii) $20,000 per megawatt of electrical output of the Small Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, but in no event less than $50,000.

3) Interconnection Customers selecting Option (B) Full Capacity or Partial Capacity Deliverability Status must post for assigned RNUs, LDNUs, LOPNUs, and ADNUs, if any.

   The posting amount for such RNUs, LDNUs, LOPNUs, and ADNUs shall equal the lesser of fifteen percent (15%) of the ADNU costs and total Current Cost Responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study for Network Upgrades or (ii) $20,000 per megawatt of electrical output of the Small Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, but in no event less than $50,000.

**11.2.3.2 Large Generator Interconnection Customers**

Each Interconnection Customer for a Large Generating Facility assigned to a Queue Cluster shall post an Interconnection Financial Security instrument as follows:

1) Interconnection Customers selecting Energy Only Deliverability Status must post for assigned RNUs and assigned LOPNUs, if any.

The posting amount for such RNUs and LOPNUs shall equal the lesser of (i) fifteen percent (15%) of the total RNU Current Cost Responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study for Network Upgrades, (ii) $20,000 per megawatt of electrical output of the Large Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, or (iii) $7,500,000, but in no event less than $500,000.

In addition, if an Interconnection Customer switches its status from Full Capacity Deliverability Status or Partial Capacity Deliverability Status to Energy-Only Deliverability Status within ten (10) Business Days following the Phase I Interconnection Study Results Meeting, the required Interconnection Financial Security for Network Upgrades shall, for purposes of this section, be additionally capped at an amount no greater than the Current Cost Responsibility assigned to the Interconnection Customer in the Phase I Interconnection Study for Reliability Network Upgrades.

2) Interconnection Customers selecting Option (A) Full Capacity or Partial Capacity Deliverability Status must post for assigned RNUs, LOPNUs, and LDNUs, if any.

The posting amount for such RNUs and LDNUs shall equal the lesser of (i) fifteen percent (15%) of the Current Cost Responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study for Network Upgrades, (ii) $20,000 per megawatt of electrical output of the Large Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, or (iii) $7,500,000, but in no event less than $500,000.

3) Interconnection Customers selecting Option (B) Full Capacity or Partial Capacity Deliverability Status must post for assigned RNUs, LDNUs, LOPNUs, and ADNUs, if any.

The posting amount for such RNUs, LDNUs, LOPNUs, and ADNUs shall equal the lesser of (i) fifteen percent (15%) of the ADNU costs and the total Current Cost Responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study for Network Upgrades, (ii) $20,000 per megawatt of electrical output of the Large Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, or (iii) $7,500,000, but in no event less than $500,000.

**11.2.4 Posting Amount for Participating TO Interconnection Facilities.**

**11.2.4.1 Small Generator Interconnection Customers**

Each Interconnection Customer for a Small Generating Facility assigned to a Queue Cluster shall post an Interconnection Financial Security instrument in an amount equal to the lesser of (i) fifteen (15) percent of the Current Cost Responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study for Participating TO's Interconnection Facilities or (ii) $20,000 per megawatt of electrical output of the Small Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, but in no event less than $50,000.

#### 11.2.4.2 Large Generator Interconnection Customers

Each Interconnection Customer for a Large Generating Facility assigned to a Queue Cluster shall post an Interconnection Financial Security instrument in an amount equal to the lesser of (i) fifteen (15) percent of the Current Cost Responsibility assigned to the Interconnection Customer in the final Phase I Interconnection Study for Participating TO's Interconnection Facilities, (ii) $20,000 per megawatt of electrical output of the Large Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request, including any requested modifications thereto, or (iii) $7,500,000, but in no event less than $500,000.

### 11.2.5 Cost Estimates Less than Minimum Posting Amounts.

If (1) the Current Cost Responsibility of the Assigned Network Upgrades, (2) the allocated costs of the Participating TO Interconnection Facilities, or (3) both are less than the respective minimum posting amounts that would apply under Sections 11.2.4.1 or 11.2.4.2, then the posting amount required will equal the Current Cost Responsibility of the Assigned Network Upgrades or the allocated costs for Participating TO Interconnection Facilities, as applicable.

### 11.2.6 Consequences for Failure to Post.

The failure by an Interconnection Customer to timely post the Interconnection Financial Security required by this Section shall result in the Interconnection Request being deemed withdrawn and subject to Section 3.8. The Interconnection Customer shall provide the CAISO and the Participating TO with written notice that it has posted the required Interconnection Financial Security no later than the applicable final day for posting.

### 11.2.7 Re-calculation of Initial Posting Requirement.

If withdrawals, modifications, or system changes occur after the completion of the Phase I Interconnection Study, pursuant to Section 6.7.2, and the CAISO, in consultation with the applicable Participating TO(s), is able to reasonably determine, prior to the date for initial posting of Interconnection Financial Security, that as a result of such decrease (solely or in combination with other modifications made by Interconnection Customers) some of the Network Upgrades and/or Participating TO Interconnection Facilities identified in the Phase I Interconnection Study will no longer be required, then the calculation of the initial posting of Interconnection Financial Security will not include those Network Upgrades and/or Participating TO Interconnection Facilities. Such determination will be made based on the CAISO's best engineering judgment and will not include any re-studies.

## 11.3 Interconnection Financial Security-Second and Third Postings for Queue Cluster Customers and Initial and Second Postings for Independent Study Process Customers

### 11.3.1 Second Posting for Queue Cluster Customers; Initial Posting for Independent Study Process Customers

**11.3.1.1** Each Interconnection Customer in a Queue Cluster shall make second postings, with notice to the CAISO, of two separate Interconnection Financial Security instruments: (i) a second posting relating to the Network Upgrades; and (ii) a second posting relating to the Participating TO's Interconnection Facilities. The Current Cost Responsibility for calculating the second and third Interconnection Financial Security postings for Interconnection Customers in Queue Clusters shall be set forth in the Phase II Interconnection Study report.

Each Interconnection Customer in the Independent Study Process shall make initial postings, with notice to the CAISO, of two separate Interconnection Financial Security instruments: (i) a posting relating to the applicable Network Upgrades; and (ii) a posting relating to the Participating TO's Interconnection Facilities. The Current Cost Responsibility for calculating the initial Interconnection Financial Security Posting shall be set forth in the System Impact and Facilities Study report.

**11.3.1.2 Timing of Posting**

The postings set forth in this Section for Interconnection Customers in a Queue Cluster shall be made any time after issuance of the final Phase II Interconnection Study report but no later than one hundred eighty (180) calendar days after issuance of the final Phase II Interconnection Study report.

The initial postings for Interconnection Customers in the Independent Study Process shall be made any time after the issuance of the final System Impact and Facilities Study report under the Independent Study Process but no later than one hundred twenty (120) calendar days after the CAISO provides the results of the System Impact and Facilities Study.

Revised Cluster Study Reports. If the CAISO revises a final Phase II Interconnection Study report pursuant to Section 6.8, the second postings will be due by the later of one hundred-eighty (180) calendar days after issuance of the original final Phase II Interconnection Study report or sixty (60) calendar days after issuance of the revised final Phase II Interconnection Study report.

Revised Independent Study Track Reports. If the CAISO revises the final System Impact and Facilities Study report pursuant to Section 6.8, the initial postings will be due by the later of one hundred-twenty (120) calendar days after the issuance of the original final System Impact and Facilities Study report or thirty (30) calendar days from the issuance of the revised System Impact and Facilities Study report.

**11.3.1.3 Posting Requirements and Timing for Parked Option (A) Generating Facilities**

For an Interconnection Customer choosing Option (A) whose Generating Facility was not allocated TP Deliverability in either the first TP Deliverability allocation following its receipt of the final Phase II Interconnection Study or the TP Deliverability allocation after parking, and who chooses to park the Interconnection Request, the posting due date will be extended by 12 months

consistent with each parking election after the initial allocation process.

For an Interconnection Customer choosing Option (A) whose Generating Facility was allocated TP Deliverability for less than the full amount of its Interconnection Request, and who chooses to seek additional TP Deliverability for the remainder of the requested Deliverability of the Interconnection Request in the next allocation cycle, the postings for RNU, Participating TO Interconnection Facilities, LOPNUs, and for LDNUs corresponding to the initial allocation of TP Deliverability will be due in accordance with the dates specified in this Section 11. The posting due date for the LDNUs corresponding to the remainder of the requested Deliverability will be extended by 12 months consistent with each parking election after the initial allocation process.

**11.3.1.4 Network Upgrade Posting Amounts**

**11.3.1.4.1 Small Generator Interconnection Customers**

Each Interconnection Customer for a Small Generating Facility assigned to a Queue Cluster or an Interconnection Customer for a Small Generating Facility in the Independent Study Process shall post an Interconnection Financial Security instrument that brings the security amount up to the following:

1) For Interconnection Customers selecting Energy Only Deliverability Status: the lesser of (i) $1 million or (ii) thirty (30) percent of the Current Cost Responsibility assigned to the Interconnection Customer for RNUs and LOPNUs in either the final Phase II Interconnection Study report, or for Independent Study Process Interconnection Customers, the system impact and facilities study. In no event shall the total amount posted be less than $100,000.

2) For Interconnection Customers who have Option (A) Generating Facilities, the lesser of (i) $1 million or (ii) thirty (30) percent of the Current Cost Responsibility assigned to the Interconnection Customer for RNUs, LOPNUs, and LDNUs in the final Phase II Interconnection Study or, for Independent Study Process Interconnection Customers, in the system impact and facilities study.

However, in no event shall the total amount posted be less than $100,000.

3) For Interconnection Customers who have Option (B) Generating Facilities: the lesser of (i) $1 million or (ii) the sum of:

   (a) thirty (30) percent of the Current Cost Responsibility assigned to the Interconnection Customer for RNUs, LOPNUs, and LDNUs in the final Phase II Interconnection Study or, for Independent Study Process Interconnection Customers, in the system impact and facilities study; plus

   (b) thirty (30) percent of the cost responsibility assigned to the Interconnection Customer for ADNUs in the final Phase II Interconnection Study. However, to the extent

that the Option (B) Interconnection Customer's Generating Facility is allocated TP Deliverability, the cost responsibility assigned to the Interconnection Customer for ADNUs will be adjusted to reflect the allocation of TP Deliverability. If the allocation of TP Deliverability is for the full Deliverability of the Interconnection Request, then the ADNU cost responsibility will equal zero (0). If the allocation of TP Deliverability is less than the full Deliverability of the Interconnection Request, then the ADNU cost responsibility will be reduced pro rata.

However, in no event shall the total amount posted be less than $100,000.

**11.3.1.4.2 Large Generator Interconnection Customers**

Each Interconnection Customer for a Large Generating Facility assigned to a Queue Cluster and each Interconnection Customer for a Large Generating Facility in the Independent Study Process shall post an Interconnection Financial Security instrument that brings the security amount up to the following:

1) For Interconnection Customers selecting Energy Only Deliverability Status: the lesser of (i) $15 million or (ii) thirty (30) percent of the Current Cost Responsibility assigned to the Interconnection Customer for RNUs and LOPNUs in the, final Phase II Interconnection Study, system impact and facilities study. In no event shall the total amount posted be less than $500,000.

2) For Interconnection Customers, who have Option (A) Generating Facilities the lesser of (i) $15 million or (ii) thirty (30) percent of the Current Cost Responsibility assigned to the Interconnection Customer for RNUs, LOPNUs, and LDNUs in the final Phase II Interconnection Study or, for Independent Study Process Interconnection Customers, in the system impact and facilities study.

However, in no event shall the total amount posted be less than $500,000.

3) For Interconnection Customers who have Option (B) Generating Facilities: the lesser of (i) $15 million or (ii) the sum of:

   (a) thirty (30) percent of the Current Cost Responsibility assigned to the Interconnection Customer for RNUs, LOPNUs, and LDNUs in the final Phase II Interconnection Study or, for Independent Study Process Interconnection Customers, in the system impact and facilities study; plus

   (b) thirty (30) percent of the cost responsibility assigned to the Interconnection Customer for ADNUs in the final Phase II Interconnection Study. However, to the extent that the Option (B) Interconnection Customer's Generating Facility is allocated TP Deliverability, the cost

responsibility assigned to the Interconnection Customer for ADNUs will be adjusted to reflect the allocation of TP Deliverability. If the allocation of TP Deliverability is for the full Deliverability of the Interconnection Request, then the ADNU cost responsibility will equal zero (0). If the allocation of TP Deliverability is less than the full Deliverability of the Interconnection Request, then the ADNU cost responsibility will be reduced pro rata.

However, in no event shall the total amount posted be less than $500,000.

**11.3.1.4.3 Cost Estimates Less than Minimum Posting Amounts.**

If the Current Cost Responsibility of the Assigned Network Upgrades are less than the posting amounts set forth in Section 11.3.1.4 above, then posting amount required will be equal to the Current Cost Responsibility of the Assigned Network Upgrades.

**11.3.1.4.4 Posting Related to Interconnection Customer's Stand Alone Network Upgrades**

If the Interconnection Customer desires to self-build Stand Alone Network Upgrades consistent with its interconnection study reports, the Interconnection Customer must post the Interconnection Financial Security for the Stand Alone Network Upgrades in its Interconnection Financial Security posting. The Interconnection Customer may request to build the Stand Alone Network Upgrades in the Generator Interconnection Agreement negotiation process, and if the Participating TO and the CAISO agree, the interconnection study reports and the second posting will be revised accordingly once the Generator Interconnection Agreement has been fully executed and documents the Stand Alone Network Upgrades. If the Participating TO and the CAISO agree to allow the Interconnection Customer to build a Stand Alone Network Upgrade in an executed Generator Interconnection Agreement, the Interconnection Customer's Maximum Cost Responsibility and Maximum Cost Exposure will be reduced by the cost of the Stand Alone Network Upgrade, and both the original and revised Maximum Cost Responsibility and Maximum Cost Exposure will be documented in the Generation Interconnection Agreement.

If at any time the responsibility for constructing the Stand Alone Network Upgrade, or a portion thereof, reverts to the Participating TO, the Interconnection Customer will be required to revise its Interconnection Financial Security posting within thirty (30) calendar days to reflect that the Participating TO will build the Stand Alone Network Upgrade. The Interconnection Customer's Maximum Cost Responsibility and Maximum Cost Exposure also will be revised to reflect that the Participating TO will build the Stand Alone Network Upgrade. Failure to make a timely posting adjustment will result in the withdrawal of the Interconnection Request in accordance with Section 3.8. If an Interconnection Customer has been allowed to reduce its Interconnection Financial Security posting following the execution of its Generator Interconnection Agreement and subsequently withdraws, the amount of the Interconnection Financial Security that is determined to be refundable under Section 11.4.2 will be

reduced by the amount of the Interconnection Financial Security posting the Interconnection Customer avoided through the self-build option.

**11.3.1.5 Posting Amount for Participating TO Interconnection Facilities.**

**11.3.1.5.1 Small Generator Interconnection Customers**

Each Interconnection Customer for a Small Generating Facility assigned to a Queue Cluster and each Interconnection Customer for a Small Generating Facility in the Independent Study Process shall post an Interconnection Financial Security instrument such that the total Interconnection Financial Security posted by the Interconnection Customer for Participating TO Interconnection Facilities equals the lesser of (i) $1 million or (ii) thirty (30) percent of the total cost responsibility assigned to the Interconnection Customer for Participating TO Interconnection Facilities in the final Phase II Interconnection Study or system impact and facilities study. In no event shall the total amount posted be less than $100,000.

**11.3.1.5.2 Large Generator Interconnection Customers**

Each Interconnection Customer for a Large Generating Facility assigned to a Queue Cluster and each Interconnection Customer for a Large Generating Facility in the Independent Study Process shall post an Interconnection Financial Security instrument such that the total Interconnection Financial Security posted by the Interconnection Customer for Participating TO Interconnection Facilities equals the lesser of (i) $15 million or (ii) thirty (30) percent of the total cost responsibility assigned to the Interconnection Customer for Participating TO Interconnection Facilities in the final Phase II Interconnection Study or system impact and facilities study. In no event shall the total amount posted be less than $500,000.

**11.3.1.5.3 Cost Estimates Less than Minimum Posting Amounts.**

If the costs of the estimated Participating TO Interconnection Facilities are less than the posting amounts set forth in Section 11.3.1.5.2 above, the posting amount required will be equal to the estimated Participating TO Interconnection Facilities amount.

**11.3.1.6 Early Commencement of Construction Activities**

If the start date for Construction Activities of Network Upgrades or Participating TO's Interconnection Facilities on behalf of the Interconnection Customer is prior to one hundred eighty (180) calendar days after issuance of the final Phase II Interconnection Study report for Interconnection Customers in a Queue Cluster or prior to one hundred twenty (120) calendar days after issuance of the final system impact and facilities study report for Interconnection Customers in the Independent Study Process, that start date must be set forth in the Interconnection Customer's GIA, and the Interconnection Customer shall make its second posting of Interconnection Financial Security pursuant to Section 11.3.2 rather than Section 11.3.1.

**11.3.1.7 Consequences for Failure to Post**

The failure by an Interconnection Customer to timely post the Interconnection

Financial Security required by this Section shall constitute grounds for termination of the GIA pursuant to LGIA Article 2.3 or SGIA Article 3.3, whichever is applicable.

### 11.3.2 Third Posting for Queue Cluster Customers and Second Posting for Independent Study Process Customers

After the second posting for a Queue Cluster has been made but no later than the start of Construction Activities for Network Upgrades or Participating TO's Interconnection Facilities on behalf of the Interconnection Customer, whichever is earlier, the Interconnection Customer shall modify the two separate Interconnection Financial Security instruments posted pursuant to Section 11.3.1.

After the first posting for Independent Study Process Customers has been made but no later than the start of Construction Activities for Network Upgrades or Participating TO's Interconnection Facilities on behalf of the Interconnection Customer, whichever is earlier, the Interconnection Customer shall modify the two separate Interconnection Financial Security instruments posted pursuant to Section 11.3.1.

#### 11.3.2.1 Network Upgrades

With respect to the Interconnection Financial Security Instrument for Network Upgrades, the Interconnection Customer shall modify this Instrument so that it equals one hundred (100) percent of the assigned ADNU costs and the Current Cost Responsibility assigned to the Interconnection Customer as determined in Section 11.3.1.4.1 for Small Generator Interconnection Customers or in Section 11.3.1.4.2 for Large Generator Interconnection Customers.

An Interconnection Customer whose Option (B) Generating Facility was not allocated TP Deliverability and elects to have a party other than the applicable Participating TO(s) construct an LDNU or ADNU is not required to make this posting for its cost responsibilities for such LDNU or ADNU. However, such Interconnection Customer will be required to demonstrate its financial capability to pay for the full cost of construction of its share, as applicable, of the LDNU or ADNU pursuant to Section 24.4.6.1 of the CAISO Tariff. An Interconnection Customer's election to have a party other than an applicable Participating TO construct an LDNU or ADNU does not relieve the Interconnection Customer of the responsibility to fund or construct such LDNU or ADNU. Upon the Interconnection Customer's demonstration to the CAISO that the Interconnection Customer has expended the amount of the avoided posting requirement on construction of the LDNU or ADNU described here, the Interconnection Customer's prior posting for these facilities will be returned to the Interconnection Customer, unless the Participating TO and Interconnection Customer agree to an alternative arrangement.

#### 11.3.2.2 Participating TO Interconnection Facilities

With respect to the Interconnection Financial Security Instrument for Participating TO Interconnection Facilities, the Interconnection Customer shall modify this instrument so that it equals one hundred (100) percent of the total cost responsibility assigned to the Interconnection Customer for Participating TO Interconnection Facilities in the final Phase II Interconnection Study for Interconnection Customers in a Queue Cluster, or the final system impact and facilities study for Interconnection Customers in the Independent Study Process.

#### 11.3.2.3 Separation of Posting

If an Interconnection Customer's Network Upgrades and/or Interconnection Facilities are separated into two or more specific components and/or can be separated into two or more separate and discrete phases of construction and the Participating TO is able to identify and separate the costs of the identified discrete components and/or phases of construction, then the Participating TO, the CAISO, and the Interconnection Customer may negotiate, as part of the Generator Interconnection Agreement, a division of the Interconnection Financial Security posting required by this Section 11.3.2 into discrete Interconnection Financial Security amounts and may establish discrete milestone dates (however, outside dates must be included) for posting the amounts corresponding to each component and/or phase of construction related to the Network Upgrades and/or Interconnection Facilities described in the Generator Interconnection Agreement.

#### 11.3.2.4 Failure to Post

The failure by an Interconnection Customer to timely post the Interconnection Financial Security required by this Section shall constitute grounds for termination of the GIA pursuant to LGIA Article 2.3 or SGIA Article 3.3, whichever is applicable.

#### 11.3.2.5 Conversion of Conditionally Assigned Network Upgrades

If at any time an Interconnection Customer's Interconnection Studies are revised to reflect that Conditionally Assigned Network Upgrades have become Assigned Network Upgrades, the Interconnection Customer's Maximum Cost Responsibility, Current Cost Responsibility, Generator Interconnection Agreement, and Interconnection Financial Security will be revised to reflect the conversion, as applicable.

#### 11.3.2.6 Shared Network Upgrades

Interconnection Studies and GIAs will identify when Network Upgrades are shared, and their estimated construction timelines. Once identified in the Interconnection Studies, or no later than when the first Interconnection Customer sharing the Assigned Network Upgrade executes its GIA with a third posting deadline for the Assigned Network Upgrade, the CAISO and Participating TO will notify the other Interconnection Customers sharing the Assigned Network Upgrade when this third Interconnection Financial Security posting will be required based on the construction timeline required to meet the earliest In-Service Date of the Interconnection Customers sharing the Assigned Network Upgrade. All Interconnection Customers sharing the Assigned Network Upgrade must submit (a) their authorizations to proceed with design and procurement of the shared Network Upgrade and (b) the third posting for the shared Network Upgrade, by the same deadline. Interconnection Customers and Participating TOs may have separate posting and authorization deadlines for each shared Network Upgrade and other non-shared Network Upgrades, but Interconnection Customers sharing Assigned Network Upgrades must have the same deadlines for them. At all times, Interconnection Customers must have sufficient Interconnection Financial Security under this Section 11, inclusive of any second and third posting obligations.

All Interconnection Customers sharing the Assigned Network Upgrade must execute an engineering and procurement agreement under Section 12 or a GIA prior to submitting the third posting for the shared Network Upgrade. Where any

Interconnection Customer sharing the Assigned Network Upgrade has not executed either agreement, the Participating TO will tender (1) a draft engineering and procurement agreement if the Interconnection Customer is parked, or (2) a draft GIA or GIA amendment, to the Interconnection Customer no later than one-hundred twenty (120) days before the third posting deadline. The Interconnection Customer must execute the engineering and procurement agreement or GIA or request that the GIA be filed unexecuted prior to the deadline to post. The failure by an Interconnection Customer to timely (a) execute an engineering and procurement agreement or GIA or request an unexecuted filing, (b) submit the authorization to proceed, or (c) submit the third posting for the shared Assigned Network Upgrade, under this Section, will result in the Interconnection Request being deemed withdrawn and subject to Section 3.8. The Interconnection Customer will provide the CAISO and the Participating TO with written notice that it has posted the required Interconnection Financial Security no later than the applicable final day for posting.

No later than thirty (30) days after each Interconnection Customer sharing the Assigned Network Upgrade complies with this Section, the Participating TO will commence Construction Activities on the shared Assigned Network Upgrade.

## 11.4 Withdrawal or Termination-Effect on Financial Security

Withdrawal of an Interconnection Request or termination of a GIA shall allow the applicable Participating TO(s) to liquidate the Interconnection Financial Security, or balance thereof, posted by the Interconnection Customer for Network Upgrades at the time of withdrawal.

To the extent the amount of the liquidated Interconnection Financial Security plus capital, if any, separately provided by the Interconnection Customer to satisfy its obligation to finance Network Upgrades exceeds the total cost responsibility for Network Upgrades assigned to the Interconnection Customer, the applicable Participating TO(s) shall remit to the Interconnection Customer the excess amount.

Withdrawal of an Interconnection Request or termination of a GIA shall result in the release to the Interconnection Customer of any Interconnection Financial Security posted by the Interconnection Customer for Participating TO Interconnection Facilities, except with respect to any amounts necessary to pay for costs incurred or irrevocably committed by the applicable Participating TO(s) on behalf of the Interconnection Customer for the Participating TO's Interconnection Facilities and for which the applicable Participating TO(s) has not been reimbursed.

### 11.4.1 [Intentionally Omitted]

### 11.4.2 Determining Refundable Portion of the Interconnection Financial Security for Network Upgrades.

#### 11.4.2.1 Withdrawal Between the First Posting and the Deadline for the Second Posting

If the Interconnection Customer either withdraws its Interconnection Request or terminates its GIA at any time between the initial posting and the deadline for the second posting of the Interconnection Financial Security for applicable Network Upgrades, then the applicable Participating TO(s) shall liquidate the Interconnection Financial Security for the applicable Network Upgrades and reimburse the Interconnection Customer the lesser of:

a. the Interconnection Financial Security plus (any other provided security plus any separately provided capital) less (all costs and expenses

incurred or irrevocably committed to finance Pre-Construction Activities for Network Upgrades on behalf of the Interconnection Customer); or

b. the Interconnection Financial Security plus (any other provided security plus any separately provided capital) minus the lesser of fifty (50) percent of the value of the posted Interconnection Financial Security for Network Upgrades or $10,000 per requested and approved, pre-downsized megawatt of the Generating Facility Capacity.

**11.4.2.2 Withdrawal Between the Second Posting and the Commencement of Construction Activities**

If the Interconnection Customer either withdraws or terminates its GIA at any time after the between the second posting of the Interconnection Financial Security for applicable Network Upgrades and the Commencement of Construction Activities for such Network Upgrades, then the applicable Participating TO(s) shall liquidate the Interconnection Financial Security for the applicable Network Upgrades and reimburse the Interconnection Customer the lesser of:

a. the Interconnection Financial Security plus (any other provided security plus any separately provided capital) less (all costs and expenses incurred or irrevocably committed to finance Pre-Construction Activities for Network Upgrades on behalf of the Interconnection Customer) and less (any posting reduction due to the Interconnection Customer's election to self-build Stand Alone Network Upgrades); or

b. the Interconnection Financial Security plus (any other provided security plus any separately provided capital) minus the lesser of fifty (50) percent of the value of the posted Interconnection Financial Security for Network Upgrades or $20,000 per requested and approved, pre-downsized megawatt of the Generating Facility Capacity.

**11.4.2.3 Special Treatment Based on Failure to Obtain Necessary Permit or Authorization from Governmental Authority.**

If, at any time after the second posting requirement , the Interconnection Customer withdraws the Interconnection Request or terminates the GIA, as applicable, because the Interconnection Customer received a final denial from the primary issuing Governmental Authority for authorization necessary for the construction or operation of the Generating Facility, and the Delivery Network Upgrades to be financed by the Interconnection Customer are also to be financed by one or more other Interconnection Customers, then Section 11.4.2.2 shall apply, except that the Interconnection Customer shall not be reimbursed for its share of any actual costs incurred or irrevocably committed by the applicable Participating TO(s) for Construction Activities.

**11.4.2.4 After Commencement of Construction Activities.**

Except as otherwise provided in Section 11.4.2.3, once Construction Activities on Network Upgrades on behalf of the Interconnection Customer commence, any withdrawal of the Interconnection Request or termination of the GIA by the Interconnection Customer will be treated as follows:

The applicable Participating TO(s) shall liquidate the Interconnection Financial Security, or balance thereof, posted by the Interconnection

Customer for Network Upgrades at the time of withdrawal.

To the extent the amount of the liquidated Interconnection Financial Security plus capital, if any, separately provided by the Interconnection Customer to satisfy its obligation to finance Network Upgrades exceeds the total cost responsibility for Network Upgrades assigned to the Interconnection Customer, the applicable Participating TO(s) shall remit to the Interconnection Customer the excess amount.

Withdrawal of an Interconnection Request or termination of a GIA shall result in the release to the Interconnection Customer of any Interconnection Financial Security posted by the Interconnection Customer for Participating TO Interconnection Facilities, except with respect to any amounts necessary to pay for costs incurred or irrevocably committed by the applicable Participating TO(s) on behalf of the Interconnection Customer for the Participating TO's Interconnection Facilities and for which the applicable Participating TO(s) has not been reimbursed in accordance with this Section.

**11.4.2.5 Notification to CAISO and Accounting by Applicable Participating TO(s).**

The applicable Participating TO(s) shall notify the CAISO within one (1) Business Day of liquidating any Interconnection Financial Security. Within twenty (20) calendar days of any liquidating event, the applicable Participating TO(s) shall provide the CAISO and Interconnection Customer with an accounting of the disposition of the proceeds of the liquidated Interconnection Financial Security and remit to the CAISO all proceeds not otherwise reimbursed to the Interconnection Customer or applied to costs incurred or irrevocably committed by the applicable Participating TO(s) on behalf of the Interconnection Customer in accordance with this Section.

All non-refundable portions of the Interconnection Financial Security remitted to the CAISO in accordance with this Section, and any non-refundable interconnection financial security funds that are received by the CAISO from a Participating TO pursuant to a requirement in the Participating TO's wholesale distribution tariff for such funds to be distributed by the CAISO, shall be treated in accordance with Section 7.6.

### 11.5 Adjusting Network Upgrade Postings Following Reassessment Process

For Interconnection Customers having selected Option (B), the most recent reassessment conducted under Section 7.4 in any Interconnection Study Cycle following the Interconnection Customer's receipt of its Phase II Interconnection study report shall provide the most recent cost estimates for the Interconnection Customer's ADNUs and the Interconnection Customer shall adjust its Interconnection Financial Security for Network Upgrades to correspond to the most recent estimate for ADNUs.

## Section 12 Engineering & Procurement ("E&P") Agreement

Prior to executing a GIA, an Interconnection Customer may, in order to advance the implementation of its interconnection, request and the applicable Participating TO(s) shall offer the Interconnection Customer, an E&P Agreement that authorizes the applicable Participating TO(s) to begin engineering and procurement of long lead-time items necessary for the establishment of the interconnection. However, the applicable Participating TO(s) shall not be obligated to offer an E&P Agreement if the Interconnection Customer is in Dispute Resolution as a result of an allegation that the Interconnection Customer has failed to meet any milestones or comply with any prerequisites specified in other parts of the GIDAP. The

E&P Agreement is an optional procedure. The E&P Agreement shall provide for the Interconnection Customer to pay the cost of all activities authorized by the Interconnection Customer and to make advance payments or provide other satisfactory security for such costs.

The Interconnection Customer shall pay the cost of such authorized activities and any cancellation costs for equipment that is already ordered for its interconnection, which cannot be mitigated as hereafter described, whether or not such items or equipment later become unnecessary. If the Interconnection Customer withdraws its application for interconnection or either Party terminates the E&P Agreement, to the extent the equipment ordered can be canceled under reasonable terms, the Interconnection Customer shall be obligated to pay the associated cancellation costs. To the extent that the equipment cannot be reasonably canceled, the applicable Participating TO(s) may elect: (i) to take title to the equipment, in which event the applicable Participating TO(s) shall refund the Interconnection Customer any amounts paid by Interconnection Customer for such equipment and shall pay the cost of delivery of such equipment, or (ii) to transfer title to and deliver such equipment to the Interconnection Customer, in which event the Interconnection Customer shall pay any unpaid balance and cost of delivery of such equipment.

**Section 13 Generator Interconnection Agreement (GIA)**

**13.1 Tender**

**13.1.1** The applicable Participating TO will tender a draft GIA, together with draft appendices, to the CAISO and the Interconnection Customer no later than the sum of (i) one hundred eighty (180) calendar days and (ii) the estimated time to construct the Interconnection Facilities and Network Upgrades indicated in the applicable study report needed by this or any other dependent project, prior to the In-Service Date. The applicable Participating TO may tender the draft GIA any time after the Phase II Study report is issued and before the determined tender date on its own accord or at the request of either the CAISO or the Interconnection Customer. Notwithstanding the foregoing, an Option (A) Generating Facility will not be tendered a GIA until it concludes its parking by accepting a TP Deliverability allocation or converting to Energy Only Deliverability Status pursuant to Section 8.9.2 and has made its second Interconnection Financial Security posting pursuant to Section 11.3. The CAISO and Participating TO will suspend negotiations for an Option (A) Generating Facility that has been tendered a GIA and subsequently elects to park its Interconnection Request. The draft GIA will be in the form of the FERC-approved GIA set forth in CAISO Tariff Appendix EE or Appendix FF, as applicable.

**13.1.2** Consistent with Section 13.1.1, when the transmission system of a Participating TO, in which the Point of Interconnection is not located, is affected, such Participating TO shall tender a separate agreement, in the form of the GIA, as appropriately modified.

**13.2 Negotiation**

The applicable Participating TO, the CAISO and the Interconnection Customer will negotiate concerning any disputed provisions of the appendices to the draft GIA for not more than one hundred twenty (120) calendar days after the Participating TO provides the Interconnection Customer and the CAISO with the draft GIA. If the Interconnection Customer determines that negotiations are at an impasse, it may request termination of the negotiations at any time after tender of the draft GIA. Within seven (7) calendar days of such request, the Interconnection Customer will request submission of the unexecuted GIA with FERC or initiate Dispute Resolution procedures pursuant to Section 15.5. If the Interconnection Customer requests termination but fails to request submission of the unexecuted GIA or to initiate Dispute Resolution within seven (7) calendar days, it will be deemed to have withdrawn its Interconnection Request.

Neither the CAISO nor the Participating TO may declare an impasse until one hundred twenty (120) calendar days after the draft GIA was tendered. If the CAISO or the Participating TO declares an

impasse, that party will file the GIA unexecuted with FERC within twenty one (21) calendar days.

Unless otherwise agreed by the Parties, if the Interconnection Customer has not executed and returned the GIA, requested filing of an unexecuted GIA, or initiated Dispute Resolution procedures pursuant to Section 15.5 within one hundred twenty (120) calendar days after issuance of the draft GIA, it shall be deemed to have withdrawn its Interconnection Request. The CAISO will provide to the Interconnection Customer a final GIA within ten (10) Business Days after the completion of the negotiation process and receipt of all requested information.

**13.2.1** Any time after the Phase II Study report is issued, if the Interconnection Customer's In-Service Date is not achievable based on the estimated time (i) to construct the longest lead Network Upgrade, Interconnection Facility, or Generating Facility as set forth in the Interconnection Customer's study reports, and (ii) the time needed to negotiate the GIA, the Interconnection Request shall be deemed withdrawn pursuant to Section 3.8.

## 13.3 Execution and Filing

The Interconnection Customer shall either: (i) execute the appropriate number of originals of the tendered GIA as specified in the directions provided by the CAISO and return them to the CAISO, as directed, for completion of the execution process; or (ii) request in writing that the applicable Participating TO(s) and CAISO file with FERC a GIA in unexecuted form. The GIA shall be considered executed as of the date that all three Parties have signed the GIA. As soon as practicable, but not later than ten (10) Business Days after receiving either the executed originals of the tendered GIA (if it does not conform with a FERC-approved standard form of interconnection agreement) or the request to file an unexecuted GIA, the applicable Participating TO(s) and CAISO shall file the GIA with FERC, as necessary, together with an explanation of any matters as to which the Interconnection Customer and the applicable Participating TO(s) or CAISO disagree and support for the costs that the applicable Participating TO(s) propose to charge to the Interconnection Customer under the GIA. An unexecuted GIA should contain terms and conditions deemed appropriate by the applicable Participating TO(s) and CAISO for the Interconnection Request. If the Parties agree to proceed with design, procurement, and construction of facilities and upgrades under the agreed-upon terms of the unexecuted GIA, they may proceed pending FERC action.

### 13.3.1 Implementation Deposit

Within thirty (30) days of the effective date of the GIA, the Interconnection Customer will provide the CAISO with a $35,000 implementation deposit. Generating facilities interconnecting pursuant to a Participating TO Wholesale Distribution Access Tariff must submit a $6,000 implementation deposit at the commencement of the CAISO new resource implementation process. The CAISO will deposit the implementation deposit in an interest bearing account at a bank or financial institution designated by the CAISO. The implementation deposit will be applied to pay for prudent costs incurred by the CAISO or third parties at the direction of the CAISO to manage the Interconnection Request between GIA execution and the Commercial Operation Date, including without limitation executing GIA amendments, modeling and testing for synchronization, preparing for metering and telemetry, and incorporating the Generating Units into the CAISO Markets. The CAISO will not use implementation deposit funds to offset or obviate processes that require separate deposits under this GIDAP, including without limitation Material Modification Assessments, Permissible Technological Advancements, and Limited Operation Studies.

The Interconnection Customer will be responsible for the actual costs incurred by the CAISO and applicable Participating TO(s). If the actual costs are less than the deposit provided by the Interconnection Customer, the Interconnection Customer will be refunded the balance, including interest earned. If the actual costs are greater than the deposit provided by the Interconnection Customer, the Interconnection Customer will pay the balance within thirty (30) days of being invoiced. The Participating TO(s) will invoice the CAISO for any work within seventy-five (75)

days of the Commercial Operation Date or withdrawal, and, within thirty (30) days thereafter, the CAISO will issue an invoice or refund to the Interconnection Customer, as applicable, based upon such submitted Participating TO invoices and the CAISO's own costs.

### 13.4 Commencement of Interconnection Activities

If the Interconnection Customer executes the final GIA, the applicable Participating TO(s), CAISO and the Interconnection Customer shall perform their respective obligations in accordance with the terms of the GIA, subject to modification by FERC. Upon submission of an unexecuted GIA, the Interconnection Customer, applicable Participating TO(s) and CAISO may proceed to comply with the unexecuted GIA, pending FERC action.

### 13.5 Interconnection Customer to Meet PTO Handbook Requirements

The Interconnection Customer's Interconnection Facilities shall be designed, constructed, operated and maintained in accordance with the applicable Participating TO's Interconnection Handbook.

## Section 14 PTOs Interconnection Facilities and Network Upgrades

### 14.1 Schedule

The applicable Participating TO(s) and the Interconnection Customer shall negotiate in good faith concerning a schedule for the construction of the applicable Participating TO's Interconnection Facilities and the Network Upgrades.

### 14.2 Construction Sequencing

#### 14.2.1 General

In general, the sequence of construction of Stand Alone Network Upgrades or other Network Upgrades for a single Interconnection Request, or Network Upgrades identified for the interconnection of Generating Facilities associated with multiple Interconnection Requests, shall be determined, to the maximum extent practical, in a manner that accommodates the proposed Commercial Operation Date set forth in the GIA of the Interconnection Customer(s) associated with the Stand Alone Network Upgrades or other Network Upgrades.

#### 14.2.2 Construction of Network Upgrades that are or were an Obligation of an Entity other than the Interconnection Customer

The applicable Participating TO(s) shall be responsible for financing and constructing any Network Upgrades necessary to support the interconnection of the Generating Facility of an Interconnection Customer with a GIA whenever the Network Upgrades were included in the Interconnection Base Case Data for a Phase II Interconnection Study on the basis that they were Network Upgrades associated with Generating Facilities of Interconnection Customers that have an executed GIA (or its equivalent predecessor agreement) or unexecuted GIA (or its equivalent predecessor agreement) filed with FERC, and such GIA specifies that the Participating TO would construct the Network Upgrades, and either:

(i) the Network Upgrades will not otherwise be completed because such GIA or equivalent predecessor agreement was subsequently terminated or the Interconnection Request has otherwise been withdrawn; or

(ii) the Network Upgrades will not otherwise be completed in time to support the

Interconnection Customer's In-Service Date because construction has not commenced in accordance with the terms of such GIA (or its equivalent predecessor agreement).

Where the Participating TO is constructing ADNUs for Option (B) Interconnection Customers and one of the two conditions above occurs, the Participating TO shall continue to construct such ADNUs with financing provided from the Interconnection Financial Security of those Option (B) Interconnection Customers' Interconnection referred to above, with any additional financing requirements to be reapportioned among those remaining Option (B) Interconnection Customers who still need the ADNUs.

The obligation under this Section arises only after the CAISO, in coordination with the applicable Participating TO(s), determines that the Network Upgrades remain needed to support the interconnection of the Interconnection Customer's Generating Facility notwithstanding, as applicable, the absence or delay of the Generating Facility that is contractually, or was previously contractually, associated with the Network Upgrades.

Further, to the extent the timing of such Network Upgrades was not accounted for in determining a reasonable Commercial Operation Date among the CAISO, applicable Participating TO(s), and the Interconnection Customer as part of the Phase II Interconnection Study, the applicable Participating TO(s) will use Reasonable Efforts to ensure that the construction of such Network Upgrades can accommodate the Interconnection Customer's proposed Commercial Operation Date. If, despite Reasonable Efforts, it is anticipated that the Network Upgrades cannot be constructed in time to accommodate the Interconnection Customer's proposed Commercial Operation Date, the Interconnection Customer may commit to pay the applicable Participating TO(s) any costs associated with expediting construction of the Network Upgrades to meet the original proposed Commercial Operation Date. The expediting costs under Section shall be in addition to the Interconnection Customer's cost responsibility.

### 14.2.3 Advancing Construction of Network Upgrades that are Part of the CAISO's Transmission Plan

An Interconnection Customer with a GIA, in order to maintain its In-Service Date as specified in the GIA, may request that the CAISO and applicable Participating TO(s) advance to the extent necessary the completion of Network Upgrades that: (i) are necessary to support such In-Service Date and (ii) would otherwise not be completed, pursuant to an approved CAISO Transmission Plan covering the PTO Service Territory of the applicable Participating TO(s), in time to support such In-Service Date. Upon such request, the applicable Participating TO(s) will use Reasonable Efforts to advance the construction of such Network Upgrades to accommodate such request; provided that the Interconnection Customer commits to pay the applicable Participating TO(s) any associated expediting costs. The Interconnection Customer shall be entitled to refunds, if any, in accordance with the GIA, for any expediting costs paid.

### 14.2.4 Limited Operation Study

**14.2.4.1** Pursuant to Article 5.9 of the Large Generator Interconnection Agreement set forth in Appendices V, BB, CC, and EE, Generating Facilities may request a limited operation study. The Participating TO and/or the CAISO, as applicable, will, upon the request and at the expense of the Interconnection Customer, perform operating studies on a timely basis to determine the extent to which the Generating Unit and the Interconnection Customer's Interconnection Facilities may operate prior to the completion of the Participating TO's Interconnection Facilities or Network Upgrades consistent with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice. The

Participating TO and the CAISO will permit the Interconnection Customer to operate the Generating Unit and the Interconnection Customer's Interconnection Facilities in accordance with the results of such studies. To the extent study assumptions change, the CAISO and Participating TO will update study results as needed.

**14.2.4.2** The Generating Unit owner will provide the CAISO a $10,000 deposit for the limited operation study with the request. Except as provided below, any limited operation study will be concluded, and a response provided to the Generating Unit owner in writing, within forty-five (45) calendar days from when the CAISO receives all of the following: the Generating Unit owner's written approval of the limited operation study plan, technical data required to assess the request, and the $10,000 deposit. If the limited operation study cannot be completed within that time period, the CAISO will notify the Generating Unit owner and provide an estimated completion date and an explanation of the reasons why additional time is required.

Notwithstanding any other provision, all refunds pursuant to this Appendix DD will be processed in accordance with the CAISO's generally accepted accounting practices, including monthly batched deposit refund disbursements. Any CAISO deadline will be tolled to the extent the Interconnection Customer has not provided the CAISO with the appropriate documents to facilitate the Interconnection Customer's refund, or if the Interconnection Customer has any outstanding invoice balance due to the CAISO on another project owned by the same Interconnection Customer.

**14.2.4.3** The Generating Unit owner will be responsible for the actual costs incurred by the CAISO and the Participating TO(s) in conducting the modification assessment. If the actual costs of the limited operation study are less than the deposit provided by the Generating Unit owner, the Generating Unit owner will be refunded the balance. If the actual costs of the limited operation study are greater than the deposit provided by the Generating Unit owner, the Generating Unit owner shall pay the balance within thirty (30) days of being invoiced. The CAISO will coordinate the request with the Participating TO(s). The Participating TO(s) will invoice the CAISO for any limited operation study work within seventy-five (75) calendar days of completion of the study, and, within thirty (30) days of payment of the Participating TO(s) invoice, the CAISO will issue an invoice or refund to the Generating Unit owner, as applicable, based upon such submitted Participating TO invoices and the CAISO's costs for the assessment.

## 14.3 Network Upgrades

With the exception of LDNUs and ADNUs for Option (B) Generating Facilities that were not allocated TP Deliverability, Network Upgrades will be constructed by the applicable Participating TO(s). Interconnection Customers may, at their discretion, select parties other than the applicable PTOs to construct certain LDNUs and ADNUs required by their Option (B) Generating Facilities that are not allocated TP Deliverability, if such LDNUs and ADNUs are eligible for construction by parties other than the applicable PTO pursuant to Section 24.5.2 of the CAISO Tariff. Such ADNUs and LDNUs will be incorporated into the CAISO Controlled Grid pursuant to the provisions for Merchant Transmission Facilities in CAISO Tariff Sections 24.4.6.1, and 36.11. Unless the Interconnection Customer elects construction by a party other than the applicable Participating TO, the applicable Participating TO(s) will be obligated to construct the LDNUs and ADNUs This Section shall not apply to an Interconnection Customer's right to build Stand Alone Network Upgrade(s) in accordance with the LGIA.

### 14.3.1 Initial Funding

Assigned Network Upgrades shall be funded by the Interconnection Customer(s) either by means of drawing down the Interconnection Financial Security or by the provision of additional capital, at each Interconnection Customer's election, up to a maximum amount no greater than that established by the Current Cost Responsibility assigned to each Interconnection Customer(s). Current Cost Responsibility may be adjusted consistent with this GIDAP and up to the Interconnection Customer's Maximum Cost Responsibility, but the applicable Participating TO(s) shall be responsible for funding any capital costs for the Assigned Network Upgrades that exceed the Current Cost Responsibility assigned to the Interconnection Customer(s).

(a) Where the funding responsibility for any RNUs, LOPNUs, and LDNUs has been assigned to a single Interconnection Customer, the applicable Participating TO(s) shall invoice the Interconnection Customer under LGIA Article 12.1 or SGIA Article 6.1, whichever is applicable, up to a maximum amount no greater than that established by the Current Cost Responsibility assigned to each Interconnection Customer(s) for the RNUs, LOPNUs, or LDNUs, respectively.

(b) Where the funding responsibility for an RNU, LOPNU, or LDNU has been assigned to more than one Interconnection Customer in accordance with this GIDAP, the applicable Participating TO(s) shall invoice each Interconnection Customer under LGIA Article 12.1 or SGIA Article 6.1, whichever is applicable, for such Network Upgrades in accordance with their respective Current Cost Responsibilities. Each Interconnection Customer may be invoiced up to a maximum amount no greater than that established by the Current Cost Responsibility assigned to that Interconnection Customer.

(c) Where the funding responsibility for an ADNU being constructed by one or more Participating TO has been assigned to more than one Option (B) Interconnection Customer, the applicable Participating TO(s) shall invoice each Interconnection Customer under LGIA Article 12.1 or SGIA Article 6.1, whichever is applicable, for such ADNUs based on their respective Current Cost Responsibilities.

Any permissible extension of the Commercial Operation Date of a Generating Facility will not alter the Interconnection Customer's obligation to finance its Assigned Network Upgrades where the Network Upgrades are required to meet the earlier Commercial Operation Date(s) of other Generating Facilities that have also been assigned cost responsibility for the Network Upgrades.

### 14.3.2 Repayment of Amounts Advanced for Network Upgrades and Refund of Interconnection Financial Security

#### 14.3.2.1 Repayment of Amounts Advanced Regarding Non-Phased Generating Facilities

An Interconnection Customer with a non-Phased Generating Facility in Queue Cluster 5 or earlier, or an Interconnection Customer in the Independent Study Process or the Fast Track Process that has been tendered a Generator Interconnection Agreement before December 19, 2014, shall be entitled to a repayment for the Interconnection Customer's contribution to the cost of Network Upgrades commencing upon the Commercial Operation Date of its Generating Facility.

An Interconnection Customer with a non-Phased Generating Facility in Queue

Cluster 6 or later, or an Interconnection Customer in the Independent Study Process or the Fast Track Process that has not been tendered an Interconnection Agreement before December 19, 2014, shall be entitled to repayment for the Interconnection Customer's contribution to the cost of Network Upgrades placed in service on or before the Commercial Operation Date of its Generating Facility, commencing upon the Commercial Operation Date of the Generating Facility. Repayment for the Interconnection Customer's contribution to the cost of Network Upgrades placed into service after the Commercial Operation Date of its Generating Facility shall, for each of these Network Upgrades, commence no later than the later of: (i) the first month of the calendar year following the year in which the Network Upgrade is placed into service or (ii) 90 days after the Network Upgrade is placed into service.

An Interconnection Customer subject to this Section 14.3.2.1 shall be entitled to repayment for its contribution to the cost of Network Upgrades as follows:

(1) For RNUs, in accordance with the Interconnection Customer's cost responsibility assigned up to a maximum of $60,000 per MW of generating capacity as specified in the GIA. The CAISO will publish an annual inflation factor and adjusted amount for this figure with the per unit cost publication on the CAISO Website pursuant to Section 6.4 of this GIDAP. Interconnection Customers will be entitled to repayment subject to the figure corresponding to their Commercial Operation Date.

(2) For LDNUs and LOPNUs, except for LDNUs for Option (B) Generating Facilities that were not allocated TP Deliverability, in accordance with the Interconnection Customer's Current Cost Responsibility.

(3) Option (B) Generating Facilities that were not allocated TP Deliverability will not receive repayment for LDNUs or ADNUs.

Unless an Interconnection Customer has provided written notice to the CAISO that it is declining all or part of such repayment, such amounts shall include any tax gross-up or other tax-related payments associated with the Network Upgrades not refunded to the Interconnection Customer, and shall be paid to the Interconnection Customer by the applicable Participating TO(s) on a dollar-for-dollar basis either through (1) direct payments made on a levelized basis over the five-year period commencing on the applicable date as provided for in this Section 14.3.2.1; or (2) any alternative payment schedule that is mutually agreeable to the Interconnection Customer and Participating TO, provided that such amount is paid within five (5) years of the applicable commencement date.

For Network Upgrades the Interconnection Customer funded but did not receive repayment, the Interconnection Customer will be eligible to receive Merchant Transmission Congestion Revenue Rights (CRRs) in accordance with CAISO Tariff Section 36.11 associated with those Network Upgrades, or portions thereof that were funded by the Interconnection Customer. Such CRRs would take effect upon the Commercial Operation Date of the Generating Facility in accordance with the GIA.

**14.3.2.2 Repayment of Amounts Advanced Regarding Phased Generating Facilities**

Upon the Commercial Operation Date of each phase of a Phased Generating Facility, unless the Interconnection Customer has provided written notice to the CAISO that it is declining all or part of such repayment, the Interconnection

Customer shall be entitled to a repayment for the Interconnection Customer's contribution to the cost of Network Upgrades for that completed phase in accordance with the Interconnection Customer's Current Cost Responsibility assigned for the phase and subject to the limitations specified in Section 14.3.2.1, if the following conditions are satisfied as described below:

(a) The Generating Facility is capable of being constructed in phases;

(b) The Generating Facility is specified in the GIA as being constructed in phases;

(c) The completed phase corresponds to one of the phases specified in the GIA;

(d) The phase has achieved Commercial Operation and the Interconnection Customer has tendered notice of the same pursuant to the GIA;

(e) All parties to the GIA have confirmed that the completed phase meets the requirements set forth in the GIA and any other operating, metering, and interconnection requirements to permit generation output of the entire capacity of the completed phase as specified in the GIA;

(f) The Network Upgrades necessary for the completed phase to meet the desired level of Deliverability are in service; and

(g) The Interconnection Customer has posted one hundred (100) percent of the Interconnection Financial Security required for the Network Upgrades for all the phases of the Generating Facility (or if less than one hundred (100) percent has been posted, then all required Interconnection Financial Security instruments to the date of commencement of repayment).

Following satisfaction of these conditions (a) through (g), an Interconnection Customer in a Queue Cluster earlier than Queue Cluster 5, or an Interconnection Customer in the Independent Study Process or the Fast Track Process that has been tendered a Generator Interconnection Agreement before December 19, 2014, shall be entitled to receive a partial repayment of its financed cost responsibility in an amount equal to the percentage of the Generating Facility declared to be in Commercial Operation multiplied by the cost of the Network Upgrades associated with the completed phase. The Interconnection Customer shall be entitled to repayment in this manner for each completed phase until the entire Generating Facility is completed.

Following satisfaction of these conditions (a) through (e) and (g), an Interconnection Customer in Queue Cluster 6 or a later Queue Cluster, or an Interconnection Customer in the Independent Study Process or the Fast Track Process that has not been tendered a Generator Interconnection Agreement before December 19, 2014, shall be entitled to receive a repayment of its financed cost responsibility for the Network Upgrades associated with the completed phase that have been placed in service. The Interconnection Customer shall be entitled to repayment in this manner for each completed phase until the entire Generating Facility is completed. With respect to any Network Upgrades necessary for a completed phase to meet its desired level of deliverability that are not in service by the time the phase achieves Commercial Operation, repayment for each such Network Upgrade will commence no later than the later of: (i) the first month of the calendar year following the year in

which the Network Upgrade is placed into service or (ii) 90 days after the Network Upgrade is placed into service.

A reduction in the electrical output (MW capacity) of the Generating Facility pursuant to the CAISO Tariff shall not diminish the Interconnection Customer's right to repayment pursuant to this Section 14.3.2.2. If the GIA includes a partial termination provision and the partial termination right has been exercised with regard to a phase that has not been built, then the Interconnection Customer's eligibility for repayment under this Section 14.3.2.2 as to the remaining phases shall not be diminished. If the Interconnection Customer completes one or more phases and then defaults on the GIA, the Participating TO and the CAISO shall be entitled to offset any losses or damages resulting from the default against any repayments made for Network Upgrades related to the completed phases provided that the party seeking to exercise the offset has complied with any requirements which may be required to apply the stream of payments utilized to make the repayment to the Interconnection Customer as an offset.

Any repayment amount provided pursuant to this Section 14.3.2.2 shall include any tax gross-up or other tax-related payments associated with the Network Upgrades not refunded to the Interconnection Customer, and shall be paid to the Interconnection Customer by the applicable Participating TO(s) on a dollar-for-dollar basis either through (1) direct payments made on a levelized basis over the five-year period commencing on the applicable date as provided for in this Section 14.3.2.2 ; or (2) any alternative payment schedule that associates the completion of Network Upgrades with the completion of particular phases and that is mutually agreeable to the Interconnection Customer and Participating TO, provided that such amount is paid within five (5) years of the applicable commencement date.

#### 14.3.2.3 Interest Payments and Assignment Rights

Any phased or non-phased repayment shall include interest calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date of any payment for Network Upgrades through the date on which the Interconnection Customer receives a repayment of such payment. The Interconnection Customer may assign such repayment rights to any person.

### 14.4 Special Provisions for Affected Systems, Other Affected PTOs

The Interconnection Customer shall enter into an agreement with the owner of the Affected System and/or other affected Participating TO(s), as applicable. The agreement shall specify the terms governing payments to be made by the Interconnection Customer to the owner of the Affected System and/or other affected Participating TO(s). If the affected entity is another Participating TO, the initial form of agreement will be the GIA, as appropriately modified.

#### 14.4.1 Cost Allocation, Interconnection Financial Security, and Reimbursement for Multiple Participating TOs

Interconnection Studies will list separate cost estimates for facilities and Network Upgrades required on the interconnecting Participating TO and affected Participating TO's systems. These separate sums will produce a single, combined Maximum Cost Responsibility and a single, combined Maximum Cost Exposure for the Interconnection Customer. Current Cost Responsibilities for each Participating TO's facilities and

Network Upgrades may be adjusted up to the Interconnection Customer's Maximum Cost Responsibility and Maximum Cost Exposure, as applicable.

The Interconnection Customer will post its initial and second Interconnection Financial Security to the interconnecting Participating TO only, for the facilities and Network Upgrades on both the interconnecting and affected Participating TOs' systems. The Interconnection Customer will post its third Interconnection Financial Security to each Participating TO based on the separate Current Cost Responsibilities for facilities and Network Upgrades on their respective systems.

Each Participating TO will repay amounts received for Network Upgrades pursuant to this GIDAP. Reimbursement for Reliability Network Upgrades will be paid by each Participating TO but subject to a single, combined maximum based upon the Interconnection Customer's generating capacity, as described in Section 14.3.2. If the amount funded for the Reliability Network Upgrades exceeds this maximum, each Participating TO will repay the Interconnection Customer proportional to its share of the Interconnection Customer's Current Cost Responsibility for the Reliability Network Upgrades.

## 14.5 CAISO as an Affected System

An interconnection customer in Balancing Authority Areas that may affect the reliability of the CAISO Controlled Grid will execute the CAISO as an Affected System Study Agreement, Appendix B.23 to the CAISO Tariff, to allow the CAISO and affected Participating TO(s) to study the impact of the interconnection. The agreement will specify the terms governing the study. In performing the study, the CAISO and Participating TO will use the Base Case effective upon execution of the Affected System Study Agreement.

### 14.5.1 Cost Allocation and Interconnection Financial Security

Affected system studies will list separate cost estimates for facilities and Network Upgrades required in the CAISO Balancing Authority Area. These separate sums may be adjusted over time based on actual costs incurred. The interconnection customer will post financial security with the impacted Participating TO(s) for facilities and Network Upgrades. The interconnection customer will be eligible for repayment of amounts advanced for Network Upgrades consistent with Section 14.3.2.1 for Interconnection Customers in Queue Cluster 6 and later.

# Section 15 Miscellaneous

## 15.1 Confidentiality

For the purposes of this Section 15.1, "Party" or "Parties" shall mean the CAISO, Participating TO(s), Interconnection Customer or any combination of the CAISO, Participating TO(s) or the Interconnection Customer.

Confidential Information shall include, without limitation, all information relating to a Party's technology, research and development, business affairs, and pricing.

Information is Confidential Information only if it is clearly designated or marked in writing as confidential on the face of the document, or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Parties receiving the information that the information is confidential.

If requested by any Party, the other Parties shall provide in writing, the basis for asserting that the information referred to in this Section warrants confidential treatment, and the requesting Party

may disclose such writing to the appropriate Governmental Authority. Each Party shall be responsible for the costs associated with affording confidential treatment to its information.

These confidentiality provisions are limited to information provided pursuant to this GIDAP.

**15.1.1 Scope**

Confidential Information shall not include information that the receiving Party can demonstrate: (1) is generally available to the public other than as a result of a disclosure by the receiving Party; (2) was in the lawful possession of the receiving Party on a non-confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a third party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the disclosing Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the disclosing Party; (5) is, or becomes, publicly known, through no wrongful act or omission of the receiving Party or breach of the GIA; or (6) is required, in accordance with Section 15.1.6, Order of Disclosure, to be disclosed by any Governmental Authority or is otherwise required to be disclosed by law or subpoena, or is necessary in any legal proceeding establishing rights and obligations under the GIDAP. Information designated as Confidential Information will no longer be deemed confidential if the Party that designated the information as confidential notifies the other Parties that it no longer is confidential.

**15.1.2. Release of Confidential Information**

No Party shall release or disclose Confidential Information to any other person, except to its employees, consultants, Affiliates (limited by FERC's Standards of Conduct requirements set forth in Part 358 of FERC's Regulations, 18 C.F.R. Part 358), or to Affected Systems, or to parties who may be or considering providing financing to or equity participation with the Interconnection Customer, or to potential purchasers or assignees of the Interconnection Customer, on a need-to-know basis in connection with these procedures, unless such person has first been advised of the confidentiality provisions of this Section and has agreed to comply with such provisions. Notwithstanding the foregoing, a Party providing Confidential Information to any person shall remain primarily responsible for any release of Confidential Information in contravention of this Section.

**15.1.3 Rights**

Each Party retains all rights, title, and interest in the Confidential Information that each Party discloses to the other Parties. The disclosure by each Party to the other Parties of Confidential Information shall not be deemed a waiver by a Party or any other person or entity of the right to protect the Confidential Information from public disclosure.

**15.1.4 No Warranties**

By providing Confidential Information, no Party makes any warranties or representations as to its accuracy or completeness. In addition, by supplying Confidential Information, no Party obligates itself to provide any particular information or Confidential Information to the other Parties nor to enter into any further agreements or proceed with any other relationship or joint venture.

**15.1.5 Standard of Care**

Each Party shall use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from

unauthorized disclosure, publication or dissemination. Each Party may use Confidential Information solely to fulfill its obligations to the other Parties under these procedures or its regulatory requirements.

**15.1.6 Order of Disclosure**

If a court or a Government Authority or entity with the right, power, and apparent authority to do so requests or requires any Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party shall provide the other Parties with prompt notice of such request(s) or requirement(s) so that the other Parties may seek an appropriate protective order or waive compliance with the terms of these confidentiality provisions . Notwithstanding the absence of a protective order or waiver, the Party may disclose such Confidential Information which, in the opinion of its counsel, the Party is legally compelled to disclose. Each Party will use Reasonable Efforts to obtain reliable assurance that confidential treatment will be accorded any Confidential Information so furnished.

**15.1.7 Remedies**

Monetary damages are inadequate to compensate a Party for another Party's breach of its obligations under this Section 15.1. Each Party accordingly agrees that the other Parties shall be entitled to equitable relief, by way of injunction or otherwise, if the first Party breaches or threatens to breach its obligations under this Section 15.1, which equitable relief shall be granted without bond or proof of damages, and the receiving Party shall not plead in defense that there would be an adequate remedy at law. Such remedy shall not be deemed an exclusive remedy for the breach of this Section 15.1, but shall be in addition to all other remedies available at law or in equity. Further, the covenants contained herein are necessary for the protection of legitimate business interests and are reasonable in scope. No Party, however, shall be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with this Section 15.1.

**15.1.8 Disclosure to FERC, its Staff, or a State**

Notwithstanding anything in this Section 15.1 to the contrary, and pursuant to 18 C.F.R. section 1b.20, if FERC or its staff, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence, the Party shall provide the requested information to FERC or its staff, within the time provided for in the request for information. In providing the information to FERC or its staff, the Party must, consistent with 18 C.F.R. Section 388.112, request that the information be treated as confidential and non-public by FERC and its staff and that the information be withheld from public disclosure. Parties are prohibited from notifying the other Parties prior to the release of the Confidential Information to FERC or its staff. The Party shall notify the other applicable Parties when it is notified by FERC or its staff that a request to release Confidential Information has been received by FERC, at which time any of the Parties may respond before such information would be made public, pursuant to 18 C.F.R. Section 388.112. Requests from a state regulatory body conducting a confidential investigation shall be treated in a similar manner, consistent with applicable state rules and regulations.

**15.1.9** Subject to the exception in Section 15.1.8, any Confidential Information shall not be disclosed by the other Parties to any person not employed or retained by the other Parties, except to the extent disclosure is (i) required by law; (ii) reasonably deemed by the disclosing Party to be required to be disclosed in connection with a dispute between or among the Parties, or the defense of litigation or dispute; (iii) otherwise permitted by

consent of the other Parties, such consent not to be unreasonably withheld; or (iv) necessary to fulfill its obligations under this GIDAP or as a transmission service provider or a Balancing Authority including disclosing the Confidential Information to an RTO or ISO or to a subregional, regional or national reliability organization or planning group. The Party asserting confidentiality shall notify the other Parties in writing of the information it claims is confidential. Prior to any disclosures of another Party's Confidential Information under this subparagraph, or if any third party or Governmental Authority makes any request or demand for any of the information described in this subparagraph, the disclosing Party agrees to promptly notify the other Party in writing and agrees to assert confidentiality and cooperate with the other Party in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order or other reasonable measures.

**15.1.10** This provision shall not apply to any information that was or is hereafter in the public domain (except as a result of a breach of this provision).

**15.1.11** The Participating TO or CAISO shall, at the Interconnection Customer's election, destroy, in a confidential manner, or return the Confidential Information provided at the time of Confidential Information is no longer needed.

### 15.2 Delegation of Responsibility

The CAISO and the Participating TOs may use the services of subcontractors as deemed appropriate to perform their obligations under this GIDAP. The applicable Participating TO or CAISO shall remain primarily liable to the Interconnection Customer for the performance of its respective subcontractors and compliance with its obligations of this GIDAP. The subcontractor shall keep all information provided confidential and shall use such information solely for the performance of such obligation for which it was provided and no other purpose.

### 15.3 [Not Used]

### 15.4 [Not Used]

### 15.5 Disputes

If an Interconnection Customer disputes withdrawal of its Interconnection Request under Section 3.8, the CAISO will forward any information regarding the disputed withdrawal received under Section 3.8 within one (1) Business Day to the executive dispute committee, consisting of the Vice President responsible for administration of this GIDAP, the CAISO Vice President responsible for customer affairs, and an additional Vice President. The CAISO may replace Vice Presidents unavailable during the five (5) Business Days with another CAISO Vice President. The executive dispute committee shall have five (5) Business Days to determine whether or not to restore the Interconnection Request. If the executive dispute committee concludes that the Interconnection Request should have been withdrawn, the Interconnection Customer may seek relief in accordance with the CAISO ADR Procedures.

All disputes, other than those arising from Section 3.8, arising out of or in connection with this GIDAP whereby relief is sought by or from the CAISO shall be settled in accordance with the CAISO ADR Procedures.

Disputes arising out of or in connection with this GIDAP not subject to the CAISO ADR Procedures shall be resolved as follows:

#### 15.5.1 Submission

In the event either Party has a dispute, or asserts a claim, that arises out of or in

connection with the GIA, the GIDAP, or their performance, such Party (the "disputing Party") shall provide the other Party with written notice of the dispute or claim ("Notice of Dispute"). Such dispute or claim shall be referred to a designated senior representative of each Party for resolution on an informal basis as promptly as practicable after receipt of the Notice of Dispute by the other Party. In the event the designated representatives are unable to resolve the claim or dispute through unassisted or assisted negotiations within thirty (30) calendar days of the other Party's receipt of the Notice of Dispute, such claim or dispute may, upon mutual agreement of the Parties, be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below. In the event the Parties do not agree to submit such claim or dispute to arbitration, each Party may exercise whatever rights and remedies it may have in equity or at law consistent with the terms of the GIA and GIDAP.

**15.5.2 External Arbitration Procedures**

Any arbitration initiated under these procedures shall be conducted before a single neutral arbitrator appointed by the Parties. If the Parties fail to agree upon a single arbitrator within ten (10) calendar days of the submission of the dispute to arbitration, each Party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty (20) calendar days select a third arbitrator to chair the arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the Parties an opportunity to be heard and, except as otherwise provided herein, shall conduct the arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("Arbitration Rules") and any applicable FERC regulations or RTO rules; provided, however, in the event of a conflict between the Arbitration Rules and the terms of this Section 15.5, the terms of this Section 15.5 shall prevail.

**15.5.3 Arbitration Decisions**

Unless otherwise agreed by the Parties, the arbitrator(s) shall render a decision within ninety (90) calendar days of appointment and shall notify the Parties in writing of such decision and the reasons therefore. The arbitrator(s) shall be authorized only to interpret and apply the provisions of the GIA and shall have no power to modify or change any provision of the GIA and in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in the Federal Arbitration Act or the Administrative Dispute Resolution Act. The final decision of the arbitrator must also be filed with FERC if it affects jurisdictional rates, terms and conditions of service, Interconnection Facilities, or Network Upgrades.

**15.5.4 Costs**

Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable: (1) the cost of the arbitrator chosen by the Party to sit on the three member panel and one half of the cost of the third arbitrator chosen; or (2) one half the cost of the single arbitrator jointly chosen by the Parties.

**15.5.5 Non-binding Alternative Dispute Resolution**

If a Party has submitted a Notice of Dispute pursuant to Section 15.5.1, and the Parties are unable to resolve the claim or dispute through unassisted or assisted negotiations

within the thirty (30) calendar days provided in that section, and the Parties cannot reach mutual agreement to pursue the Section 15.5 arbitration process, a Party may request that the CAISO engage in non-binding Alternative Dispute Resolution pursuant to this section by providing written notice to the CAISO. Conversely, either Party may file a request for non-binding Alternative Dispute Resolution pursuant to this section without first seeking mutual agreement to pursue the Section 15.5 arbitration process. The process in this Section 15.5.5 shall serve as an alternative to, and not a replacement of, the Section 15.5 arbitration process. Pursuant to this process, the CAISO must within thirty (30) calendar days of receipt of the request for non-binding Alternative Dispute Resolution appoint a neutral decision-maker that is an independent subcontractor that shall not have any current or past substantial business or financial relationships with either Party. Unless otherwise agreed by the Parties, the decision-maker shall render a decision within sixty (60) calendar days of appointment and shall notify the Parties in writing of such decision and reasons therefore. This decision-maker shall be authorized only to interpret and apply the provisions of the GIDAP and GIA and shall have no power to modify or change any provision of the GIDAP and GIA in any manner. The result reached in this process is not binding, but, unless otherwise agreed, the Parties may cite the record and decision in the non-binding dispute resolution process in future dispute resolution processes, including in a Section 15.5 arbitration, or in a Federal Power Act section 206 complaint. Each Party shall be responsible for its own costs incurred during the process and the cost of the decision-maker shall be divided equally among each Party to the dispute.

## 15.6 Local Furnishing Bonds

### 15.6.1 Participating TOs that Own Facilities Financed by Local Furnishing Bonds

This provision is applicable only to a Participating TO that has financed facilities for the local furnishing of electric energy with Local Furnishing Bonds. Notwithstanding any other provisions of this , the Participating TO and the CAISO shall not be required to provide Interconnection Service to the Interconnection Customer pursuant to this and the GIA if the provision of such Interconnection Service would jeopardize the tax-exempt status of any Local Furnishing Bond(s) issued for the benefit of the Participating TO.

### 15.6.2 Alternative Procedures for Requesting Interconnection Service

If a Participating TO determines that the provision of Interconnection Service requested by the Interconnection Customer would jeopardize the tax-exempt status of any Local Furnishing Bond(s) issued for the benefit of the Participating TO, it shall advise the Interconnection Customer and the CAISO within (30) calendar days of receipt of the Interconnection Request.

The Interconnection Customer thereafter may renew its request for the same interconnection Service by tendering an application under Section 211 of the Federal Power Act, in which case the Participating TO, within ten (10) calendar days of receiving a copy of the Section 211 application, will waive its rights to a request for service under Section 213(a) of the Federal Power Act and to the issuance of a proposed order under Section 212(c) of the Federal Power Act, and the CAISO and Participating TO shall provide the requested Interconnection Service pursuant to the terms and conditions set forth in this and the GIA.

## 15.7 Change in CAISO Operational Control

If the CAISO no longer has control of the portion of the CAISO Controlled Grid at the Point of Interconnection during the period when an Interconnection Request is pending, the CAISO shall transfer to the applicable former Participating TO or successor entity which has ownership of the

Point of Interconnection any amount of the deposit or payment with interest thereon that exceeds the cost that it incurred to evaluate the request for interconnection. Any difference between such net deposit amount and the costs that the former Participating TO or successor entity incurs to evaluate the request for interconnection shall be paid by or refunded to the Interconnection Customer, as appropriate. The CAISO shall coordinate with the applicable former Participating TO or successor entity which has ownership of the Point of Interconnection to complete any Interconnection Study, as appropriate, that the CAISO has begun but has not completed. If the Participating TO has tendered a draft GIA to the Interconnection Customer but the Interconnection Customer has neither executed the GIA nor requested the filing of an unexecuted GIA with FERC, unless otherwise provided, the Interconnection Customer must complete negotiations with the applicable former Participating TO or successor entity which has the ownership of the Point of Interconnection.

## Section 16. Cluster 14 Unique Procedures

The CAISO tariff and the GIDAP will apply to Queue Cluster 14 with the following exceptions:

### 16.1 Study Procedures and Timelines

a) The CAISO will validate Cluster 14 Interconnection Requests by September 26, 2021. Interconnection Requests with deficiencies after that date will be deemed invalid and will not be included in Cluster 14.

b) GIDAP provisions stating when the CAISO and Participating TOs must initiate Interconnection Studies will not apply.

c) The CAISO will publish Phase I Interconnection Studies no later than September 15, 2022. The Phase I Interconnection Study will not include system-level stability analyses.

d) Interconnection Customers may submit, in writing, additional comments on the final Phase I Interconnection Study report up to (5) Business Days following the Results Meeting. Based on any discussion at the Results Meeting and any comments received, the CAISO (in consultation with the applicable Participating TO(s)) will determine, in accordance with Section 6.8, whether it is necessary to follow the final Phase I Interconnection Study report with a revised study report or an addendum. The CAISO will issue any such revised report or addendum to the Interconnection Customer no later than thirty (30) calendar days following the Results Meeting.

e) No later than January 13, 2023, Interconnection Customers must (1) submit an updated, valid dynamic model to the CAISO, (2) post their initial Interconnection Financial Security, and (3) have submitted an Appendix B that is deemed valid.

f) The CAISO will publish Phase II Interconnection Studies no later than January 31, 2024.

g) Phase I and Phase II Interconnection Study Results meetings will occur with ninety (90) days of publication.

h) The CAISO will publish the results of the TP Deliverability allocation process no later than May 31, 2024.

i) Interconnection Customers must post their second Interconnection Financial Security no later than July 1, 2024, unless parked pursuant to Sections 8.9 and 16.1(k).

j) Unless the CAISO issues a Market Notice stating otherwise, the CAISO will not open the Queue Cluster 15 Cluster Application Window in 2022. The CAISO will open the Queue Cluster 15 Cluster Application Window in 2023 pursuant to Section 3.3.

k) Deadlines related to Interconnection Customers that elect to park their Interconnection Requests will be extended consistent with this Section, including for Interconnection Financial Security postings. Parked Interconnection Customers must submit their second Interconnection Financial Security posting by the later of (a) May 29, 2026, or (b) sixty (60) days after the CAISO publishes the results of the TP Deliverability allocation process for those parked Interconnection Customers. Interconnection Customers eligible to park again pursuant to Section 8.9.4.1 must submit their second Interconnection Financial Security posting sixty (60) days after the CAISO publishes the results of the TP Deliverability allocation process for those parked Interconnection Customers.

(l) If an Interconnection Customer withdraws after posting its initial Interconnection Financial Security but before demonstrating Site Exclusivity, its Site Exclusivity Deposit will not be refunded, and will be processed with non-refundable funds described in Section 7.6.

(m) On or before their initial Interconnection Financial Security posting, Interconnection Customers proposing to use third-party Interconnection Facilities must provide documentation to the CAISO demonstrating they are negotiating or have secured rights on those Interconnection Facilities. On or before their second Interconnection Financial Security posting, such Interconnection Customers must provide documentation to the CAISO demonstrating they have secured rights on those Interconnection Facilities through their Commercial Operation Date.

The CAISO and Participating TOs will use Reasonable Efforts to meet all deadlines in the GIDAP and this Section 16, and may publish study results early or otherwise accelerate the interconnection process where possible. The CAISO will publish Interconnection Studies simultaneously for all the Participating TOs.

### 16.2 Cost Responsibility and Interconnection Financial Security

a) Maximum Cost Responsibility and Maximum Cost Exposure in the Phase I Interconnection Study will be advisory only. Only the Phase II Interconnection Study will set Interconnection Customers' binding Maximum Cost Responsibility and Maximum Cost Exposure.

b) Interconnection Customers will receive a complete refund of their initial Interconnection Financial Security posting if they withdraw before their second Interconnection Financial Security posting is due where: (1) their Maximum Cost Responsibility increases by twenty-five (25) percent or more between Phase I and Phase II; or (2) the anticipated completion of their longest lead-time Reliability Network Upgrade extends by one year or more between Phase I and Phase II.

### 16.3 Reliability Network Upgrade Prioritization

For any assigned Reliability Network Upgrades with construction schedules of four (4) or more years that delay an Interconnection Customer's earliest available In-Service Date by two (2) years or more, the CAISO and Participating TO will assess whether impacted Interconnection Customers may interconnect safely and reliably without the completion of all such Reliability Network Upgrades. Reliability Network Upgrades considered will include Precursor Network Upgrades approved in the Transmission Plan, and Assigned Network Upgrades. Interconnection Studies and GIAs will be updated to reflect where an Interconnection Customer may interconnect earlier under this Section 16.3, including whether there is insufficient projected margin such that a Limited Operation Study will be required.

The CAISO will post the methodology for this assessment on the CAISO Website. The CAISO will issue a Market Notice specifying the timeline for commencement of activities, for Interconnection Customer submissions, and anticipated release of results to Interconnection Customers. The CAISO will notify Interconnection Customers whether they have qualifying Reliability Network Upgrades and there may be available capacity to interconnect earlier at least thirty (30) days before the deadline to submit affidavits for scoring.

To participate, Interconnection Customers must submit affidavits on their project status. The CAISO will determine scores based on the criteria below under the methodology set forth in the Business Practice Manual:

(1) Permitting status.

a. The Interconnection Customer has received its final governmental permit or authorization allowing the Generating Facility to commence construction.

b. The Interconnection Customer has received a draft environmental report document (or equivalent environmental permitting document) indicating likely approval of the requested permit and/or which indicates that the permitting authority has not found an environmental impact which would likely prevent the permit approval.

c. The Interconnection Customer has applied for the necessary governmental permits or authorizations and the authority has deemed such documentation as data adequate for the authority to initiate its review process.

d. The Interconnection Customer has applied for the necessary governmental permit or authorization for the construction.

(2) Project financing status.

a. The Interconnection Customer is a Load Serving Entity constructing its project to serve its own Load pursuant to a regulatory requirement or meet its own Resource Adequacy obligation.

b. The Interconnection Customer has an executed power purchase agreement.

(3) GIA and posting status.

a. The Interconnection Customer has an executed GIA, has provided the Participating TO a notice to proceed to construction, and has provided its final Interconnection Financial Security or equivalent financing to the Participating TO, as agreed in its GIA.

b. The Interconnection Customer has an executed GIA and has provided the Participating TO a notice to proceed to construction.

c. The Interconnection Customer has an executed GIA or its GIA has been filed with FERC unexecuted and is still pending before or approved by FERC.

(4) Deliverability Network Upgrades status.

a. All of the Interconnection Customer's Delivery Network Upgrades are online, or the Interconnection Customer does not require Delivery Network Upgrades, including for Energy Only Interconnection Customers.

b. The Interconnection Customer is waiting for its Delivery Network Upgrades.

Interconnection Customers also must submit a $50,000 deposit by the deadline for affidavits. The Interconnection Customer will be responsible for the actual costs incurred by the CAISO and applicable Participating TO(s) in conducting the assessment. If the actual costs of the assessment are less than the deposit provided by the Interconnection Customer, the Interconnection Customer will be refunded the balance. If the actual costs of the assessment are greater than the deposit provided by the

Interconnection Customer, the Interconnection Customer shall pay the balance within thirty (30) days of being invoiced.

In allocating transmission capacity under this section, the CAISO, in coordination with the applicable Participating TO(s), will allocate transmission capacity based on the highest numerical score. The CAISO will resolve any ties for capacity from short-circuit related General Reliability Network Upgrades by short-circuit duty contribution, with the lowest contribution per MW prevailing. The CAISO will resolve any ties for capacity from power-flow related General Reliability Network Upgrades by flow contribution, with the lowest contribution prevailing. The CAISO will resolve any ties for capacity from Interconnection Reliability Network Upgrades by Generating Facility capacity, with the largest capacity prevailing.

## Section 17. Cluster 15 Unique Procedures

Notwithstanding Section 3.3.1, the CAISO will not open a Cluster Application Window in 2024. Except for this Section 17, Cluster 15 will be subject to the RIS and not the GIDAP.

### 17.1 Study Procedures and Timelines

a) Consistent with the process set forth in Section 3.5.2, the CAISO will validate Cluster 15 Interconnection Requests between January 1, 2025 and May 1, 2025. Interconnection Requests with deficiencies after that date will be deemed invalid and will not be included in Cluster 15. Interconnection Customers in Cluster 15 must submit any element required under Section 3.5.1 of the RIS not previously submitted before May 1, 2025.

b) Between October 1, 2024 and December 1, 2024, Interconnection Customers may submit any element required under Section 3.5.1 of the RIS not previously submitted. During this time, Interconnection Customers also may modify their Interconnection Requests (a) as permissible under Section 6.7.2.2 of this GIDAP; (b) to change generating technology or fuel; (c) to add or increase energy storage capacity; (d) to change their Points of Interconnection within the same Transmission Zone; and (e) to change their requested Deliverability Statuses. The CAISO will not accept any modification under this Section 17.1(b) that would result in increasing the Interconnection Service Capacity or Deliverability requested. Interconnection Customers modifying their Interconnection Requests must submit updated information required under Section 3.5 to reflect the modification. Except for changes to the Point of Interconnection, which must be submitted by December 1, 2024, modifications effected pursuant to this provision will not affect Interconnection Customers' rights to modify their Interconnection Requests after December 1, 2024 under the RIS.

c) An Interconnection Customers that withdraws its Interconnection Request prior to January 1, 2025 will receive a refund of its Interconnection Study Deposit, including any interest earned, minus any costs expended on the Interconnection Customer's behalf. If an Interconnection Customer submitted a Site Exclusivity Deposit, it will receive a complete refund of its Site Exclusivity Deposit, including any interest earned. Withdrawals effected pursuant to this provision will not affect Interconnection Customers' rights to withdraw after January 1, 2025, and receive any corresponding refund and interest under the RIS.

d) The CAISO will begin the Cluster 15 Cluster Study on June 1, 2025. With the commencement of the Cluster Study, the CAISO, Participating TOs, and Interconnection Customers will comply with all RIS provisions, schedules, rights, and obligations.

e) Load Serving Entities must comply with Section 4 of the RIS by October 1, 2024, and with Section 3.5.4 of the RIS by December 23, 2024.

f) Pursuant to Sections 3.5 and 4 of the RIS, the CAISO will notify Interconnection Customers they satisfied the scoring criteria, must participate in an auction, or failed the scoring criteria by

February 12, 2025. Interconnection Customers participating in an auction must submit bids by February 26, 2025. The CAISO will notify Interconnection Customers of the results of their auctions by March 5, 2025.

**Appendix 1 Interconnection Request**
**INTERCONNECTION REQUEST**

Provide one copy of this completed form pursuant to Section 7 of this Appendix 1 below.

1. The undersigned Interconnection Customer submits this request to interconnect its Generating Facility with the CAISO Controlled Grid pursuant to the CAISO Tariff (check one):
   _____ Fast Track Process.
   _____ Independent Study Process.
   _____ Queue Cluster process.
   _____ Annual Deliverability Assessment pursuant to Section 9.
2. This Interconnection Request is for (check one):
   _____ A proposed new Generating Facility.
   _____ An increase in the generating capacity or a Material Modification to an existing Generating Facility.

3. Requested Deliverability Statuses are (check one):

   On-Peak (for purposes of Net Qualifying Capacity):

   _ Full Capacity (For Independent Study Process and Queue Cluster Process only)
   (Note – Deliverability analysis for Independent Study Process is conducted with the next annual Cluster Study)
   _ Partial Deliverability for __ MW of electrical output (For Independent Study Process and Queue Cluster Process only)
   _ Energy Only

   Off-Peak:

   _Off-Peak Deliverable

   _Off-Peak Energy Only

4. The Interconnection Customer provides the following information:

   a. Address or location, including the county, of the proposed new Generating Facility site or, in the case of an existing Generating Facility, the name and specific location, including the county, of the existing Generating Facility;

      Project Name:_____

      Project Location:
      Street Address:_____
      City, State:_____
      County:_____
      Zip Code:_____
      GPS Coordinates:_____

   b. Maximum net megawatt electrical output (as defined by section 2.c of Attachment A to this appendix) of the proposed new Generating Facility or the amount of net megawatt increase in the generating capacity of an existing Generating Facility;

Maximum net megawatt electrical output (MW):_____ or
Net Megawatt increase (MW): _____

c. Type of project (i.e., gas turbine, hydro, wind, etc.) and general description of the equipment configuration (if more than one type is chosen include nameplate MW for each);

| Technology | Nameplate |
|---|---|
| ___ Cogeneration | ____ (MW) |
| ___ Reciprocating Engine | ____ (MW) |
| ___ Biomass | ____ (MW) |
| ___ Steam Turbine | ____ (MW) |
| ___ Gas Turbine | ____ (MW) |
| ___ Wind | ____ (MW) |
| ___ Hydro | ____ (MW) |
| ___ Photovoltaic | ____ (MW) |
| ___ Combined Cycle | ____ (MW) |

___Other (please describe):

General description of the equipment configuration (e.g. number, size, type, etc):

d. Proposed In-Service Date (first date transmission is needed to the facility), Trial Operation date and Commercial Operation Date by month, day, and year and term of service (dates must be sequential); _____

Proposed Trial Operation Date: _____
Proposed Commercial Operation Date: _____
Proposed Term of Service (years): _____

e. Name, address, telephone number, and e-mail address of the Interconnection Customer's contact person (primary person who will be contacted);

Name: _____
Title: _____
Company Name: _____
Street Address:_____
City, State: _____
Zip Code: _____
Phone Number:_____
Fax Number: _____
Email Address:_____

f. Approximate location of the proposed Point of Interconnection (i.e., specify transmission facility interconnection point name, voltage level, and the location of interconnection);

_____

g. Interconnection Customer data (set forth in Attachment A)

**The Interconnection Customer shall provide to the CAISO the technical data called for in Attachment A to this Interconnection Request. One (1) copy is required.**

h. Requested Interconnection Service Capacity (in MW) (if lower than the Generating Facility Capacity; may not exceed Generating Facility Capacity);

_____

5. Applicable deposit amount made payable to California ISO. Send check to CAISO (see section 7 below for details) along with the:
   a. Interconnection Request for processing.
   b. Attachment A (Interconnection Request Generating Facility Data).

6. Evidence of Site Exclusivity as specified in the GIDAP and name(s), address(es) and contact information of site owner(s) (check one):

____ Is attached to this Interconnection Request
____ Deposit in lieu of Site Exclusivity attached, Site Exclusivity will be provided at a later date in accordance with this GIDAP

7. This Interconnection Request shall be submitted to the CAISO representative indicated below:

California ISO
Attn: Grid Assets
P.O. Box 639014
Folsom, CA 95763-9014

Overnight address:
California ISO
Attn: Grid Assets
250 Outcropping Way
Folsom, CA 95630

8. Representative of the Interconnection Customer to contact:

[To be completed by the Interconnection Customer]
Name:_____
Title: _____
Company Name:_____
Street Address: _____
City, State: _____
Zip Code: _____
Phone Number: _____
Fax Number: _____
Email Address: _____

9. This Interconnection Request is submitted by:

Legal name of the Interconnection Customer: _____

By (signature):_____

Name (type or print):_____

Title:_____

Date:_____

**Interconnection Request**

**Attachment A Generating Facility Data**

**GENERATING FACILITY DATA**

Provide one copy of this completed form.

1. **Provide one set of original prints (no larger than 11" x 17") or soft copy on cd/flashdrive of the following:**

   A. Site drawing to scale, showing generator location and Point of Interconnection with the CAISO Controlled Grid.
   B. Single-line diagram showing applicable equipment such as generating units, step-up transformers, auxiliary transformers, switches/disconnects of the proposed interconnection, including the required protection devices and circuit breakers. For wind and photovoltaic generator plants, the one line diagram should include the distribution lines connecting the various groups of generating units, the generator capacitor banks, the step up transformers, the distribution lines, and the substation transformers and capacitor banks at the Point of Interconnection with the CAISO Controlled Grid.

**2. Generating Facility Information**

A. Total Generating Facility rated output (MW): _____
B. Generating Facility auxiliary Load (MW): _____
C. Project net capacity (A-B)(MW): _____
D. Standby Load when Generating Facility is off-line (MW): _____
E. Number of Generating Units: _____
(Please repeat the following items for each generator)
F. Individual generator rated output (MW for each unit): _____
G. Manufacturer: _____
H. Year Manufactured _____
I. Nominal Terminal Voltage (kV): _____
J. Rated Power Factor (%): _____
K. Type (Induction, Synchronous, D.C. with Inverter): _____
L. Phase (three phase or single phase): _____
M. Connection (Delta, Grounded WYE, Ungrounded WYE, impedance grounded): _____
N. Generator Voltage Regulation Range (+/- %): _____
O. Generator Power Factor Regulation Range: _____
P. For combined cycle plants, specify the plant net output capacity (MW) for an outage of the steam turbine or an outage of a single combustion turbine_____

**3. Synchronous Generator – General Information:**
(Please repeat the following for each generator model)

A. Rated Generator speed (rpm):_____
B. Rated MVA: _____
C. Rated Generator Power Factor: _____
D. Generator Efficiency at Rated Load (%): _____
E. Moment of Inertia (including prime mover): _____
F. Inertia Time Constant (on machine base) H: _____ sec or MJ/MVA
G. SCR (Short-Circuit Ratio - the ratio of the field current required for rated open-circuit voltage to the field current required for rated short-circuit current): _____
H. Please attach generator reactive capability curves.
I. Rated Hydrogen Cooling Pressure in psig (Steam Units only): _____
J. Please attach a plot of generator terminal voltage versus field current that shows the air

gap line, the open-circuit saturation curve, and the saturation curve at full load and rated power factor.

**4. Excitation System Information**

(Please repeat the following for each generator model)

A. Indicate the Manufacturer _____ and Type _____of excitation system used for the generator. For exciter type, please choose from 1 to 9 below or describe the specific excitation system.

(1) Rotating DC commutator exciter with continuously acting regulator. The regulator power source is independent of the generator terminal voltage and current.

(2) Rotating DC commentator exciter with continuously acting regulator. The regulator power source is bus fed from the generator terminal voltage.

(3) Rotating DC commutator exciter with non-continuously acting regulator (i.e., regulator adjustments are made in discrete increments).

(4) Rotating AC Alternator Exciter with non-controlled (diode) rectifiers. The regulator power source is independent of the generator terminal voltage and current (not bus-fed).

(5) Rotating AC Alternator Exciter with controlled (thyristor) rectifiers. The regulator power source is fed from the exciter output voltage.

(6) Rotating AC Alternator Exciter with controlled (thyristor) rectifiers.

(7) Static Exciter with controlled (thyristor) rectifiers. The regulator power source is bus-fed from the generator terminal voltage.

(8) Static Exciter with controlled (thyristor) rectifiers. The regulator power source is bus-fed from a combination of generator terminal voltage and current (compound-source controlled rectifiers system).

(9) Other (specify):_____

B. Attach a copy of the block diagram of the excitation system from its instruction manual. The diagram should show the input, output, and all feedback loops of the excitation system.

C. Excitation system response ratio (ASA): _____

D. Full load rated exciter output voltage: _____

E. Maximum exciter output voltage (ceiling voltage): _____

F. Other comments regarding the excitation system?

_____
_____
_____

**5. Power System Stabilizer Information**

(Please repeat the following for each generator model. All new generators are required to install PSS unless an exemption has been obtained from WECC. Such an exemption can be obtained for units that do not have suitable excitation systems.)

A. Manufacturer: _____

B. Is the PSS digital or analog? _____

C. Note the input signal source for the PSS?
_____ Bus frequency _____ Shaft speed _____ Bus Voltage
_____ Other (specify source)

D. Please attach a copy of a block diagram of the PSS from the PSS Instruction Manual and the correspondence between dial settings and the time constants or PSS gain.

E: Other comments regarding the PSS?

_____
_____
_____

**6. Turbine-Governor Information**
(Please repeat the following for each generator model)

Please complete Part A for steam, gas or combined-cycle turbines, Part B for hydro turbines, and Part C for both.

A. Steam, gas or combined-cycle turbines:

(1) List type of unit (Steam, Gas, or Combined-cycle):_____
(2) If steam or combined-cycle, does the turbine system have a reheat process (i.e., both high and low pressure turbines)? _____
(3) If steam with reheat process, or if combined-cycle, indicate in the space provided, the percent of full load power produced by each turbine:
Low pressure turbine or gas turbine:_____%
High pressure turbine or steam turbine:_____%

B. Hydro turbines:

(1) Turbine efficiency at rated load: _____%
(2) Length of penstock: _____ft
(3) Average cross-sectional area of the penstock: _____ft2
(4) Typical maximum head (vertical distance from the bottom of the penstock, at the gate, to the water level): _____ft
(5) Is the water supply run-of-the-river or reservoir: _____
(6) Water flow rate at the typical maximum head: _____ft3/sec
(7) Average energy rate: _____kW-hrs/acre-ft
(8) Estimated yearly energy production: _____kW-hrs

C. Complete this section for each machine, independent of the turbine type.

(1) Turbine manufacturer: _____
(2) Maximum turbine power output: _____MW
(3) Minimum turbine power output (while on line): _____MW
(4) Governor information:
(a) Droop setting (speed regulation): _____
(b) Is the governor mechanical-hydraulic or electro-hydraulic (Electro-hydraulic governors have an electronic speed sensor and transducer)? _____
(c) Other comments regarding the turbine governor system?
_____
_____
_____
_____

**7. Induction Generator Data:**

A. Rated Generator Power Factor at rated load: _____
B. Moment of Inertia (including prime mover): _____
C. Do you wish reclose blocking? Yes ___, No ___
Note: Sufficient capacitance may be on the line now, or in the future, and the generator may self-excite unexpectedly.

**7a Wind Generators**
Number of generators to be interconnected pursuant to this Interconnection Request: _____
Average Site Elevation: _____ Single Phase _____ Three Phase_____

Field Volts: _____
Field Amperes: _____
Motoring Power (MW): _____
Neutral Grounding Resistor (If Applicable): _____
I22t or K (Heating Time Constant): _____
Rotor Resistance: _____
Stator Resistance: _____
Stator Reactance: _____
Rotor Reactance: _____
Magnetizing Reactance: _____
Short Circuit Reactance: _____
Exciting Current: _____
Temperature Rise: _____
Frame Size: _____
Design Letter: _____
Reactive Power Required In Vars (No Load):_____
Reactive Power Required In Vars (Full Load):_____
Total Rotating Inertia, H: _____ Per Unit on 100 MVA Base

Note: A completed General Electric Company Power Systems Load Flow (PSLF) data sheet must be supplied with the Interconnection Request. If other data sheets are more appropriate to the proposed device then they shall be provided and discussed at Scoping Meeting.

**8. Generator Short Circuit Data**

For each generator model, provide the following reactances expressed in p.u. on the generator base:

- X"1 – positive sequence subtransient reactance: _____p.u**
- X2 – negative sequence reactance: _____p.u**
- X0 – zero sequence reactance: _____

Generator Grounding (select 1 for each model):

A. _____ Solidly grounded
B. _____ Grounded through an impedance
(Impedance value in p.u on generator base. R: _____p.u.
X: _____p.u.)
C. _____ Ungrounded

**9. Step-Up Transformer Data**

For each step-up transformer, fill out the data form provided in Table 1.

**10. Interconnection Facilities Line Data**

There is no need to provide data for new lines that are to be planned by the Participating TO. However, for transmission lines that are to be planned by the generation developer, please provide the following information:

Nominal Voltage: _____kV
Line Length: _____miles
Line termination Points: _____
Conductor Type: _____ Size: _____
If bundled. Number per phase: _____, Bundle spacing: _____in.

Phase Configuration. Vertical: _____, Horizontal: _____
Phase Spacing: A-B: _____ft., B-C: _____ft., C-A: _____ft.
Distance of lowest conductor to Ground at full load and 40 C.º_____ft
Ground Wire Type: _____ Size: _____ Distance to Ground: _____ft
Attach Tower Configuration Diagram
Summer line ratings in amperes (normal and emergency) _____
Positive Sequence Resistance ( R ): _____ p.u.** (for entire line length)
Positive Sequence Reactance: ( X ): _____ p.u**(for entire line length)
Zero Sequence Resistance ( R0 ): _____ p.u.** (for entire line length)
Zero Sequence Reactance: ( X0 ): _____ p.u** (for entire line length)
Line Charging (B/2): _____ p.u**
** On 100-MVA and nominal line voltage (kV) Base

**10a. For Wind/photovoltaic plants, provide collector System Equivalence Impedance Data Provide values for each equivalence collector circuit at all voltage levels.**

Nominal Voltage: _____
Summer line ratings in amperes (normal and emergency) _____
Positive Sequence Resistance (R1):_____ p.u. ** (for entire line length of each collector circuit)
Positive Sequence Reactance: (X1):_____ p.u** (for entire line length of each collector circuit)
Zero Sequence Resistance (R0):_____ p.u. ** (for entire line length of each collector circuit)
Zero Sequence Reactance: (X0):_____ p.u** (for entire line length of each collector circuit)
Line Charging (B/2): _____ p.u** (for entire line length of each collector circuit)
** On 100-MVA and nominal line voltage (kV) Base

**11. Inverter-Based Machines**

Number of inverters to be interconnected pursuant to this Interconnection Request:_____

Inverter manufacturer, model name, number, and version:
_____

List of adjustable set points for the protective equipment or software:
_____

Max design fault contribution current:

Harmonics Characteristics:

Start-up requirements:

Note: A completed General Electric Company Power Systems Load Flow (PSLF) data sheet must be supplied with the Interconnection Request. If other data sheets are more appropriate to the proposed device then they shall be provided and discussed at Scoping Meeting.

**12. Load Flow and Dynamic Models:**

**Provide load flow model for the generating plant and its interconnection facilities in GE PSLF *.epc format, including new buses, generators, transformers, interconnection facilities. An equivalent model is required for the plant with generation collector systems. This data should reflect the technical data provided in this Attachment A.**

For each generator, governor, exciter and power system stabilizer, select the appropriate dynamic model

from the General Electric PSLF Program Manual and provide the required input data. For inverter based generating facilities, select the appropriate generator and control models from the General Electric PSLF Program Manual and provide the required input data. **Provide a completed *.dyd file that contains the information specified in this section. One copy of this data should be provided on DVD, CD, or USB flash drive media.**

If you require assistance in developing the models, we suggest you contact General Electric. Accurate models are important to obtain accurate study results. Costs associated with any changes in facility requirements that are due to differences between model data provided by the generation developer and the actual generator test data, may be the responsibility of the generation developer.

TABLE 1

TRANSFORMER DATA
**(Provide for each level of transformation)**

UNIT_____

NUMBER OF TRANSFORMERS_____ PHASE _____

| RATING | H Winding | X Winding | Y Winding |
|---|---|---|---|
| Rated MVA | _____ | _____ | _____ |
| Connection (Delta, Wye, Gnd.) | _____ | _____ | _____ |
| Cooling Type (OA,OA/FA, etc) : | _____ | _____ | _____ |
| Temperature Rise Rating | _____ | _____ | _____ |
| Rated Voltage | _____ | _____ | _____ |
| BIL | _____ | _____ | _____ |
| Available Taps (% of rating) | _____ | _____ | _____ |
| Load Tap Changer? (Y or N) | _____ | _____ | _____ |
| Tap Settings | _____ | _____ | _____ |
| IMPEDANCE | H-X | H-Y | X-Y |
| Percent | _____ | _____ | _____ |
| MVA Base | _____ | _____ | _____ |
| Tested Taps | _____ | _____ | _____ |
| WINDING RESISTANCE | H | X | Y |
| Ohms | _____ | _____ | _____ |

CURRENT TRANSFORMER RATIOS

H_____ X_____ Y_____ N_____

Percent exciting current at 100 % Voltage; _____ 110% Voltage_____

Supply copy of nameplate and manufacture's test report when available

**Appendix 2**

**[Intentionally Omitted]**

**Appendix 3**

**GENERATOR INTERCONNECTION STUDY PROCESS AGREEMENT FOR QUEUE CLUSTERS**

THIS AGREEMENT is made and entered into this day of , 20 by and between _____ , a organized and existing under the laws of the State of , ("Interconnection Customer") and the California Independent System Operator Corporation, a California nonprofit public benefit corporation existing under the laws of the State of California, ("CAISO"). The Interconnection Customer and the CAISO each may be referred to as a "Party," or collectively as the "Parties."

**RECITALS**

WHEREAS, the Interconnection Customer is proposing to develop a Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by the Interconnection Customer dated _____; and

WHEREAS, the Interconnection Customer desires to interconnect the Generating Facility with the CAISO Controlled Grid pursuant to Appendix DD to the CAISO Tariff; and

WHEREAS, the Interconnection Customer has requested the CAISO to conduct or cause to be performed Interconnection Studies to assess the system impact of interconnecting the Generating Facility to the CAISO Controlled Grid and to specify and estimate the cost of the equipment, engineering, procurement and construction work needed on the Participating TO's electric system in accordance with Good Utility Practice to physically and electrically connect the Generating Facility to the CAISO Controlled Grid;

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein the Parties agree as follows:

1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in the CAISO's FERC-approved Generation Interconnection and Deliverability Allocation Procedures in CAISO Tariff Appendix DD "GIDAP" or the Master Definitions Supplement, Appendix A to the CAISO Tariff, as applicable.

2.0 The Interconnection Customer elects and the CAISO shall conduct or cause to be performed Interconnection Studies, including any accelerated Interconnection Study, in accordance with the CAISO Tariff.

3.0 The scope of the Interconnection Studies shall be subject to the assumptions set forth in Appendices A and B to this Agreement.

4.0 The Interconnection Studies will be based upon the technical information provided by the Interconnection Customer in the Interconnection Request, as may be modified under the CAISO Tariff. The CAISO reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Interconnection Studies.

5.0 [NOT USED]

6.0 Consistent with the GIDAP and CAISO Tariff, the Interconnection Customer will provide deposits and pay its share of actual costs of applicable studies, including in excess of provided deposits. The CAISO and Participating TO will provide invoices and refunds on a timely basis required by the GIDAP and the CAISO Tariff.

Following the issuance of an Interconnection Study report, the CAISO shall charge and the Interconnection Customer shall pay its share of the actual costs of the Interconnection Study pursuant to Section 3.5.1 of the GIDAP.

Any difference between the deposits made toward the Interconnection Study process and associated administrative costs, including any accelerated studies, and the actual cost of the Interconnection Studies and associated administrative costs shall be paid by or refunded to the Interconnection Customer, in the appropriate allocation, in accordance with Section 3.5.1 of the GIDAP.

7.0 Pursuant to Section 3.7 of the GIDAP, the CAISO will coordinate the conduct of any studies required to determine the impact of the Interconnection Request on Affected Systems. The CAISO may provide a copy of the Interconnection Studies or other assessments to an Affected System Operator and the Western Electricity Coordinating Council. Requests for review and input from Affected System Operators or the Western Electricity Coordinating Council may arrive at any time prior to interconnection.

8.0 Substantial portions of technical data and assumptions used to perform the Phase I Interconnection Study, such as system conditions, existing and planned generation, and unit modeling, may change after the CAISO provides the Interconnection Study results to the Interconnection Customer. Interconnection Study results will reflect available data at the time the CAISO provides the Phase I Interconnection Study report to the Interconnection Customer. The CAISO shall not be responsible for any additional costs, including, without limitation, costs of new or additional facilities, system upgrades, or schedule changes, that may be incurred by the Interconnection Customer as a result of changes in such data and assumptions.

9.0 [NOT USED]

10.0 The CAISO and Participating TO(s) shall maintain records and accounts of all costs incurred in performing the Interconnection Study in sufficient detail to allow verification of all costs incurred, including associated overheads. The Interconnection Customer shall have the right, upon reasonable notice, within a reasonable time at the CAISO's offices and at its own expense, to audit the CAISO's records as necessary and as appropriate in order to verify costs incurred by the CAISO. Any audit requested by the Interconnection Customer shall be completed, and written notice of any audit dispute provided to the CAISO representative, within one hundred eighty (180) calendar days following receipt by the Interconnection Customer of the CAISO's notification of the final costs of the Interconnection Study.

11.0 In accordance with Section 3.8 of the GIDAP, the Interconnection Customer may withdraw its Interconnection Request at any time by written notice to the CAISO. Upon receipt of such notice, this Agreement shall terminate, subject to the requirements of Section 3.5.1 and 11.4 of the GIDAP.

12.0 This Agreement shall become effective on the date the CAISO notifies the Interconnection Customer that the Interconnection Request is complete pursuant to Section 3.5.1 of the GIDAP.

13.0 Miscellaneous.

13.1 Dispute Resolution. Any dispute, or assertion of a claim, arising out of or in connection with this Agreement, shall be resolved in accordance with Section 15.5 of the GIDAP.

13.2 Confidentiality. Confidential Information shall be treated in accordance with Section 15.1 of the GIDAP.

13.3 Binding Effect. This Agreement and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

13.4 Conflicts. In the event of a conflict between the body of this Agreement and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this Agreement shall prevail and be deemed the final intent of the Parties.

13.5 Rules of Interpretation. This Agreement, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this Agreement, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this Agreement), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any applicable laws and regulations means such applicable laws and regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article or Section of this Agreement or such Appendix to this Agreement, or such Section of the GIDAP or such Appendix to the GIDAP, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this Agreement as a whole and not to any particular Article, Section, or other provision hereof or thereof; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".

13.6 Entire Agreement. This Agreement, including all Appendices and Schedules attached hereto, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this Agreement.

13.7 No Third Party Beneficiaries. This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

13.8 Waiver. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Agreement. Termination or default of this Agreement for any reason by the Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Participating TO or CAISO. Any waiver of this Agreement shall, if requested, be provided in writing.

Any waivers at any time by any Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

13.9 Headings. The descriptive headings of the various Articles and Sections of this Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Agreement.

13.10 **[Not Used]**

13.11 Amendment. The Parties may by mutual agreement amend this Agreement by a written instrument duly executed by both of the Parties.

13.12 Modification by the Parties. The Parties may by mutual agreement amend the Appendices to this Agreement by a written instrument duly executed by both of the Parties. Such amendment shall become effective and a part of this Agreement upon satisfaction of all applicable laws and regulations.

13.13 Reservation of Rights. The CAISO shall have the right to make a unilateral filing with FERC to modify this Agreement with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

13.14 No Partnership. This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

13.15 Assignment. This Agreement may be assigned by a Party only with the written consent of the other Party; provided that a Party may assign this Agreement without the consent of the other Party to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement; and provided further that the Interconnection Customer shall have the right to assign this Agreement, without the consent of the other Party, for collateral security purposes to aid in providing financing for the Generating Facility, provided that the Interconnection Customer will require any secured party, trustee or mortgagee to notify the other Party of any such assignment. Any financing arrangement entered into by the Interconnection Customer pursuant to this Section will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify the other Party of the date and particulars of any such exercise of assignment right(s). Any attempted assignment that violates this Section is void and ineffective. Any assignment under this Agreement shall not relieve a Party of its

obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

IN WITNESS THEREOF, the Party has caused this Agreement to be duly executed by its duly authorized officers or agents on the day and year first above written.

**[Insert name of the Interconnection Customer]**

By: _____

Printed Name: _____

Title: _____

Date: _____

**Appendix A**

**[NOT USED]**

**Appendix B**

**DATA FORM TO BE PROVIDED BY THE INTERCONNECTION CUSTOMER PRIOR TO COMMENCEMENT OF THE PHASE II INTERCONNECTION STUDY**

Generating Facility size (MW): _____

Provide two copies of this completed form and other required plans and diagrams in accordance with Section 8.1 of the GIDAP.

Provide location plan and one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

One set of metering is required for each generation connection to the new bus or existing CAISO Controlled Grid station. Number of generation connections: _____

On the one line indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)

On the one line indicate the location of auxiliary power. (Minimum load on CT/PT)

Will an alternate source of auxiliary power be available during CT/PT maintenance? _____ Yes _____ No

Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation? Yes No
(Please indicate on one line).

What type of control system or PLC will be located at the Interconnection Customer's Generating Facility?
_____
_____

What protocol does the control system or PLC use?
_____
_____

Please provide a 7.5-minute quadrangle of the site. Sketch the plant, station, transmission line, and property line.

Physical dimensions of the proposed interconnection station:

Bus length from generation to interconnection station:

Line length from interconnection station to the Participating TO’s transmission line.

Tower number observed in the field. (Painted on tower leg)*

Number of third party easements required for transmission lines*:

* To be completed in coordination with the Participating TO or CAISO.

Is the Generating Facility in the Participating TO's service area?

Yes No

Local service provider for auxiliary and other power: _____

Point of Interconnection: _____

Please provide proposed schedule dates:

Environmental survey start: _____

Environmental impact report submittal: _____

Procurement of project equipment: _____

Begin Construction Date: _____

In-Service Date: _____
r

Trial Operation Date:_____

Commercial Operation Date: _____

Level of Deliverability: Choose one of the following:

_____Energy Only

_____Full Capacity

TP Deliverability: Choose one of the following:

_____ Option (A), which means that the Generating Facility requires TP Deliverability to be able to continue to commercial operation.

_____Option (B), which means that the Interconnection Customer will continue to commercial operation without an allocation of TP Deliverability.

Please provide any additional modification request pursuant to Section 6.7.2.2 pf Appendix DD:

**Appendix 4**

**AGREEMENT FOR THE ALLOCATION OF RESPONSIBILITIES WITH REGARD TO GENERATOR INTERCONNECTION PROCEDURES AND INTERCONNECTION STUDY AGREEMENTS**

This Agreement for the Allocation of Responsibilities With Regard to Generator Interconnection Procedures and Interconnection Study Agreements ("Agreement"), dated _____ , is entered into between the California Independent System Operator Corporation ("CAISO") and [NAME OF PTO] _____ ("PTO"). The CAISO and PTO are jointly referred to as the "Parties" and individually, as a "Party."

WHEREAS, this Agreement will ensure an independent assessment of new Generating Facility impacts on the CAISO Controlled Grid and take advantage of the respective expertise of the Parties to facilitate efficient and cost effective Interconnection Study procedures in a manner consistent with the Federal Energy Regulatory Commission's ("FERC") July 1, 2005 Order (112 FERC ¶ 61,009), FERC's August 26, 2005 Order (112 FERC ¶ 61,231), and prior FERC Orders recognizing that Order No. 2003 did not allocate responsibilities between transmission owners and transmission providers for the provision of Interconnection Service and suggesting those parties enter into an agreement to allocate those responsibilities. Southwest Power Pool, Inc., 106 FERC ¶ 61,254 (2004).

NOW THEREFORE, in view of the respective responsibilities assigned to the Parties and the foregoing FERC orders, and the provisions of the CAISO's Generator Interconnection Procedures set forth in CAISO Tariff Appendix DD, the CAISO and PTO agree to the following allocation of responsibilities for a centralized Interconnection Study process under the direction and oversight of the CAISO:

**1. DEFINITIONS**

Unless otherwise defined herein, all capitalized terms shall have the meaning set forth in the CAISO Tariff.

**2. TERM OF AGREEMENT**

This Agreement shall become effective upon the date specified in the first paragraph above and shall remain in effect until (1) terminated by all Parties in writing, or (2) with respect to the PTO, upon the termination of that entity's status as a PTO pursuant to the Transmission Control Agreement, as amended from time to time.

**3. PROVISIONS FOR ALLOCATION OF RESPONSIBILITIES BETWEEN CAISO AND PTO**

**3.1** Interconnection Service: The Parties acknowledge that, as the transmission provider, the CAISO is responsible for reliably operating the transmission grid. The Parties also recognize that while the CAISO is a transmission provider under the CAISO Tariff, the CAISO does not own any transmission facilities, and the PTO owns, constructs, and maintains the facilities to which Generating Facilities are to be interconnected, and that the PTO may construct or modify facilities to allow the interconnection. While the Parties recognize that the CAISO will be responsible for conducting or causing to be performed Interconnection Studies and similar studies, the PTO will participate in these studies and conduct certain portions of studies, under the direction and oversight of, and approval by, the CAISO, as provided in this Agreement. The CAISO shall not enter into any Interconnection Study agreement with an Interconnection Customer that is contrary to these rights.

**3.2 [INTENTIONALLY LEFT BLANK]**

**3.3 Transmission Owners' Right to Participation in Studies, Committees and Meetings:**

**3.3.1** In the event that an Interconnection Customer proposes to interconnect a Generating Facility with the PTO's facilities, or the PTO is an owner of an affected system, the PTO shall have the right to participate in any Interconnection Study or any other study conducted in connection with such request for Interconnection Service. "Participate" in this Section 3.3.1 means physically perform any study or portion thereof in connection with an Interconnection Request, under the direction and oversight of, and approval by, the CAISO pursuant to Section 3.4 of this Agreement; provide or receive input, data or other information regarding any study or portion thereof consistent with Section 3.4 of this Agreement; and, when any study or portion thereof in connection with an Interconnection Request is physically performed by an entity other than the PTO, perform activities necessary to adequately review or validate, as appropriate, any results of the study or portions thereof and provide recommendations.

**3.3.2** In the event that an Interconnection Customer proposes to interconnect a Generating Facility with the PTO's facilities, or the PTO is an owner of an affected system, the PTO shall have the right to participate in all meetings expressly established pursuant to the CAISO . As appropriate, the PTO may participate in all other material or substantive communications in connection with an Interconnection Request.

**3.4** Interconnection Study Responsibility Allocation: In complying with its responsibility for conducting or causing to be performed Interconnection Studies, the CAISO will assign responsibility for performance of portions of the Interconnection Studies to the PTO, under the direction and oversight of, and approval by, the CAISO, as set forth in Attachment A, except as specifically qualified as follows:

**3.4.1** For any tasks specifically assigned to the PTO pursuant to Attachment A or otherwise mutually agreed upon by the CAISO and the PTO, the CAISO reserves the right, on a case-by-case basis, to perform or reassign to a mutually agreed upon and pre-qualified contractor such task only where: (a) the quality and accuracy of prior PTO Interconnection Study work product resulting from assigned tasks has been deemed deficient by the CAISO, the CAISO has notified the PTO pursuant to the notice provision of Section 4.15 of this Agreement in writing of the deficiency, and the deficiency has not been cured pursuant to Section 3.4.2 of this Agreement; (b) the timeliness of PTO Interconnection Study work product has been deemed deficient, and either (i) the CAISO has not been notified of the reasons and actions taken to address the timeliness of the work, or (ii) if notified, the stated reasons and actions taken are insufficient or unjustifiable and the PTO has not cured the deficiency pursuant to Section 3.4.2 of this Agreement; (c) the PTO has failed, in a mutually agreed upon timeframe, to provide the CAISO with information or data related to an Interconnection Request despite a written request by the CAISO, pursuant to Section 3.5 hereof, to do so, and such data is the responsibility of the PTO to provide to the CAISO, subject to Section 4.3 of this Agreement; (d) the PTO advises the CAISO in writing that it does not have the resources to adequately or timely perform the task according to the applicable timelines set forth in Attachment A; or (e) the estimated cost of the PTO performing the task has been determined in writing by the CAISO to significantly exceed the cost of the CAISO or mutually agreed upon contractor performing the task, inclusive of the costs that will be incurred by the PTO in exercising its review rights of the results of any such tasks performed by such third party(ies). If the CAISO deviates from the assignments set forth in Attachment A based on the foregoing factors, the CAISO will provide the PTO with a written explanation for the deviation and any associated reassignments of work. The PTO may contest the deviation pursuant

to the Dispute Resolution procedures set forth in Section 4.1 of this Agreement.

Task(s) may only be reassigned in accordance with this Section 3.4.1 where the PTO has been deemed to be deficient in relation to that (those) particular task(s).

**3.4.2 Cure for reassigned Interconnection Study work**
The CAISO shall not reassign task(s) without the opportunity to cure, as specified in Section 3.4.1 of this Agreement. The following actions will serve to cure the deficiencies and result in restoring the assignment(s) as provided in Attachment A:

(a) The CAISO and PTO shall negotiate in good faith and agree to a corrective action plan proposed by the PTO, including a reasonably adequate cure period, and the corrective action plan is satisfactorily implemented.

(b) The CAISO determines the deficiency is cured without an action plan.

**3.4.3** Assessment of prior PTO Interconnection Study work shall only be based on work conducted under the process that becomes effective concurrent with the effective date of this Agreement. Further, assessment of prior PTO Interconnection Study work shall be based on work conducted no earlier than the eighteen (18) month period prior to the date of the CAISO notice of deviation from assignments set forth in Attachment A to this Agreement.

**3.5** Information Exchange: The PTO shall provide the CAISO, subject to confidentiality requirements in Section 4.3 of this Agreement, with any documentation or data requested by the CAISO reasonably necessary to permit the CAISO to perform, review, validate and approve any Interconnection Study, or portion thereof, performed by the PTO. The CAISO shall provide the PTO with any documentation or data requested by the PTO, subject to confidentiality requirements in Section 4.3 of this Agreement, reasonably necessary to perform, review, and validate any Interconnection Study, or portion thereof.

**3.6** Consistency with Provisions for Centralized Interconnection Study Process: The CAISO and PTO have determined that the processes and allocation of responsibilities in Section 3.4 of this Agreement ensure that impacts to the CAISO Controlled Grid are independently assessed and that the assignment of responsibilities minimizes handoffs, takes advantage of non-transferable skills, and promotes the efficiency and cost-effectiveness of the centralized Interconnection Study processes, consistent with Section 3.2.

**3.7** Re-Studies: If any re-studies are required, the CAISO will confer with the PTO as to the need for a re-study. The CAISO will make the final determination regarding the need for a re-study, subject to dispute resolution procedures.

**3.8** Use of Contractors: Nothing in this Agreement shall prevent either the CAISO or the PTO from using qualified, mutually agreed upon third party contractors to meet that Party's rights or obligations under this Agreement or the . To promote the efficiency of the process, the CAISO and PTO will collaborate to identify a list of the mutually agreed to qualified contractors available to the Parties.

**3.9** Performance Standards: Each Party shall perform all of its obligations under the GIDAP, this Agreement, and any FERC approved Interconnection Study procedures that may be adopted by the CAISO to implement the GIDAP or this Agreement in accordance with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice.

**3.10** Recovery of Costs: In accordance with Section 3.5.1 of the GIDAP, the PTO shall recover all actual costs from the CAISO incurred in performing Interconnection Studies or portions thereof assigned to it by the CAISO, including all costs incurred in exercising its right to review, and make recommendations on, Interconnection Studies or portions thereof performed by the CAISO and/or contractors under Section 3.8 of this Agreement.

## 4 GENERAL TERMS AND CONDITIONS

**4.1** Dispute Resolution: In the event any dispute regarding the terms, conditions, and performance of this Agreement is not settled informally, the Parties shall follow the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff.

**4.2** Liability: No Party to this Agreement shall be liable to any other Party for any direct, indirect, special, incidental or consequential losses, damages, claims, liabilities, costs or expenses (including attorneys fees and court costs) arising from the performance or non-performance of its obligations under this Agreement regardless of the cause (including intentional action, willful action, gross or ordinary negligence, or force majeure); provided, however, that a Party may seek equitable or other non-monetary relief as may be necessary to enforce this Agreement and that damages for which a Party may be liable to another Party under another agreement will not be considered damages under this Agreement.

**4.3** Confidentiality: Confidential Information shall be treated in accordance with Section 14.1 of the GIDAP.

**4.4** Binding Effect: This Agreement and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

**4.5** Conflicts: In the event of a conflict between the body of this Agreement and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this Agreement shall prevail and be deemed the final intent of the Parties.

**4.6** Rules of Interpretation: This Agreement, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this Agreement, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this Agreement), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any applicable laws and regulations means such applicable laws and regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section, Attachment, or Appendix means such Article or Section of this Agreement or such Attachment or Appendix to this Agreement, or such Section of the or such Appendix to the , as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this Agreement as a whole and not to any particular Article or Section; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".

**4.7** Entire Agreement: This Agreement, including all Attachments hereto, constitutes the entire agreement among the Parties with reference to the subject matter hereof, and

supersedes all prior and contemporaneous understandings or agreements, oral or written, among the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants, which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this Agreement.

**4.8** No Third Party Beneficiaries: This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

**4.9** Waiver: The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party. Any waiver at any time by a Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Agreement. Any waiver of this Agreement shall, if requested, be provided in writing. Any waivers at any time by any Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**4.10** Headings: The descriptive headings of the various Articles and Sections of this Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Agreement.

**4.11** Multiple Counterparts: This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

**4.12** Modification by the Parties: The Parties may amend this Agreement and any Appendices to this Agreement only (1) by mutual agreement of the Parties by a written instrument duly executed by the Parties, subject to FERC approval or (2) upon the issuance of a FERC order, pursuant to Section 206 of the Federal Power Act. It is the Parties' intent that FERC's right to change any provision of this Agreement shall be limited to the maximum extent permissible by law and that any such change, if permissible, shall be in accordance with the Mobile-Sierra public interest standard applicable to fixed rate agreements. United Gas Pipe Line Co. v. Mobile Gas Service Corp., 350 U.S. 332 (1956). Such amendment shall become effective and a part of this Agreement upon satisfaction of all applicable laws and regulations. Notwithstanding the foregoing, Attachment B (Notices) may be modified as set forth in Section 4.15 of this Agreement, and the CAISO and the PTO may from time to time mutually agree to deviate from Attachment A in accordance with the provisions of this Agreement, however, such deviation shall be subject to Section 4.9 of this Agreement and not considered a course of dealing.

**4.13** No Partnership: This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

**4.14** Assignment: This Agreement may be assigned by a Party only with the written consent

of the other Parties; provided that a Party may assign this Agreement without the consent of the other Parties to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement. Any attempted assignment that violates this Article is void and ineffective. Any assignment under this Agreement shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

**4.15** Notices: Any notice, demand, or request provided in this Agreement, or served, given, or made in connection with it, will be in writing and deemed properly served, given, or made if delivered in person, transmitted by facsimile, or sent by United States mail, postage prepaid, to the persons specified in Attachment B hereto unless otherwise provided in this Agreement. Any Party may at any time, by notice to all other Parties, change the designation or address of the person specified in Attachment B as the person who receives notices pursuant to this Agreement.

IN WITNESS WHEREOF, the Parties have executed this Agreement in multiple originals, each of which shall constitute and be an original effective agreement among the Parties.

**California Independent System Operator Corporation**

By:_____

Printed Name:_____

Title:_____

Date:_____

**[NAME OF PTO]**

By:_____

Printed Name:_____

Title:_____

Date:_____

**ATTACHMENT A**

**INTERCONNECTION STUDY RESPONSIBILITY ALLOCATION**

Description of Generator Interconnection Process: Roles and Responsibilities of CAISO and PTOs.

Purpose: This Attachment A to the "AGREEMENT FOR THE ALLOCATION OF RESPONSIBILITIES WITH REGARD TO GENERATOR INTERCONNECTION PROCEDURES AND INTERCONNECTION STUDY AGREEMENTS" serves as further clarification of the roles and responsibilities of the parties to this Agreement. The CAISO will assign responsibility for performance of portions of the Interconnection Studies to the relevant PTOs, under the direction and oversight of, and approval by, the CAISO, as set forth in this Attachment A. This document serves as a general overview of only the roles and responsibilities as between the CAISO and PTOs. This Agreement does not include the process steps, involvement or obligations of the Interconnection Customer (IC). This Agreement is not inclusive of all procedures necessary to comply with all provisions of the GIA, and Generator Interconnection Study Process Agreement for Queue Clusters.

**Interconnection Request (IR) Process**

1. CAISO forwards the IR to the PTO within three (3) Business Days (BD) of receipt of IR from Interconnection Customer (IC)
2. PTO(s) provides any feedback regarding IR to CAISO within 3 BD
3. CAISO distributes draft Scoping Meeting minutes for review within 5 BD of Scoping Meeting.
4. PTO(s) provide any comments to the Scoping Meeting minutes within 2 BD of receipt of draft Scoping Meeting minutes.
5. CAISO issues the final Scoping Meeting minutes within 3 BD of receipt of comments.

**Phase I Interconnection Study Timeline**

| | | | |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

| Line | Phase I Cluster Study | Typical Calendar Days | Timeline (Days) |
|---|---|---|---|
| 1 | CAISO and PTOs develop initial Generating Facility groups for initial Dispatch assumptions and cost allocation purposes (except for thermal overload and short circuit mitigation). | 1 | 1 |
| 2 | PTOs develop draft Base Cases, each representing all Generating Facilities in the queue cluster, and deliver to CAISO. | 14 | 2-15 |
| 3 | PTO develops preferred and alternative, if applicable, direct interconnection plans, including the need for an Interconnection Grid Substation (IGS). | 14 | 2-15 |
| 4 | CAISO reviews and approves direct interconnection plans and change files. | 5 | 16-20 |
| 5 | CAISO updates deliverability base case. PTOs update reliability base cases. PTOs develop draft contingency lists. | 10 | 21-30 |
| 6 | CAISO reviews and approves reliability base cases and contingency lists. | 5 | 31-35 |
| 7 | CAISO performs peak Deliverability Assessment identifying constrained facilities and prepares results summary. | 21 | 36-56 |
| 8 | At the CAISO's direction, the PTOs perform the off-peak Load Flow, and summer peak and off-peak Post Transient and Stability analyses and submits draft study results to CAISO for review and direction. | 21 | 36-56 |
| 9 | CAISO and PTOs develop mitigation plans and determine RNU and LDNU | 21 | 57-77 |
| 10 | CAISO develops deliverability base case with TP upgrades only. | 7 | 78-84 |
| 11 | CAISO performs deliverability assessment for the purpose of determining incremental ADNUs and proposes ADNU. | 21 | 85-105 |
| 12 | CAISO and PTOs finalize ADNU. | 14 | 106-119 |
| 13 | CAISO develops shift factors for cost allocation purposes of all Network Upgrades and usage of previously triggered Network Upgrades. | 7 | 120-126 |
| 14 | CAISO performs off-peak deliverability assessment. | 14 | 127-140 |
| **Short Circuit Duty** | | | |
| 15 | CAISO coordinates with other potentially affected facility owners[1]. | n/a | n/a |
| 16 | CAISO directs PTO to develop Base Case and run short circuit analysis. | 106 | 21-126 |
| 17 | PTO performs facilities review. (Note: possibly for feedback into the power flow studies and PTO mitigation plans.) | 14 | 127-140 |
| 18 | PTO prepares draft study results and submits to the CAISO for review and direction. | 14 | 141-154 |
| **Facility cost estimates and schedules** | | | |
| 19 | At the CAISO's direction, PTO(s) prepares cost estimates and schedules for the direct assignment | 134 | 21-154 |

| | | | |
|---|---|---|---|
| | facilities and Network Upgrades identified in the power flow, short circuit duty, post transient, and stability studies. | | |
| **Study Report** | | | |
| 20 | At the CAISO's direction, PTO(s) prepares draft report for impacts in its service territory. | 120 | 21-140 |
| 21 | CAISO compiles all results into a draft report that covers grid impacts, as appropriate. CAISO reviews integrated draft report and submits comments, recommendations and direction to the PTO. | 10 | 141-150 |
| 22 | PTO incorporates CAISO's directions, conclusions and recommendations. If CAISO conclusions and recommendations conflict with PTO conclusions, then CAISO and PTO must coordinate to resolve conflicts. Any remaining conflicts must be noted in the final report. PTO submits final draft report to the CAISO. | 10 | 151-160 |
| 23 | CAISO finalizes the report and provides final approved report to ICs, PTO, and any applicable Affected Systems. | 10 | 161-170 |
| | CAISO performs Reassessment and prepares amended study reports for affected earlier queued interconnection customer interconnection requests. | | |

[footnote 1: In accordance with the WECC Short Circuit Duty Procedure]

**Phase II Interconnection Study Process****

**All Interconnection Studies will be under the direction and oversight of, and approval by, the CAISO and may involve more than one PTO.

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| Line | Phase II Cluster Study | Typical Calendar Days | Timeline (Days) |
|---|---|---|---|
| 1 | CAISO and PTOs update Base Cases based on the annual reassessment study results. | 7 | 1-7 |
| 2 | CAISO reviews and approves Base Cases. | 7 | 8-14 |

| | | | |
|---|---|---|---|
| | PTOs update contingency lists. | | |
| 3 | CAISO reviews and approves contingency lists. | 5 | 15-19 |
| 4 | CAISO performs peak Deliverability Assessment identifying constrained facilities and prepares results summary. | 21 | 20-40 |
| 5 | At the CAISO's direction, the PTOs perform the off-peak Load Flow, and summer peak and off-peak Post Transient and Stability analyses and submit draft study results to CAISO for review and direction. | 21 | 20-40 |
| 6 | CAISO and PTOs determine RNU and LDNU. | 21 | 41-61 |
| 7 | CAISO performs peak Deliverability Assessment for Option B projects for the purpose of identifying ADNU. | 28 | 62-89 |
| 8 | PTOs performs additional reliability assessment with all LDNUs modeled and identify | 28 | 62-89 |
| 9 | CAISO and PTOs determine ADNU and additional RNU and LDNU. | 14 | 90-103 |
| 10 | CAISO develops cost allocation table. | 7 | 104-110 |
| 11 | CAISO performs off-peak Deliverability Assessment. | 14 | 111-124 |
| 12 | PTOs update short-circuit duty results with all RNU and LDNU. | 105 | 20-124 |
| 13 | PTOs update short-circuit duty results with ADNU. | 21 | 125-145 |
| 14 | CAISO performs operational deliverability assessment. | 60 | 111-170 |
| 15 | PTOs perform operational reliability assessment. | 60 | 111-170 |
| **Study Report Including Facility Costs and Schedules** | | | |
| 16 | At the CAISO's direction, PTOs prepare detailed cost estimates and schedules for the direct assignment facilities and schedules for RNU and LDNU identified in the overall plan of service and including individual segments. | 91 | 20-110 |
| 17 | At the CAISO's direction, PTOs prepare draft reports that include detailed cost estimates and schedules for the direct assignment facilities and Network Upgrades identified in the overall plan of service and including individual segments. | 131 | 20-150 |
| 18 | CAISO reviews draft report and submits comments, recommendations and direction to the PTOs. | 14 | 151-164 |
| 19 | PTOs incorporate CAISO directions, conclusions and recommendations and add operational assessment conclusions to the draft report. If CAISO conclusions and recommendations conflict with PTO conclusions, then CAISO and PTO must coordinate to resolve conflicts. Any remaining conflicts must be noted in the final report. | 21 | 165-185 |
| 20 | CAISO finalizes the reports and tenders the reports to IC. | 20 | 186-205 |

**ATTACHMENT B**

**CONTACTS FOR NOTICES**

**[Section 4.15]**

**California ISO**

Manager, Transmission Engineering
250 Outcropping Way
Folsom, CA 95630
Phone: 916.351.2104
Fax: 916.351.2264

**[NAME OF PTO]**

[Address of PTO]

**Appendix 5**

**Schedule for Release and Review of Per Unit Costs**

**SCHEDULE FOR RELEASE AND REVIEW OF PER UNIT COSTS**

| Line | Schedule for the Release and Review of Per Unit Costs | Anticipated Calendar Date(s) |
|---|---|---|
| □ | | |
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| | **Annual Review, Update, and Posting of Per Unit Costs** | |
| □ | PTOs to review and update their per unit costs. | October – mid-January |
| □ | PTOs to provide their updated per unit costs to the CAISO for CAISO review and posting to the CAISO Website. | Mid-January |
| □ | CAISO to review and post the PTO per unit costs to the CAISO Website for stakeholder review. | Third week of January |
| □ | Provide two weeks for stakeholders to review the posted per unit costs. | Last week of January and first week of February |
| □ | CAISO to schedule and conduct a one-day stakeholder meeting in February to discuss the posted per unit costs with stakeholders. | Second week of February |
| □ | Provide two weeks following the scheduled stakeholder meeting for stakeholders to provide comments to the CAISO. | Last two weeks of February |
| □ | Provide two weeks for CAISO and PTOs to review and address stakeholder comments. | First two weeks of March |
| □ | Provide three weeks following the stakeholder meeting for PTOs to review, update as needed, and finalize their per unit costs. | First three weeks of March |
| □ | PTOs to provide their final per unit costs to the CAISO for posting to the CAISO Website. | End of third week of March |
| □ | CAISO to review and post the PTOs' final per unit costs to the CAISO Website. | Fourth week of March |
| □ | Final per unit costs are posted and available for use to estimate the costs of Network Upgrades and Interconnection Facilities. | Last week of March to first of April |

## Appendix 6

## INDEPENDENT STUDY PROCESS STUDY AGREEMENT

THIS AGREEMENT is made and entered into this day of , 20 by and between _____ , a organized and existing under the laws of the State of , ("Interconnection Customer") and the California Independent System Operator Corporation, a California nonprofit public benefit corporation existing under the laws of the State of California, ("CAISO"). The Interconnection Customer and the CAISO each may be referred to as a "Party," or collectively as the "Parties."

### RECITALS

WHEREAS, the Interconnection Customer is proposing to develop a Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by the Interconnection Customer dated _____; and

WHEREAS, the Interconnection Customer desires to interconnect the Generating Facility with the CAISO Controlled Grid pursuant to the Independent Study Process; and

WHEREAS, the Interconnection Customer has requested the CAISO to conduct or cause to be performed Interconnection Studies to assess the system impact of interconnecting the Generating Facility to the CAISO Controlled Grid and to specify and estimate the cost of the equipment, engineering, procurement and construction work needed on the Participating TO's electric system in accordance with Good Utility Practice to physically and electrically connect the Generating Facility to the CAISO Controlled Grid;

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein the Parties agree as follows:

1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in the CAISO's FERC-approved Generation Interconnection Procedures in CAISO Tariff Appendix DD or the Master Definitions Supplement, Appendix A to the CAISO Tariff, as applicable.

2.0 The Interconnection Customer elects and the CAISO shall conduct or cause to be performed Interconnection Studies in accordance with the CAISO Tariff.

3.0 The scope of the applicable Interconnection Studies shall be subject to the assumptions set forth in Appendices A and B to this Agreement.

4.0 The Interconnection Studies will be based upon the technical information provided by the Interconnection Customer in the Interconnection Request, as may be modified as the result of the Scoping Meeting, subject to any modifications in accordance with Section 6.1.2 of the GIDAP and modifications to the proposed Commercial Operation Date of the Generating Facility permitted by the GIDAP. The CAISO reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Interconnection Studies. If the Interconnection Customer modifies its designated Point of Interconnection, Interconnection Request, or the technical information provided therein is modified, the Interconnection Studies may be modified as specified in the .

5.0 The Interconnection Study report for each Interconnection Study shall provide the information specified in the GIDAP.

6.0 The Interconnection Customer shall provide an Interconnection Study Deposit and other

Interconnection Financial Security for the performance of the Interconnection Studies in accordance with the provisions of Sections 3.5.1 and 11 of the GIDAP.

Following the issuance of an Interconnection Study report, the CAISO shall charge and the Interconnection Customer shall pay its share of the actual costs of the Interconnection Study pursuant to Section 3.5.1 of the GIDAP.

Any difference between the deposits made toward the Interconnection Study process and associated administrative costs, including any accelerated studies, and the actual cost of the Interconnection Studies and associated administrative costs shall be paid by or refunded to the Interconnection Customer, in the appropriate allocation, in accordance with Section 3.5.1 of the GIDAP.

7.0 Pursuant to Section 3.7 of the GIDAP, the CAISO will coordinate the conduct of any studies required to determine the impact of the Interconnection Request on Affected Systems. The CAISO may provide a copy of the system impact and facilities study results to an Affected System Operator and the Western Electricity Coordinating Council. Requests for review and input from Affected System Operators or the Western Electricity Coordinating Council may arrive at any time prior to interconnection.

8.0 Substantial portions of technical data and assumptions used to perform the Interconnection Studies, such as system conditions, existing and planned generation, and unit modeling, may change after the CAISO provides the Interconnection Study results to the Interconnection Customer. Interconnection Study results will reflect available data at the time the CAISO provides the system impact and facilities study report to the Interconnection Customer. The CAISO shall not be responsible for any additional costs, including, without limitation, costs of new or additional facilities, system upgrades, or schedule changes, that may be incurred by the Interconnection Customer as a result of changes in such data and assumptions.

9.0 The CAISO shall maintain records and accounts of all costs incurred in performing the Interconnection Studies in sufficient detail to allow verification of all costs incurred, including associated overheads. The Interconnection Customer shall have the right, upon reasonable notice, within a reasonable time at the CAISO's offices and at its own expense, to audit the CAISO's records as necessary and as appropriate in order to verify costs incurred by the CAISO. Any audit requested by the Interconnection Customer shall be completed, and written notice of any audit dispute provided to the CAISO representative, within one hundred eighty (180) calendar days following receipt by the Interconnection Customer of the CAISO's notification of the final costs of the Interconnection Study.

10.0 In accordance with Section 3.8 of the GIDAP, the Interconnection Customer may withdraw its Interconnection Request at any time by written notice to the CAISO. Upon receipt of such notice, this Agreement shall terminate, subject to the requirements of Sections 3.5.1 and 15.1 of the GIDAP.

11.0 This Agreement shall become effective upon the date the fully executed Agreement is received by the CAISO. If the CAISO does not receive the fully executed Agreement and deposit or other Interconnection Financial Security pursuant to Section 3.5.1 of the GIDAP, then the Interconnection Request will be deemed withdrawn upon the Interconnection Customer's receipt of written notice by the CAISO pursuant to Section 3.8 of the GIDAP.

12.0 Miscellaneous.

12.1 Dispute Resolution. Any dispute, or assertion of a claim, arising out of or in connection

with this Agreement, shall be resolved in accordance with Section 15.5 of the GIDAP.

12.2 Confidentiality. Confidential Information shall be treated in accordance with Section 15.1 of the GIDAP.

12.3 Binding Effect. This Agreement and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

12.4 Conflicts. In the event of a conflict between the body of this Agreement and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this Agreement shall prevail and be deemed the final intent of the Parties.

12.5 Rules of Interpretation. This Agreement, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this Agreement, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this Agreement), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any applicable laws and regulations means such applicable laws and regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article or Section of this Agreement or such Appendix to this Agreement, or such Section of the or such Appendix to the , as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this Agreement as a whole and not to any particular Article, Section, or other provision hereof or thereof; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".

12.6 Entire Agreement. This Agreement, including all Appendices and Schedules attached hereto, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this Agreement.

12.7 No Third Party Beneficiaries. This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

12.8 Waiver. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Agreement. Termination or default of this Agreement for any reason by the Interconnection Customer shall not constitute a waiver

of the Interconnection Customer's legal rights to obtain an interconnection from the Participating TO or CAISO. Any waiver of this Agreement shall, if requested, be provided in writing.

Any waivers at any time by any Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

12.9 Headings. The descriptive headings of the various Articles and Sections of this Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Agreement.

12.10 Multiple Counterparts. This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

12.11 Amendment. The Parties may by mutual agreement amend this Agreement by a written instrument duly executed by both of the Parties.

12.12 Modification by the Parties. The Parties may by mutual agreement amend the Appendices to this Agreement by a written instrument duly executed by both of the Parties. Such amendment shall become effective and a part of this Agreement upon satisfaction of all applicable laws and regulations.

12.13 Reservation of Rights. The CAISO shall have the right to make a unilateral filing with FERC to modify this Agreement with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

12.14 No Partnership. This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

12.15 Assignment. This Agreement may be assigned by a Party only with the written consent of the other Party; provided that a Party may assign this Agreement without the consent of the other Party to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement; and provided further that the Interconnection Customer shall have the right to assign this Agreement, without the consent of the other Party, for collateral security purposes to aid in providing financing for the Generating Facility, provided that the Interconnection Customer will require any secured party, trustee or mortgagee to notify the other Party of any such assignment. Any financing arrangement entered into by the Interconnection Customer pursuant to this Section will

provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify the other Party of the date and particulars of any such exercise of assignment right(s). Any attempted assignment that violates this Section is void and ineffective. Any assignment under this Agreement shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

IN WITNESS THEREOF, the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**California Independent System Operator Corporation**

By: _____

Printed Name: _____

Title: _____

Date: _____

**[Insert name of the Interconnection Customer]**

By: _____

Printed Name: _____

Title: _____

Date: _____

**Appendix A**

**ASSUMPTIONS USED IN CONDUCTING THE SYSTEM IMPACT AND FACILITIES STUDY**

The system impact and facilities study will be based upon the information set forth in the Interconnection Request and agreed upon in the Scoping Meeting held on , subject to any modifications in accordance with Section 6.1.2 of the GIDAP, and the following assumptions:

Designation of Point of Interconnection and configuration to be studied.

Deliverability Status requested (Full Capacity, Partial Capacity, or Energy-Only)

**Appendix B Data Form, Pre- System Impact and Facilities Study**

**DATA FORM TO BE PROVIDED BY THE INTERCONNECTION CUSTOMER PRIOR TO COMMENCEMENT OF THE PHASE II INTERCONNECTION STUDY**

Generating Facility size (MW): _____

Provide two copies of this completed form and other required plans and diagrams in accordance with Section 4.5 of the GIDAP.

Provide location plan and one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

One set of metering is required for each generation connection to the new bus or existing CAISO Controlled Grid station. Number of generation connections: _____

On the one line indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)

On the one line indicate the location of auxiliary power. (Minimum load on CT/PT)

Will an alternate source of auxiliary power be available during CT/PT maintenance? Yes _____ No

Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation? Yes No
(Please indicate on one line).

What type of control system or PLC will be located at the Interconnection Customer's Generating Facility?
_____
_____

What protocol does the control system or PLC use?
_____
_____

Please provide a 7.5-minute quadrangle of the site. Sketch the plant, station, transmission line, and property line.

Physical dimensions of the proposed interconnection station:

Bus length from generation to interconnection station:

Line length from interconnection station to the Participating TO's transmission line.

Tower number observed in the field. (Painted on tower leg)*

Number of third party easements required for transmission lines*:

* To be completed in coordination with the Participating TO or CAISO.

Is the Generating Facility in the Participating TO's service area?

Yes No

Local service provider for auxiliary and other power: _____

Please provide proposed schedule dates:

Environmental survey start: _____

Environmental impact report submittal: _____

Procurement of project equipment: _____

Begin Construction Date: _____

In-Service Date: _____

Trial Operation Date:_____

Commercial Operation Date: _____

Level of Deliverability Status: Choose one of the following:

_____Energy-Only

_____Full Capacity

_____Partial Capacity (expressed in fraction of Full Capacity)

Off-Peak Deliverability Status: Choose one of the following:

_____ Off-Peak Deliverable

_____ Off-Peak Energy Only

Please provide any additional modification request pursuant to Section 6.7.2.2 of Appendix DD.

**Appendix 7**

**Application, Procedures, and Terms and Conditions for Interconnecting a Certified Inverter-Based Small Generating Facility No Larger than 10 kW ("10 kW Inverter Process")**

1.0 The Interconnection Customer ("Customer") completes the Interconnection Request ("Application") and submits it to the Participating TO ("Company").

2.0 The Company acknowledges to the Customer receipt of the Application within three Business Days of receipt.

3.0 The Company evaluates the Application for completeness and notifies the Customer within ten Business Days of receipt that the Application is or is not complete and, if not, advises what material is missing.

4.0 The Company verifies that the Small Generating Facility can be interconnected safely and reliably using the screens contained in the Fast Track Process in the Generator Interconnection and Deliverability Allocation Procedures (GIDAP). The Company has 15 Business Days to complete this process. Unless the Company determines and demonstrates that the Small Generating Facility cannot be interconnected safely and reliably, the Company approves the Application and returns it to the Customer. Note to Customer: Please check with the Company before submitting the Application if disconnection equipment is required.

5.0 After installation, the Customer returns the Certificate of Completion to the Company. Prior to parallel operation, the Company may inspect the Small Generating Facility for compliance with standards which may include a witness test, and may schedule appropriate metering replacement, if necessary.

6.0 The Company notifies the Customer in writing that interconnection of the Small Generating Facility is authorized. If the witness test is not satisfactory, the Company has the right to disconnect the Small Generating Facility. The Customer has no right to operate in parallel until a witness test has been performed, or previously waived on the Application. The Company is obligated to complete this witness test within ten Business Days of the receipt of the Certificate of Completion. If the Company does not inspect within ten Business Days or by mutual agreement of the Parties, the witness test is deemed waived.

7.0 Contact Information – The Customer must provide the contact information for the legal applicant (i.e., the Interconnection Customer). If another entity is responsible for interfacing with the Company, that contact information must be provided on the Application.

8.0 Ownership Information – Enter the legal names of the owner(s) of the Small Generating Facility. Include the percentage ownership (if any) by any utility or public utility holding company, or by any entity owned by either.

9.0 UL1741 Listed – This standard ("Inverters, Converters, and Controllers for Use in Independent Power Systems") addresses the electrical interconnection design of various forms of generating equipment. Many manufacturers submit their equipment to a Nationally Recognized Testing Laboratory (NRTL) that verifies compliance with UL1741. This "listing" is then marked on the equipment and supporting documentation.

**Application for Interconnecting a Certified Inverter-Based Small Generating Facility No Larger than 10kW**

This Application is considered complete when it provides all applicable and correct information required below. Additional information to evaluate the Application may be required.

Processing Fee
A non-refundable processing fee of $100 must accompany this Application.

Interconnection Customer
Name: _____
Contact Person: _____
Address: _____
City:_____State:_____Zip_____:
Telephone (Day): _____(Evening):_____
Fax:_____ E-Mail Address:_____

Contact (if different from Interconnection Customer)
Name: _____
Address: _____
City:_____State:_____Zip:_____
Telephone (Day):_____(Evening):_____
Fax:_____ __E-Mail Address:_____

Owner of the facility (include % ownership by any electric utility):_____

Small Generating Facility Information
Location (if different from above): _____
Electric Service Company: _____
Account Number: _____
Inverter Manufacturer:_ _____ Model_____
Nameplate Rating: _____ (kW) _____ (kVA) _____ (AC Volts)_____
Single Phase _____ Three Phase_____
System Design Capacity: _____ (kW) _____ (kVA)_____
Prime Mover: Photovoltaic Reciprocating Engine Fuel Cell
Turbine Other _____
Energy Source: Solar Wind Hydro Diesel Natural Gas
Fuel Oil Other (describe) _____
Is the equipment UL1741 Listed? _____Yes_____ No _____
If Yes, attach manufacturer's cut-sheet showing UL1741 listing

Estimated Installation Date: _____Estimated In-Service Date: _____

The 10 kW Inverter Process is available only for inverter-based Small Generating Facilities no larger than 10 kW that meet the codes, standards, and certification requirements of Appendices 9 and 10 of the Generator Interconnection Procedures (), or the Participating TO has reviewed the design or tested the proposed Small Generating Facility and is satisfied that it is safe to operate.

List components of the Small Generating Facility equipment package that are currently certified:

| | Equipment Type | Certifying Entity |
|---|---|---|
| 1. | _____ | _____ |
| 2. | _____ | _____ |
| 3. | _____ | _____ |
| 4. | _____ | _____ |
| 5. | _____ | _____ |

Interconnection Customer Signature

I hereby certify that, to the best of my knowledge, the information provided in this Application is true. I agree to abide by the Terms and Conditions for Interconnecting an Inverter-Based Small Generating Facility No Larger than 10kW and return the Certificate of Completion when the Small Generating Facility has been installed.

Signed: _____

Title: _____ Date: _____

Contingent Approval to Interconnect the Small Generating Facility

(For Company use only)

Interconnection of the Small Generating Facility is approved contingent upon the Terms and Conditions for Interconnecting an Inverter-Based Small Generating Facility No Larger than 10kW and return of the Certificate of Completion.

Company Signature: _____

Title: _____ Date: _____

Application ID number: _____

Company waives inspection/witness test? Yes___ No___

**Small Generating Facility Certificate of Completion**

Is the Small Generating Facility owner-installed? Yes_____ No _____

Interconnection Customer: _____

Contact Person: _____

Address: _____

Location of the Small Generating Facility (if different from above):

_____

City: _____ State: _____Zip Code: _____

Telephone (Day): _____ (Evening): _____

Fax: _____ E-Mail Address: _____

Electrician:

Name: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Day): _____ (Evening): _____

Fax: _____ E-Mail Address: _____

License number: _____

Date Approval to Install Facility granted by the Company: _____

Application ID number: _____

Inspection:

The Small Generating Facility has been installed and inspected in compliance with the local

building/electrical code of _____

Signed (Local electrical wiring inspector, or attach signed electrical inspection):

_____

Print Name: _____

Date: _____

As a condition of interconnection, you are required to send/fax a copy of this form along with a copy of the signed electrical permit to (insert Company information below):

Name: _____

Company: _____

Address:_____

City _____State _____ZIP: _____

Fax: _____

Approval to Energize the Small Generating Facility (For Company use only)
Energizing the Small Generating Facility is approved contingent upon the Terms and Conditions for Interconnecting an Inverter-Based Small Generating Facility No Larger than 10kW

Company Signature: _____

Title: _____ Date: _____

**Terms and Conditions for Interconnecting an Inverter-Based Small Generating Facility No Larger than 10kW**

## 1.0 Construction of the Facility

The Interconnection Customer (the "Customer") may proceed to construct (including operational testing not to exceed two hours) the Small Generating Facility when the Participating TO (the "Company") approves the Interconnection Request (the "Application") and returns it to the Customer.

## 2.0 Interconnection and Operation

The Customer may operate Small Generating Facility and interconnect with the Company's electric system once all of the following have occurred:

2.1 Upon completing construction, the Customer will cause the Small Generating Facility to be inspected or otherwise certified by the appropriate local electrical wiring inspector with jurisdiction, and

2.2 The Customer returns the Certificate of Completion to the Company, and

2.3 The Company has either:

2.3.1 Completed its inspection of the Small Generating Facility to ensure that all equipment has been appropriately installed and that all electrical connections have been made in accordance with applicable codes. All inspections must be conducted by the Company, at its own expense, within ten Business Days after receipt of the Certificate of Completion and shall take place at a time agreeable to the Parties. The Company shall provide a written statement that the Small Generating Facility has passed inspection or shall notify the Customer of what steps it must take to pass inspection as soon as practicable after the inspection takes place; or

2.3.2 If the Company does not schedule an inspection of the Small Generating Facility within ten business days after receiving the Certificate of Completion, the witness test is deemed waived (unless the Parties agree otherwise); or

2.3.3 The Company waives the right to inspect the Small Generating Facility.

2.4 The Company has the right to disconnect the Small Generating Facility in the event of improper installation or failure to return the Certificate of Completion.

2.5 Revenue quality metering equipment must be installed and tested in accordance with applicable ANSI standards.

## 3.0 Safe Operations and Maintenance

The Customer shall be fully responsible to operate, maintain, and repair the Small Generating Facility as required to ensure that it complies at all times with the interconnection standards to which it has been certified.

## 4.0 Access

The Company shall have access to the disconnect switch (if the disconnect switch is required) and metering equipment of the Small Generating Facility at all times. The Company shall provide reasonable notice to the Customer when possible prior to using its right of access.

**5.0 Disconnection**

The Company may temporarily disconnect the Small Generating Facility upon the following conditions:

5.1 For scheduled outages upon reasonable notice.

5.2 For unscheduled outages or emergency conditions.

5.3 If the Small Generating Facility does not operate in the manner consistent with these Terms and Conditions.

5.4 The Company shall inform the Customer in advance of any scheduled disconnection, or as is reasonable after an unscheduled disconnection.

**6.0 Indemnification**

The Parties shall at all times indemnify, defend, and save the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or inactions of its obligations under this agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

**7.0 Insurance**

The Parties each agree to maintain commercially reasonable amounts of insurance.

**8.0 Limitation of Liability**

Each party's liability to the other party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either party be liable to the other party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever, except as allowed under paragraph 6.0.

**9.0 Termination**

The agreement to operate in parallel may be terminated under the following conditions:

9.1 By the Customer

By providing written notice to the Company.

9.2 By the Company

If the Small Generating Facility fails to operate for any consecutive 12-month period or the Customer fails to remedy a violation of these Terms and Conditions.

9.3 Permanent Disconnection

In the event this Agreement is terminated, the Company shall have the right to disconnect its facilities or direct the Customer to disconnect its Small Generating Facility.

9.4 Survival Rights

This Agreement shall continue in effect after termination to the extent necessary to allow or require either Party to fulfill rights or obligations that arose under the Agreement.

**10.0 Assignment/Transfer of Ownership of the Facility**

This Agreement shall survive the transfer of ownership of the Small Generating Facility to a new owner when the new owner agrees in writing to comply with the terms of this Agreement and so notifies the Company.

**Appendix 8**

**[intentionally omitted]**

**Appendix 9**

**Certification Codes and Standards**

IEEE1547 Standard for Interconnecting Distributed Resources with Electric Power Systems (including use of IEEE 1547.1 testing protocols to establish conformity)

UL 1741 Inverters, Converters, and Controllers for Use in Independent Power Systems

IEEE Std 929-2000 IEEE Recommended Practice for Utility Interface of Photovoltaic (PV) Systems

NFPA 70 (2002), National Electrical Code

IEEE Std C37.90.1-1989 (R1994), IEEE Standard Surge Withstand Capability (SWC) Tests for Protective Relays and Relay Systems

IEEE Std C37.90.2 (1995), IEEE Standard Withstand Capability of Relay Systems to Radiated Electromagnetic Interference from Transceivers

IEEE Std C37.108-1989 (R2002), IEEE Guide for the Protection of Network Transformers

IEEE Std C57.12.44-2000, IEEE Standard Requirements for Secondary Network Protectors

IEEE Std C62.41.2-2002, IEEE Recommended Practice on Characterization of Surges in Low Voltage (1000V and Less) AC Power Circuits

IEEE Std C62.45-1992 (R2002), IEEE Recommended Practice on Surge Testing for Equipment Connected to Low-Voltage (1000V and Less) AC Power Circuits

ANSI C84.1-1995 Electric Power Systems and Equipment – Voltage Ratings (60 Hertz)

IEEE Std 100-2000, IEEE Standard Dictionary of Electrical and Electronic Terms

NEMA MG 1-1998, Motors and Small Resources, Revision 3

IEEE Std 519-1992, IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems

NEMA MG 1-2003 (Rev 2004), Motors and Generators, Revision 1

## Appendix 10

## Certification of Small Generator Equipment Packages

1.0 Small Generating Facility equipment proposed for use separately or packaged with other equipment in an interconnection system shall be considered certified for interconnected operation if (1) it has been tested in accordance with industry standards for continuous utility interactive operation in compliance with the appropriate codes and standards referenced below by any Nationally Recognized Testing Laboratory (NRTL) recognized by the United States Occupational Safety and Health Administration to test and certify interconnection equipment pursuant to the relevant codes and standards listed in Appendix 9, (2) it has been labeled and is publicly listed by such NRTL at the time of the interconnection application, and (3) such NRTL makes readily available for verification all test standards and procedures it utilized in performing such equipment certification, and, with consumer approval, the test data itself. The NRTL may make such information available on its website and by encouraging such information to be included in the manufacturer's literature accompanying the equipment.

2.0 The Interconnection Customer must verify that the intended use of the equipment falls within the use or uses for which the equipment was tested, labeled, and listed by the NRTL.

3.0 Certified equipment shall not require further type-test review, testing, or additional equipment to meet the requirements of this interconnection procedure; however, nothing herein shall preclude the need for an on-site commissioning test by the parties to the interconnection nor follow-up production testing by the NRTL.

4.0 If the certified equipment package includes only interface components (switchgear, inverters, or other interface devices), then an Interconnection Customer must show that the generator or other electric source being utilized with the equipment package is compatible with the equipment package and is consistent with the testing and listing specified for this type of interconnection equipment.

5.0 Provided the generator or electric source, when combined with the equipment package, is within the range of capabilities for which it was tested by the NRTL, and does not violate the interface components' labeling and listing performed by the NRTL, no further design review, testing or additional equipment on the customer side of the point of common coupling shall be required to meet the requirements of this interconnection procedure.

6.0 An equipment package does not include equipment provided by the utility.

7.0 Any equipment package approved and listed in a state by that state's regulatory body for interconnected operation in that state prior to the effective date of these small generator interconnection procedures shall be considered certified under these procedures for use in that state.

**APPENDIX 11**

**[Not Used]**

**Appendix EE**

**Large Generator Interconnection Agreement**

**for Interconnection Requests Processed under the Generator Interconnection and Deliverability Allocation Procedures (Appendix DD of the CAISO Tariff)**

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**LARGE GENERATOR INTERCONNECTION AGREEMENT**

**[INTERCONNECTION CUSTOMER]**

**[PARTICIPATING TO]**

**CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

**THIS LARGE GENERATOR INTERCONNECTION AGREEMENT** ("LGIA") is made and entered into this ____ day of _____ 20___, by and among _____, a _____ organized and existing under the laws of the State/Commonwealth of _____ ("Interconnection Customer" with a Large Generating Facility), _____, a corporation organized and existing under the laws of the State of California ("**Participating TO**"), and **California Independent System Operator Corporation**, a California nonprofit public benefit corporation organized and existing under the laws of the State of California ("CAISO"). Interconnection Customer, Participating TO, and CAISO each may be referred to as a "Party" or collectively as the "Parties."

**RECITALS**

**WHEREAS,** CAISO exercises Operational Control over the CAISO Controlled Grid; and

**WHEREAS,** the Participating TO owns, operates, and maintains the Participating TO's Transmission System; and

**WHEREAS,** Interconnection Customer intends to own, lease and/or control and operate the Generating Facility identified as a Large Generating Facility in Appendix C to this LGIA; and

**WHEREAS,** Interconnection Customer, Participating TO, and CAISO have agreed to enter into this LGIA for the purpose of interconnecting the Large Generating Facility with the Participating TO's Transmission System;

**NOW, THEREFORE,** in consideration of and subject to the mutual covenants contained herein, it is agreed:

When used in this LGIA, terms with initial capitalization that are not defined in Article 1 shall have the meanings specified in the Article in which they are used.

**Article 1. Definitions**

**ADNU** shall mean Area Delivery Network Upgrade.

**Adverse System Impact** shall mean the negative effects due to technical or operational limits on conductors or equipment being exceeded that may compromise the safety and reliability of the electric system.

**Affected System** shall mean an electric system other than the CAISO Controlled Grid that may be affected by the proposed interconnection, including the Participating TO's electric system that is not part of the CAISO Controlled Grid.

**Affiliate** shall mean, with respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

**Applicable Laws and Regulations** shall mean all duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.

**Applicable Reliability Council** shall mean the Western Electricity Coordinating Council or its successor.

**Applicable Reliability Standards** shall mean the requirements and guidelines of NERC, the Applicable Reliability Council, and the Balancing Authority Area of the Participating TO's Transmission System to which the Generating Facility is directly connected, including requirements adopted pursuant to Section 215 of the Federal Power Act.

**Area Deliverability Constraint** shall mean a previously identified transmission system operating limit, based on a CAISO interconnection study or transmission planning study and listed on the CAISO website, that would constrain the deliverability of a substantial number of generators if the CAISO were to assign full capacity or partial capacity deliverability status to additional generating facilities in one or more specified geographic or electrical areas of the CAISO Controlled Grid in a total amount that is greater than the TP Deliverability for those areas. May also be a transmission system operating limit that constrains all or most of the same generation already constrained by a previously identified Area Deliverability Constraint.

**Area Delivery Network Upgrade** shall mean a transmission upgrade or addition identified by the CAISO to relieve an Area Deliverability Constraint.

**Area Off-Peak Constraints** shall mean a transmission system operating limit that would cause excessive curtailment to a substantial number of Generating Facilities during Off-Peak Load conditions, as described in Section 6.3.2.2 of Appendix DD and the CAISO Off-Peak Deliverability Assessment posted on the CAISO Website.

**Area Off-Peak Network Upgrades (AOPNUs)** shall mean a transmission upgrade or addition the CAISO identifies in the Transmission Planning Process to relieve an Area Off-Peak Constraint.

**Assigned Network Upgrade (ANU)** shall mean Reliability Network Upgrades, Local Off-Peak Network Upgrades, and Local Delivery Network Upgrades currently assigned to the Interconnection Customer. Assigned Network Upgrades exclude Conditionally Assigned Network Upgrades unless they become Assigned Network Upgrades.

**Asynchronous Generating Facility** shall mean an induction, doubly-fed, or electronic power generating unit(s) that produces 60 Hz (nominal) alternating current.

**Balancing Authority** shall mean the responsible entity that integrates resource plans ahead of time, maintains load-interchange-generation balance within a Balancing Authority Area, and supports Interconnection frequency in real time.

**Balancing Authority Area** shall mean the collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.

**Base Case** shall mean the base case power flow, short circuit, and stability databases used for the Interconnection Studies.

**Breach** shall mean the failure of a Party to perform or observe any material term or condition of this LGIA.

**Breaching Party** shall mean a Party that is in Breach of this LGIA.

**Business Day** shall mean Monday through Friday, excluding federal holidays and the day after Thanksgiving Day.

**CAISO Controlled Grid** shall mean the system of transmission lines and associated facilities of the parties to the Transmission Control Agreement that have been placed under the CAISO's Operational Control.

**CAISO Tariff** shall mean the CAISO's tariff, as filed with FERC, and as amended or supplemented from time to time, or any successor tariff.

**Calendar Day** shall mean any day including Saturday, Sunday or a federal holiday.

**Commercial Operation** shall mean the status of an Electric Generating Unit or project phase at a Generating Facility that has commenced generating electricity for sale, excluding electricity generated during Trial Operation.

**Commercial Operation Date** of an Electric Generating Unit or project phase shall mean the date on which the Electric Generating Unit or project phase at the Generating Facility commences Commercial Operation as agreed to by the applicable Participating TO, the CAISO, and the Interconnection Customer pursuant to Appendix E to this LGIA, and in accordance with the implementation plan agreed to by the Participating TO and the CAISO for multiple individual Electric Generating Units or project phases at a Generating Facility where an Interconnection Customer intends to establish separate Commercial Operation Dates for those Electric Generating Units or project phases.

**Conditionally Assigned Network Upgrade (CANU)** shall mean Reliability Network Upgrades, Local Off-Peak Network Upgrades, and Local Delivery Network Upgrades currently assigned to an earlier Interconnection Customer, but which may be assigned to the Interconnection Customer.

**Confidential Information** shall mean any confidential, proprietary or trade secret information of a plan, specification, pattern, procedure, design, device, list, concept, policy or compilation relating to the present or planned business of a Party, which is designated as confidential by the Party supplying the information, whether conveyed orally, electronically, in writing, through inspection, or otherwise, subject to Article 22.1.2.

**Current Cost Responsibility (CCR)** shall mean the Interconnection Customer's current allocated costs for Assigned Network Upgrades, not to exceed the Maximum Cost Responsibility. This cost is used to calculate the Interconnection Customer's Interconnection Financial Security requirement.

**Deliverability** shall mean (1) The annual Net Qualifying Capacity of a Generating Facility, as verified through a Deliverability Assessment and measured in MW, which specifies the amount of resource adequacy capacity the Generating Facility is eligible to provide. (2) The annual Maximum Import Capability of an Intertie which specifies the amount of resource adequacy capacity measured in MW, that load-serving entities collectively can procure from imports at that Intertie to meet their resource adequacy requirements.

**Default** shall mean the failure of a Breaching Party to cure its Breach in accordance with Article 17 of this LGIA.

**Distribution System** shall mean those non-CAISO-controlled transmission and distribution facilities owned by the Participating TO.

**Distribution Upgrades** shall mean the additions, modifications, and upgrades to the Participating TO's Distribution System. Distribution Upgrades do not include Interconnection Facilities.

**Effective Date** shall mean the date on which this LGIA becomes effective upon execution by all Parties subject to acceptance by FERC, or if filed unexecuted, upon the date specified by FERC.

**Electric Generating Unit** shall mean an individual electric generator and its associated plant and

apparatus whose electrical output is capable of being separately identified and metered.

**Emergency Condition** shall mean a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (2) that, in the case of the CAISO, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the CAISO Controlled Grid or the electric systems of others to which the CAISO Controlled Grid is directly connected; (3) that, in the case of the Participating TO, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Participating TO's Transmission System, Participating TO's Interconnection Facilities, Distribution System, or the electric systems of others to which the Participating TO's electric system is directly connected; or (4) that, in the case of the Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Generating Facility or Interconnection Customer's Interconnection Facilities. System restoration and black start shall be considered Emergency Conditions; provided, that Interconnection Customer is not obligated by this LGIA to possess black start capability.

**Environmental Law** shall mean Applicable Laws or Regulations relating to pollution or protection of the environment or natural resources.

**Federal Power Act** shall mean the Federal Power Act, as amended, 16 U.S.C. §§ 791a et seq.

**FERC** shall mean the Federal Energy Regulatory Commission or its successor.

**Force Majeure** shall mean any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure event does not include acts of negligence or intentional wrongdoing by the Party claiming Force Majeure.

**General Reliability Network Upgrade (GRNU)** shall mean Reliability Network Upgrades that are not Interconnection Reliability Network Upgrades.

**Generating Facility** shall mean the Interconnection Customer's Electric Generating Unit(s) used for the production and/or storage for later injection of electricity identified in the Interconnection Customer's Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

**Generating Facility Capacity** shall mean the net capacity of the Generating Facility and the aggregate net capacity of the Generating Facility where it includes multiple energy production devices.

**Generator Interconnection and Deliverability Allocation Procedures (GIDAP)** shall mean the CAISO protocol that sets forth the interconnection and allocation procedures applicable to an Interconnection Request pertaining to a Large Generating Facility that is included in CAISO Tariff Appendix DD.

**Generator Interconnection Study Process Agreement** shall mean the agreement between the Interconnection Customer and the CAISO for the conduct of the Interconnection Studies.

**Good Utility Practice** shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be any one of a number of the optimum practices, methods, or acts to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the

region.

**Governmental Authority** shall mean any federal, state, local or other governmental, regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the Interconnection Customer, CAISO, Participating TO, or any Affiliate thereof.

**Governing Independent Study Process Interconnection Studies** shall mean the engineering study(ies) conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), that evaluates the impact of the proposed interconnection on the safety and reliability of the Participating TO's Transmission System and, if applicable, an Affected System, which shall consist primarily of a Facilities Study as described in Section 4.5 of the Generation Interconnection Procedures, a System Impact Study as described in Section 4.4 of the Generation Interconnection Procedures, or a system impact and facilities study as described in Section 4.4 of the GIDAP.

**Hazardous Substances** shall mean any chemicals, materials or substances defined as or included in the definition of "hazardous substances," "hazardous wastes," "hazardous materials," "hazardous constituents," "restricted hazardous materials," "extremely hazardous substances," "toxic substances," "radioactive substances," "contaminants," "pollutants," "toxic pollutants" or words of similar meaning and regulatory effect under any applicable Environmental Law, or any other chemical, material or substance, exposure to which is prohibited, limited or regulated by any applicable Environmental Law.

**Initial Synchronization Date** shall mean the date upon which an Electric Generating Unit is initially synchronized and upon which Trial Operation begins.

**In-Service Date** shall mean the date upon which the Interconnection Customer reasonably expects it will be ready to begin use of the Participating TO's Interconnection Facilities to obtain back feed power.

**Interconnection Customer's Interconnection Facilities** shall mean all facilities and equipment, as identified in Appendix A of this LGIA, that are located between the Generating Facility and the Point of Change of Ownership, including any modification, addition, or upgrades to such facilities and equipment necessary to physically and electrically interconnect the Generating Facility to the Participating TO's Transmission System. Interconnection Customer's Interconnection Facilities are sole use facilities.

**Interconnection Facilities** shall mean the Participating TO's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Generating Facility to the Participating TO's Transmission System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

**Interconnection Financial Security (IFS)** shall mean any of the financial instruments listed in Section 11.1 of the GIDAP that are posted by an Interconnection Customer to finance the construction of facilities or Network Upgrades.

**Interconnection Handbook** shall mean a handbook, developed by the Participating TO and posted on the Participating TO's web site or otherwise made available by the Participating TO, describing technical and operational requirements for wholesale generators and loads connected to the Participating TO's portion of the CAISO Controlled Grid, as such handbook may be modified or superseded from time to time. Participating TO's standards contained in the Interconnection Handbook shall be deemed consistent with Good Utility Practice and Applicable Reliability Standards. In the event of a conflict

between the terms of this LGIA and the terms of the Participating TO's Interconnection Handbook, the terms in this LGIA shall apply.

**Interconnection Reliability Network Upgrades (IRNU)** shall mean Reliability Network Upgrades at the Point of Interconnection to accomplish the physical interconnection of the Generating Facility to the CAISO Controlled Grid. IRNUs are treated as Reliability Network Upgrades unless otherwise noted.

**Interconnection Request** shall mean a request, in the form of Appendix 1 to the GIDAP, in accordance with the CAISO Tariff.

**Interconnection Service** shall mean the service provided by the Participating TO and CAISO associated with interconnecting the Interconnection Customer's Generating Facility to the Participating TO's Transmission System and enabling the CAISO Controlled Grid to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of this LGIA, the Participating TO's Transmission Owner Tariff, and the CAISO Tariff.

**Interconnection Study** shall mean

(i) For Interconnection Requests processed under the cluster study process described in the GIDAP, any of the following: the Phase I Interconnection Study conducted or caused to be performed by the CAISO, the reassessment of the Phase I Interconnection Study Base Case conducted or caused to be performed by the CAISO prior to the commencement of the Phase II Interconnection Study, or the Phase II Interconnection Study conducted or caused to be performed by the CAISO, pursuant to the GIDAP.

(ii) For Interconnection Requests processed under the Independent Study Process described in the GIDAP, the governing study(ies) conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), pursuant to the GIDAP, which shall consist primarily of a system impact and facilities study as described in Section 4.4 of the GIDAP.

**IRS** shall mean the Internal Revenue Service.

**Large Generating Facility** shall mean a Generating Facility having a Generating Facility Capacity of more than 20 MW.

**LDNU** shall mean Local Delivery Network Upgrades.

**Local Deliverability Constraint** shall mean a transmission system operating limit modeled in the GIDAP study process that would be exceeded if the CAISO were to assign full capacity or partial capacity deliverability status to one or more additional generating facilities interconnecting to the CAISO Controlled Grid in a specific local area, and that is not an Area Deliverability Constraint.

**Local Delivery Network Upgrade** shall mean a transmission upgrade or addition identified by the CAISO in the GIDAP study process to relieve a Local Deliverability Constraint.

**Local Off-Peak Constraints** shall mean a transmission system operating limit modeled in the generator interconnection study process that would be exceeded or lead to excessive curtailment, as described in the Off-Peak Deliverability Assessment methodology, if the CAISO were to assign Off-Peak Deliverability Status to one or more Generating Facilities interconnecting to the CAISO Controlled Grid in a specific local area, and that is not an Area Off-Peak Constraint.

**Local Off-Peak Network Upgrades (LOPNUs)** shall mean a transmission upgrade or addition the CAISO identifies in the generator interconnection study process to relieve a Local Off-Peak

Constraint.

**Loss** shall mean any and all damages, losses, and claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties.

**Material Modification** shall mean those modifications that have a material impact on the cost or timing of any Interconnection Request or any other valid interconnection request with a later queue priority date.

**Maximum Cost Exposure (MCE)** shall mean, pursuant to Appendix DD, the sum of (1) the Interconnection Customer's Maximum Cost Responsibility and (2) the Conditionally Assigned Network Upgrades from its Phase I or Phase II Interconnection Study.

**Maximum Cost Responsibility (MCR)** shall mean, pursuant to Appendix DD, the lower sum of the Interconnection Customer's (1) full cost of assigned Interconnection Reliability Network Upgrades and (2) allocated costs for all other Assigned Network Upgrades, from its Phase I or Phase II Interconnection Studies, not to exceed the Maximum Cost Exposure.

**Merchant Network Upgrades** - Network Upgrades constructed and owned by an Interconnection Customer or a third party pursuant to Article 5.1.5 of this LGIA, Section 14.3 of the GIDAP, and Sections 24.4.6.1 and 36.11 of the CAISO Tariff.

**Metering Equipment** shall mean all metering equipment installed or to be installed for measuring the output of the Generating Facility pursuant to this LGIA at the metering points, including but not limited to instrument transformers, MWh-meters, data acquisition equipment, transducers, remote terminal unit, communications equipment, phone lines, and fiber optics.

**NERC** shall mean the North American Electric Reliability Corporation or its successor organization.

**Net Scheduled Generating Unit** shall mean an Electric Generating Unit identified in a Net Scheduled PGA operated as a single unit such that the energy bid or self-schedule with the CAISO is the net value of the aggregate electrical net output of the Electric Generating Unit and the self-provided load.

**Net Scheduled PGA** shall mean a Net Scheduled Participating Generator Agreement specifying the special provisions for the operating relationship between a Net Scheduled Generating Unit and the CAISO, a pro forma version of which is set forth in Appendix B.3 of the CAISO Tariff.

**Network Upgrades** shall be Participating TO's Delivery Network Upgrades and Participating TO's Reliability Network Upgrades.

**Off-Peak Deliverability Constraints** shall mean a transmission system operating limit that constrains Generating Facilities in an area, leading to the excessive curtailment of expected Energy.

**Off-Peak Network Upgrades** shall mean Network Upgrades needed to relieve Off-Peak Deliverability Constraints. Area Off-Peak Network Upgrades address Area Off-Peak Constraints. Local Off-Peak Network Upgrades address Local Off-Peak Constraints.

**Operational Control** shall mean the rights of the CAISO under the Transmission Control Agreement and the CAISO Tariff to direct the parties to the Transmission Control Agreement how to operate their transmission lines and facilities and other electric plant affecting the reliability of those lines and facilities for the purpose of affording comparable non-discriminatory transmission access and meeting applicable reliability criteria.

**Option (A) Generating Facilities** shall mean a Generating Facility for which the Interconnection Customer has selected Option (A) as the Deliverability option under Section 7.2 of the GIDAP.

**Option (B) Generating Facilities** shall mean a Generating Facility for which the Interconnection Customer has selected Option (B) as the Deliverability option under Section 7.2 of the GIDAP.

**Participating TO's Delivery Network Upgrades** shall mean the additions, modifications, and upgrades to the Participating TO's Transmission System at or beyond the Point of Interconnection, other than Reliability Network Upgrades, identified in the Interconnection Studies, as identified in Appendix A, to relieve constraints on the CAISO Controlled Grid. Participating TO Delivery Network Upgrades can be either ADNU or LDNU.

**Participating TO's Interconnection Facilities** shall mean all facilities and equipment owned, controlled or operated by the Participating TO from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to this LGIA, including any modifications, additions or upgrades to such facilities and equipment. Participating TO's Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

**Participating TO's Reliability Network Upgrades** shall mean the additions, modifications, and upgrades to the Participating TO's Transmission System at or beyond the Point of Interconnection, identified in the Interconnection Studies, as identified in Appendix A, necessary to interconnect the Large Generating Facility safely and reliably to the Participating TO's Transmission System, which would not have been necessary but for the interconnection of the Large Generating Facility, including additions, modifications, and upgrades necessary to remedy short circuit or stability problems resulting from the interconnection of the Large Generating Facility to the Participating TO's Transmission System. Participating TO's Reliability Network Upgrades also include, consistent with Applicable Reliability Standards and Applicable Reliability Council practice, the Participating TO's facilities necessary to mitigate any adverse impact the Large Generating Facility's interconnection may have on a path's Applicable Reliability Council rating. Participating TO's Reliability Network Upgrades do not include any Participating TO's Delivery Network Upgrades.

**Participating TO's Transmission System** shall mean the facilities owned and operated by the Participating TO and that have been placed under the CAISO's Operational Control, which facilities form part of the CAISO Controlled Grid.

**Party** or **Parties** shall mean the Participating TO, CAISO, Interconnection Customer or the applicable combination of the above.

**Phase I Interconnection Study** shall mean the engineering study conducted or caused to be performed by the CAISO, in coordination with the applicable Participating TO(s), that evaluates the impact of the proposed interconnection on the safety and reliability of the Participating TO's Transmission System and, if applicable, an Affected System. The study shall identify and detail the system impacts that would result if the Generating Facility(ies) were interconnected without identified project modifications or system modifications, as provided in the On-Peak Deliverability Assessment (as defined in the CAISO Tariff), and other potential impacts, including but not limited to those identified in the Scoping Meeting as described in the GIDAP. The study will also identify the approximate total costs, based on per unit costs, of mitigating these impacts, along with an equitable allocation of those costs to Interconnection Customers for their individual Generating Facilities.

**Phase II Interconnection Study** shall mean an engineering and operational study conducted or caused to be performed by the CAISO in coordination with the applicable Participating TO(s), to determine the Point of Interconnection and a list of facilities (including the Participating TO's Interconnection Facilities, Network Upgrades, Distribution Upgrades, and Stand Alone Network Upgrades), the cost of those facilities, and the time required to interconnect the Generating Facility(ies) with the Participating TO's Transmission System.

**Phased Generating Facility** shall mean a Generating Facility that is structured to be completed and to achieve Commercial Operation in two or more successive sequences that are specified in this LGIA, such that each sequence comprises a portion of the total megawatt generation capacity of the entire Generating Facility.

**Point of Change of Ownership** shall mean the point, as set forth in Appendix A to this LGIA, where the Interconnection Customer's Interconnection Facilities connect to the Participating TO's Interconnection Facilities.

**Point of Interconnection** shall mean the point, as set forth in Appendix A to this LGIA, where the Interconnection Facilities connect to the Participating TO's Transmission System.

**Precursor Network Upgrades (PNU)** shall mean Network Upgrades required for the Interconnection Customer consisting of (1) Network Upgrades assigned to an earlier Interconnection Customer in an earlier Queue Cluster, Independent Study Process, or Fast Track Process, that has executed its GIA pursuant to Section 14.2.2 of the GIDAP; and (2) Network Upgrades in the approved CAISO Transmission Plan.

**Reasonable Efforts** shall mean, with respect to an action required to be attempted or taken by a Party under this LGIA, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

**RNU** shall mean Reliability Network Upgrades.

**Reliability Network Upgrades (RNU)** shall mean the transmission facilities at or beyond the Point of Interconnection identified in the Interconnection Studies as necessary to interconnect one or more Generating Facility(ies) safely and reliably to the CAISO Controlled Grid, which would not have been necessary but for the interconnection of one or more Generating Facility(ies), including Network Upgrades necessary to remedy short circuit or stability problems, or thermal overloads. Reliability Network Upgrades shall only be deemed necessary for system operating limits, occurring under any system condition, which cannot be adequately mitigated through Congestion Management or Operating Procedures based on the characteristics of the Generating Facilities included in the Interconnection Studies, limitations on market models, systems, or information, or other factors specifically identified in the Interconnection Studies. Reliability Network Upgrades also include, consistent with WECC practice, the facilities necessary to mitigate any adverse impact the Generating Facility's interconnection may have on a path's WECC rating. Reliability Network Upgrades include Interconnection Reliability Network Upgrades and General Reliability Network Upgrades.

**Scoping Meeting** shall mean the meeting among representatives of the Interconnection Customer, the Participating TO(s), other Affected Systems, and the CAISO conducted for the purpose of discussing alternative interconnection options, to exchange information including any transmission data and earlier study evaluations that would be reasonably expected to impact such interconnection options, to analyze such information, and to determine the potential feasible Points of Interconnection.

**Stand Alone Network Upgrades** shall mean Network Upgrades that are not part of an Affected System that the Interconnection Customer may construct without affecting day-to-day operations of the CAISO Controlled Grid or Affected Systems during their construction. The Participating TO, the CAISO, and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to this LGIA. If the CAISO, the Participating TO, and the Interconnection Customer disagree about whether a particular Network Upgrade is a Stand Alone Network Upgrade, the CAISO or Participating TO must provide the Interconnection Customer a written technical explanation outlining why it does not consider the Network Upgrade to be a Stand Alone Network Upgrade within 15 days of its determination.

**Surplus Interconnection Service** shall mean any unneeded portion of Interconnection Service

Capacity established herein, such that if Surplus Interconnection Service is utilized the total amount of Interconnection Service Capacity at the Point of Interconnection would remain the same.

**System Protection Facilities** shall mean the equipment, including necessary protection signal communications equipment, that protects (1) the Participating TO's Transmission System, Participating TO's Interconnection Facilities, CAISO Controlled Grid, and Affected Systems from faults or other electrical disturbances occurring at the Generating Facility and (2) the Generating Facility from faults or other electrical system disturbances occurring on the CAISO Controlled Grid, Participating TO's Interconnection Facilities, and Affected Systems or on other delivery systems or other generating systems to which the CAISO Controlled Grid is directly connected.

**TP Deliverability** shall mean the capability, measured in MW, of the CAISO Controlled Grid as modified by transmission upgrades and additions identified in the annual Transmission Plan to support the interconnection with Full Capacity Deliverability Status or Partial Capacity Deliverability Status of additional Generating Facilities in a specified geographic or electrical area of the CAISO Controlled Grid.

**Transmission Control Agreement** shall mean CAISO FERC Electric Tariff No. 7.

**Trial Operation** shall mean the period during which the Interconnection Customer is engaged in on-site test operations and commissioning of an Electric Generating Unit prior to Commercial Operation.

**Variable Energy Resource** shall mean a device for the production of electricity that is characterized by an Energy source that: (1) is renewable; (2) cannot be stored by the facility owner or operator; and (3) has variability that is beyond the control of the facility owner or operator.

## Article 2. Effective Date, Term and Termination

**2.1 Effective Date.** This LGIA shall become effective upon execution by all Parties subject to acceptance by FERC (if applicable), or if filed unexecuted, upon the date specified by FERC. The CAISO and Participating TO shall promptly file this LGIA with FERC upon execution in accordance with Article 3.1, if required.

**2.2 Term of Agreement.** Subject to the provisions of Article 2.3, this LGIA shall remain in effect for a period of ____ years from the Effective Date (Term Specified in Individual Agreements to be ten (10) years or such other longer period as the Interconnection Customer may request) and shall be automatically renewed for each successive one-year period thereafter.

**2.3 Termination Procedures.**

**2.3.1 Written Notice.** This LGIA may be terminated by the Interconnection Customer after giving the CAISO and the Participating TO ninety (90) Calendar Days advance written notice, or by the CAISO and the Participating TO notifying FERC after the Generating Facility permanently ceases Commercial Operation.

**2.3.2 Default.** A Party may terminate this LGIA in accordance with Article 17.

**2.3.3 Suspension of Work.** This LGIA may be deemed terminated in accordance with Article 5.16, if applicable.

**2.3.4** Notwithstanding Articles 2.3.1, 2.3.2, and 2.3.3, no termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination, including the filing with FERC of a notice of termination of this LGIA (if applicable), which notice has been accepted for filing by FERC, and the Interconnection Customer has fulfilled its termination cost obligations under Article 2.4.

**2.4** **Termination Costs.** Immediately upon the other Parties' receipt of a notice of the termination of this LGIA pursuant to Article 2.3 above, the CAISO and the Participating TO will determine the total cost responsibility of the Interconnection Customer. If, as of the date of the other Parties' receipt of the notice of termination, the Interconnection Customer has not already paid its share of Network Upgrade costs, as set forth in Appendix G to this LGIA, the Participating TO will liquidate the Interconnection Customer's Interconnection Financial Security associated with its cost responsibility for Network Upgrades, in accordance with Section 11.4 of the GIDAP.

The Interconnection Customer will also be responsible for all costs incurred or irrevocably committed to be incurred in association with the construction of the Participating TO's Interconnection Facilities (including any cancellation costs relating to orders or contracts for Interconnection Facilities and equipment) and other such expenses, including any Distribution Upgrades for which the Participating TO or CAISO has incurred expenses or has irrevocably committed to incur expenses and has not been reimbursed by the Interconnection Customer, as of the date of the other Parties' receipt of the notice of termination, subject to the limitations set forth in this Article 2.4. Nothing in this Article 2.4 shall limit the Parties' rights under Article 17. If, as of the date of the other Parties' receipt of the notice of termination, the Interconnection Customer has not already reimbursed the Participating TO and the CAISO for costs incurred to construct the Participating TO's Interconnection Facilities, the Participating TO will liquidate the Interconnection Customer's Interconnection Financial Security associated with the construction of the Participating TO's Interconnection Facilities, in accordance with Section 11.4 of the GIDAP. If the amount of the Interconnection Financial Security liquidated by the Participating TO under this Article 2.4 is insufficient to compensate the CAISO and the Participating TO for actual costs associated with the construction of the Participating TO's Interconnection Facilities contemplated in this Article, any additional amounts will be the responsibility of the Interconnection Customer, subject to the provisions of Section 11.4 of the GIDAP. Any such additional amounts due from the Interconnection Customer beyond the amounts covered by its Interconnection Financial Security will be due to the Participating TO immediately upon termination of this LGIA in accordance with Section 11.4 of the GIDAP.

If the amount of the Interconnection Financial Security exceeds the Interconnection Customer's cost responsibility under Section 11.4 of the GIDAP, any excess amount will be released to the Interconnection Customer in accordance with Section 11.4 of the GIDAP.

**2.4.1** Notwithstanding the foregoing, in the event of termination by a Party, all Parties shall use commercially Reasonable Efforts to mitigate the costs, damages, and charges arising as a consequence of termination. With respect to any portion of the Participating TO's Interconnection Facilities that have not yet been constructed or installed, the Participating TO shall to the extent possible and with the Interconnection Customer's authorization cancel any pending orders of, or return, any materials or equipment for, or contracts for construction of, such facilities; provided that in the event the Interconnection Customer elects not to authorize such cancellation, the Interconnection Customer shall assume all payment obligations with respect to such materials, equipment, and contracts, and the Participating TO shall deliver such material and equipment, and, if necessary, assign such contracts, to the Interconnection Customer as soon as practicable, at the Interconnection Customer's expense. To the extent that the Interconnection Customer has already paid the Participating TO for any or all such costs of materials or equipment not taken by the Interconnection Customer, the Participating TO shall promptly refund such amounts to the Interconnection Customer, less any costs, including penalties, incurred by the Participating TO to cancel any pending orders of or return such materials, equipment, or contracts.

**2.4.2** The Participating TO may, at its option, retain any portion of such materials, equipment, or facilities that the Interconnection Customer chooses not to accept delivery of, in which case the Participating TO shall be responsible for all costs associated with procuring

such materials, equipment, or facilities.

**2.4.3** With respect to any portion of the Interconnection Facilities, and any other facilities already installed or constructed pursuant to the terms of this LGIA, Interconnection Customer shall be responsible for all costs associated with the removal, relocation or other disposition or retirement of such materials, equipment, or facilities.

**2.5 Disconnection.** Upon termination of this LGIA, the Parties will take all appropriate steps to disconnect the Large Generating Facility from the Participating TO's Transmission System. All costs required to effectuate such disconnection shall be borne by the terminating Party, unless such termination resulted from the non-terminating Party's Default of this LGIA or such non-terminating Party otherwise is responsible for these costs under this LGIA.

**2.6 Survival.** This LGIA shall continue in effect after termination to the extent necessary to provide for final billings and payments and for costs incurred hereunder, including billings and payments pursuant to this LGIA; to permit the determination and enforcement of liability and indemnification obligations arising from acts or events that occurred while this LGIA was in effect; and to permit each Party to have access to the lands of the other Parties pursuant to this LGIA or other applicable agreements, to disconnect, remove or salvage its own facilities and equipment.

## Article 3. Regulatory Filings and CAISO Tariff Compliance

**3.1 Filing.** The Participating TO and the CAISO shall file this LGIA (and any amendment hereto) with the appropriate Governmental Authority(ies), if required. The Interconnection Customer may request that any information so provided be subject to the confidentiality provisions of Article 22. If the Interconnection Customer has executed this LGIA, or any amendment thereto, the Interconnection Customer shall reasonably cooperate with the Participating TO and CAISO with respect to such filing and to provide any information reasonably requested by the Participating TO or CAISO needed to comply with applicable regulatory requirements.

**3.2 Agreement Subject to CAISO Tariff.** The Interconnection Customer will comply with all applicable provisions of the CAISO Tariff, including the GIDAP.

**3.3 Relationship Between this LGIA and the CAISO Tariff.** With regard to rights and obligations between the Participating TO and the Interconnection Customer, if and to the extent a matter is specifically addressed by a provision of this LGIA (including any appendices, schedules or other attachments to this LGIA), the provisions of this LGIA shall govern. If and to the extent a provision of this LGIA is inconsistent with the CAISO Tariff and dictates rights and obligations between the CAISO and the Participating TO or the CAISO and the Interconnection Customer, the CAISO Tariff shall govern.

**3.4 Relationship Between this LGIA and the Net Scheduled PGA.** With regard to the rights and obligations of a Net Scheduled Generating Unit that has entered into a Net Scheduled PGA with the CAISO and has entered into this LGIA, if and to the extent a matter is specifically addressed by a provision of the Net Scheduled PGA that is inconsistent with this LGIA, the terms of the Net Scheduled PGA shall govern.

## Article 4. Scope of Service

**4.1 Interconnection Service.** Interconnection Service allows the Interconnection Customer to connect the Large Generating Facility to the Participating TO's Transmission System and be eligible to deliver the Large Generating Facility's output using the available capacity of the CAISO Controlled Grid. To the extent the Interconnection Customer wants to receive Interconnection Service, the Participating TO shall construct facilities identified in Appendices A and C that the

Participating TO is responsible to construct.

Interconnection Service does not necessarily provide the Interconnection Customer with the capability to physically deliver the output of its Large Generating Facility to any particular load on the CAISO Controlled Grid without incurring congestion costs. In the event of transmission constraints on the CAISO Controlled Grid, the Interconnection Customer's Large Generating Facility shall be subject to the applicable congestion management procedures in the CAISO Tariff in the same manner as all other resources. Full Capacity Deliverability Status, Partial Capacity Deliverability Status, and Off-Peak Deliverability Status do not confer any priority over other Generating Facilities to deliver Energy; nor provide any warranty or guarantee to deliver any amount of Energy or avoid curtailment at any time.

**4.2 Provision of Service.** The Participating TO and the CAISO shall provide Interconnection Service for the Large Generating Facility.

**4.3 Performance Standards.** Each Party shall perform all of its obligations under this LGIA in accordance with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice, and to the extent a Party is required or prevented or limited in taking any action by such regulations and standards, such Party shall not be deemed to be in Breach of this LGIA for its compliance therewith. If such Party is the CAISO or Participating TO, then that Party shall amend the LGIA and submit the amendment to FERC for approval.

**4.4 No Transmission Service.** The execution of this LGIA does not constitute a request for, nor the provision of, any transmission service under the CAISO Tariff, and does not convey any right to deliver electricity to any specific customer or point of delivery.

**4.5 Interconnection Customer Provided Services.** The services provided by Interconnection Customer under this LGIA are set forth in Article 9.6 and Article 13.5.1. Interconnection Customer shall be paid for such services in accordance with Article 11.6.

**4.6 TP Deliverability.** To the extent that an Interconnection Customer is eligible for and has been allocated TP Deliverability pursuant to Section 8.9 of the GIDAP, the Interconnection Customer's retention of such allocated TP Deliverability shall be contingent upon satisfying the obligations set forth in Section 8.9.3 of the GIDAP. In the event that the Interconnection does not retain allocated TP Deliverability with regard to any portion of the Generating Facility, such portion of the Generating Facility shall be deemed to receive Interconnection Service under this LGIA as Energy Only Deliverability Status.

## ARTICLE 5. INTERCONNECTION FACILITIES ENGINEERING, PROCUREMENT, AND CONSTRUCTION

Interconnection Facilities, Network Upgrades, and Distribution Upgrades shall be studied, designed, and constructed pursuant to Good Utility Practice. Such studies, design and construction shall be based on the assumed accuracy and completeness of all technical information received by the Participating TO and the CAISO from the Interconnection Customer associated with interconnecting the Large Generating Facility.

**5.1 Options.** Unless otherwise mutually agreed among the Parties, the Interconnection Customer shall select the In-Service Date, Initial Synchronization Date, and Commercial Operation Date; and either the Standard Option, Alternate Option, or, if eligible, Merchant Option, set forth below, Interconnection Facilities, Network Upgrades, and Distribution Upgrades, and such dates and selected option shall be set forth in Appendix B, Milestones. At the same time, the Interconnection Customer shall indicate whether it elects the Option to Build set forth in Article 5.1.3 below. If the dates designated by the Interconnection Customer are not acceptable to the CAISO and Participating TO, they shall so notify the Interconnection Customer within thirty (30)

calendar days. Upon receipt of the notification that the Interconnection Customer's designated dates are not acceptable to the CAISO and Participating TO, the Interconnection Customer shall notify the CAISO and Participating TO within thirty (30) calendar days whether it elects to exercise the Option to Build if it has not already elected to exercise the Option to Build.

**5.1.1 Standard Option.** The Participating TO shall design, procure, and construct the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades, using Reasonable Efforts to complete the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades by the dates set forth in Appendix B, Milestones. The Participating TO shall not be required to undertake any action which is inconsistent with its standard safety practices, its material and equipment specifications, its design criteria and construction procedures, its labor agreements, and Applicable Laws and Regulations. In the event the Participating TO reasonably expects that it will not be able to complete the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades by the specified dates, the Participating TO shall promptly provide written notice to the Interconnection Customer and the CAISO and shall undertake Reasonable Efforts to meet the earliest dates thereafter.

**5.1.2 Alternate Option.** If the dates designated by the Interconnection Customer are acceptable to the Participating TO, the Participating TO shall so notify the Interconnection Customer within thirty (30) Calendar Days, and shall assume responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities by the designated dates.

If the Participating TO subsequently fails to complete the Participating TO's Interconnection Facilities by the In-Service Date, to the extent necessary to provide back feed power; or fails to complete Network Upgrades by the Initial Synchronization Date to the extent necessary to allow for Trial Operation at full power output, unless other arrangements are made by the Parties for such Trial Operation; or fails to complete the Network Upgrades by the Commercial Operation Date, as such dates are reflected in Appendix B, Milestones; the Participating TO shall pay the Interconnection Customer liquidated damages in accordance with Article 5.3, Liquidated Damages, provided, however, the dates designated by the Interconnection Customer shall be extended day for day for each day that the CAISO refuses to grant clearances to install equipment.

**5.1.3 Option to Build.** The Interconnection Customer shall have the option to assume responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades. The Participating TO, CAISO, and Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify such Stand Alone Network Upgrades in Appendix A to this LGIA. Except for Stand Alone Network Upgrades, the Interconnection Customer shall have no right to construct Network Upgrades under this option.

**5.1.4 Negotiated Option.** If the dates designated by the Interconnection Customer are not acceptable to the CAISO and Participating TO, the Parties shall in good faith attempt to negotiate terms and conditions, including revision of the specified dates and liquidated damages, the provision of incentives, or the procurement and construction of all facilities other than the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades if the Interconnection Customer elects to exercise the Option to Build under Article 5.1.3. If the Parties are unable to reach agreement on such terms and conditions, then, pursuant to Article 5.1.1 (Standard Option), the Participating TO shall assume responsibility for the design, procurement and construction of all facilities other than the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades if the Interconnection Customer elects to exercise the Option to Build.

**5.1.5 Merchant Option.** In addition to any Option to Build set forth in Article 5.1.3 of this LGIA,

an Interconnection Customer having an Option (B) Generating Facility may elect to have a party other than the applicable Participating TO construct some or all of the LDNU and ADNU for which the Interconnection Customer has the obligation to fund and which are not subject to reimbursement. Such LDNU and ADNU will be constructed and incorporated into the CAISO Controlled Grid pursuant to the provisions for Merchant Transmission Facilities in CAISO Tariff Sections 24.4.6.1 and 36.11

**5.2 General Conditions Applicable to Option to Build.** If the Interconnection Customer assumes responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, or assumes responsibility for any stand-alone task, such as telecommunications, environmental, or real-estate related work:

(1) within six (6) months of the execution of this LGIA, or at a later date agreed to by the Parties, the Interconnection Customer will submit to the CAISO and the Participating TO a milestone schedule for the design, procurement, and construction of the Stand Alone Network Upgrades, or any stand-alone task assumed by the Interconnection Customer. The milestone schedule will be required to support the Interconnection Customer's Commercial Operation Date, and any Appendix B Milestones will be amended to include the milestone schedule for the Stand Alone Network Upgrades;

(2) the Interconnection Customer shall engineer, procure equipment, and construct the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades (or portions thereof) using Good Utility Practice and using standards and specifications provided in advance by the Participating TO;

(3) The Interconnection Customer's engineering, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades shall comply with all requirements of law to which the Participating TO would be subject in the engineering, procurement or construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades;

(4) the Participating TO shall review, and the Interconnection Customer shall obtain the Participating TO's approval of, the engineering design, equipment acceptance tests, and the construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, which approval shall not be unreasonably withheld, and the CAISO may, at its option, review the engineering design, equipment acceptance tests, and the construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades;

(5) prior to commencement of construction, the Interconnection Customer shall provide to the Participating TO, with a copy to the CAISO for informational purposes, a schedule for construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, and shall promptly respond to requests for information from the Participating TO;

(6) at any time during construction, the Participating TO shall have the right to gain unrestricted access to the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades and to conduct inspections of the same;

(7) at any time during construction, should any phase of the engineering, equipment procurement, or construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades not meet the standards and specifications provided by the Participating TO, the Interconnection Customer shall be obligated to remedy deficiencies in that portion of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades;

(8) the Interconnection Customer shall indemnify the CAISO and Participating TO for claims arising from the Interconnection Customer's construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades under the terms and procedures applicable to Article 18.1 Indemnity;

(9) The Interconnection Customer shall transfer control of the Participating TO's Interconnection Facilities to the Participating TO and shall transfer Operational Control of Stand Alone Network Upgrades to the CAISO;

(10) Unless the Parties otherwise agree, the Interconnection Customer shall transfer ownership of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades to the Participating TO. As soon as reasonably practicable, but within twelve months after completion of the construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, the Interconnection Customer shall provide an invoice of the final cost of the construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades to the Participating TO, which invoice shall set forth such costs in sufficient detail to enable the Participating TO to reflect the proper costs of such facilities in its transmission rate base and to identify the investment upon which refunds will be provided;

(11) the Participating TO shall accept for operation and maintenance the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades to the extent engineered, procured, and constructed in accordance with this Article 5.2; and

(12) The Interconnection Customer's engineering, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades shall comply with all requirements of the "Option to Build" conditions set forth in Appendix C. Interconnection Customer shall deliver to the Participating TO "as-built" drawings, information, and any other documents that are reasonably required by the Participating TO to assure that the Interconnection Facilities and Stand-Alone Network Upgrades are built to the standards and specifications required by the Participating TO.

(13) If the Interconnection Customer exercises the Option to Build pursuant to Article 5.1.3, the Interconnection Customer shall pay the Participating TO the agreed upon amount of $_____ for Participating TO to execute the responsibilities enumerated to it under Article 5.2. The Participating TO will invoice the Interconnection Customer for this total amount to be divided on a monthly basis pursuant to Article 12.

**5.3 Liquidated Damages.** The actual damages to the Interconnection Customer, in the event the Participating TO's Interconnection Facilities or Network Upgrades are not completed by the dates designated by the Interconnection Customer and accepted by the Participating TO pursuant to subparagraphs 5.1.2 or 5.1.4, above, may include Interconnection Customer's fixed operation and maintenance costs and lost opportunity costs. Such actual damages are uncertain and impossible to determine at this time. Because of such uncertainty, any liquidated damages paid by the Participating TO to the Interconnection Customer in the event that the Participating TO does not complete any portion of the Participating TO's Interconnection Facilities or Network Upgrades by the applicable dates, shall be an amount equal to ½ of 1 percent per day of the actual cost of the Participating TO's Interconnection Facilities and Network Upgrades, in the aggregate, for which the Participating TO has assumed responsibility to design, procure and construct.

However, in no event shall the total liquidated damages exceed 20 percent of the actual cost of the Participating TO's Interconnection Facilities and Network Upgrades for which the Participating TO has assumed responsibility to design, procure, and construct. The foregoing payments will be made by the Participating TO to the Interconnection Customer as just compensation for the damages caused to the Interconnection Customer, which actual damages are uncertain and

impossible to determine at this time, and as reasonable liquidated damages, but not as a penalty or a method to secure performance of this LGIA. Liquidated damages, when the Parties agree to them, are the exclusive remedy for the Participating TO's failure to meet its schedule.

No liquidated damages shall be paid to the Interconnection Customer if: (1) the Interconnection Customer is not ready to commence use of the Participating TO's Interconnection Facilities or Network Upgrades to take the delivery of power for the Electric Generating Unit's Trial Operation or to export power from the Electric Generating Unit on the specified dates, unless the Interconnection Customer would have been able to commence use of the Participating TO's Interconnection Facilities or Network Upgrades to take the delivery of power for Electric Generating Unit's Trial Operation or to export power from the Electric Generating Unit, but for the Participating TO's delay; (2) the Participating TO's failure to meet the specified dates is the result of the action or inaction of the Interconnection Customer or any other interconnection customer who has entered into an interconnection agreement with the CAISO and/or Participating TO, action or inaction by the CAISO, or any cause beyond the Participating TO's reasonable control or reasonable ability to cure; (3) the Interconnection Customer has assumed responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades; or (4) the Parties have otherwise agreed.

In no event shall the CAISO have any responsibility or liability to the Interconnection Customer for liquidated damages pursuant to the provisions of this Article 5.3.

**5.4 Power System Stabilizers.** The Interconnection Customer shall procure, install, maintain and operate Power System Stabilizers in accordance with Applicable Reliability Standards, the guidelines and procedures established by the Applicable Reliability Council, and the provisions of Section 4.6.5.1 of the CAISO Tariff. The CAISO reserves the right to establish reasonable minimum acceptable settings for any installed Power System Stabilizers, subject to the design and operating limitations of the Large Generating Facility. If the Large Generating Facility's Power System Stabilizers are removed from service or not capable of automatic operation, the Interconnection Customer shall immediately notify the CAISO and the Participating TO and restore the Power System Stabilizers to operation as soon as possible. The CAISO shall have the right to order the reduction in output or disconnection of the Large Generating Facility if the reliability of the CAISO Controlled Grid would be adversely affected as a result of improperly tuned Power System Stabilizers. The requirements of this Article 5.4 shall apply to Asynchronous Generating Facilities in accordance with Appendix H.

**5.5 Equipment Procurement.** If responsibility for construction of the Participating TO's Interconnection Facilities or Network Upgrades is to be borne by the Participating TO, then the Participating TO shall notify the Interconnection Customer and the CAISO in writing within thirty (30) days and commence design of the Participating TO's Interconnection Facilities or Network Upgrades and procurement of necessary equipment after all of the following conditions are satisfied, unless the Parties otherwise agree in writing:

**5.5.1** The CAISO, in coordination with the applicable Participating TO(s), has completed the Phase II Interconnection Study or Governing Independent Study Interconnection Study pursuant to the applicable Generator Interconnection Study Process Agreement or other applicable study process agreement;

**5.5.2** The Participating TO has received written authorization to proceed with design and procurement from the Interconnection Customer by the date specified in Appendix B, Milestones; and

**5.5.3** The Interconnection Customer has provided security to the Participating TO in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

**5.6 Construction Commencement.** The Participating TO shall notify the Interconnection Customer

and the CAISO in writing and commence construction of the Participating TO's Interconnection Facilities and Network Upgrades for which it is responsible within thirty (30) days after the following additional conditions are satisfied:

**5.6.1** Approval of the appropriate Governmental Authority has been obtained for any facilities requiring regulatory approval;

**5.6.2** Necessary real property rights and rights-of-way have been obtained, to the extent required for the construction of a discrete aspect of the Participating TO's Interconnection Facilities and Network Upgrades;

**5.6.3** The Participating TO has received written authorization to proceed with construction from the Interconnection Customer by the date specified in Appendix B, Milestones; and

**5.6.4** The Interconnection Customer has provided payment and security to the Participating TO in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

**5.7 Work Progress.** The Parties will keep each other advised periodically as to the progress of their respective design, procurement and construction efforts. Any Party may, at any time, request a progress report from another Party. If, at any time, the Interconnection Customer determines that the completion of the Participating TO's Interconnection Facilities will not be required until after the specified In-Service Date, the Interconnection Customer will provide written notice to the Participating TO and CAISO of such later date upon which the completion of the Participating TO's Interconnection Facilities will be required.

**5.8 Information Exchange.** As soon as reasonably practicable after the Effective Date, the Parties shall exchange information regarding the design and compatibility of the Interconnection Customer's Interconnection Facilities and Participating TO's Interconnection Facilities and compatibility of the Interconnection Facilities with the Participating TO's Transmission System, and shall work diligently and in good faith to make any necessary design changes.

**5.9 Limited Operation.** If any of the Participating TO's Interconnection Facilities or Network Upgrades are not reasonably expected to be completed prior to the Commercial Operation Date of the Electric Generating Unit, the Participating TO and/or CAISO, as applicable, shall, upon the request and at the expense of the Interconnection Customer, perform operating studies on a timely basis to determine the extent to which the Electric Generating Unit and the Interconnection Customer's Interconnection Facilities may operate prior to the completion of the Participating TO's Interconnection Facilities or Network Upgrades consistent with Applicable Laws and Regulations, Applicable Reliability Standards, Good Utility Practice, and this LGIA. The Participating TO and CAISO shall permit Interconnection Customer to operate the Electric Generating Unit and the Interconnection Customer's Interconnection Facilities in accordance with the results of such studies.

**5.10 Interconnection Customer's Interconnection Facilities.** The Interconnection Customer shall, at its expense, design, procure, construct, own and install the Interconnection Customer's Interconnection Facilities, as set forth in Appendix A.

**5.10.1 Large Generating Facility and Interconnection Customer's Interconnection Facilities Specifications.** In addition to the Interconnection Customer's responsibility to submit technical data with its Interconnection Request as required by Section 3.5.1 of the GIDAP, the Interconnection Customer shall submit all remaining necessary specifications for the Interconnection Customer's Interconnection Facilities and Large Generating Facility, including System Protection Facilities, to the Participating TO and the CAISO at least one hundred eighty (180) Calendar Days prior to the Initial Synchronization Date; and final specifications for review and comment at least ninety (90) Calendar Days prior

to the Initial Synchronization Date. The Participating TO and the CAISO shall review such specifications pursuant to this LGIA and the GIDAP to ensure that the Interconnection Customer's Interconnection Facilities and Large Generating Facility are compatible with the technical specifications, operational control, safety requirements, and any other applicable requirements of the Participating TO and the CAISO and comment on such specifications within thirty (30) Calendar Days of the Interconnection Customer's submission. All specifications provided hereunder shall be deemed confidential.

**5.10.2 Participating TO's and CAISO's Review.** The Participating TO's and the CAISO's review of the Interconnection Customer's final specifications shall not be construed as confirming, endorsing, or providing a warranty as to the design, fitness, safety, durability or reliability of the Large Generating Facility, or the Interconnection Customer's Interconnection Facilities. Interconnection Customer shall make such changes to the Interconnection Customer's Interconnection Facilities as may reasonably be required by the Participating TO or the CAISO, in accordance with Good Utility Practice, to ensure that the Interconnection Customer's Interconnection Facilities are compatible with the technical specifications, Operational Control, and safety requirements of the Participating TO or the CAISO.

**5.10.3 Interconnection Customer's Interconnection Facilities Construction.** The Interconnection Customer's Interconnection Facilities shall be designed and constructed in accordance with Good Utility Practice. Within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Participating TO and Interconnection Customer agree on another mutually acceptable deadline, the Interconnection Customer shall deliver to the Participating TO and CAISO "as-built" drawings, information and documents for the Interconnection Customer's Interconnection Facilities and the Electric Generating Unit(s), such as: a one-line diagram, a site plan showing the Large Generating Facility and the Interconnection Customer's Interconnection Facilities, plan and elevation drawings showing the layout of the Interconnection Customer's Interconnection Facilities, a relay functional diagram, relaying AC and DC schematic wiring diagrams and relay settings for all facilities associated with the Interconnection Customer's step-up transformers, the facilities connecting the Large Generating Facility to the step-up transformers and the Interconnection Customer's Interconnection Facilities, and the impedances (determined by factory tests) for the associated step-up transformers and the Electric Generating Units. The Interconnection Customer shall provide the Participating TO and the CAISO specifications for the excitation system, automatic voltage regulator, Large Generating Facility control and protection settings, transformer tap settings, and communications, if applicable. Any deviations from the relay settings, machine specifications, and other specifications originally submitted by the Interconnection Customer shall be assessed by the Participating TO and the CAISO pursuant to the appropriate provisions of this LGIA and the GIDAP.

**5.10.4 Interconnection Customer to Meet Requirements of the Participating TO's Interconnection Handbook.** The Interconnection Customer shall comply with the Participating TO's Interconnection Handbook.

**5.11 Participating TO's Interconnection Facilities Construction.** The Participating TO's Interconnection Facilities shall be designed and constructed in accordance with Good Utility Practice. Upon request, within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Participating TO and Interconnection Customer agree on another mutually acceptable deadline, the Participating TO shall deliver to the Interconnection Customer and the CAISO the following "as-built" drawings, information and documents for the Participating TO's Interconnection Facilities [include appropriate drawings and relay diagrams].

The Participating TO will obtain control for operating and maintenance purposes of the

Participating TO's Interconnection Facilities and Stand Alone Network Upgrades upon completion of such facilities. Pursuant to Article 5.2, the CAISO will obtain Operational Control of the Stand Alone Network Upgrades prior to the Commercial Operation Date.

**5.12 Access Rights.** Upon reasonable notice and supervision by a Party, and subject to any required or necessary regulatory approvals, a Party ("Granting Party") shall furnish at no cost to the other Party ("Access Party") any rights of use, licenses, rights of way and easements with respect to lands owned or controlled by the Granting Party, its agents (if allowed under the applicable agency agreement), or any Affiliate, that are necessary to enable the Access Party to obtain ingress and egress to construct, operate, maintain, repair, test (or witness testing), inspect, replace or remove facilities and equipment to: (i) interconnect the Large Generating Facility with the Participating TO's Transmission System; (ii) operate and maintain the Large Generating Facility, the Interconnection Facilities and the Participating TO's Transmission System; and (iii) disconnect or remove the Access Party's facilities and equipment upon termination of this LGIA. In exercising such licenses, rights of way and easements, the Access Party shall not unreasonably disrupt or interfere with normal operation of the Granting Party's business and shall adhere to the safety rules and procedures established in advance, as may be changed from time to time, by the Granting Party and provided to the Access Party.

**5.13 Lands of Other Property Owners.** If any part of the Participating TO's Interconnection Facilities and/or Network Upgrades are to be installed on property owned by persons other than the Interconnection Customer or Participating TO, the Participating TO shall at the Interconnection Customer's expense use efforts, similar in nature and extent to those that it typically undertakes on its own behalf or on behalf of its Affiliates, including use of its eminent domain authority, and to the extent consistent with state law, to procure from such persons any rights of use, licenses, rights of way and easements that are necessary to construct, operate, maintain, test, inspect, replace or remove the Participating TO's Interconnection Facilities and/or Network Upgrades upon such property.

**5.14 Permits.** Participating TO and Interconnection Customer shall cooperate with each other in good faith in obtaining all permits, licenses and authorization that are necessary to accomplish the interconnection in compliance with Applicable Laws and Regulations. With respect to this paragraph, the Participating TO shall provide permitting assistance to the Interconnection Customer comparable to that provided to the Participating TO's own, or an Affiliate's generation.

**5.15 Early Construction of Base Case Facilities.** The Interconnection Customer may request the Participating TO to construct, and the Participating TO shall construct, using Reasonable Efforts to accommodate Interconnection Customer's In-Service Date, all or any portion of any Network Upgrades required for Interconnection Customer to be interconnected to the Participating TO's Transmission System which are included in the Base Case of the Interconnection Studies for the Interconnection Customer, and which also are required to be constructed for another interconnection customer, but where such construction is not scheduled to be completed in time to achieve Interconnection Customer's In-Service Date.

**5.16 Suspension.** The Interconnection Customer may request to suspend at any time all work associated with the construction and installation of the Participating TO's Interconnection Facilities, Network Upgrades, and/or Distribution Upgrades required under this LGIA, other than Network Upgrades identified in the Phase II Interconnection Study as common to multiple generating facilities. Interconnection Customers seeking to suspend construction will provide the CAISO and Participating TO a request for assessment pursuant to Section 6.7.2 of the GIDAP, a modification assessment deposit, and an anticipated end date of the suspension. Interconnection Customers may request a suspension for the maximum amount of time in lieu of providing an anticipated end date. The CAISO and Participating TO will approve suspension requests where:

(a) the Participating TO's electrical system and the CAISO Controlled Grid can be left in a safe and reliable condition in accordance with Good Utility Practice, the Participating

TO's safety and reliability criteria, and Applicable Reliability Standards; and

(b) the CAISO and Participating TO determine the suspension will not result in a Material Modification.

For any suspension that will extend the Commercial Operation Date beyond seven (7) years from the date the Interconnection Request is received by the CAISO, the Interconnection Customer must satisfy the commercial viability criteria in Section 6.7.4 of the GIDAP.

During suspension, the Interconnection Customer may request to extend or shorten their suspension period, consistent with the maximum period provided in this Article. The CAISO and Participating TO will approve such requests where they meet criteria (a) and (b), above. Requests to extend or shorten extensions will require a new modification assessment request and deposit. The Interconnection Customer shall be responsible for all reasonable and necessary costs for suspension for which the Participating TO (i) has incurred pursuant to this LGIA prior to the suspension and (ii) incurs in suspending such work, including any costs incurred to perform such work as may be necessary to ensure the safety of persons and property and the integrity of the Participating TO's electric system during such suspension and, if applicable, any costs incurred in connection with the cancellation or suspension of material, equipment and labor contracts which the Participating TO cannot reasonably avoid; provided, however, that prior to canceling or suspending any such material, equipment or labor contract, the Participating TO shall obtain Interconnection Customer's authorization to do so.

Network Upgrades common to multiple generating facilities, and to which the Interconnection Customer's right of suspension shall not extend, consist of Network Upgrades identified for:

(i) generating facilities which are the subject of all Interconnection Requests made prior to the Interconnection Customer's Interconnection Request;
(ii) generating facilities which are the subject of Interconnection Requests within the Interconnection Customer's queue cluster; and
(iii) generating facilities that are the subject of Interconnection Requests that were made after the Interconnection Customer's Interconnection Request but no later than the date on which the Interconnection Customer's Phase II Interconnection Study Report is issued, and have been modeled in the Base Case at the time the Interconnection Customer seeks to exercise its suspension rights under this Article.

The Participating TO shall invoice the Interconnection Customer for such costs pursuant to Article 12 and shall use due diligence to minimize its costs. In the event Interconnection Customer suspends work required under this LGIA pursuant to this Article 5.16, and has not requested the Participating TO to recommence the work or has not itself recommenced work required under this LGIA in time to ensure that the new projected Commercial Operation Date for the full Generating Facility Capacity of the Large Generating Facility is no more than three (3) years from the Commercial Operation Date identified in Appendix B hereto, this LGIA shall be deemed terminated and the Interconnection Customer's responsibility for costs will be determined in accordance with Article 2.4 of this LGIA. The suspension period shall begin on the date the Interconnection Customer provides in its request, if approved. Ninety (90) days before the anticipated end date of the suspension, the Participating TO and the CAISO will tender an amended draft LGIA with new construction milestones. The Parties agree to negotiate the amended draft LGIA in good faith such that it can be executed by the end of the suspension.

Interconnection Customer subject to Section 8.9.2.2 of Appendix DD may not request suspension.

**5.17 Taxes.**

**5.17.1 Interconnection Customer Payments Not Taxable.** The Parties intend that all payments or property transfers made by the Interconnection Customer to the Participating TO for the installation of the Participating TO's Interconnection Facilities and the Network Upgrades shall be non-taxable, either as contributions to capital, or as a refundable advance, in accordance with the Internal Revenue Code and any applicable state income tax laws and shall not be taxable as contributions in aid of construction or otherwise under the Internal Revenue Code and any applicable state income tax laws.

**5.17.2 Representations And Covenants.** In accordance with IRS Notice 2001-82 and IRS Notice 88-129, the Interconnection Customer represents and covenants that (i) ownership of the electricity generated at the Large Generating Facility will pass to another party prior to the transmission of the electricity on the CAISO Controlled Grid, (ii) for income tax purposes, the amount of any payments and the cost of any property transferred to the Participating TO for the Participating TO's Interconnection Facilities will be capitalized by the Interconnection Customer as an intangible asset and recovered using the straight-line method over a useful life of twenty (20) years, and (iii) any portion of the Participating TO's Interconnection Facilities that is a "dual-use intertie," within the meaning of IRS Notice 88-129, is reasonably expected to carry only a de minimis amount of electricity in the direction of the Large Generating Facility. For this purpose, "de minimis amount" means no more than 5 percent of the total power flows in both directions, calculated in accordance with the "5 percent test" set forth in IRS Notice 88-129. This is not intended to be an exclusive list of the relevant conditions that must be met to conform to IRS requirements for non-taxable treatment.

At the Participating TO's request, the Interconnection Customer shall provide the Participating TO with a report from an independent engineer confirming its representation in clause (iii), above. The Participating TO represents and covenants that the cost of the Participating TO's Interconnection Facilities paid for by the Interconnection Customer without the possibility of refund or credit will have no net effect on the base upon which rates are determined.

**5.17.3 Indemnification for the Cost Consequence of Current Tax Liability Imposed Upon the Participating TO.** Notwithstanding Article 5.17.1, the Interconnection Customer shall protect, indemnify and hold harmless the Participating TO from the cost consequences of any current tax liability imposed against the Participating TO as the result of payments or property transfers made by the Interconnection Customer to the Participating TO under this LGIA for Interconnection Facilities, as well as any interest and penalties, other than interest and penalties attributable to any delay caused by the Participating TO.
The Participating TO shall not include a gross-up for the cost consequences of any current tax liability in the amounts it charges the Interconnection Customer under this LGIA unless (i) the Participating TO has determined, in good faith, that the payments or property transfers made by the Interconnection Customer to the Participating TO should be reported as income subject to taxation or (ii) any Governmental Authority directs the Participating TO to report payments or property as income subject to taxation; provided, however, that the Participating TO may require the Interconnection Customer to provide security for Interconnection Facilities, in a form reasonably acceptable to the Participating TO (such as a parental guarantee or a letter of credit), in an amount equal to the cost consequences of any current tax liability under this Article 5.17. The Interconnection Customer shall reimburse the Participating TO for such costs on a fully grossed-up basis, in accordance with Article 5.17.4, within thirty (30) Calendar Days of receiving written notification from the Participating TO of the amount due, including detail about how the amount was calculated.

The indemnification obligation shall terminate at the earlier of (1) the expiration of the ten year testing period and the applicable statute of limitation, as it may be extended by the Participating TO upon request of the IRS, to keep these years open for audit or adjustment, or (2) the occurrence of a subsequent taxable event and the payment of any related indemnification obligations as contemplated by this Article 5.17.

**5.17.4 Tax Gross-Up Amount.** The Interconnection Customer's liability for the cost consequences of any current tax liability under this Article 5.17 shall be calculated on a fully grossed-up basis. Except as may otherwise be agreed to by the parties, this means that the Interconnection Customer will pay the Participating TO, in addition to the amount paid for the Interconnection Facilities and Network Upgrades, an amount equal to (1) the current taxes imposed on the Participating TO ("Current Taxes") on the excess of (a) the gross income realized by the Participating TO as a result of payments or property transfers made by the Interconnection Customer to the Participating TO under this LGIA (without regard to any payments under this Article 5.17) (the "Gross Income Amount") over (b) the present value of future tax deductions for depreciation that will be available as a result of such payments or property transfers (the "Present Value Depreciation Amount"), plus (2) an additional amount sufficient to permit the Participating TO to receive and retain, after the payment of all Current Taxes, an amount equal to the net amount described in clause (1).

For this purpose, (i) Current Taxes shall be computed based on the Participating TO's composite federal and state tax rates at the time the payments or property transfers are received and the Participating TO will be treated as being subject to tax at the highest marginal rates in effect at that time (the "Current Tax Rate"), and (ii) the Present Value Depreciation Amount shall be computed by discounting the Participating TO's anticipated tax depreciation deductions as a result of such payments or property transfers by the Participating TO's current weighted average cost of capital. Thus, the formula for calculating the Interconnection Customer's liability to the Participating TO pursuant to this Article 5.17.4 can be expressed as follows: (Current Tax Rate x (Gross Income Amount – Present Value of Tax Depreciation))/(1-Current Tax Rate). Interconnection Customer's estimated tax liability in the event taxes are imposed shall be stated in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades.

**5.17.5 Private Letter Ruling or Change or Clarification of Law.** At the Interconnection Customer's request and expense, the Participating TO shall file with the IRS a request for a private letter ruling as to whether any property transferred or sums paid, or to be paid, by the Interconnection Customer to the Participating TO under this LGIA are subject to federal income taxation. The Interconnection Customer will prepare the initial draft of the request for a private letter ruling, and will certify under penalties of perjury that all facts represented in such request are true and accurate to the best of the Interconnection Customer's knowledge. The Participating TO and Interconnection Customer shall cooperate in good faith with respect to the submission of such request, provided, however, the Interconnection Customer and the Participating TO explicitly acknowledge (and nothing herein is intended to alter) Participating TO's obligation under law to certify that the facts presented in the ruling request are true, correct and complete.

The Participating TO shall keep the Interconnection Customer fully informed of the status of such request for a private letter ruling and shall execute either a privacy act waiver or a limited power of attorney, in a form acceptable to the IRS, that authorizes the Interconnection Customer to participate in all discussions with the IRS regarding such request for a private letter ruling. The Participating TO shall allow the Interconnection Customer to attend all meetings with IRS officials about the request and shall permit the Interconnection Customer to prepare the initial drafts of any follow-up letters in connection with the request.

**5.17.6 Subsequent Taxable Events.** If, within 10 years from the date on which the relevant Participating TO's Interconnection Facilities are placed in service, (i) the Interconnection Customer Breaches the covenants contained in Article 5.17.2, (ii) a "disqualification event" occurs within the meaning of IRS Notice 88-129, or (iii) this LGIA terminates and the Participating TO retains ownership of the Interconnection Facilities and Network Upgrades, the Interconnection Customer shall pay a tax gross-up for the cost consequences of any current tax liability imposed on the Participating TO, calculated using the methodology described in Article 5.17.4 and in accordance with IRS Notice 90-60.

**5.17.7 Contests.** In the event any Governmental Authority determines that the Participating TO's receipt of payments or property constitutes income that is subject to taxation, the Participating TO shall notify the Interconnection Customer, in writing, within thirty (30) Calendar Days of receiving notification of such determination by a Governmental Authority. Upon the timely written request by the Interconnection Customer and at the Interconnection Customer's sole expense, the Participating TO may appeal, protest, seek abatement of, or otherwise oppose such determination. Upon the Interconnection Customer's written request and sole expense, the Participating TO may file a claim for refund with respect to any taxes paid under this Article 5.17, whether or not it has received such a determination. The Participating TO reserve the right to make all decisions with regard to the prosecution of such appeal, protest, abatement or other contest, including the selection of counsel and compromise or settlement of the claim, but the Participating TO shall keep the Interconnection Customer informed, shall consider in good faith suggestions from the Interconnection Customer about the conduct of the contest, and shall reasonably permit the Interconnection Customer or an Interconnection Customer representative to attend contest proceedings.

The Interconnection Customer shall pay to the Participating TO on a periodic basis, as invoiced by the Participating TO, the Participating TO's documented reasonable costs of prosecuting such appeal, protest, abatement or other contest, including any costs associated with obtaining the opinion of independent tax counsel described in this Article 5.17.7. The Participating TO may abandon any contest if the Interconnection Customer fails to provide payment to the Participating TO within thirty (30) Calendar Days of receiving such invoice.

At any time during the contest, the Participating TO may agree to a settlement either with the Interconnection Customer's consent or, if such consent is refused, after obtaining written advice from independent nationally-recognized tax counsel, selected by the Participating TO, but reasonably acceptable to the Interconnection Customer, that the proposed settlement represents a reasonable settlement given the hazards of litigation. The Interconnection Customer's obligation shall be based on the amount of the settlement agreed to by the Interconnection Customer, or if a higher amount, so much of the settlement that is supported by the written advice from nationally-recognized tax counsel selected under the terms of the preceding paragraph. The settlement amount shall be calculated on a fully grossed-up basis to cover any related cost consequences of the current tax liability. The Participating TO may also settle any tax controversy without receiving the Interconnection Customer's consent or any such written advice; however, any such settlement will relieve the Interconnection Customer from any obligation to indemnify the Participating TO for the tax at issue in the contest (unless the failure to obtain written advice is attributable to the Interconnection Customer's unreasonable refusal to the appointment of independent tax counsel).

**5.17.8 Refund.** In the event that (a) a private letter ruling is issued to the Participating TO which holds that any amount paid or the value of any property transferred by the Interconnection Customer to the Participating TO under the terms of this LGIA is not subject to federal income taxation, (b) any legislative change or administrative

announcement, notice, ruling or other determination makes it reasonably clear to the Participating TO in good faith that any amount paid or the value of any property transferred by the Interconnection Customer to the Participating TO under the terms of this LGIA is not taxable to the Participating TO, (c) any abatement, appeal, protest, or other contest results in a determination that any payments or transfers made by the Interconnection Customer to the Participating TO are not subject to federal income tax, or (d) if the Participating TO receives a refund from any taxing authority for any overpayment of tax attributable to any payment or property transfer made by the Interconnection Customer to the Participating TO pursuant to this LGIA, the Participating TO shall promptly refund to the Interconnection Customer the following:

(i) any payment made by Interconnection Customer under this Article 5.17 for taxes that is attributable to the amount determined to be non-taxable, together with interest thereon,

(ii) interest on any amounts paid by the Interconnection Customer to the Participating TO for such taxes which the Participating TO did not submit to the taxing authority, calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date payment was made by the Interconnection Customer to the date the Participating TO refunds such payment to the Interconnection Customer, and

(iii) with respect to any such taxes paid by the Participating TO, any refund or credit the Participating TO receives or to which it may be entitled from any Governmental Authority, interest (or that portion thereof attributable to the payment described in clause (i), above) owed to the Participating TO for such overpayment of taxes (including any reduction in interest otherwise payable by the Participating TO to any Governmental Authority resulting from an offset or credit); provided, however, that the Participating TO will remit such amount promptly to the Interconnection Customer only after and to the extent that the Participating TO has received a tax refund, credit or offset from any Governmental Authority for any applicable overpayment of income tax related to the Participating TO's Interconnection Facilities.

The intent of this provision is to leave the Parties, to the extent practicable, in the event that no taxes are due with respect to any payment for Interconnection Facilities and Network Upgrades hereunder, in the same position they would have been in had no such tax payments been made.

**5.17.9 Taxes Other Than Income Taxes.** Upon the timely request by the Interconnection Customer, and at the Interconnection Customer's sole expense, the CAISO or Participating TO may appeal, protest, seek abatement of, or otherwise contest any tax (other than federal or state income tax) asserted or assessed against the CAISO or Participating TO for which the Interconnection Customer may be required to reimburse the CAISO or Participating TO under the terms of this LGIA. The Interconnection Customer shall pay to the Participating TO on a periodic basis, as invoiced by the Participating TO, the Participating TO's documented reasonable costs of prosecuting such appeal, protest, abatement, or other contest. The Interconnection Customer, the CAISO, and the Participating TO shall cooperate in good faith with respect to any such contest. Unless the payment of such taxes is a prerequisite to an appeal or abatement or cannot be deferred, no amount shall be payable by the Interconnection Customer to the CAISO or Participating TO for such taxes until they are assessed by a final, non-appealable order by any court or agency of competent jurisdiction. In the event that a tax payment is withheld and ultimately due and payable after appeal, the Interconnection

Customer will be responsible for all taxes, interest and penalties, other than penalties attributable to any delay caused by the Participating TO.

**5.18 Tax Status.** Each Party shall cooperate with the others to maintain the other Parties' tax status. Nothing in this LGIA is intended to adversely affect the CAISO's or any Participating TO's tax exempt status with respect to the issuance of bonds including, but not limited to, Local Furnishing Bonds.

**5.19 Modification.**

**5.19.1 General.** The Interconnection Customer or the Participating TO may undertake modifications to its facilities, subject to Section 25.1(c) and Section 25 of the CAISO Tariff if the Interconnection Customer has achieved its Commercial Operation Date, and subject to Section 6.7.2 of Appendix DD if it has not.

If a Party plans to undertake a modification that reasonably may be expected to affect the other Parties' facilities, that Party shall provide to the other Parties sufficient information regarding such modification so that the other Parties may evaluate the potential impact of such modification prior to commencement of the work. Such information shall be deemed to be confidential hereunder and shall include information concerning the timing of such modifications and whether such modifications are expected to interrupt the flow of electricity from the Large Generating Facility. The Party desiring to perform such work shall provide the relevant drawings, plans, and specifications to the other Parties at least ninety (90) Calendar Days in advance of the commencement of the work or such shorter period upon which the Parties may agree, which agreement shall not unreasonably be withheld, conditioned or delayed.

At any time after achieving its Commercial Operation Date, the Interconnection Customer may reduce the megawatt generating capacities of its Generating Facilities, subject to Section 25.1(c) of the CAISO Tariff. Section 6.7.2 of Appendix DD will still apply to such requests to reduce capacity.

**5.19.2 Standards.** Any additions, modifications, or replacements made to a Party's facilities shall be designed, constructed and operated in accordance with this LGIA and Good Utility Practice.

**5.19.3 Modification Costs.** The Interconnection Customer shall not be directly assigned the costs of any additions, modifications, or replacements that the Participating TO makes to the Participating TO's Interconnection Facilities or the Participating TO's Transmission System to facilitate the interconnection of a third party to the Participating TO's Interconnection Facilities or the Participating TO's Transmission System, or to provide transmission service to a third party under the CAISO Tariff. The Interconnection Customer shall be responsible for the costs of any additions, modifications, or replacements to the Interconnection Facilities that may be necessary to maintain or upgrade such Interconnection Facilities consistent with Applicable Laws and Regulations, Applicable Reliability Standards or Good Utility Practice.

**5.20 Annual Reassessment Process**. In accordance with Section 7.4 of the GIDAP, the CAISO will perform an annual reassessment, as part of a queue cluster interconnection study cycle, in which it will update certain base case data prior to beginning the GIDAP Phase II Interconnection Studies. As set forth in Section 7.4, the CAISO may determine through this assessment that Delivery Network Upgrades and Off-Peak Network Upgrades already identified and included in executed generator interconnection agreements should be modified in order to reflect the current circumstances of interconnection customers

in the queue, including any withdrawals therefrom, and any additions and upgrades approved in the CAISO's most recent TPP cycle. To the extent that this determination modifies the scope or characteristics of, or the cost responsibility for, any Delivery Network Upgrades and Off-Peak Network Upgrades set forth in Appendix A to this LGIA, such modification(s) will be reflected through an amendment to this LGIA.

## Article 6. Testing and Inspection

**6.1 Pre-Commercial Operation Date Testing and Modifications.** Prior to the Commercial Operation Date, the Participating TO shall test the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades and the Interconnection Customer shall test the Large Generating Facility and the Interconnection Customer's Interconnection Facilities to ensure their safe and reliable operation. Similar testing may be required after initial operation. Each Party shall make any modifications to its facilities that are found to be necessary as a result of such testing. The Interconnection Customer shall bear the cost of all such testing and modifications. The Interconnection Customer shall not commence initial parallel operation of an Electric Generating Unit with the Participating TO's Transmission System until the Participating TO provides prior written approval, which approval shall not be unreasonably withheld, for operation of such Electric Generating Unit. The Interconnection Customer shall generate test energy at the Large Generating Facility only if it has arranged for the delivery of such test energy.

**6.2 Post-Commercial Operation Date Testing and Modifications.** Each Party shall at its own expense perform routine inspection and testing of its facilities and equipment in accordance with Good Utility Practice as may be necessary to ensure the continued interconnection of the Large Generating Facility with the Participating TO's Transmission System in a safe and reliable manner. Each Party shall have the right, upon advance written notice, to require reasonable additional testing of the other Party's facilities, at the requesting Party's expense, as may be in accordance with Good Utility Practice.

**6.3 Right to Observe Testing.** Each Party shall notify the other Parties at least fourteen (14) Calendar Days in advance of its performance of tests of its Interconnection Facilities or Generating Facility. The other Parties have the right, at their own expense, to observe such testing.

**6.4 Right to Inspect.** Each Party shall have the right, but shall have no obligation to: (i) observe another Party's tests and/or inspection of any of its System Protection Facilities and other protective equipment, including Power System Stabilizers; (ii) review the settings of another Party's System Protection Facilities and other protective equipment; and (iii) review another Party's maintenance records relative to the Interconnection Facilities, the System Protection Facilities and other protective equipment. A Party may exercise these rights from time to time as it deems necessary upon reasonable notice to the other Party. The exercise or non-exercise by a Party of any such rights shall not be construed as an endorsement or confirmation of any element or condition of the Interconnection Facilities or the System Protection Facilities or other protective equipment or the operation thereof, or as a warranty as to the fitness, safety, desirability, or reliability of same. Any information that a Party obtains through the exercise of any of its rights under this Article 6.4 shall be deemed to be Confidential Information and treated pursuant to Article 22 of this LGIA.

## Article 7. Metering

**7.1 General.** Each Party shall comply with any Applicable Reliability Standards and the Applicable Reliability Council requirements. The Interconnection Customer and CAISO shall comply with the provisions of the CAISO Tariff regarding metering, including Section 10 of the CAISO Tariff. Unless otherwise agreed by the Participating TO and the Interconnection Customer, the Participating TO may install additional Metering Equipment at the Point of Interconnection prior to any operation of any Electric Generating Unit and shall own, operate, test and maintain such Metering Equipment. Power flows to and from the Large Generating Facility shall be measured at or, at the CAISO's or Participating TO's option for its respective Metering Equipment,

compensated to, the Point of Interconnection. The CAISO shall provide metering quantities to the Interconnection Customer upon request in accordance with the CAISO Tariff by directly polling the CAISO's meter data acquisition system. The Interconnection Customer shall bear all reasonable documented costs associated with the purchase, installation, operation, testing and maintenance of the Metering Equipment.

**7.2 Check Meters.** The Interconnection Customer, at its option and expense, may install and operate, on its premises and on its side of the Point of Interconnection, one or more check meters to check the CAISO-polled meters or the Participating TO's meters. Such check meters shall be for check purposes only and shall not be used for the measurement of power flows for purposes of this LGIA, except in the case that no other means are available on a temporary basis at the option of the CAISO or the Participating TO. The check meters shall be subject at all reasonable times to inspection and examination by the CAISO or Participating TO or their designees. The installation, operation and maintenance thereof shall be performed entirely by the Interconnection Customer in accordance with Good Utility Practice.

**7.3 Participating TO Retail Metering.** The Participating TO may install retail revenue quality meters and associated equipment, pursuant to the Participating TO's applicable retail tariffs.

## Article 8. Communications

**8.1 Interconnection Customer Obligations.** The Interconnection Customer shall maintain satisfactory operating communications with the CAISO in accordance with the provisions of the CAISO Tariff and with the Participating TO's dispatcher or representative designated by the Participating TO. The Interconnection Customer shall provide standard voice line, dedicated voice line and facsimile communications at its Large Generating Facility control room or central dispatch facility through use of either the public telephone system, or a voice communications system that does not rely on the public telephone system. The Interconnection Customer shall also provide the dedicated data circuit(s) necessary to provide Interconnection Customer data to the CAISO and Participating TO as set forth in Appendix D, Security Arrangements Details. The data circuit(s) shall extend from the Large Generating Facility to the location(s) specified by the CAISO and Participating TO. Any required maintenance of such communications equipment shall be performed by the Interconnection Customer. Operational communications shall be activated and maintained under, but not be limited to, the following events: system paralleling or separation, scheduled and unscheduled shutdowns, equipment clearances, and hourly and daily load data.

**8.2 Remote Terminal Unit.** Prior to the Initial Synchronization Date of each Electric Generating Unit, a Remote Terminal Unit, or equivalent data collection and transfer equipment acceptable to the Parties, shall be installed by the Interconnection Customer, or by the Participating TO at the Interconnection Customer's expense, to gather accumulated and instantaneous data to be telemetered to the location(s) designated by the CAISO and by the Participating TO through use of a dedicated point-to-point data circuit(s) as indicated in Article 8.1.

Telemetry to the CAISO shall be provided in accordance with the CAISO's technical standards for direct telemetry. For telemetry to the Participating TO, the communication protocol for the data circuit(s) shall be specified by the Participating TO. Instantaneous bi-directional real power and reactive power flow and any other required information must be telemetered directly to the location(s) specified by the Participating TO.

Each Party will promptly advise the other Parties if it detects or otherwise learns of any metering, telemetry or communications equipment errors or malfunctions that require the attention and/or correction by another Party. The Party owning such equipment shall correct such error or malfunction as soon as reasonably feasible.

**8.3 No Annexation.** Any and all equipment placed on the premises of a Party shall be and remain

the property of the Party providing such equipment regardless of the mode and manner of annexation or attachment to real property, unless otherwise mutually agreed by the Parties.

**8.4 Provision of Data from a Variable Energy Resource.** The Interconnection Customer whose Generating Facility is a Variable Energy Resource shall provide meteorological and forced outage data to the CAISO to the extent necessary for the CAISO's development and deployment of power production forecasts for that class of Variable Energy Resources. The Interconnection Customer with a Variable Energy Resource having wind as the energy source, at a minimum, will be required to provide the CAISO with site-specific meteorological data including: temperature, wind speed, wind direction, and atmospheric pressure. The Interconnection Customer with a Variable Energy Resource having solar as the energy source, at a minimum, will be required to provide the CAISO with site-specific meteorological data including: temperature, atmospheric pressure, and irradiance. The CAISO and Interconnection Customer whose Generating Facility is a Variable Energy Resource shall mutually agree to any additional meteorological data that are required for the development and deployment of a power production forecast. The Interconnection Customer whose Generating Facility is a Variable Energy Resource also shall submit data to the CAISO regarding all forced outages to the extent necessary for the CAISO's development and deployment of power production forecasts for that class of Variable Energy Resources. The exact specifications of the meteorological and forced outage data to be provided by the Interconnection Customer to the CAISO, including the frequency and timing of data submittals, shall be made taking into account the size and configuration of the Variable Energy Resource, its characteristics, location, and its importance in maintaining generation resource adequacy and transmission system reliability in its area. All requirements for meteorological and forced outage data must be commensurate with the power production forecasting employed by the CAISO. Such requirements for meteorological and forced outage data are set forth in Appendix C, Interconnection Details, of this LGIA, as they may change from time to time.

## Article 9. Operations

**9.1 General.** Each Party shall comply with Applicable Reliability Standards and the Applicable Reliability Council requirements. Each Party shall provide to the other Party all information that may reasonably be required by the other Party to comply with Applicable Laws and Regulations and Applicable Reliability Standards.

**9.2 Balancing Authority Area Notification.** At least three months before Initial Synchronization Date, the Interconnection Customer shall notify the CAISO and Participating TO in writing of the Balancing Authority Area in which the Large Generating Facility intends to be located. If the Interconnection Customer intends to locate the Large Generating Facility in a Balancing Authority Area other than the Balancing Authority Area within whose electrically metered boundaries the Large Generating Facility is located, and if permitted to do so by the relevant transmission tariffs, all necessary arrangements, including but not limited to those set forth in Article 7 and Article 8 of this LGIA, and remote Balancing Authority Area generator interchange agreements, if applicable, and the appropriate measures under such agreements, shall be executed and implemented prior to the placement of the Large Generating Facility in the other Balancing Authority Area.

**9.3 CAISO and Participating TO Obligations.** The CAISO and Participating TO shall cause the Participating TO's Transmission System to be operated and controlled in a safe and reliable manner and in accordance with this LGIA. The Participating TO at the Interconnection Customer's expense shall cause the Participating TO's Interconnection Facilities to be operated, maintained and controlled in a safe and reliable manner and in accordance with this LGIA. The CAISO and Participating TO may provide operating instructions to the Interconnection Customer consistent with this LGIA and Participating TO and CAISO operating protocols and procedures as they may change from time to time. The Participating TO and CAISO will consider changes to their operating protocols and procedures proposed by the Interconnection Customer.

**9.4 Interconnection Customer Obligations.** The Interconnection Customer shall at its own

expense operate, maintain and control the Large Generating Facility and the Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA. The Interconnection Customer shall operate the Large Generating Facility and the Interconnection Customer's Interconnection Facilities in accordance with all applicable requirements of the Balancing Authority Area of which it is part, including such requirements as set forth in Appendix C, Interconnection Details, of this LGIA. Appendix C, Interconnection Details, will be modified to reflect changes to the requirements as they may change from time to time. A Party may request that another Party provide copies of the requirements set forth in Appendix C, Interconnection Details, of this LGIA. The Interconnection Customer shall not commence Commercial Operation of an Electric Generating Unit with the Participating TO's Transmission System until the Participating TO provides prior written approval, which approval shall not be unreasonably withheld, for operation of such Electric Generating Unit.

**9.5 Start-Up and Synchronization.** Consistent with the Parties' mutually acceptable procedures, the Interconnection Customer is responsible for the proper synchronization of each Electric Generating Unit to the CAISO Controlled Grid.

**9.6 Reactive Power and Primary Frequency Response.**

**9.6.1 Power Factor Design Criteria.** For all Generating Facilities other than Asynchronous Generating Facilities, the Interconnection Customer shall design the Large Generating Facility to maintain a composite power delivery at continuous rated power output at the terminals of the Electric Generating Unit at a power factor within the range of 0.95 leading to 0.90 lagging, unless the CAISO has established different requirements that apply to all generators in the Balancing Authority Area on a comparable basis. For Asynchronous Generating Facilities, the Interconnection Customer shall design the Large Generating Facility to maintain power factor criteria in accordance with Appendix H of this LGIA except in the following cases: (a) an Interconnection Customer posts Interconnection Financial Security for an Asynchronous Generating Facility pursuant to Appendix DD of the CAISO Tariff Section 11.2.2 on or after September 21, 2016; or (b) an Interconnection Customer that submits an Interconnection Request for an Asynchronous Generating Facility under the Fast Track Process pursuant to Appendix DD of the CAISO Tariff on or after September 21, 2016.

When an Interconnection Customer posts Interconnection Financial Security for an Asynchronous Generating Facility pursuant to Appendix DD of the CAISO Tariff on or after September 21, 2016, the Interconnection Customer will design the Large Generator Facility to maintain a composite power delivery at continuous rated power output at the high-side of the generator substation at a power factor within the range of 0.95 leading to 0.95 lagging, unless the CAISO has established a different power factor range that applies to all Asynchronous Generating Facilities on a comparable basis. This power factor range standard shall be dynamic and can be met using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors and reactors, or a combination of the two.

When an Interconnection Customer submits an Interconnection Request for an Asynchronous Generating Facility under the Fast Track Process pursuant to Appendix DD of the CAISO Tariff on or after September 21, 2016, the Interconnection Customer will design the Large Generating Facility to maintain a composite power delivery at continuous rated power output at the high-side of the generator substation at a power factor within the range of 0.95 leading to 0.95 lagging, unless the CAISO has established a different power factor range that applies to all Asynchronous Generating Facilities on a comparable basis. This power factor range standard shall be dynamic and can be met using, for example, power electronics designed to supply this level of reactive capability

(taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors and reactors, or a combination of the two.

**9.6.2 Voltage Schedules.** Once the Interconnection Customer has synchronized an Electric Generating Unit with the CAISO Controlled Grid, the CAISO or Participating TO shall require the Interconnection Customer to maintain a voltage schedule by operating the Electric Generating Unit to produce or absorb reactive power within the design limitations of the Electric Generating Unit set forth in Article 9.6.1 (Power Factor Design Criteria). CAISO's voltage schedules shall treat all sources of reactive power in the Balancing Authority Area in an equitable and not unduly discriminatory manner. The Participating TO shall exercise Reasonable Efforts to provide the Interconnection Customer with such schedules at least one (1) day in advance, and the CAISO or Participating TO may make changes to such schedules as necessary to maintain the reliability of the CAISO Controlled Grid or the Participating TO's electric system. The Interconnection Customer shall operate the Electric Generating Unit to maintain the specified output voltage or power factor within the design limitations of the Electric Generating Unit set forth in Article 9.6.1 (Power Factor Design Criteria), and as may be required by the CAISO to operate the Electric Generating Unit at a specific voltage schedule within the design limitations set forth in Article 9.6.1. If the Interconnection Customer is unable to maintain the specified voltage or power factor, it shall promptly notify the CAISO and the Participating TO.

**9.6.2.1 Voltage Regulators.** Whenever an Electric Generating Unit is operated in parallel with the CAISO Controlled Grid and voltage regulators are capable of operation, the Interconnection Customer shall operate the Electric Generating Unit with its voltage regulators in automatic operation. If the Electric Generating Unit's voltage regulators are not capable of such automatic operation, the Interconnection Customer shall immediately notify the CAISO and the Participating TO and ensure that the Electric Generating Unit operates as specified in Article 9.6.2 through manual operation and that such Electric Generating Unit's reactive power production or absorption (measured in MVARs) are within the design capability of the Electric Generating Unit(s) and steady state stability limits. The Interconnection Customer shall restore the speed governors and voltage regulators to automatic operation as soon as possible. If the Large Generating Facility's speed governors and voltage regulators are improperly tuned or malfunctioning, the CAISO shall have the right to order the reduction in output or disconnection of the Large Generating Facility if the reliability of the CAISO Controlled Grid would be adversely affected. The Interconnection Customer shall not cause its Large Generating Facility to disconnect automatically or instantaneously from the CAISO Controlled Grid or trip any Electric Generating Unit comprising the Large Generating Facility for an under or over frequency condition unless the abnormal frequency condition persists for a time period beyond the limits set forth in ANSI/IEEE Standard C37.106, or such other standard as applied to other generators in the Balancing Authority Area on a comparable basis.

**9.6.3 Payment for Reactive Power.** CAISO is required to pay the Interconnection Customer for reactive power that Interconnection Customer provides or absorbs from an Electric Generating Unit when the CAISO requests the Interconnection Customer to operate its Electric Generating Unit outside the range specified in Article 9.6.1, provided that if the CAISO pays other generators for reactive power service within the specified range, it must also pay the Interconnection Customer. Payments shall be pursuant to Article 11.6 or such other agreement to which the CAISO and Interconnection Customer have otherwise agreed.

**9.6.4 Primary Frequency Response.** Interconnection Customer shall ensure the primary frequency response capability of its Electric Generating Unit(s) by installing, maintaining, and operating a functioning governor or equivalent controls. The term "functioning governor or equivalent controls" as used herein shall mean the required hardware and/or software that provides frequency responsive real power control with the ability to sense changes in system frequency and autonomously adjust the Electric Generating Unit's real power output in accordance with the droop and deadband parameters and in the direction needed to correct frequency deviations. Interconnection Customer is required to install a governor or equivalent controls with the capability of operating: (1) with a maximum 5 percent droop and ±0.036 Hz deadband; or (2) in accordance with the relevant droop, deadband, and timely and sustained response settings from Applicable Reliability Standards providing for equivalent or more stringent parameters. The droop characteristic shall be: (1) based on the nameplate capacity of the Electric Generating Unit(s), and shall be linear in the range of frequencies between 59 to 61 Hz that are outside of the deadband parameter; or (2) based on Applicable Reliability Standards providing for an equivalent or more stringent parameter. The deadband parameter shall be: the range of frequencies above and below nominal (60 Hz) in which the governor or equivalent controls is not expected to adjust the Electric Generating Units' real power output in response to frequency deviations. The deadband shall be implemented: (1) without a step to the droop curve, that is, once the frequency deviation exceeds the deadband parameter, the expected change in the Electric Generating Units' real power output in response to frequency deviations shall start from zero and then increase (for under-frequency deviations) or decrease (for over-frequency deviations) linearly in proportion to the magnitude of the frequency deviation; or (2) in accordance with Applicable Reliability Standards providing for an equivalent or more stringent parameter. Interconnection Customer shall notify the CAISO that the primary frequency response capability of the Electric Generating Unit(s) has been tested and confirmed during commissioning. Once Interconnection Customer has synchronized the Electric Generating Unit(s) with the CAISO Controlled Grid, Interconnection Customer shall operate the Electric Generating Unit(s) consistent with the provisions specified in Sections 9.6.4.1 and 9.6.4.2 of this LGIA. The primary frequency response requirements contained herein shall apply to both synchronous and non-synchronous Large Generating Facilities.

**9.6.4.1 Governor or Equivalent Controls.** Whenever the Electric Generating Unit(s) is operated in parallel with the CAISO Controlled Grid, Interconnection Customer shall operate the Electric Generating Unit(s) with its governor or equivalent controls in service and responsive to frequency. Interconnection Customer shall, in coordination with the CAISO, set the deadband parameter to: (1) a maximum of ±0.036 Hz and set the droop parameter to a maximum of 5 percent; or (2) implement the relevant droop and deadband settings from Applicable Reliability Standards that provides for equivalent or more stringent parameters. Interconnection Customer shall be required to provide the status and settings of the governor or equivalent controls to the CAISO upon request. If Interconnection Customer needs to operate the Electric Generating Unit(s) with its governor or equivalent controls not in service, Interconnection Customer shall immediately notify the CAISO, and provide the following information: (1) the operating status of the governor or equivalent controls (i.e., whether it is currently out of service or when it will be taken out of service); (2) the reasons for removing the governor or equivalent controls from service; and (3) a reasonable estimate of when the governor or equivalent controls will be returned to service. Interconnection Customer shall make Reasonable Efforts to return its governor or equivalent controls into service as soon as practicable. Interconnection Customer shall make Reasonable Efforts to keep outages of the Electric Generating Units' governor or equivalent controls to a minimum whenever the Electric Generating Unit(s) is operated in parallel with the CAISO Controlled Grid.

**9.6.4.2 Timely and Sustained Response.** Interconnection Customer shall ensure that the Electric Generating Units' real power response to sustained frequency deviations outside of the deadband setting is automatically provided and shall begin immediately after frequency deviates outside of the deadband, and to the extent the Electric Generating Unit(s) has operating capability in the direction needed to correct the frequency deviation. Interconnection Customer shall not block or otherwise inhibit the ability of the governor or equivalent controls to respond and shall ensure that the response is not inhibited, except under certain operational constraints including, but not limited to, ambient temperature limitations, physical energy limitations, outages of mechanical equipment, or regulatory requirements. The Electric Generating Unit(s) shall sustain the real power response at least until system frequency returns to a value within the deadband setting of the governor or equivalent controls. A FERC-approved Applicable Reliability Standard with equivalent or more stringent requirements shall supersede the above requirements.

**9.6.4.3 Exemptions.** Large Generating Facilities that are regulated by the Nuclear Regulatory Commission shall be exempt from Sections 9.6.4, 9.6.4.1, and 9.6.4.2 of this LGIA. Large Generating Facilities that are behind-the-meter generation that is sized-to-load (i.e., the thermal load and the generation are near-balanced in real-time operation and the generation is primarily controlled to maintain the unique thermal, chemical, or mechanical output necessary for the operating requirements of its host facility) shall be required to install primary frequency response capability in accordance with the droop and deadband capability requirements specified in Section 9.6.4, but shall be otherwise exempt from the operating requirements in Sections 9.6.4, 9.6.4.1, 9.6.4.2, and 9.6.4.4 of this LGIA.

**9.6.4.4 Electric Storage Resources.** Interconnection Customer interconnecting an electric storage resource shall establish an operating range in Appendix C of this LGIA that specifies a minimum state of charge and a maximum state of charge between which the electric storage resource will be required to provide primary frequency response consistent with the conditions set forth in Sections 9.6.4, 9.6.4.1, 9.6.4.2, and 9.6.4.3 of this LGIA. Appendix C shall specify whether the operating range is static or dynamic, and shall consider: (1) the expected magnitude of frequency deviations in the interconnection; (2) the expected duration that system frequency will remain outside of the deadband parameter in the interconnection; (3) the expected incidence of frequency deviations outside of the deadband parameter in the interconnection; (4) the physical capabilities of the electric storage resource; (5) operational limitations of the electric storage resource due to manufacturer specifications; and (6) any other relevant factors agreed to by the CAISO and Interconnection Customer, and in consultation with the relevant transmission owner or balancing authority as appropriate. If the operating range is dynamic, then Appendix C must establish how frequently the operating range will be reevaluated and the factors that may be considered during its reevaluation.

Interconnection Customer's electric storage resource is required to provide timely and sustained primary frequency response consistent with Section 9.6.4.2 of this LGIA when it is online and dispatched to inject electricity to the CAISO Controlled Grid and/or receive electricity from the Participating TO's Transmission System or the CAISO Controlled Grid. This excludes circumstances when the electric storage resource is not dispatched to inject electricity to the CAISO Controlled Grid and/or dispatched to receive electricity from the Participating TO's Transmission system or the CAISO Controlled Grid. If Interconnection

Customer's electric storage resource is charging at the time of a frequency deviation outside of its deadband parameter, it is to increase (for over-frequency deviations) or decrease (for under-frequency deviations) the rate at which it is charging in accordance with its droop parameter. Interconnection Customer's electric storage resource is not required to change from charging to discharging, or vice versa, unless the response necessitated by the droop and deadband settings requires it to do so and it is technically capable of making such a transition.

**9.7 Outages and Interruptions.**

**9.7.1 Outages.**

**9.7.1.1 Outage Authority and Coordination.** Each Party may in accordance with Good Utility Practice in coordination with the other Parties remove from service any of its respective Interconnection Facilities or Network Upgrades that may impact another Party's facilities as necessary to perform maintenance or testing or to install or replace equipment. Absent an Emergency Condition, the Party scheduling a removal of such facility(ies) from service will use Reasonable Efforts to schedule such removal on a date and time mutually acceptable to all Parties. In all circumstances any Party planning to remove such facility(ies) from service shall use Reasonable Efforts to minimize the effect on the other Parties of such removal.

**9.7.1.2 Outage Schedules.** The CAISO shall post scheduled outages of CAISO Controlled Grid facilities in accordance with the provisions of the CAISO Tariff. The Interconnection Customer shall submit its planned maintenance schedules for the Large Generating Facility to the CAISO in accordance with the CAISO Tariff. The Interconnection Customer shall update its planned maintenance schedules in accordance with the CAISO Tariff. The CAISO may request the Interconnection Customer to reschedule its maintenance as necessary to maintain the reliability of the CAISO Controlled Grid in accordance with the CAISO Tariff. Such planned maintenance schedules and updates and changes to such schedules shall be provided by the Interconnection Customer to the Participating TO concurrently with their submittal to the CAISO. The CAISO shall compensate the Interconnection Customer for any additional direct costs that the Interconnection Customer incurs as a result of having to reschedule maintenance in accordance with the CAISO Tariff. The Interconnection Customer will not be eligible to receive compensation, if during the twelve (12) months prior to the date of the scheduled maintenance, the Interconnection Customer had modified its schedule of maintenance activities.

**9.7.1.3 Outage Restoration.** If an outage on a Party's Interconnection Facilities or Network Upgrades adversely affects another Party's operations or facilities, the Party that owns or controls the facility that is out of service shall use Reasonable Efforts to promptly restore such facility(ies) to a normal operating condition consistent with the nature of the outage. The Party that owns or controls the facility that is out of service shall provide the other Parties, to the extent such information is known, information on the nature of the Emergency Condition, if the outage is caused by an Emergency Condition, an estimated time of restoration, and any corrective actions required. Initial verbal notice shall be followed up as soon as practicable with written notice explaining the nature of the outage, if requested by a Party, which may be provided by e-mail or facsimile.

**9.7.2 Interruption of Service.** If required by Good Utility Practice to do so, the CAISO or the

Participating TO may require the Interconnection Customer to interrupt or reduce deliveries of electricity if such delivery of electricity could adversely affect the CAISO's or the Participating TO's ability to perform such activities as are necessary to safely and reliably operate and maintain the Participating TO's electric system or the CAISO Controlled Grid. The following provisions shall apply to any interruption or reduction permitted under this Article 9.7.2:

**9.7.2.1** The interruption or reduction shall continue only for so long as reasonably necessary under Good Utility Practice;

**9.7.2.2** Any such interruption or reduction shall be made on an equitable, non-discriminatory basis with respect to all generating facilities directly connected to the CAISO Controlled Grid, subject to any conditions specified in this LGIA;

**9.7.2.3** When the interruption or reduction must be made under circumstances which do not allow for advance notice, the CAISO or Participating TO, as applicable, shall notify the Interconnection Customer by telephone as soon as practicable of the reasons for the curtailment, interruption, or reduction, and, if known, its expected duration. Telephone notification shall be followed by written notification, if requested by the Interconnection Customer, as soon as practicable;

**9.7.2.4** Except during the existence of an Emergency Condition, the CAISO or Participating TO shall notify the Interconnection Customer in advance regarding the timing of such interruption or reduction and further notify the Interconnection Customer of the expected duration. The CAISO or Participating TO shall coordinate with the Interconnection Customer using Good Utility Practice to schedule the interruption or reduction during periods of least impact to the Interconnection Customer, the CAISO, and the Participating TO;

**9.7.2.5** The Parties shall cooperate and coordinate with each other to the extent necessary in order to restore the Large Generating Facility, Interconnection Facilities, the Participating TO's Transmission System, and the CAISO Controlled Grid to their normal operating state, consistent with system conditions and Good Utility Practice.

**9.7.3 Under-Frequency and Over Frequency Conditions.** The CAISO Controlled Grid is designed to automatically activate a load-shed program as required by Applicable Reliability Standards and the Applicable Reliability Council in the event of an under-frequency system disturbance. The Interconnection Customer shall implement under-frequency and over-frequency protection set points for the Large Generating Facility as required by Applicable Reliability Standards and the Applicable Reliability Council to ensure "ride through" capability. Large Generating Facility response to frequency deviations of pre-determined magnitudes, both under-frequency and over-frequency deviations, shall be studied and coordinated with the Participating TO and CAISO in accordance with Good Utility Practice. The term "ride through" as used herein shall mean the ability of a Generating Facility to stay connected to and synchronized with the CAISO Controlled Grid during system disturbances within a range of under-frequency and over-frequency conditions, in accordance with Good Utility Practice. . Asynchronous Generating Facilities shall be subject to frequency ride through capability requirements in accordance with Appendix H to this LGIA.

**9.7.4 System Protection and Other Control Requirements.**

**9.7.4.1 System Protection Facilities.** The Interconnection Customer shall, at its

expense, install, operate and maintain System Protection Facilities as a part of the Large Generating Facility or the Interconnection Customer's Interconnection Facilities. The Participating TO shall install at the Interconnection Customer's expense any System Protection Facilities that may be required on the Participating TO's Interconnection Facilities or the Participating TO's Transmission System as a result of the interconnection of the Large Generating Facility and the Interconnection Customer's Interconnection Facilities.

**9.7.4.2** The Participating TO's and Interconnection Customer's protection facilities shall be designed and coordinated with other systems in accordance with Applicable Reliability Standards, Applicable Reliability Council criteria, and Good Utility Practice.

**9.7.4.3** The Participating TO and Interconnection Customer shall each be responsible for protection of its facilities consistent with Good Utility Practice.

**9.7.4.4** The Participating TO's and Interconnection Customer's protective relay design shall incorporate the necessary test switches to perform the tests required in Article 6. The required test switches will be placed such that they allow operation of lockout relays while preventing breaker failure schemes from operating and causing unnecessary breaker operations and/or the tripping of the Interconnection Customer's Electric Generating Units.

**9.7.4.5** The Participating TO and Interconnection Customer will test, operate and maintain System Protection Facilities in accordance with Good Utility Practice and, if applicable, the requirements of the Participating TO's Interconnection Handbook.

**9.7.4.6** Prior to the in-service date, and again prior to the Commercial Operation Date, the Participating TO and Interconnection Customer or their agents shall perform a complete calibration test and functional trip test of the System Protection Facilities. At intervals suggested by Good Utility Practice, the standards and procedures of the Participating TO, including, if applicable, the requirements of the Participating TO's Interconnection Handbook, and following any apparent malfunction of the System Protection Facilities, each Party shall perform both calibration and functional trip tests of its System Protection Facilities. These tests do not require the tripping of any in-service generation unit. These tests do, however, require that all protective relays and lockout contacts be activated.

**9.7.5 Requirements for Protection.** In compliance with Good Utility Practice and, if applicable, the requirements of the Participating TO's Interconnection Handbook, the Interconnection Customer shall provide, install, own, and maintain relays, circuit breakers and all other devices necessary to remove any fault contribution of the Large Generating Facility to any short circuit occurring on the Participating TO's Transmission System not otherwise isolated by the Participating TO's equipment, such that the removal of the fault contribution shall be coordinated with the protective requirements of the Participating TO's Transmission System. Such protective equipment shall include, without limitation, a disconnecting device with fault current-interrupting capability located between the Large Generating Facility and the Participating TO's Transmission System at a site selected upon mutual agreement (not to be unreasonably withheld, conditioned or delayed) of the Parties. The Interconnection Customer shall be responsible for protection of the Large Generating Facility and the Interconnection Customer's other equipment from such conditions as negative sequence currents, over- or under-frequency, sudden load rejection, over- or under-voltage, and generator loss-of-field. The Interconnection Customer shall be solely responsible to disconnect the Large Generating Facility and the Interconnection Customer's other equipment if conditions on the CAISO Controlled Grid

could adversely affect the Large Generating Facility.

**9.7.6 Power Quality.** Neither the Participating TO's nor the Interconnection Customer's facilities shall cause excessive voltage flicker nor introduce excessive distortion to the sinusoidal voltage or current waves as defined by ANSI Standard C84.1-1989, in accordance with IEEE Standard 519, any applicable superseding electric industry standard, or any alternative Applicable Reliability Standard or Applicable Reliability Council standard. In the event of a conflict among ANSI Standard C84.1-1989, any applicable superseding electric industry standard, or any alternative Applicable Reliability Standard or Applicable Reliability Council standard, the alternative Applicable Reliability Standard or Applicable Reliability Council standard shall control.

**9.8 Switching and Tagging Rules.** Each Party shall provide the other Parties a copy of its switching and tagging rules that are applicable to the other Parties' activities. Such switching and tagging rules shall be developed on a non-discriminatory basis. The Parties shall comply with applicable switching and tagging rules, as amended from time to time, in obtaining clearances for work or for switching operations on equipment.

**9.9 Use of Interconnection Facilities by Third Parties.**

**9.9.1 Purpose of Interconnection Facilities.** Except as may be required by Applicable Laws and Regulations, or as otherwise agreed to among the Parties, the Interconnection Facilities shall be constructed for the sole purpose of interconnecting the Large Generating Facility to the Participating TO's Transmission System and shall be used for no other purpose.

**9.9.2 Third Party Users.** If required by Applicable Laws and Regulations or if the Parties mutually agree, such agreement not to be unreasonably withheld, to allow one or more third parties to use the Participating TO's Interconnection Facilities, or any part thereof, the Interconnection Customer will be entitled to compensation for the capital expenses it incurred in connection with the Interconnection Facilities based upon the pro rata use of the Interconnection Facilities by the Participating TO, all third party users, and the Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually-agreed upon methodology. In addition, cost responsibility for ongoing costs, including operation and maintenance costs associated with the Interconnection Facilities, will be allocated between the Interconnection Customer and any third party users based upon the pro rata use of the Interconnection Facilities by the Participating TO, all third party users, and the Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually agreed upon methodology. If the issue of such compensation or allocation cannot be resolved through such negotiations, it shall be submitted to FERC for resolution.

**9.10 Disturbance Analysis Data Exchange.** The Parties will cooperate with one another in the analysis of disturbances to either the Large Generating Facility or the CAISO Controlled Grid by gathering and providing access to any information relating to any disturbance, including information from oscillography, protective relay targets, breaker operations and sequence of events records, and any disturbance information required by Good Utility Practice.

## Article 10. Maintenance

**10.1 Participating TO Obligations.** The Participating TO shall maintain the Participating TO's Transmission System and the Participating TO's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA.

**10.2 Interconnection Customer Obligations.** The Interconnection Customer shall maintain the

Large Generating Facility and the Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA.

**10.3 Coordination.** The Parties shall confer regularly to coordinate the planning, scheduling and performance of preventive and corrective maintenance on the Large Generating Facility and the Interconnection Facilities.

**10.4 Secondary Systems.** The Participating TO and Interconnection Customer shall cooperate with the other Parties in the inspection, maintenance, and testing of control or power circuits that operate below 600 volts, AC or DC, including, but not limited to, any hardware, control or protective devices, cables, conductors, electric raceways, secondary equipment panels, transducers, batteries, chargers, and voltage and current transformers that directly affect the operation of a Party's facilities and equipment which may reasonably be expected to impact the other Parties. Each Party shall provide advance notice to the other Parties before undertaking any work on such circuits, especially on electrical circuits involving circuit breaker trip and close contacts, current transformers, or potential transformers.

**10.5 Operating and Maintenance Expenses.** Subject to the provisions herein addressing the use of facilities by others, and except for operations and maintenance expenses associated with modifications made for providing interconnection or transmission service to a third party and such third party pays for such expenses, the Interconnection Customer shall be responsible for all reasonable expenses including overheads, associated with: (1) owning, operating, maintaining, repairing, and replacing the Interconnection Customer's Interconnection Facilities; and (2) operation, maintenance, repair and replacement of the Participating TO's Interconnection Facilities.

## Article 11. Performance Obligation

**11.1 Interconnection Customer's Interconnection Facilities.** The Interconnection Customer shall design, procure, construct, install, own and/or control the Interconnection Customer's Interconnection Facilities described in Appendix A at its sole expense.

**11.2 Participating TO's Interconnection Facilities.** The Participating TO shall design, procure, construct, install, own and/or control the Participating TO's Interconnection Facilities described in Appendix A at the sole expense of the Interconnection Customer. Unless the Participating TO elects to fund the capital for the Participating TO's Interconnection Facilities, they shall be solely funded by the Interconnection Customer.

**11.3 Network Upgrades and Distribution Upgrades.** The Participating TO shall design, procure, construct, install, and own the Network Upgrades and Distribution Upgrades described in Appendix A, except for Stand Alone Network Upgrades, which will be constructed, and if agreed to by the Parties owned by the Interconnection Customer, and Merchant Network Upgrades. The Interconnection Customer shall be responsible for all costs related to Distribution Upgrades. Network Upgrades shall be funded by the Interconnection Customer, which for Interconnection Customers processed under Section 6 of the GIDAP (in Queue Clusters) shall be in an amount determined pursuant to the methodology set forth in Section 6.3 of the GIDAP. This specific amount is set forth in Appendix G to this LGIA. For costs associated with Area Delivery Network Upgrades, any amounts set forth in Appendix G will be advisory estimates only, and will not operate to establishing any cap or Maximum Cost Exposure on the cost responsibility of the Interconnection Customer for Area Delivery Network Upgrades.

**11.4 Transmission Credits.** No later than thirty (30) Calendar Days prior to the Commercial Operation Date, the Interconnection Customer may make a one-time election by written notice to the CAISO and the Participating TO to (a) receive Congestion Revenue Rights as defined in and as available under the CAISO Tariff at the time of the election in accordance with the CAISO

Tariff, in lieu of a repayment of the cost of Network Upgrades in accordance with Article 11.4.1, and/or (b) decline all or part of a refund of the cost of Network Upgrades entitled to the Interconnection Customer in accordance with Article 11.4.1.

**11.4.1 Repayment of Amounts Advanced for Network Upgrades.**

**11.4.1.1 Repayment of Amounts Advanced Regarding Non-Phased Generating Facilities**

An Interconnection Customer with a non-Phased Generating Facility in Queue Cluster 5 or earlier, or an Interconnection Customer in the Independent Study Process or the Fast Track Process that has been tendered a Generator Interconnection Agreement before December 19, 2014, shall be entitled to a repayment for the Interconnection Customer's contribution to the cost of Network Upgrades commencing upon the Commercial Operation Date of its Generating Facility.

An Interconnection Customer with a non-Phased Generating Facility in Queue Cluster 6 or later, or an Interconnection Customer in the Independent Study Process or the Fast Track Process that has not been tendered an Interconnection Agreement before December 19, 2014, shall be entitled to repayment for the Interconnection Customer's contribution to the cost of Network Upgrades placed in service on or before the Commercial Operation Date of its Generating Facility, commencing upon the Commercial Operation Date of the Generating Facility. Repayment for the Interconnection Customer's contribution to the cost of Network Upgrades placed into service after the Commercial Operation Date of its Generating Facility shall, for each of these Network Upgrades, commence no later than the later of: (i) the first month of the calendar year following the year in which the Network Upgrade is placed into service or (ii) 90 days after the Network Upgrade is placed into service.

An Interconnection Customer subject to this Article 11.4.1.1 shall be entitled to repayment for its contribution to the cost of Network Upgrades as follows:

(a) For Reliability Network Upgrades, the Interconnection Customer shall be entitled to a repayment of the amount paid by the Interconnection Customer for Reliability Network Upgrades as set forth in Appendix G, up to a maximum amount established in Section 14.3.2.1 of the GIDAP. For purposes of this determination, generating capacity will be based on the capacity of the Interconnection Customer's Generating Facility at the time it achieves Commercial Operation. To the extent that such repayment does not cover all of the costs of Interconnection Customer's Reliability Network Upgrades, the Interconnection Customer shall receive Merchant Transmission CRRs for that portion of its Reliability Network Upgrades that are not covered by cash repayment.

(b) For Local Delivery Network Upgrades:

i. If the Interconnection Customer is an Option (B) Interconnection Customer and has been allocated and continues to be eligible to receive TP Deliverability pursuant to the GIDAP, the Interconnection Customer shall be entitled to repayment of a portion of the total amount paid to the Participating TO for the costs of Local Delivery Network Upgrades for which it is responsible, as set forth in Appendix G. The repayment amount shall be determined by dividing the amount of TP Deliverability

received by the amount of deliverability requested by the Interconnection Customer, and multiplying that percentage by the total amount paid to the Participating TO by the Interconnection Customer for Local Delivery Network Upgrades

ii. If the Generating Facility is an Option (B) Generating Facility and has not been allocated any TP Deliverability, the Interconnection Customer shall not be entitled to repayment for the costs of Local Delivery Network Upgrades.

iii. If the Generating Facility is an Option (A) Generating Facility, the Interconnection Customer shall be entitled to a repayment equal to the total amount paid to the Participating TO for the costs of Local Delivery Network Upgrades for which it is responsible, as set forth in Appendix G.

(c) For Area Delivery Network Upgrades, the Interconnection Customer shall not be entitled to repayment for the costs of Area Delivery Network Upgrades.

(d) If an Interconnection Customer having a Option (B) Generating Facility, and is eligible, to construct and own Network Upgrades pursuant to the Merchant Option set forth in Article 5.15 of this LGIA, then the Interconnection Customer shall not be entitled to any repayment pursuant to this LGIA.

(e) For Local Off-Peak Network Upgrades, the Interconnection Customer will be entitled to a repayment equal to the total amount paid to the Participating TO for the costs of Local Delivery Network Upgrades for which it is responsible, as set forth in Appendix G.

Unless an Interconnection Customer has provided written notice to the CAISO that it is declining all or part of such repayment, such amounts shall include any tax gross-up or other tax-related payments associated with Network Upgrades not refunded to the Interconnection Customer pursuant to Article 5.17.8 or otherwise, and shall be paid to the Interconnection Customer by the Participating TO on a dollar-for-dollar basis either through (1) direct payments made on a levelized basis over the five-year period commencing on the applicable date as provided for in this Article 11.4.1.1; or (2) any alternative payment schedule that is mutually agreeable to the Interconnection Customer and Participating TO, provided that such amount is paid within five (5) years of the applicable commencement date. Notwithstanding the foregoing, if this LGIA terminates within five (5) years of the applicable commencement date, the Participating TO's obligation to pay refunds to the Interconnection Customer shall cease as of the date of termination.

(f) Where the Interconnection Customer finances the construction of Network Upgrades for more than one Participating TO, the cost allocation, Interconnection Financial Security, and repayment will be conducted pursuant to Section 14.4.1 of the GIDAP, and set forth in Appendix G.

**11.4.1.2 Repayment of Amounts Advanced Regarding Phased Generating Facilities**

Upon the Commercial Operation Date of each phase of a Phased Generating Facility, the Interconnection Customer shall be entitled to a repayment equal to the Interconnection Customer's contribution to the cost of Network Upgrades for that completed phase for which the Interconnection Customer is responsible, as set forth in Appendix G, subject to the limitations specified in Article 11.4.1.1, if the following conditions are satisfied as described below:

(a) The Generating Facility is capable of being constructed in phases;

(b) The Generating Facility is specified in the LGIA as being constructed in phases;

(c) The completed phase corresponds to one of the phases specified in the LGIA;

(d) The phase has achieved Commercial Operation and the Interconnection Customer has tendered notice of the same pursuant to this LGIA;

(e) All Parties to the LGIA have confirmed that the completed phase meets the requirements set forth in this LGIA and any other operating, metering, and interconnection requirements to permit generation output of the entire capacity of the completed phase as specified in this LGIA;

(f) The Network Upgrades necessary for the completed phase to meet the desired level of deliverability are in service; and

(g) The Interconnection Customer has posted one hundred (100) percent of the Interconnection Financial Security required for the Network Upgrades for all the phases of the Generating Facility (or if less than one hundred (100) percent has been posted, then all required Financial Security Instruments to the date of commencement of repayment).

Following satisfaction of these conditions (a) through (g), an Interconnection Customer in a Queue Cluster earlier than Queue Cluster 5, or an Interconnection Customer in the Independent Study Process or the Fast Track Process that has been tendered a Generator Interconnection Agreement before December 19, 2014, shall be entitled to receive a partial repayment of its financed cost responsibility, to the extent that it is otherwise eligible for such repayment per Article 11.4.1.1, in an amount equal to the percentage of the Generating Facility declared to be in Commercial Operation multiplied by the cost of the Network Upgrades associated with the completed phase. The Interconnection Customer shall be entitled to repayment in this manner for each completed phase until the entire Generating Facility is completed.

Following satisfaction of these conditions (a) through (e) and (g), an Interconnection Customer in Queue Cluster 6 or a later Queue Cluster, or an Interconnection Customer in the Independent Study Process or the Fast Track Process that has not been tendered a Generator Interconnection Agreement before December 19, 2014, shall be entitled to receive a repayment of its financed cost responsibility for the Network Upgrades associated with the completed phase that have been placed in service. The Interconnection Customer shall be entitled to repayment in this manner for each completed phase until the entire Generating Facility is completed. With respect to any Network Upgrades necessary for a completed phase to meet its desired level of deliverability that are not in service by the time the phase achieves Commercial Operation, repayment for each such Network Upgrade will commence no later

than the later of: (i) the first month of the calendar year following the year in which the Network Upgrade is placed into service or (ii) 90 days after the Network Upgrade is placed into service.

A reduction in the electrical output (MW capacity) of the Generating Facility pursuant to the CAISO Tariff shall not diminish the Interconnection Customer's right to repayment pursuant to this LGIA Article 11.4.1.2. If the LGIA includes a partial termination provision and the partial termination right has been exercised with regard to a phase that has not been built, then the Interconnection Customer's eligibility for repayment under this Article 11.4.1.2 as to the remaining phases shall not be diminished. If the Interconnection Customer completes one or more phases and then breaches the LGIA, the Participating TO and the CAISO shall be entitled to offset any losses or damages resulting from the Breach against any repayments made for Network Upgrades related to the completed phases.

Any repayment amount provided pursuant to this Article 11.4.1.2 shall include any tax gross-up or other tax-related payments associated with Network Upgrades not refunded to the Interconnection Customer pursuant to Article 5.17.8 or otherwise, and shall be paid to the Interconnection Customer by the Participating TO on a dollar-for-dollar basis either through (1) direct payments made on a levelized basis over the five-year period commencing on the applicable as provided for in this Article 11.4.1.2; or (2) any alternative payment schedule that is mutually agreeable to the Interconnection Customer and Participating TO, provided that such amount is paid within five (5) years of the applicable commencement date. Notwithstanding the foregoing, if this LGIA terminates within five (5) years of the applicable commencement date, the Participating TO's obligation to pay refunds to the Interconnection Customer shall cease as of the date of termination.

**11.4.1.3 Interest Payments and Assignment Rights**

Any phased or non-phased repayment shall include interest calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date of any payment for Network Upgrades through the date on which the Interconnection Customer receives a repayment of such payment. Interest shall continue to accrue on the repayment obligation so long as this LGIA is in effect. The Interconnection Customer may assign such repayment rights to any entity.

**11.4.1.4 Failure to Achieve Commercial Operation**

If the Large Generating Facility fails to achieve Commercial Operation, but it or another generating facility is later constructed and makes use of the Network Upgrades, the Participating TO shall at that time reimburse Interconnection Customer for the amounts advanced for the Network Upgrades. Before any such reimbursement can occur, the Interconnection Customer, or the entity that ultimately constructs the generating facility, if different, is responsible for identifying and demonstrating to the Participating TO the appropriate entity to which reimbursement must be made in order to implement the intent of this reimbursement obligation.

**11.4.2** Special Provisions for Affected Systems. The Interconnection Customer shall enter into an agreement with the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid, as applicable, in accordance with the GIDAP. Such agreement shall specify the terms governing payments to be made by the

Interconnection Customer to the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid as well as the repayment by the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid. In no event shall the Participating TO be responsible for the repayment for any facilities that are not part of the Participating TO's Transmission System. In the event the Participating TO is a joint owner with an Affected System or with any other co-owner of a facility affected by the Large Generating Facility, the Participating TO's obligation to reimburse the Interconnection Customer for payments made to address the impacts of the Large Generating Facility on the system shall not exceed the proportionate amount of the cost of any upgrades attributable to the proportion of the jointly-owned facility owned by the Participating TO.

**11.4.3** Notwithstanding any other provision of this LGIA, nothing herein shall be construed as relinquishing or foreclosing any rights, including but not limited to firm transmission rights, capacity rights, Congestion Revenue Rights, or transmission credits, that the Interconnection Customer shall be entitled to, now or in the future under any other agreement or tariff as a result of, or otherwise associated with, the transmission capacity, if any, created by the Network Upgrades, including the right to obtain cash reimbursements, merchant transmission Congestion Revenue Rights in accordance with Section 36.11 of the CAISO Tariff, or transmission credits for transmission service that is not associated with the Large Generating Facility.

**11.5 Provision of Interconnection Financial Security.** The Interconnection Customer is obligated to provide all necessary Interconnection Financial Security required under Section 11 of the GIDAP in a manner acceptable under Section 11 of the GIDAP. Failure by the Interconnection Customer to timely satisfy the GIDAP's requirements for the provision of Interconnection Financial Security shall be deemed a breach of this Agreement and a condition of Default of this Agreement.

**11.5.1** Notwithstanding any other provision of this Agreement for notice of Default and opportunity to cure such Default, the CAISO or the Participating TO shall provide the Interconnection Customer with written notice of any Default due to timely failure to post Interconnection Financial Security, and the Interconnection Customer shall have five (5) Business Days from the date of such notice to cure such Default by posting the required Interconnection Financial Security. If the Interconnection Customer fails to cure the Default, then this Agreement shall be deemed terminated.

**11.6 Interconnection Customer Compensation.** If the CAISO requests or directs the Interconnection Customer to provide a service pursuant to Articles 9.6.3 (Payment for Reactive Power) or 13.5.1 of this LGIA, the CAISO shall compensate the Interconnection Customer in accordance with the CAISO Tariff.

**11.6.1** Interconnection Customer Compensation for Actions During Emergency Condition. The CAISO shall compensate the Interconnection Customer in accordance with the CAISO Tariff for its provision of real and reactive power and other Emergency Condition services that the Interconnection Customer provides to support the CAISO Controlled Grid during an Emergency Condition in accordance with Article 11.6.

## Article 12. Invoice

**12.1 General.** The Participating TO shall submit to the Interconnection Customer, on a monthly basis, invoices of amounts due pursuant to this LGIA for the preceding month. Each invoice shall state the month to which the invoice applies and fully describe the services and equipment provided. The Parties may discharge mutual debts and payment obligations due and owing to each other on the same date through netting, in which case all amounts a Party owes to the other Party under this LGIA, including interest payments or credits, shall be netted so that only the net

amount remaining due shall be paid by the owing Party. Notwithstanding the foregoing, any invoices between the CAISO and another Party shall be submitted and paid in accordance with the CAISO Tariff.

**12.2 Final Invoice.** As soon as reasonably practicable, but within twelve months after completion of the construction of the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades, the Participating TO shall provide an invoice of the final cost of the construction of the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades, and shall set forth such costs in sufficient detail to enable the Interconnection Customer to compare the actual costs with the estimates and to ascertain deviations, if any, from the cost estimates. With respect to costs associated with the Participating TO's Interconnection Facilities and Distribution Upgrades, the Participating TO shall refund to the Interconnection Customer any amount by which the actual payment by the Interconnection Customer for estimated costs exceeds the actual costs of construction within thirty (30) Calendar Days of the issuance of such final construction invoice; or, in the event the actual costs of construction exceed the Interconnection Customer's actual payment for estimated costs, then the Interconnection Customer shall pay to the Participating TO any amount by which the actual costs of construction exceed the actual payment by the Interconnection Customer for estimated costs within thirty (30) Calendar Days of the issuance of such final construction invoice. With respect to costs associated with Network Upgrades, the Participating TO shall refund to the Interconnection Customer any amount by which the actual payment by the Interconnection Customer for estimated costs exceeds the actual costs of construction multiplied by the Interconnection Customer's percentage share of those costs, as set forth in Appendix G to this LGIA within thirty (30) Calendar Days of the issuance of such final construction invoice. In the event the actual costs of construction multiplied by the Interconnection Customer's percentage share of those costs exceed the Interconnection Customer's actual payment for estimated costs, then the Participating TO shall recover such difference through its transmission service rates.

**12.3 Payment.** Invoices shall be rendered to the Interconnection Customer at the address specified in Appendix F. The Interconnection Customer shall pay, or Participating TO shall refund, the amounts due within thirty (30) Calendar Days of the Interconnection Customer's receipt of the invoice. All payments shall be made in immediately available funds payable to the Interconnection Customer or Participating TO, or by wire transfer to a bank named and account designated by the invoicing Interconnection Customer or Participating TO. Payment of invoices by any Party will not constitute a waiver of any rights or claims any Party may have under this LGIA.

**12.4 Disputes.** In the event of a billing dispute between the Interconnection Customer and the Participating TO, the Participating TO and the CAISO shall continue to provide Interconnection Service under this LGIA as long as the Interconnection Customer: (i) continues to make all payments not in dispute; and (ii) pays to the Participating TO or into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If the Interconnection Customer fails to meet these two requirements for continuation of service, then the Participating TO may provide notice to the Interconnection Customer of a Default pursuant to Article 17. Within thirty (30) Calendar Days after the resolution of the dispute, the Party that owes money to the other Party shall pay the amount due with interest calculated in accordance with the methodology set forth in FERC's Regulations at 18 C.F.R. § 35.19a(a)(2)(iii). Notwithstanding the foregoing, any billing dispute between the CAISO and another Party shall be resolved in accordance with the provisions of Article 27 of this LGIA.

## Article 13. Emergencies

**13.1 [Reserved]**

**13.2 Obligations.** Each Party shall comply with the Emergency Condition procedures of the CAISO, NERC, the Applicable Reliability Council, Applicable Reliability Standards, Applicable Laws and

Regulations, and any emergency procedures set forth in this LGIA.

**13.3 Notice.** The Participating TO or the CAISO shall notify the Interconnection Customer promptly when it becomes aware of an Emergency Condition that affects the Participating TO's Interconnection Facilities or Distribution System or the CAISO Controlled Grid, respectively, that may reasonably be expected to affect the Interconnection Customer's operation of the Large Generating Facility or the Interconnection Customer's Interconnection Facilities. The Interconnection Customer shall notify the Participating TO and the CAISO promptly when it becomes aware of an Emergency Condition that affects the Large Generating Facility or the Interconnection Customer's Interconnection Facilities that may reasonably be expected to affect the CAISO Controlled Grid or the Participating TO's Interconnection Facilities. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of the Interconnection Customer's or Participating TO's facilities and operations, its anticipated duration and the corrective action taken and/or to be taken. The initial notice shall be followed as soon as practicable with written notice, if requested by a Party, which may be provided by electronic mail or facsimile, or in the case of the CAISO may be publicly posted on the CAISO's internet web site.

**13.4 Immediate Action.** Unless, in the Interconnection Customer's reasonable judgment, immediate action is required, the Interconnection Customer shall obtain the consent of the CAISO and the Participating TO, such consent to not be unreasonably withheld, prior to performing any manual switching operations at the Large Generating Facility or the Interconnection Customer's Interconnection Facilities in response to an Emergency Condition declared by the Participating TO or CAISO or in response to any other emergency condition.

**13.5 CAISO and Participating TO Authority.**

**13.5.1 General.** The CAISO and Participating TO may take whatever actions or inactions, including issuance of dispatch instructions, with regard to the CAISO Controlled Grid or the Participating TO's Interconnection Facilities or Distribution System they deem necessary during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the CAISO Controlled Grid or the Participating TO's Interconnection Facilities or Distribution System, (iii) limit or prevent damage, and (iv) expedite restoration of service.

The Participating TO and the CAISO shall use Reasonable Efforts to minimize the effect of such actions or inactions on the Large Generating Facility or the Interconnection Customer's Interconnection Facilities. The Participating TO or the CAISO may, on the basis of technical considerations, require the Large Generating Facility to mitigate an Emergency Condition by taking actions necessary and limited in scope to remedy the Emergency Condition, including, but not limited to, directing the Interconnection Customer to shut-down, start-up, increase or decrease the real or reactive power output of the Large Generating Facility; implementing a reduction or disconnection pursuant to Article 13.5.2; directing the Interconnection Customer to assist with black start (if available) or restoration efforts; or altering the outage schedules of the Large Generating Facility and the Interconnection Customer's Interconnection Facilities. Interconnection Customer shall comply with all of the CAISO's Dispatch Instructions and Operating Instructions and Participating TO's dispatch instructions or Operating Instructions concerning Large Generating Facility real power and reactive power output within the manufacturer's design limitations of the Large Generating Facility's equipment that is in service and physically available for operation at the time, in compliance with Applicable Laws and Regulations.

**13.5.2 Reduction and Disconnection.** The Participating TO or the CAISO may reduce Interconnection Service or disconnect the Large Generating Facility or the Interconnection Customer's Interconnection Facilities when such reduction or

disconnection is necessary under Good Utility Practice due to Emergency Conditions. These rights are separate and distinct from any right of curtailment of the CAISO pursuant to the CAISO Tariff. When the CAISO or Participating TO can schedule the reduction or disconnection in advance, the CAISO or Participating TO shall notify the Interconnection Customer of the reasons, timing and expected duration of the reduction or disconnection. The CAISO or Participating TO shall coordinate with the Interconnection Customer using Good Utility Practice to schedule the reduction or disconnection during periods of least impact to the Interconnection Customer and the CAISO and Participating TO. Any reduction or disconnection shall continue only for so long as reasonably necessary under Good Utility Practice. The Parties shall cooperate with each other to restore the Large Generating Facility, the Interconnection Facilities, and the CAISO Controlled Grid to their normal operating state as soon as practicable consistent with Good Utility Practice.

**13.6 Interconnection Customer Authority.** Consistent with Good Utility Practice, this LGIA, and the CAISO Tariff, the Interconnection Customer may take actions or inactions with regard to the Large Generating Facility or the Interconnection Customer's Interconnection Facilities during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the Large Generating Facility or the Interconnection Customer's Interconnection Facilities, (iii) limit or prevent damage, and (iv) expedite restoration of service. Interconnection Customer shall use Reasonable Efforts to minimize the effect of such actions or inactions on the CAISO Controlled Grid and the Participating TO's Interconnection Facilities. The CAISO and Participating TO shall use Reasonable Efforts to assist Interconnection Customer in such actions.

**13.7 Limited Liability.** Except as otherwise provided in Article 11.6.1 of this LGIA, no Party shall be liable to any other Party for any action it takes in responding to an Emergency Condition so long as such action is made in good faith and is consistent with Good Utility Practice.

## Article 14. Regulatory Requirements and Governing Laws

**14.1 Regulatory Requirements.** Each Party's obligations under this LGIA shall be subject to its receipt of any required approval or certificate from one or more Governmental Authorities in the form and substance satisfactory to the applying Party, or the Party making any required filings with, or providing notice to, such Governmental Authorities, and the expiration of any time period associated therewith. Each Party shall in good faith seek and use its Reasonable Efforts to obtain such other approvals. Nothing in this LGIA shall require the Interconnection Customer to take any action that could result in its inability to obtain, or its loss of, status or exemption under the Federal Power Act or the Public Utility Holding Company Act of 1935, as amended, or the Public Utility Regulatory Policies Act of 1978, or the Energy Policy Act of 2005.

**14.2 Governing Law.**

**14.2.1** The validity, interpretation and performance of this LGIA and each of its provisions shall be governed by the laws of the state where the Point of Interconnection is located, without regard to its conflicts of law principles.

**14.2.2** This LGIA is subject to all Applicable Laws and Regulations.

**14.2.3** Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, rules, or regulations of a Governmental Authority.

## Article 15. Notices

**15.1 General.** Unless otherwise provided in this LGIA, any notice, demand or request required or permitted to be given by a Party to another and any instrument required or permitted to be tendered or delivered by a Party in writing to another shall be effective when delivered and may be so given, tendered or delivered, by recognized national courier, conveyed by e-mail, or by

depositing the same with the United States Postal Service with postage prepaid, for delivery by certified or registered mail, addressed to the Party, or personally delivered to the Party, at the address set out in Appendix F, Addresses for Delivery of Notices and Billings.

A Party must update the information in Appendix F as information changes. A Party may change the notice information in this LGIA by giving five (5) Business Days written notice prior to the effective date of the change. Such changes shall not constitute an amendment to this LGIA.

**15.2 Billings and Payments.** Billings and payments shall be sent to the addresses set out in Appendix F.

**15.3 Alternative Forms of Notice.** Any notice or request required or permitted to be given by a Party to another and not required by this LGIA to be given as provided in Article 15.1 may be so given by telephone, or e-mail to the telephone numbers and e-mail addresses set out in Appendix F.

**15.4 Operations and Maintenance Notice.** Each Party shall notify the other Parties in writing of the identity of the person(s) that it designates as the point(s) of contact with respect to the implementation of Articles 9 and 10.

## Article 16. Force Majeure

**16.1 Force Majeure.**

**16.1.1** Economic hardship is not considered a Force Majeure event.

**16.1.2** No Party shall be considered to be in Default with respect to any obligation hereunder, (including obligations under Article 4), other than the obligation to pay money when due, if prevented from fulfilling such obligation by Force Majeure. A Party unable to fulfill any obligation hereunder (other than an obligation to pay money when due) by reason of Force Majeure shall give notice and the full particulars of such Force Majeure to the other Party in writing or by telephone as soon as reasonably possible after the occurrence of the cause relied upon. Telephone notices given pursuant to this Article shall be confirmed in writing as soon as reasonably possible and shall specifically state full particulars of the Force Majeure, the time and date when the Force Majeure occurred and when the Force Majeure is reasonably expected to cease. The Party affected shall exercise due diligence to remove such disability with reasonable dispatch, but shall not be required to accede or agree to any provision not satisfactory to it in order to settle and terminate a strike or other labor disturbance.

## Article 17. Default

**17.1 Default.**

**17.1.1 General.** No Default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of Force Majeure as defined in this LGIA or the result of an act or omission of the other Party. Upon a Breach, the affected non-Breaching Party(ies) shall give written notice of such Breach to the Breaching Party. Except as provided in Articles 11.5.1 and 17.1.2, the Breaching Party shall have thirty (30) Calendar Days from receipt of the Default notice within which to cure such Breach; provided however, if such Breach is not capable of cure within thirty (30) Calendar Days, the Breaching Party shall commence such cure within thirty (30) Calendar Days after notice and continuously and diligently complete such cure within ninety (90) Calendar Days from receipt of the Default notice; and, if cured within such time, the Breach specified in such notice shall cease to exist.

**17.1.2 Right to Terminate.** If a Breach is not cured as provided in this Article, or if a Breach is not capable of being cured within the period provided for herein, the affected non-Breaching Party(ies) shall have the right to declare a Default and terminate this LGIA by

written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not such Party(ies) terminates this LGIA, to recover from the Breaching Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this Article will survive termination of this LGIA.

**Article 18. Indemnity, Consequential Damages, and Insurance**

**18.1 Indemnity.** Each Party shall at all times indemnify, defend, and hold the other Parties harmless from, any and all Losses arising out of or resulting from another Party's action or inactions of its obligations under this LGIA on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the Indemnified Party.

**18.1.1 Indemnified Party.** If an Indemnified Party is entitled to indemnification under this Article 18 as a result of a claim by a third party, and the Indemnifying Party fails, after notice and reasonable opportunity to proceed under Article 18.1, to assume the defense of such claim, such Indemnified Party may at the expense of the Indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

**18.1.2 Indemnifying Party.** If an Indemnifying Party is obligated to indemnify and hold any Indemnified Party harmless under this Article 18, the amount owing to the Indemnified Party shall be the amount of such Indemnified Party's actual Loss, net of any insurance or other recovery.

**18.1.3 Indemnity Procedures.** Promptly after receipt by an Indemnified Party of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in Article 18.1 may apply, the Indemnified Party shall notify the Indemnifying Party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying Party.

The Indemnifying Party shall have the right to assume the defense thereof with counsel designated by such Indemnifying Party and reasonably satisfactory to the Indemnified Party. If the defendants in any such action include one or more Indemnified Parties and the Indemnifying Party and if the Indemnified Party reasonably concludes that there may be legal defenses available to it and/or other Indemnified Parties which are different from or additional to those available to the Indemnifying Party, the Indemnified Party shall have the right to select separate counsel to assert such legal defenses and to otherwise participate in the defense of such action on its own behalf. In such instances, the Indemnifying Party shall only be required to pay the fees and expenses of one additional attorney to represent an Indemnified Party or Indemnified Parties having such differing or additional legal defenses.

The Indemnified Party shall be entitled, at its expense, to participate in any such action, suit or proceeding, the defense of which has been assumed by the Indemnifying Party. Notwithstanding the foregoing, the Indemnifying Party (i) shall not be entitled to assume and control the defense of any such action, suit or proceedings if and to the extent that, in the opinion of the Indemnified Party and its counsel, such action, suit or proceeding involves the potential imposition of criminal liability on the Indemnified Party, or there exists a conflict or adversity of interest between the Indemnified Party and the Indemnifying Party, in such event the Indemnifying Party shall pay the reasonable expenses of the Indemnified Party, and (ii) shall not settle or consent to the entry of any judgment in any action, suit or proceeding without the consent of the Indemnified Party, which shall not be unreasonably withheld, conditioned or delayed.

**18.2 Consequential Damages.** Other than the liquidated damages heretofore described in Article

5.3, in no event shall any Party be liable under any provision of this LGIA for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to another Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

**18.3 Insurance.** As indicated below, the designated Party shall, at its own expense, maintain in force throughout the periods noted in this LGIA, and until released by the other Parties, the following minimum insurance coverages, with insurers rated no less than A- (with a minimum size rating of VII) by Bests' Insurance Guide and Key Ratings and authorized to do business in the state where the Point of Interconnection is located, except in the case of any insurance required to be carried by the CAISO, the State of California:

**18.3.1 Workers' Compensation Insurance and Employers' Liability.** The Participating TO and the Interconnection Customer shall maintain such coverage from the commencement of any Construction Activities providing statutory benefits for Workers Compensation coverage and coverage amounts of no less than One Million Dollars ($1,000,000) for employer's liability for each employee for bodily injury by accident and One Million Dollars ($1,000,000) for each employee for bodily injury by disease in accordance with the laws and regulations of the state in which the Point of Interconnection is located. The Participating TO shall provide the Interconnection Customer with evidence of such insurance coverage within thirty (30) Calendar Days of any request by the Interconnection Customer. The Interconnection Customer shall provide evidence of such insurance thirty (30) Calendar Days prior to entry by any employee or contractor or other person acting on the Interconnection Customer's behalf onto any construction site to perform any work related to the Interconnection Facilities or Generating Facility.

**18.3.2 Commercial General Liability Insurance**. The Participating TO and the Interconnection Customer shall maintain commercial general liability insurance coverage commencing within thirty (30) Calendar Days of the Effective Date of this LGIA, including coverage for premises and operations, bodily injury (including death), personal injury, property damage, products and completed operations coverage, coverage for explosion, collapse and underground hazards, independent contractors coverage, and (i) liability of Participating TO and the Interconnection Customer that would be imposed without the LGIA, or (ii) liability assumed by the Participating TO and the Interconnection Customer in a contract or agreement that is an "insured contract" under commercial general liability insurance policy. Such insurance shall include no cross liability exclusions or separation of insured clause endorsement exclusions, with minimum limits of One Million Dollars ($1,000,000) per occurrence/One Million Dollars ($1,000,000) aggregate. If the activities of the Interconnection Customer are being conducted through the actions of an Affiliate, then the Interconnection Customer may satisfy the insurance requirements of this Section 18.3.2 by providing evidence of insurance coverage carried by such Affiliate and showing the Participating TO and the CAISO as an additional insured only with respect to the LGIA, together with the Interconnection Customer's written representation to the Participating TO and the CAISO that the insured Affiliate is conducting all of the necessary pre-construction work. Within thirty (30) Calendar Days prior to the entry of any person on behalf of the Interconnection Customer onto any construction site to perform work related to the Interconnection Facilities or Generating Facility, the Interconnection Customer shall replace any evidence of Affiliate Insurance with evidence of such insurance carried by the Interconnection Customer, naming the Participating TO and CAISO as additional insured only with respect to the LGIA.

**18.3.3** **Business Automobile Liability Insurance**. Prior to the entry of any such vehicles on any construction site in connection with work done by or on behalf of the Interconnection Customer, the Interconnection Customer shall provide evidence of coverage of owned and non-owned and hired vehicles, trailers or semi-trailers designed for travel on public roads, with a minimum, combined single limit of One Million Dollars ($1,000,000) per occurrence for bodily injury, including death, and property damage. The Interconnection Customer shall include the Participating TO and the CAISO as additional insured with respect to the LGIA on any such policies.

**18.3.4** **Excess Liability Insurance**. Commencing at the time of entry of any person on its behalf upon any construction site for the Network Upgrades, Interconnection Facilities, or Generating Facility, the Participating TO and the Interconnection Customer shall maintain Excess Liability insurance over and above the Employer's Liability Commercial General Liability and Business Automobile Liability Insurance coverage, with a minimum limit of Twenty Million Dollars ($20,000,000) per occurrence/Twenty Million Dollars ($20,000,000) aggregate. Such insurance carried by the Participating TO shall include the Interconnection Customer and CAISO as additional insured with respect to the LGIA, and such insurance carried by the Interconnection Customer shall include the Participating TO and CAISO as an additional insured with respect to the LGIA. The requirements of Section 18.3.2 and 18.3.4 may be met by any combination of general and excess liability insurance.

**18.3.5** The Commercial General Liability Insurance, Business Automobile Insurance and Excess Liability Insurance policies shall include the other Parties identified in the sections above, their parents, their subsidiaries, respective directors, officers, agents, servants and employees ("Other Party Group") and the CAISO as additional insured. All policies shall contain provisions whereby the insurers waive all rights of subrogation in accordance with the provisions of this LGIA against the Other Party Group. If any Party can reasonably demonstrate that coverage policies containing provisions for insurer waiver of subrogation rights, or advance notice are not commercially available, then the Parties shall meet and confer and mutually determine to (i) establish replacement or equivalent terms in lieu of subrogation or notice or (ii) waive the requirements that coverage(s) include such subrogation provision or require advance written notice from such insurers.

**18.3.6** The Commercial General Liability Insurance, Business Automobile Liability Insurance and Excess Liability Insurance policies shall contain provisions that specify that the policies are primary and non-contributory. Each Party shall be responsible for its respective deductibles or self-insured retentions.

**18.3.7** The Commercial General Liability Insurance, Business Automobile Liability Insurance and Excess Liability Insurance policies, if written on a Claims First Made Basis, shall be maintained in full force and effect for two (2) years after termination of this LGIA, which coverage may be in the form of extended reporting period coverage if agreed by the Parties.

**18.3.8** [Not Used.]

**18.3.9** Thirty (30) Calendar Days prior to the start of any work at the construction site related to Interconnection Facilities or Generating Facility under this LGIA, and as soon as practicable after the end of each fiscal year or at the renewal of the insurance policy and in any event within ninety (90) Calendar Days thereafter, the Participating TO and the Interconnection Customer shall provide a certificate of insurance for all insurance required in this LGIA, executed by each insurer or by an authorized representative of each insurer.

**18.3.10** Notwithstanding the foregoing, each Party may self-insure

a) to meet the minimum insurance requirements of Article 18.3.1, to the extent that it maintains a self-insurance program that is a qualified self insurer within the state in which the Point of Interconnection is located, under the laws and regulations of such state; and

b) to meet the minimum insurance requirements of Articles 18.3.2 through 18.3.8 to the extent it maintains a self-insurance program; provided that, such Party's senior unsecured debt or issuer rating is BBB-, or better, as rated by Standard & Poor's and that its self-insurance program meets the minimum insurance requirements of Articles 18.3.2 through 18.3.8. For any period of time that a Party's senior unsecured debt rating and issuer rating are both unrated by Standard & Poor's or are both rated at less than BBB- by Standard & Poor's, such Party shall comply with the insurance requirements applicable to it under Articles 18.3.2 through 18.3.9.
c) in the event that a Party is permitted to self-insure pursuant to this Article 18.3.10, it shall notify the other Parties that it meets the requirements to self-insure and that its self-insurance program meets the minimum insurance requirements in a manner consistent with that specified in Article 18.3.9.

**18.3.11** The Parties agree to report to each other in writing as soon as practical all accidents or occurrences resulting in injuries to any person, including death, and any property damage greater than $25,000, including within the scope of coverage of such insurance whether or not such coverage is sought.

## Article 19. Assignment

**19.1** **Assignment.** This LGIA may be assigned by a Party only with the written consent of the other Parties; provided that a Party may assign this LGIA without the consent of the other Parties to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this LGIA; and provided further that the Interconnection Customer shall have the right to assign this LGIA, without the consent of the CAISO or Participating TO, for collateral security purposes to aid in providing financing for the Large Generating Facility, provided that the Interconnection Customer will promptly notify the CAISO and Participating TO of any such assignment. Any financing arrangement entered into by the Interconnection Customer pursuant to this Article will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify the CAISO and Participating TO of the date and particulars of any such exercise of assignment right(s), including providing the CAISO and Participating TO with proof that it meets the requirements of Articles 11.5 and 18.3. Any attempted assignment that violates this Article is void and ineffective. Any assignment under this LGIA shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

The Interconnection Customer may assign Surplus Interconnection Service pursuant to Section 3.4 of the GIDAP. The CAISO, Participating TO, and original Interconnection Customer will work in good faith to amend this GIA to reflect the transfer of Surplus Interconnection Service before the execution of the assignee's GIA. The assignee must execute a separate GIA with the CAISO and Participating TO to memorialize its Interconnection Service.

## Article 20. Severability

**20.1** **Severability.** If any provision in this LGIA is finally determined to be invalid, void or unenforceable by any court or other Governmental Authority having jurisdiction, such determination shall not invalidate, void or make unenforceable any other provision, agreement or

covenant of this LGIA; provided that if the Interconnection Customer (or any third party, but only if such third party is not acting at the direction of the Participating TO or CAISO) seeks and obtains such a final determination with respect to any provision of the Alternate Option (Article 5.1.2), or the Negotiated Option (Article 5.1.4), then none of the provisions of Article 5.1.2 or 5.1.4 shall thereafter have any force or effect and the Parties' rights and obligations shall be governed solely by the Standard Option (Article 5.1.1).

## Article 21. Comparability

**21.1 Comparability.** The Parties will comply with all applicable comparability and code of conduct laws, rules and regulations, as amended from time to time.

## Article 22. Confidentiality

**22.1 Confidentiality.** Confidential Information shall include, without limitation, all information relating to a Party's technology, research and development, business affairs, and pricing, and any information supplied by any of the Parties to the other Parties prior to the execution of this LGIA.

Information is Confidential Information only if it is clearly designated or marked in writing as confidential on the face of the document, or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Parties receiving the information that the information is confidential.

If requested by any Party, the other Parties shall provide in writing, the basis for asserting that the information referred to in this Article 22 warrants confidential treatment, and the requesting Party may disclose such writing to the appropriate Governmental Authority. Each Party shall be responsible for the costs associated with affording confidential treatment to its information.

**22.1.1 Term.** During the term of this LGIA, and for a period of three (3) years after the expiration or termination of this LGIA, except as otherwise provided in this Article 22, each Party shall hold in confidence and shall not disclose to any person Confidential Information.

**22.1.2 Scope.** Confidential Information shall not include information that the receiving Party can demonstrate: (1) is generally available to the public other than as a result of a disclosure by the receiving Party; (2) was in the lawful possession of the receiving Party on a non-confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a third party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the disclosing Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the disclosing Party; (5) is, or becomes, publicly known, through no wrongful act or omission of the receiving Party or Breach of this LGIA; or (6) is required, in accordance with Article 22.1.7 of this LGIA, Order of Disclosure, to be disclosed by any Governmental Authority or is otherwise required to be disclosed by law or subpoena, or is necessary in any legal proceeding establishing rights and obligations under this LGIA. Information designated as Confidential Information will no longer be deemed confidential if the Party that designated the information as confidential notifies the other Parties that it no longer is confidential.

**22.1.3 Release of Confidential Information.** No Party shall release or disclose Confidential Information to any other person, except to its employees, consultants, Affiliates (limited by the Standards of Conduct requirements set forth in Part 358 of FERC's Regulations, 18 C.F.R. 358), subcontractors, or to parties who may be or considering providing financing to or equity participation with the Interconnection Customer, or to potential purchasers or assignees of the Interconnection Customer, on a need-to-know basis in connection with this LGIA, unless such person has first been advised of the confidentiality provisions of this Article 22 and has agreed to comply with such provisions.

Notwithstanding the foregoing, a Party providing Confidential Information to any person shall remain primarily responsible for any release of Confidential Information in contravention of this Article 22.

**22.1.4 Rights.** Each Party retains all rights, title, and interest in the Confidential Information that each Party discloses to the other Parties. The disclosure by each Party to the other Parties of Confidential Information shall not be deemed a waiver by a Party or any other person or entity of the right to protect the Confidential Information from public disclosure.

**22.1.5 No Warranties.** The mere fact that a Party has provided Confidential Information does not constitute a warranty or representation as to its accuracy or completeness. In addition, by supplying Confidential Information, no Party obligates itself to provide any particular information or Confidential Information to the other Parties nor to enter into any further agreements or proceed with any other relationship or joint venture.

**22.1.6 Standard of Care.** Each Party shall use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from unauthorized disclosure, publication or dissemination. Each Party may use Confidential Information solely to fulfill its obligations to the other Parties under this LGIA or its regulatory requirements.

**22.1.7 Order of Disclosure.** If a court or a Government Authority or entity with the right, power, and apparent authority to do so requests or requires any Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party shall provide the other Parties with prompt notice of such request(s) or requirement(s) so that the other Parties may seek an appropriate protective order or waive compliance with the terms of this LGIA. Notwithstanding the absence of a protective order or waiver, the Party may disclose such Confidential Information which, in the opinion of its counsel, the Party is legally compelled to disclose. Each Party will use Reasonable Efforts to obtain reliable assurance that confidential treatment will be accorded any Confidential Information so furnished.

**22.1.8 Termination of Agreement.** Upon termination of this LGIA for any reason, each Party shall, within ten (10) Calendar Days of receipt of a written request from another Party, use Reasonable Efforts to destroy, erase, or delete (with such destruction, erasure, and deletion certified in writing to the other Party) or return to the other Party, without retaining copies thereof, any and all written or electronic Confidential Information received from the other Party.

**22.1.9 Remedies.** The Parties agree that monetary damages would be inadequate to compensate a Party for another Party's Breach of its obligations under this Article 22. Each Party accordingly agrees that the other Parties shall be entitled to equitable relief, by way of injunction or otherwise, if the first Party Breaches or threatens to Breach its obligations under this Article 22, which equitable relief shall be granted without bond or proof of damages, and the receiving Party shall not plead in defense that there would be an adequate remedy at law. Such remedy shall not be deemed an exclusive remedy for the Breach of this Article 22, but shall be in addition to all other remedies available at law or in equity. The Parties further acknowledge and agree that the covenants contained herein are necessary for the protection of legitimate business interests and are reasonable in scope. No Party, however, shall be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with this Article 22.

**22.1.10 Disclosure to FERC, its Staff, or a State.** Notwithstanding anything in this Article 22 to the contrary, and pursuant to 18 C.F.R. section 1b.20, if FERC or its staff, during the

course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to this LGIA, the Party shall provide the requested information to FERC or its staff, within the time provided for in the request for information. In providing the information to FERC or its staff, the Party must, consistent with 18 C.F.R. section 388.112, request that the information be treated as confidential and non-public by FERC and its staff and that the information be withheld from public disclosure. Parties are prohibited from notifying the other Parties to this LGIA prior to the release of the Confidential Information to FERC or its staff. The Party shall notify the other Parties to the LGIA when it is notified by FERC or its staff that a request to release Confidential Information has been received by FERC, at which time any of the Parties may respond before such information would be made public, pursuant to 18 C.F.R. section 388.112. Requests from a state regulatory body conducting a confidential investigation shall be treated in a similar manner if consistent with the applicable state rules and regulations.

**22.1.11** Subject to the exception in Article 22.1.10, Confidential Information shall not be disclosed by the other Parties to any person not employed or retained by the other Parties, except to the extent disclosure is (i) required by law; (ii) reasonably deemed by the disclosing Party to be required to be disclosed in connection with a dispute between or among the Parties, or the defense of litigation or dispute; (iii) otherwise permitted by consent of the other Parties, such consent not to be unreasonably withheld; or (iv) necessary to fulfill its obligations under this LGIA or as a transmission service provider or a Balancing Authority including disclosing the Confidential Information to an RTO or ISO or to a regional or national reliability organization. The Party asserting confidentiality shall notify the other Parties in writing of the information it claims is confidential. Prior to any disclosures of another Party's Confidential Information under this subparagraph, or if any third party or Governmental Authority makes any request or demand for any of the information described in this subparagraph, the disclosing Party agrees to promptly notify the other Party in writing and agrees to assert confidentiality and cooperate with the other Party in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order or other reasonable measures.

## Article 23. Environmental Releases

**23.1** Each Party shall notify the other Parties, first orally and then in writing, of the release of any Hazardous Substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Large Generating Facility or the Interconnection Facilities, each of which may reasonably be expected to affect the other Parties. The notifying Party shall: (i) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than twenty-four hours after such Party becomes aware of the occurrence; and (ii) promptly furnish to the other Parties copies of any publicly available reports filed with any Governmental Authorities addressing such events.

## Article 24. Information Requirements

**24.1** **Information Acquisition.** The Participating TO and the Interconnection Customer shall submit specific information regarding the electrical characteristics of their respective facilities to each other as described below and in accordance with Applicable Reliability Standards.

**24.2** **Information Submission by Participating TO.** The initial information submission by the Participating TO shall occur no later than one hundred eighty (180) Calendar Days prior to Trial Operation and shall include the Participating TO's Transmission System information necessary to allow the Interconnection Customer to select equipment and meet any system protection and stability requirements, unless otherwise agreed to by the Participating TO and the Interconnection Customer. On a monthly basis the Participating TO shall provide the Interconnection Customer and the CAISO a status report on the construction and installation of the Participating TO's Interconnection Facilities and Network Upgrades, including, but not limited to, the following

information: (1) progress to date; (2) a description of the activities since the last report; (3) a description of the action items for the next period; and (4) the delivery status of equipment ordered.

**24.3 Updated Information Submission by Interconnection Customer.** The updated information submission by the Interconnection Customer, including manufacturer information, shall occur no later than one hundred eighty (180) Calendar Days prior to the Trial Operation. The Interconnection Customer shall submit a completed copy of the Electric Generating Unit data requirements contained in Appendix 1 to the GIDAP. It shall also include any additional information provided to the Participating TO and the CAISO for the Interconnection Studies. Information in this submission shall be the most current Electric Generating Unit design or expected performance data. Information submitted for stability models shall be compatible with the Participating TO and CAISO standard models. If there is no compatible model, the Interconnection Customer will work with a consultant mutually agreed to by the Parties to develop and supply a standard model and associated information.

If the Interconnection Customer's data is materially different from what was originally provided to the Participating TO and the CAISO for the Interconnection Studies, then the Participating TO and the CAISO will conduct appropriate studies pursuant to the GIDAP to determine the impact on the Participating TO's Transmission System and affected portions of the CAISO Controlled Grid based on the actual data submitted pursuant to this Article 24.3. The Interconnection Customer shall not begin Trial Operation until such studies are completed and all other requirements of this LGIA are satisfied.

**24.4 Information Supplementation.** Prior to the Trial Operation date, the Parties shall supplement their information submissions described above in this Article 24 with any and all "as-built" Electric Generating Unit information or "as-tested" performance information that differs from the initial submissions or, alternatively, written confirmation that no such differences exist. The Interconnection Customer shall conduct tests on the Electric Generating Unit as required by Good Utility Practice such as an open circuit "step voltage" test on the Electric Generating Unit to verify proper operation of the Electric Generating Unit's automatic voltage regulator.

Unless otherwise agreed, the test conditions shall include: (1) Electric Generating Unit at synchronous speed; (2) automatic voltage regulator on and in voltage control mode; and (3) a five percent (5 percent) change in Electric Generating Unit terminal voltage initiated by a change in the voltage regulators reference voltage. The Interconnection Customer shall provide validated test recordings showing the responses of Electric Generating Unit terminal and field voltages. In the event that direct recordings of these voltages is impractical, recordings of other voltages or currents that mirror the response of the Electric Generating Unit's terminal or field voltage are acceptable if information necessary to translate these alternate quantities to actual Electric Generating Unit terminal or field voltages is provided. Electric Generating Unit testing shall be conducted and results provided to the Participating TO and the CAISO for each individual Electric Generating Unit in a station.

Subsequent to the Commercial Operation Date, the Interconnection Customer shall provide the Participating TO and the CAISO any information changes due to equipment replacement, repair, or adjustment. The Participating TO shall provide the Interconnection Customer any information changes due to equipment replacement, repair or adjustment in the directly connected substation or any adjacent Participating TO-owned substation that may affect the Interconnection Customer's Interconnection Facilities equipment ratings, protection or operating requirements. The Parties shall provide such information pursuant to Article 5.19.

## Article 25. Information Access and Audit Rights

**25.1 Information Access.** Each Party (the "disclosing Party") shall make available to the other Party information that is in the possession of the disclosing Party and is necessary in order for the other

Party to: (i) verify the costs incurred by the disclosing Party for which the other Party is responsible under this LGIA; and (ii) carry out its obligations and responsibilities under this LGIA. The Parties shall not use such information for purposes other than those set forth in this Article 25.1 and to enforce their rights under this LGIA. Nothing in this Article 25 shall obligate the CAISO to make available to a Party any third party information in its possession or control if making such third party information available would violate a CAISO Tariff restriction on the use or disclosure of such third party information.

**25.2 Reporting of Non-Force Majeure Events.** Each Party (the "notifying Party") shall notify the other Parties when the notifying Party becomes aware of its inability to comply with the provisions of this LGIA for a reason other than a Force Majeure event. The Parties agree to cooperate with each other and provide necessary information regarding such inability to comply, including the date, duration, reason for the inability to comply, and corrective actions taken or planned to be taken with respect to such inability to comply. Notwithstanding the foregoing, notification, cooperation or information provided under this Article shall not entitle the Party receiving such notification to allege a cause for anticipatory breach of this LGIA.

**25.3 Audit Rights.** Subject to the requirements of confidentiality under Article 22 of this LGIA, the Parties' audit rights shall include audits of a Party's costs pertaining to such Party's performance or satisfaction of obligations owed to the other Party under this LGIA, calculation of invoiced amounts, the CAISO's efforts to allocate responsibility for the provision of reactive support to the CAISO Controlled Grid, the CAISO's efforts to allocate responsibility for interruption or reduction of generation on the CAISO Controlled Grid, and each such Party's actions in an Emergency Condition.

**25.3.1** The Interconnection Customer and the Participating TO shall each have the right, during normal business hours, and upon prior reasonable notice to the other Party, to audit at its own expense the other Party's accounts and records pertaining to either such Party's performance or either such Party's satisfaction of obligations owed to the other Party under this LGIA. Subject to Article 25.3.2, any audit authorized by this Article shall be performed at the offices where such accounts and records are maintained and shall be limited to those portions of such accounts and records that relate to each such Party's performance and satisfaction of obligations under this LGIA. Each such Party shall keep such accounts and records for a period equivalent to the audit rights periods described in Article 25.4.

**25.3.2** Notwithstanding anything to the contrary in Article 25.3, each Party's rights to audit the CAISO's accounts and records shall be as set forth in Section 22.1 of the CAISO Tariff.

**25.4 Audit Rights Periods.**

**25.4.1 Audit Rights Period for Construction-Related Accounts and Records.** Accounts and records related to the design, engineering, procurement, and construction of Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades constructed by the Participating TO shall be subject to audit for a period of twenty-four months following the Participating TO's issuance of a final invoice in accordance with Article 12.2. Accounts and records related to the design, engineering, procurement, and construction of Participating TO's Interconnection Facilities and/or Stand Alone Network Upgrades constructed by the Interconnection Customer shall be subject to audit and verification by the Participating TO and the CAISO for a period of twenty-four months following the Interconnection Customer's issuance of a final invoice in accordance with Article 5.2(8).

**25.4.2 Audit Rights Period for All Other Accounts and Records.** Accounts and records related to a Party's performance or satisfaction of all obligations under this LGIA other than those described in Article 25.4.1 shall be subject to audit as follows: (i) for an audit

relating to cost obligations, the applicable audit rights period shall be twenty-four months after the auditing Party's receipt of an invoice giving rise to such cost obligations; and (ii) for an audit relating to all other obligations, the applicable audit rights period shall be twenty-four months after the event for which the audit is sought; provided that each Party's rights to audit the CAISO's accounts and records shall be as set forth in Section 22.1 of the CAISO Tariff.

**25.5 Audit Results.** If an audit by the Interconnection Customer or the Participating TO determines that an overpayment or an underpayment has occurred with respect to the other Party, a notice of such overpayment or underpayment shall be given to the other Party together with those records from the audit which supports such determination. The Party that is owed payment shall render an invoice to the other Party and such invoice shall be paid pursuant to Article 12 hereof.

**25.5.1** Notwithstanding anything to the contrary in Article 25.5, the Interconnection Customer's and Participating TO's rights to audit the CAISO's accounts and records shall be as set forth in Section 22.1 of the CAISO Tariff, and the CAISO's process for remedying an overpayment or underpayment shall be as set forth in the CAISO Tariff.

## Article 26. Subcontractors

**26.1 General.** Nothing in this LGIA shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this LGIA; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this LGIA in providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

**26.2 Responsibility of Principal.** The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this LGIA. The hiring Party shall be fully responsible to the other Parties for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall the CAISO or Participating TO be liable for the actions or inactions of the Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under Article 5 of this LGIA. Any applicable obligation imposed by this LGIA upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

**26.3 No Limitation by Insurance.** The obligations under this Article 26 will not be limited in any way by any limitation of subcontractor's insurance.

## Article 27. Disputes

All disputes arising out of or in connection with this LGIA whereby relief is sought by or from the CAISO shall be settled in accordance with the provisions of Article 13 of the CAISO Tariff, except that references to the CAISO Tariff in such Article 13 of the CAISO Tariff shall be read as references to this LGIA. Disputes arising out of or in connection with this LGIA not subject to provisions of Article 13 of the CAISO Tariff shall be resolved as follows:

**27.1 Submission.** In the event either Party has a dispute, or asserts a claim, that arises out of or in connection with this LGIA or its performance, such Party (the "disputing Party") shall provide the other Party with written notice of the dispute or claim ("Notice of Dispute"). Such dispute or claim shall be referred to a designated senior representative of each Party for resolution on an informal basis as promptly as practicable after receipt of the Notice of Dispute by the other Party. In the event the designated representatives are unable to resolve the claim or dispute through unassisted or assisted negotiations within thirty (30) Calendar Days of the other Party's receipt of the Notice of Dispute, such claim or dispute may, upon mutual agreement of the Parties, be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below. In the event the Parties do not agree to submit such claim or dispute to arbitration, each Party may exercise whatever rights and remedies it may have in equity or at law consistent with

the terms of this LGIA.

**27.2 External Arbitration Procedures.** Any arbitration initiated under this LGIA shall be conducted before a single neutral arbitrator appointed by the Parties. If the Parties fail to agree upon a single arbitrator within ten (10) Calendar Days of the submission of the dispute to arbitration, each Party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty (20) Calendar Days select a third arbitrator to chair the arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the Parties an opportunity to be heard and, except as otherwise provided herein, shall conduct the arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("Arbitration Rules") and any applicable FERC regulations; provided, however, in the event of a conflict between the Arbitration Rules and the terms of this Article 27, the terms of this Article 27 shall prevail.

**27.3 Arbitration Decisions.** Unless otherwise agreed by the Parties, the arbitrator(s) shall render a decision within ninety (90) Calendar Days of appointment and shall notify the Parties in writing of such decision and the reasons therefor. The arbitrator(s) shall be authorized only to interpret and apply the provisions of this LGIA and shall have no power to modify or change any provision of this Agreement in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in the Federal Arbitration Act or the Administrative Dispute Resolution Act. The final decision of the arbitrator(s) must also be filed with FERC if it affects jurisdictional rates, terms and conditions of service, Interconnection Facilities, or Network Upgrades.

**27.4 Costs.** Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable: (1) the cost of the arbitrator chosen by the Party to sit on the three member panel and one half of the cost of the third arbitrator chosen; or (2) one half the cost of the single arbitrator jointly chosen by the Parties.

## Article 28. Representations, Warranties and Covenants

**28.1 General.** Each Party makes the following representations, warranties and covenants:

**28.1.1 Good Standing.** Such Party is duly organized, validly existing and in good standing under the laws of the state in which it is organized, formed, or incorporated, as applicable; that it is qualified to do business in the state or states in which the Large Generating Facility, Interconnection Facilities and Network Upgrades owned by such Party, as applicable, are located; and that it has the corporate power and authority to own its properties, to carry on its business as now being conducted and to enter into this LGIA and carry out the transactions contemplated hereby and perform and carry out all covenants and obligations on its part to be performed under and pursuant to this LGIA.

**28.1.2 Authority.** Such Party has the right, power and authority to enter into this LGIA, to become a Party hereto and to perform its obligations hereunder. This LGIA is a legal, valid and binding obligation of such Party, enforceable against such Party in accordance with its terms, except as the enforceability thereof may be limited by applicable bankruptcy, insolvency, reorganization or other similar laws affecting creditors' rights generally and by general equitable principles (regardless of whether enforceability is sought in a proceeding in equity or at law).

**28.1.3 No Conflict.** The execution, delivery and performance of this LGIA does not violate

or conflict with the organizational or formation documents, or bylaws or operating agreement, of such Party, or any judgment, license, permit, order, material agreement or instrument applicable to or binding upon such Party or any of its assets.

**28.1.4** **Consent and Approval.** Such Party has sought or obtained, or, in accordance with this LGIA will seek or obtain, each consent, approval, authorization, order, or acceptance by any Governmental Authority in connection with the execution, delivery and performance of this LGIA, and it will provide to any Governmental Authority notice of any actions under this LGIA that are required by Applicable Laws and Regulations.

## Article 29. [Reserved]

## Article 30. Miscellaneous

**30.1** **Binding Effect.** This LGIA and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

**30.2** **Conflicts.** In the event of a conflict between the body of this LGIA and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this LGIA shall prevail and be deemed the final intent of the Parties.

**30.3** **Rules of Interpretation.** This LGIA, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this LGIA, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this LGIA), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any Applicable Laws and Regulations means such Applicable Laws and Regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article of this LGIA or such Appendix to this LGIA, or such Section to the GIDAP or such Appendix to the GIDAP, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this LGIA as a whole and not to any particular Article or other provision hereof or thereof; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".

**30.4** **Entire Agreement.** This LGIA, including all Appendices and Schedules attached hereto, constitutes the entire agreement among the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between or among the Parties with respect to the subject matter of this LGIA. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this LGIA.

**30.5** **No Third Party Beneficiaries.** This LGIA is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

**30.6** **Waiver.** The failure of a Party to this LGIA to insist, on any occasion, upon strict performance of any provision of this LGIA will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this LGIA shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this LGIA. Termination or Default of this LGIA for any reason by the Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Participating TO. Any waiver of this LGIA shall, if requested, be provided in writing.

**30.7 Headings.** The descriptive headings of the various Articles of this LGIA have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this LGIA.

**30.8 Multiple Counterparts.** This LGIA may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

**30.9 Amendment.** The Parties may by mutual agreement amend this LGIA by a written instrument duly executed by all of the Parties. Such amendment shall become effective and a part of this LGIA upon satisfaction of all Applicable Laws and Regulations.

**30.10 Modification by the Parties.** The Parties may by mutual agreement amend the Appendices to this LGIA by a written instrument duly executed by all of the Parties. Such amendment shall become effective and a part of this LGIA upon satisfaction of all Applicable Laws and Regulations.

**30.11 Reservation of Rights.** The CAISO and Participating TO shall each have the right to make a unilateral filing with FERC to modify this LGIA pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following Articles and Appendices of this LGIA and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these Articles and Appendices:

> Recitals, 1, 2.1, 2.2, 2.3, 2.4, 2.6, 3.1, 3.3, 4.1, 4.2, 4.3, 4.4, 5 preamble, 5.4, 5.7, 5.8, 5.9, 5.12, 5.13, 5.18, 5.19.1, 7.1, 7.2, 8, 9.1, 9.2, 9.3, 9.5, 9.6, 9.7, 9.8, 9.10, 10.3, 11.4, 12.1, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24.3, 24.4, 25.1, 25.2, 25.3 (excluding subparts), 25.4.2, 26, 28, 29, 30, Appendix D, Appendix F, Appendix G, and any other Article not reserved exclusively to the Participating TO or the CAISO below.

The Participating TO shall have the exclusive right to make a unilateral filing with FERC to modify this LGIA pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following Articles and Appendices of this LGIA and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these Articles and Appendices:

> 2.5, 5.1, 5.2, 5.3, 5.5, 5.6, 5.10, 5.11, 5.14, 5.15, 5.16, 5.17, 5.19 (excluding 5.19.1), 6, 7.3, 9.4, 9.9, 10.1, 10.2, 10.4, 10.5, 11.1, 11.2, 11.3, 11.5, 12.2, 12.3, 12.4, 24.1, 24.2, 25.3.1, 25.4.1, 25.5 (excluding 25.5.1), 27 (excluding preamble), Appendix A, Appendix B, Appendix C, and Appendix E.

The CAISO shall have the exclusive right to make a unilateral filing with FERC to modify this LGIA pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following Articles of this LGIA and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these Articles:

> 3.2, 4.5, 11.6, 25.3.2, 25.5.1, and 27 preamble.

The Interconnection Customer, the CAISO, and the Participating TO shall have the right to make a unilateral filing with FERC to modify this LGIA pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this LGIA shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**30.12 No Partnership.** This LGIA shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership among the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

**30.13 Joint and Several Obligations.** Except as otherwise provided in this LGIA, the obligations of the CAISO, the Participating TO, and the Interconnection Customer are several, and are neither joint nor joint and several.

**IN WITNESS WHEREOF,** the Parties have executed this LGIA in multiple originals, each of which shall constitute and be an original effective agreement among the Parties.

**[Insert name of Interconnection Customer]**

By: _____

Name: _____

Title: _____

Date: _____

**[Insert name of Participating TO]**

By: _____

Name: _____

Title: _____

Date: _____

**California Independent System Operator Corporation**

By: _____

Name: _____

Title: _____

Date: _____

**Appendices to LGIA**

Appendix A Interconnection Facilities, Network Upgrades and Distribution Upgrades

Appendix B Milestones

Appendix C Interconnection Details

Appendix D Security Arrangements Details

Appendix E Commercial Operation Date

Appendix F Addresses for Delivery of Notices and Billings

Appendix G Interconnection Customer's Share of Costs of Network Upgrades for Applicable Project Group

Appendix H Interconnection Requirements for an Asynchronous Generating Facility

**Appendix A**

**Interconnection Facilities, Network Upgrades and Distribution Upgrades**

**1. Interconnection Facilities:**

**(a) [insert Interconnection Customer's Interconnection Facilities]:**

**(b) [insert Participating TO's Interconnection Facilities]:**

**2. Network Upgrades:**

**(a) [insert Stand Alone Network Upgrades]:**

**(b) [insert Other Network Upgrades]:**

**(i) [insert Participating TO's Reliability Network Upgrades]**

**(ii) [insert Participating TO's Delivery Network Upgrades]**

**3. Distribution Upgrades:**

**Appendix B**

**Milestones**

**Appendix C**

**Interconnection Details**

**Appendix D**

**Security Arrangements Details**

Infrastructure security of CAISO Controlled Grid equipment and operations and control hardware and software is essential to ensure day-to-day CAISO Controlled Grid reliability and operational security. FERC will expect the CAISO, all Participating TOs, market participants, and Interconnection Customers interconnected to the CAISO Controlled Grid to comply with Applicable Reliability Criteria. All public utilities will be expected to meet basic standards for system infrastructure and operational security, including physical, operational, and cyber-security practices.

The Interconnection Customer shall meet the requirements for security implemented pursuant to the CAISO Tariff, including the CAISO's standards for information security posted on the CAISO's internet web site at the following internet address: http://www.caiso.com/pubinfo/info-security/index.html.

## Appendix E

[This Appendix E sets forth a form of letter to be provided by the Interconnection Customer to the CAISO and Participating TO to provide formal notice of the Commercial Operation of an Electric Generating Unit.]

**[Date]**

**[CAISO Address]**

**[Participating TO Address]**

Re: _____ Electric Generating Unit

Dear _____:

On **[Date] [Interconnection Customer]** has completed Trial Operation of Unit No. ___. This letter confirms that [Interconnection Customer] commenced Commercial Operation of Unit No. ___ at the Electric Generating Unit, effective as of **[Date plus one day]** and that [Interconnection Customer] provided the CAISO's operations personnel advance notice of its intended Commercial Operation Date no less than five Business Days prior to that date.

Thank you.

**[Signature]**

**[Interconnection Customer Representative]**

## Appendix F

**Addresses for Delivery of Notices and Billings**

**Notices:**

Participating TO:

[To be supplied.]

Interconnection Customer:

[To be supplied.]

CAISO:

[To be supplied.]

**Billings and Payments:**

Participating TO:

[To be supplied.]

Interconnection Customer:

[To be supplied.]

CAISO:

[To be supplied.]

**Alternative Forms of Delivery of Notices (telephone, facsimile or e-mail):**

Participating TO:

[To be supplied.]

Interconnection Customer:

[To be supplied.]

CAISO:

[To be supplied.]

**Appendix G**

**Interconnection Customer's Share of Costs of Network Upgrades for Applicable Project Group**

**Appendix H**

**INTERCONNECTION REQUIREMENTS FOR AN ASYNCHRONOUS GENERATING FACILITY**

Appendix H sets forth interconnection requirements specific to all Asynchronous Generating Facilities. Except as provided in Section 25.4.2 of the CAISO tariff, existing individual generating units of an Asynchronous Generating Facility that are, or have been, interconnected to the CAISO Controlled Grid at the same location are exempt from the requirements of this Appendix H for the remaining life of the existing generating unit.

**A. Technical Requirements Applicable to Asynchronous Generating Facilities**

**i. Voltage Ride-Through Capability**

An Asynchronous Generating Facility shall be able to remain online during voltage disturbances up to the time periods and associated voltage levels set forth in the requirements below.

1. An Asynchronous Generating Facility shall remain online for the voltage disturbance caused by any fault on the transmission grid, or within the Asynchronous Generating Facility between the Point of Interconnection and the high voltage terminals of the Asynchronous Generating Facility's step up transformer, having a duration equal to the lesser of the normal three-phase fault clearing time (4-9 cycles) or one-hundred fifty (150) milliseconds, plus any subsequent post-fault voltage recovery to the final steady-state post-fault voltage unless clearing the fault effectively disconnects the generator from the system. Clearing time shall be based on the maximum normal clearing time associated with any three-phase fault location that reduces the voltage at the Asynchronous Generating Facility's Point of Interconnection to 0.2 per-unit of nominal voltage or less, independent of any fault current contribution from the Asynchronous Generating Facility.

2. An Asynchronous Generating Facility shall remain online for any voltage disturbance caused by a single-phase fault on the transmission grid, or within the Asynchronous Generating Facility between the Point of Interconnection and the high voltage terminals of the Asynchronous Generating Facility's step up transformer, with delayed clearing, plus any subsequent post-fault voltage recovery to the final steady-state post-fault voltage unless clearing the fault effectively disconnects the generator from the system. Clearing time shall be based on the maximum backup clearing time associated with a single point of failure (protection or breaker failure) for any single-phase fault location that reduces any phase-to-ground or phase-to-phase voltage at the Asynchronous Generating Facility's Point of Interconnection to 0.2 per-unit of nominal voltage or less, independent of any fault current contribution from the Asynchronous Generating Facility.

3. Remaining on-line shall be defined as continuous connection between the Point of Interconnection and the Asynchronous Generating Facility's units, without any mechanical isolation. Momentary cessation (namely, ceasing to inject current during a fault without mechanical isolation) is prohibited unless transient high voltage conditions rise to 1.20 per unit or more. For transient low voltage conditions, the Asynchronous Generating Facility's inverters will inject reactive current. The level of this reactive current must be directionally proportional to the decrease in per unit voltage at the inverter AC terminals. The inverter must produce full reactive current capability when the AC voltage at the inverter terminals drops to a level of 0.50 per unit or below. The Asynchronous Generating Facility must continue to operate and absorb reactive current for transient voltage conditions between 1.10 and 1.20 per unit.

   Upon the cessation of transient voltage conditions and the return of the grid to normal operating voltage ($0.90 < V < 1.10$ per unit), the Asynchronous Generating Facility's inverters automatically must transition to normal active (real power) current injection. The Asynchronous Generating Facility's inverters must ramp up to inject active (real power) current with a minimum ramping rate

of at least 100% per second (from no output to full available output). The total time to complete the transition from reactive current injection or absorption to normal active (real power) current injection must be one second or less. The total time to return from momentary cessation, if used, during transient high voltage conditions over 1.20 per unit or more must be one second or less.

4. The Asynchronous Generating Facility's inverter will be considered to have tripped where its AC circuit breaker is open or otherwise has electrically isolated the inverter from the grid. Following an inverter trip, the inverter must make at least one attempt to resynchronize and connect back to the grid unless the trip resulted from a fatal fault code, as defined by the inverter manufacturer. This attempt must take place within 2.5 minutes from the inverter trip. An attempt to resynchronize and connect back to the grid is not required if the trip was initiated due to a fatal fault code, as determined by the original equipment manufacturer.

5. The Asynchronous Generating Facility is not required to remain on line during multi-phased faults exceeding the duration described in Section A.i.1 of this Appendix H or single-phase faults exceeding the duration described in Section A.i.2 of this Appendix H.

6. The requirements of this Section A.i of this Appendix H do not apply to faults that occur between the Asynchronous Generating Facility's terminals and the high side of the step-up transformer to the high-voltage transmission system.

7. Asynchronous Generating Facilities may be tripped after the fault period if this action is intended as part of a special protection system.

8. Asynchronous Generating Facilities may meet the requirements of this Section A.i of this Appendix H through the performance of the generating units or by installing additional equipment within the Asynchronous Generating Facility, or by a combination of generating unit performance and additional equipment.

9. The provisions of this Section A.i of this Appendix H apply only if the voltage at the Point of Interconnection has remained within the range of 0.9 and 1.10 per-unit of nominal voltage for the preceding two seconds, excluding any sub-cycle transient deviations.

10. Asynchronous Generating Facility inverters may not trip or cease to inject current for momentary loss of synchronism. As a minimum, the Asynchronous Generating Facility's inverter controls may lock the phase lock loop to the last synchronized point and continue to inject current into the grid at that last calculated phase prior to the loss of synchronism until the phase lock loop can regain synchronism. The current injection may be limited to protect the inverter. Any inverter may trip if the phase lock loop is unable to regain synchronism 150 milliseconds after loss of synchronism.

11. Inverter restoration following transient voltage conditions must not be impeded by plant level controllers. If the Asynchronous Generating Facility uses a plant level controller, it must be programmed to allow the inverters to automatically re-synchronize rapidly and ramp up to active current injection (without delayed ramping) following transient voltage recovery, before resuming overall control of the individual plant inverters.

**ii. Frequency Disturbance Ride-Through Capability**

An Asynchronous Generating Facility shall comply with the off nominal frequency requirements set forth in the NERC Reliability Standard for Generator Frequency and Voltage Protective Relay Settings, or successor requirements as they may be amended from time to time.

### iii. Power Factor Design Criteria (Reactive Power)

An Asynchronous Generating Facility not studied under the Independent Study Process, as set forth in Section 4 of Appendix DD, shall operate within a power factor within the range of 0.95 leading to 0.95 lagging, measured at the high voltage side of the substation transformer, as defined in this LGIA in order to maintain a specified voltage schedule, if the Phase II Interconnection Study shows that such a requirement is necessary to ensure safety or reliability. An Asynchronous Generating Facility studied under the Independent Study Process, as set forth in Section 4 of Appendix DD, shall operate within a power factor within the range of 0.95 leading to 0.95 lagging, measured at the high voltage side of the substation transformer, as defined in this LGIA in order to maintain a specified voltage schedule. The power factor range standards set forth in this section can be met by using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors, or a combination of the two, if agreed to by the Participating TO and CAISO. The Interconnection Customer shall not disable power factor equipment while the Asynchronous Generating Facility is in operation. Asynchronous Generating Facilities shall also be able to provide sufficient dynamic voltage support in lieu of the power system stabilizer and automatic voltage regulation at the generator excitation system if the Phase II Interconnection Study shows this to be required for system safety or reliability.

### iv. Supervisory Control and Data Acquisition (SCADA) Capability

An Asynchronous Generating Facility shall provide SCADA capability to transmit data and receive instructions from the Participating TO and CAISO to protect system reliability. The Participating TO and CAISO and the Asynchronous Generating Facility Interconnection Customer shall determine what SCADA information is essential for the proposed Asynchronous Generating Facility, taking into account the size of the plant and its characteristics, location, and importance in maintaining generation resource adequacy and transmission system reliability.

### v. Power System Stabilizers (PSS)

Power system stabilizers are not required for Asynchronous Generating Facilities.

### vi. Transient Data Recording Equipment for Facilities

Asynchronous Generating Facilities with generating capacities of more than 20 MW must monitor and record data for all frequency ride-through events, transient low voltage disturbances that initiated reactive current injection, reactive current injection or momentary cessation for transient high voltage disturbances, and inverter trips. The data may be recorded and stored in a central plant control system. The following data must be recorded:

**Plant Level:**

(1) Plant three phase voltage and current
(2) Status of ancillary reactive devices
(3) Status of all plant circuit breakers
(4) Status of plant controller
(5) Plant control set points
(6) Position of main plant transformer no-load taps
(7) Position of main plant transformer tap changer (if extant)
(8) Protective relay trips or relay target data

**Inverter Level:**

(1) Frequency, current, and voltage during frequency ride-through events
(2) Voltage and current during momentary cessation for transient high voltage events (when used)
(3) Voltage and current during reactive current injection for transient low or high voltage events
(4) Inverter alarm and fault codes
(5) DC current
(6) DC voltage

The data must be time synchronized, using a GPS clock or similar device, to a one millisecond level of resolution. All data except phase angle measuring unit data must be sampled at least every 10 milliseconds. Data recording must be triggered upon detecting a frequency ride-through event, a transient low voltage disturbance that initiated reactive current injection, momentary cessation or reactive current injection for a transient high voltage disturbance, or an inverter trip. Each recording will include as a minimum 150 milliseconds of data prior to the triggering event, and 1000 milliseconds of data after the event trigger. The Asynchronous Generating Facility must store this data for a minimum of 30 days. The Asynchronous Generating Facility will provide all data within 10 calendar days of a request from the CAISO or the Participating TO.

The Asynchronous Generating Facility must install and maintain a phase angle measuring unit or functional equivalent at the entrance to the facility or at the Generating Facility's main substation transformer. The phase angle measuring unit must have a resolution of at least 16 samples per cycle. The Asynchronous Generating Facility will store this data for a minimum of 30 days. The Asynchronous Generating Facility will provide all phase angle measuring unit data within 10 calendar days of a request from the CAISO or the Participating TO.

**Appendix FF**

**Small Generator Interconnection Agreement for Interconnection Requests Processed Under the Generator Interconnection and Deliverability Allocation Procedures (Appendix DD to the CAISO Tariff)**

This Small Generator Interconnection Agreement ("Agreement") is made and entered into this _____ day of _____, 20___, by _____ ("Participating TO"), the California Independent System Operator Corporation, a California nonprofit public benefit corporation organized and existing under the laws of the State of California ("CAISO") and _____ ("Interconnection Customer") each hereinafter sometimes referred to individually as "Party" or referred to collectively as the "Parties."

**Participating TO Information**

Participating TO: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

E-mail Address: _____

**CAISO Information**

Attention: _____

250 Outcropping Way

Folsom, CA 95630

Phone: _____ Fax: _____

E-mail: _____@caiso.com

**Interconnection Customer Information**

Interconnection Customer: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

E-mail Address: _____

Interconnection Customer Queue Position No: _____

In consideration of the mutual covenants set forth herein, the Parties agree as follows:

**Article 1. Scope and Limitations of Agreement**

**1.1** This Agreement shall be used for all Small Generating Facility Interconnection Requests submitted under the Generator Interconnection and Transmission Allocation Procedures (GIDAP) set forth in Appendix DD except for those submitted under the 10 kW Inverter Process contained in GIDAP Appendix 7. For those Interconnection Requests, GIDAP Appendix 7 contains the terms and conditions which serve as the Interconnection Agreement.

**1.2** This Agreement governs the terms and conditions under which the Interconnection Customer's Small Generating Facility will interconnect with, and operate in parallel with, the Participating TO's Transmission System.

**1.3** This Agreement does not constitute an agreement to purchase or deliver the Interconnection Customer's power. The purchase or delivery of power and other services that the Interconnection Customer may require will be covered under separate agreements, if any. The Interconnection Customer will be responsible for separately making all necessary arrangements (including scheduling) for delivery of electricity in accordance with the CAISO Tariff. Full Capacity Deliverability Status, Partial Capacity Deliverability Status, and Off-Peak Deliverability Status do not confer any priority over other Generating Facilities to deliver Energy; nor provide any warranty or guarantee to deliver any amount of Energy or avoid curtailment at any time.

**1.4** Nothing in this Agreement is intended to affect any other agreement between or among the Parties.

**1.5 Responsibilities of the Parties**

**1.5.1** The Parties shall perform all obligations of this Agreement in accordance with all Applicable Laws and Regulations, Operating Requirements, and Good Utility Practice. The Parties shall use the applicable Large Generator Interconnection Agreement to interpret the responsibilities of the Parties under this Agreement.

**1.5.2** The Interconnection Customer shall construct, interconnect, operate and maintain its Small Generating Facility and construct, operate, and maintain its Interconnection Facilities in accordance with the applicable manufacturer's recommended maintenance schedule, and in accordance with this Agreement, and with Good Utility Practice.

**1.5.3** The Participating TO shall construct, operate, and maintain its Interconnection Facilities and Upgrades in accordance with this Agreement, and with Good Utility Practice. The CAISO and the Participating TO shall cause the Participating TO's Transmission System to be operated and controlled in a safe and reliable manner and in accordance with this Agreement.

**1.5.4** The Interconnection Customer agrees to construct its facilities or systems in accordance with applicable specifications that meet or exceed those provided by the National Electrical Safety Code, the American National Standards Institute, IEEE, Underwriter's Laboratory, and Operating Requirements in effect at the time of construction and other applicable national and state codes and standards. The Interconnection Customer agrees to design, install, maintain, and operate its Small Generating Facility so as to reasonably minimize the likelihood of a disturbance adversely affecting or impairing the system or equipment of the Participating TO and any Affected Systems. The Interconnection Customer shall comply with the Participating TO's Interconnection Handbook. In the event of a conflict between the terms of this Agreement and the terms of the Participating TO's Interconnection Handbook, the terms in this Agreement shall govern.

**1.5.5** Each Party shall operate, maintain, repair, and inspect, and shall be fully responsible for the facilities that it now or subsequently may own unless otherwise specified in the Attachments to this Agreement. Each Party shall be responsible for the safe installation, maintenance, repair and condition of their respective lines and appurtenances on their respective sides of the Point of Change of Ownership. The Participating TO and the Interconnection Customer, as appropriate, shall provide Interconnection Facilities that adequately protect the CAISO Controlled Grid, the Participating TO's electric system, the Participating TO's personnel, and other persons from damage and injury. The allocation of responsibility for the design, installation, operation, maintenance and ownership of Interconnection Facilities shall be delineated in the Attachments to this Agreement.

**1.5.6** The Participating TO and the CAISO shall coordinate with Affected Systems to support the interconnection.

**1.5.7** For Interconnection Customers that execute or request the un-executed filing of an SGIA on or after October 5, 2016, the Interconnection Customer shall ensure "frequency ride-through" capability and "voltage ride-through" capability of its Small Generating Facility.

**Frequency Conditions.** The CAISO Controlled Grid is designed to automatically activate a load-shed program as required by the Applicable Reliability Standards and the Applicable Reliability Council in the event of an under-frequency system disturbance. The Interconnection Customer shall implement under-frequency and over-frequency protection set points for the Small Generating Facility as required by Applicable Reliability Standards and the Applicable Reliability Council to ensure "ride-through" capability. Small Generating Facility response to frequency deviations of pre-determined magnitudes, both under-frequency and over-frequency deviations, shall be studied and coordinated with the Participating TO and CAISO in accordance with Good Utility Practice. The term "ride-through" as used herein shall mean the ability of a Generating Facility to stay connected to and synchronized with the CAISO Controlled Grid during system disturbances within a range of under-frequency and over-frequency conditions, in accordance with Good Utility Practice. Asynchronous Generating Facilities are subject to the frequency ride-through requirements set forth in Attachment 7.

**Voltage Conditions.** The Interconnection Customer shall ensure "voltage ride-through" capability of its Small Generating Facility. The Interconnection Customer shall enable these capabilities such that its Small Generating Facility shall not disconnect automatically or instantaneously from the system or equipment of the CAISO and any Affected Systems for an under-voltage or over-voltage condition, as tested pursuant to section 2.1 of this Agreement. The defined conditions shall be in accordance with Good Utility Practice and consistent with any standards and guidelines that are applied to other generating facilities in the Balancing Authority Area on a comparable basis. Asynchronous Generating Facilities are subject to the voltage ride-through requirements set forth in Attachment 7.

## 1.6 Parallel Operation Obligations

Once the Small Generating Facility has been authorized to commence parallel operation, the Interconnection Customer shall abide by all rules and procedures pertaining to the parallel operation of the Small Generating Facility in the CAISO Balancing Authority Area, including, but not limited to; 1) the rules and procedures concerning the operation of generation set forth in the CAISO Tariff for the CAISO Controlled Grid and; 2) the Operating Requirements set forth in Attachment 5 of this Agreement.

## 1.7 Metering

The Interconnection Customer shall be responsible for the reasonable and necessary cost for the

purchase, installation, operation, maintenance, testing, repair, and replacement of metering and data acquisition equipment specified in Attachments 2 and 3 of this Agreement. The Interconnection Customer's metering (and data acquisition, as required) equipment shall conform to applicable industry rules and Operating Requirements.

### 1.8 Reactive Power and Primary Frequency Response

**1.8.1** For synchronous Generating Facilities, the Interconnection Customer shall design its Small Generating Facility to maintain a composite power delivery at continuous rated power output at the terminals of each generating unit at a power factor within the range of 0.95 leading to 0.90 lagging, unless the CAISO has established different requirements that apply to all similarly situated generators in the CAISO Balancing Authority Area on a comparable basis. The requirements of this paragraph shall not apply to Asynchronous Generating Facilities and the requirements of Attachment 7 shall apply instead except in the following cases: (a) an Interconnection Customer posts Interconnection Financial Security for an Asynchronous Generating Facility pursuant to Appendix DD of the CAISO Tariff Section 11.2.2 on or after September 21, 2016; or (b) and Interconnection Customer that submits an Interconnection Request for an Asynchronous Generating Facility under the Fast Track Process pursuant to Appendix DD of the CAISO Tariff on or after September 16, 2016.

When an Interconnection Customer posts Interconnection Financial Security for an Asynchronous Generating Facility pursuant to Appendix DD of the CAISO Tariff Section 11.2.2 on or after September 21, 2016, the Interconnection Customer will design the Small Generating Facility to maintain a composite power delivery at continuous rated power output at the high-side of the generator substation at a power factor within the range of 0.95 leading to 0.95 lagging, unless the CAISO has established a different power factor range that applies to all Asynchronous Generating Facilities on a comparable basis. This power factor range standard shall be dynamic and can be met using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors and reactors, or a combination of the two.

When an Interconnection Customer submits an Interconnection Request for an Asynchronous Generating Facility under the Fast Track Process pursuant to Appendix DD of the CAISO Tariff on or after September 21, 2016, the Interconnection Customer will design the Small Generating Facility to maintain a composite power delivery at continuous rated power output at the high-side of the generator substation at a power factor within the range of 0.95 leading to 0.95 lagging, unless the CAISO has established a different power factor range that applies to all Asynchronous Generating Facilities on a comparable basis. This power factor range standard shall be dynamic and can be met using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors and reactors, or a combination of the two.

**1.8.2** Payment to the Interconnection Customer for reactive power that the Small Generating Facility provides or absorbs when the CAISO requests the Interconnection Customer to operate its Small Generating Facility outside the range specified in Article 1.8.1 will be made by the CAISO in accordance with the applicable provisions of the CAISO Tariff.

**1.8.3** **Primary Frequency Response.** Interconnection Customer shall ensure the primary frequency response capability of its Small Generating Facility by installing, maintaining, and operating a functioning governor or equivalent controls. The term “functioning governor or equivalent controls” as used herein shall mean the required hardware and/or software that provides frequency responsive real power control with the ability to sense changes in system frequency and autonomously adjust the Small Generating Facility’s

real power output in accordance with the droop and deadband parameters and in the direction needed to correct frequency deviations. Interconnection Customer is required to install a governor or equivalent controls with the capability of operating: (1) with a maximum 5 percent droop and ±0.036 Hz deadband; or (2) in accordance with the relevant droop, deadband, and timely and sustained response settings from Applicable Reliability Standards providing for equivalent or more stringent parameters. The droop characteristic shall be: (1) based on the nameplate capacity of the Small Generating Facility, and shall be linear in the range of frequencies between 59 to 61 Hz that are outside of the deadband parameter; or (2) based on Applicable Reliability Standards providing for an equivalent or more stringent parameter. The deadband parameter shall be: the range of frequencies above and below nominal (60 Hz) in which the governor or equivalent controls is not expected to adjust the Small Generating Facility's real power output in response to frequency deviations. The deadband shall be implemented: (1) without a step to the droop curve, that is, once the frequency deviation exceeds the deadband parameter, the expected change in the Small Generating Facility's real power output in response to frequency deviations shall start from zero and then increase (for under-frequency deviations) or decrease (for over-frequency deviations) linearly in proportion to the magnitude of the frequency deviation; or (2) in accordance with Applicable Reliability Standards providing for an equivalent or more stringent parameter. Interconnection Customer shall notify the CAISO that the primary frequency response capability of the Small Generating Facility has been tested and confirmed during commissioning. Once Interconnection Customer has synchronized the Small Generating Facility with the CAISO Controlled Grid, Interconnection Customer shall operate the Small Generating Facility consistent with the provisions specified in Sections 1.8.3.1 and 1.8.3.2 of this SGIA. The primary frequency response requirements contained herein shall apply to both synchronous and non-synchronous Small Generating Facilities.

**1.8.3.1 Governor or Equivalent Controls.** Whenever the Small Generating Facility is operated in parallel with the CAISO Controlled Grid, Interconnection Customer shall operate the Small Generating Facility with its governor or equivalent controls in service and responsive to frequency. Interconnection Customer shall, in coordination with the CAISO, set the deadband parameter to: (1) a maximum of ±0.036 Hz and set the droop parameter to a maximum of 5 percent; or (2) implement the relevant droop and deadband settings from Applicable Reliability Standards that provides for equivalent or more stringent parameters. Interconnection Customer shall be required to provide the status and settings of the governor or equivalent controls to the CAISO upon request. If Interconnection Customer needs to operate the Small Generating Facility with its governor or equivalent controls not in service, Interconnection Customer shall immediately notify the CAISO, and provide the following information: (1) the operating status of the governor or equivalent controls (i.e., whether it is currently out of service or when it will be taken out of service); (2) the reasons for removing the governor or equivalent controls from service; and (3) a reasonable estimate of when the governor or equivalent controls will be returned to service. Interconnection Customer shall make Reasonable Efforts to return its governor or equivalent controls into service as soon as practicable. Interconnection Customer shall make Reasonable Efforts to keep outages of the Small Generating Facility's governor or equivalent controls to a minimum whenever the Small Generating Facility is operated in parallel with the CAISO Controlled Grid.

**1.8.3.2 Timely and Sustained Response.** Interconnection Customer shall ensure that the Small Generating Facility's real power response to sustained frequency deviations outside of the deadband setting is automatically provided and shall begin immediately after frequency deviates outside of the deadband, and to the extent the Small Generating Facility has operating capability in the direction needed to correct the frequency deviation. Interconnection Customer shall not

block or otherwise inhibit the ability of the governor or equivalent controls to respond and shall ensure that the response is not inhibited, except under certain operational constraints including, but not limited to, ambient temperature limitations, physical energy limitations, outages of mechanical equipment, or regulatory requirements. The Small Generating Facility shall sustain the real power response at least until system frequency returns to a value within the deadband setting of the governor or equivalent controls. A FERC-approved Applicable Reliability Standard with equivalent or more stringent requirements shall supersede the above requirements.

**1.8.3.3 Exemptions.** Small Generating Facilities that are regulated by the Nuclear Regulatory Commission shall be exempt from Sections 1.8.3, 1.8.3.1, and 1.8.3.2 of this SGIA. Small Generating Facilities that are behind-the-meter generation that is sized-to-load (i.e., the thermal load and the generation are near-balanced in real-time operation and the generation is primarily controlled to maintain the unique thermal, chemical, or mechanical output necessary for the operating requirements of its host facility) shall be required to install primary frequency response capability in accordance with the droop and deadband capability requirements specified in Section 1.8.3, but shall be otherwise exempt from the operating requirements in Sections 1.8.3, 1.8.3.1, 1.8.3.2, and 1.8.3.4 of this SGIA.

**1.8.3.4 Electric Storage Resources.** Interconnection Customer interconnecting an electric storage resource shall establish an operating range in Attachment 5 of this SGIA that specifies a minimum state of charge and a maximum state of charge between which the electric storage resource will be required to provide primary frequency response consistent with the conditions set forth in Sections 1.8.3, 1.8.3.1, 1.8.3.2, and 1.8.3.3 of this SGIA. Attachment 5 shall specify whether the operating range is static or dynamic, and shall consider: (1) the expected magnitude of frequency deviations in the interconnection; (2) the expected duration that system frequency will remain outside of the deadband parameter in the interconnection; (3) the expected incidence of frequency deviations outside of the deadband parameter in the interconnection; (4) the physical capabilities of the electric storage resource; (5) operational limitations of the electric storage resource due to manufacturer specifications; and (6) any other relevant factors agreed to by the CAISO and Interconnection Customer, and in consultation with the relevant transmission owner or balancing authority as appropriate. If the operating range is dynamic, then Attachment 5 must establish how frequently the operating range will be reevaluated and the factors that may be considered during its reevaluation.

Interconnection Customer's electric storage resource is required to provide timely and sustained primary frequency response consistent with Section 1.8.3.2 of this SGIA when it is online and dispatched to inject electricity to the CAISO Controlled Grid and/or receive electricity from the Participating TO's Transmission System or the CAISO Controlled Grid. This excludes circumstances when the electric storage resource is not dispatched to inject electricity to the CAISO Controlled Grid and/or dispatched to receive electricity from the Participating TO's Transmission System or the CAISO Controlled Grid. If Interconnection Customer's electric storage resource is charging at the time of a frequency deviation outside of its deadband parameter, it is to increase (for over-frequency deviations) or decrease (for under-frequency deviations) the rate at which it is charging in accordance with its droop parameter. Interconnection Customer's electric storage resource is not required to change from charging to discharging, or vice versa, unless the response necessitated by the droop and deadband settings requires it to do so and it is technically capable of making

such a transition.

**1.9** Capitalized terms used herein shall have the meanings specified in the Glossary of Terms in Attachment 1 or the body of this Agreement.

**1.10 TP Deliverability**

To the extent that an Interconnection Customer is eligible for and has been allocated TP Deliverability pursuant to Section 8.9 of the GIDAP, the Interconnection Customer's right to retain such allocated TP Deliverability shall be contingent upon satisfying the obligations set forth in Section 8.9.3 of the GIDAP.

**Article 2. Inspection, Testing, Authorization, and Right of Access**

**2.1 Equipment Testing and Inspection**

**2.1.1** The Interconnection Customer shall test and inspect its Small Generating Facility and Interconnection Facilities prior to interconnection. The Interconnection Customer shall notify the Participating TO and the CAISO of such activities no fewer than five (5) Business Days (or as may be agreed to by the Parties) prior to such testing and inspection. Testing and inspection shall occur on a Business Day. The Participating TO and the CAISO may, at their own expense, send qualified personnel to the Small Generating Facility site to inspect the interconnection and observe the testing. The Interconnection Customer shall provide the Participating TO and the CAISO a written test report when such testing and inspection is completed.

**2.1.2** The Participating TO and the CAISO shall provide the Interconnection Customer written acknowledgment that they have received the Interconnection Customer's written test report. Such written acknowledgment shall not be deemed to be or construed as any representation, assurance, guarantee, or warranty by the Participating TO or the CAISO of the safety, durability, suitability, or reliability of the Small Generating Facility or any associated control, protective, and safety devices owned or controlled by the Interconnection Customer or the quality of power produced by the Small Generating Facility.

**2.2 Authorization Required Prior to Parallel Operation**

**2.2.1** The Participating TO and the CAISO shall use Reasonable Efforts to list applicable parallel operation requirements in Attachment 5 of this Agreement. Additionally, the Participating TO and the CAISO shall notify the Interconnection Customer of any changes to these requirements as soon as they are known. The Participating TO and the CAISO shall make Reasonable Efforts to cooperate with the Interconnection Customer in meeting requirements necessary for the Interconnection Customer to commence parallel operations by the in-service date.

**2.2.2** The Interconnection Customer shall not operate its Small Generating Facility in parallel with the Participating TO's Transmission System without prior written authorization of the Participating TO. The Participating TO will provide such authorization to the Interconnection Customer and the CAISO once the Participating TO receives notification that the Interconnection Customer has complied with all applicable parallel operation requirements. Such authorization shall not be unreasonably withheld, conditioned, or delayed.

**2.3 Right of Access to Premises**

**2.3.1** Upon reasonable notice, the Participating TO and the CAISO may send a qualified

person to the premises of the Interconnection Customer at or immediately before the time the Small Generating Facility first produces energy to inspect the interconnection, and observe the commissioning of the Small Generating Facility (including any required testing), startup, and operation for a period of up to three (3) Business Days after initial start-up of the unit. In addition, the Interconnection Customer shall notify the Participating TO and the CAISO at least five (5) Business Days prior to conducting any on-site verification testing of the Small Generating Facility.

**2.3.2** Following the initial inspection process described above, at reasonable hours, and upon reasonable notice, or at any time without notice in the event of an emergency or hazardous condition, the Participating TO and the CAISO shall have access to the Interconnection Customer's premises for any reasonable purpose in connection with the performance of the obligations imposed on it by this Agreement or if necessary to meet its legal obligation to provide service to its customers.

**2.3.3** Each Party shall be responsible for its own costs associated with following this article.

## Article 3. Effective Date, Term, Termination, and Disconnection

### 3.1 Effective Date

This Agreement shall become effective upon execution by the Parties subject to acceptance by FERC (if applicable), or if filed unexecuted, upon the date specified by the FERC. The Participating TO and the CAISO shall promptly file this Agreement with the FERC upon execution, if required.

### 3.2 Term of Agreement

This Agreement shall become effective on the Effective Date and shall remain in effect for a period of ____ years from the Effective Date (term specified in individual agreements to be ten (10) years or such other longer period as the Interconnection Customer may request) and shall be automatically renewed for each successive one-year period thereafter, unless terminated earlier in accordance with Article 3.3 of this Agreement.

### 3.3 Termination

No termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination, including the filing with FERC of a notice of termination of this Agreement (if required), which notice has been accepted for filing by FERC.

**3.3.1** The Interconnection Customer may terminate this Agreement at any time by giving the Participating TO and the CAISO twenty (20) Business Days written notice.

**3.3.2** Any Party may terminate this Agreement after Default pursuant to Article 7.6.

**3.3.3** Upon termination of this Agreement, the Small Generating Facility will be disconnected from the CAISO Controlled Grid. All costs required to effectuate such disconnection shall be borne by the terminating Party, unless such termination resulted from the non-terminating Party's Default of this Agreement or such non-terminating Party otherwise is responsible for these costs under this Agreement.

**3.3.4** The termination of this Agreement shall not relieve any Party of its liabilities and obligations, owed or continuing at the time of termination.

**3.3.5** The provisions of this article shall survive termination or expiration of this Agreement.

## 3.4 Temporary Disconnection

Temporary disconnection of the Small Generating Facility or associated Interconnection Facilities shall continue only for so long as reasonably necessary under Good Utility Practice.

### 3.4.1 Emergency Conditions

**"Emergency Condition"** shall mean a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; (2) that, in the case of the CAISO, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the CAISO Controlled Grid or the electric systems of others to which the CAISO Controlled Grid is directly connected; (3) that, in the case of the Participating TO, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Participating TO's Transmission System, the Participating TO's Interconnection Facilities, Distribution System, or the electric systems of others to which the Participating TO's electric system is directly connected; or (4) that, in the case of the Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Small Generating Facility or the Interconnection Customer's Interconnection Facilities. Under Emergency Conditions, the CAISO or the Participating TO may immediately suspend interconnection service and temporarily disconnect the Small Generating Facility. The Participating TO or the CAISO shall notify the Interconnection Customer promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the Interconnection Customer's operation of the Small Generating Facility or the Interconnection Customer's Interconnection Facilities. The Interconnection Customer shall notify the Participating TO and the CAISO promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the CAISO Controlled Grid, the Participating TO's Interconnection Facilities, or any Affected Systems. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of the Interconnection Customer's or Participating TO's facilities and operations, its anticipated duration, and the necessary corrective action.

### 3.4.2 Routine Maintenance, Construction, and Repair

The Participating TO or the CAISO may interrupt interconnection service or curtail the output of the Small Generating Facility and temporarily disconnect the Small Generating Facility from the CAISO Controlled Grid when necessary for routine maintenance, construction, and repairs on the CAISO Controlled Grid or the Participating TO's electric system. The Party scheduling the interruption shall provide the Interconnection Customer with (5) five Business Days notice prior to such interruption. The Party scheduling the interruption shall use Reasonable Efforts to coordinate such reduction or temporary disconnection with the Interconnection Customer.

The Interconnection Customer shall update its planned maintenance schedules in accordance with the CAISO Tariff. The CAISO may request the Interconnection Customer to reschedule its maintenance as necessary to maintain the reliability of the CAISO Controlled Grid in accordance with the CAISO Tariff. Such planned maintenance schedules and updates and changes to such schedules shall be provided by the Interconnection Customer to the Participating TO concurrently with their submittal to the CAISO.

### 3.4.3 Forced Outages

During any forced outage, the Participating TO or the CAISO may suspend interconnection service to effect immediate repairs on the CAISO Controlled Grid or the Participating TO's electric system. The Participating TO or the CAISO shall use Reasonable Efforts to provide the Interconnection Customer with prior notice. If prior notice is not given, the Participating TO or the CAISO shall, upon request, provide the Interconnection Customer written documentation after the fact explaining the circumstances of the disconnection. The Interconnection Customer shall notify CAISO, as soon as practicable, of all forced outages or reductions of the Small Generating Facility in accordance with the CAISO Tariff.

### 3.4.4 Adverse Operating Effects

The Participating TO or the CAISO shall notify the Interconnection Customer as soon as practicable if, based on Good Utility Practice, operation of the Small Generating Facility may cause disruption or deterioration of service to other customers served from the same electric system, or if operating the Small Generating Facility could cause damage to the CAISO Controlled Grid, the Participating TO's Transmission System or Affected Systems. Supporting documentation used to reach the decision to disconnect shall be provided to the Interconnection Customer upon request. If, after notice, the Interconnection Customer fails to remedy the adverse operating effect within a reasonable time, the Participating TO or the CAISO may disconnect the Small Generating Facility. The Participating TO or the CAISO shall provide the Interconnection Customer with (5) five Business Day notice of such disconnection, unless the provisions of Article 3.4.1 apply.

### 3.4.5 Modification of the Small Generating Facility

Prior to making any modifications to the Small Generating Facility before it has achieved its Commercial Operation Date, the Interconnection Customer must first request that the CAISO evaluate whether such modification is a Material Modification and receive written authorization from the Participating TO and the CAISO. Such authorization shall not be unreasonably withheld. Modifications shall be done in accordance with Good Utility Practice. The CAISO may engage the services of the applicable Participating TO to assess the modification. Costs incurred by the Participating TO and CAISO (if any) shall be borne by the party making the request under Section 6.7.2 of Appendix DD, and such costs shall be included in any CAISO invoice for modification assessment activities. If the Interconnection Customer has achieved its Commercial Operation Date, the CAISO and Participating TO(s) will review the requested modification pursuant to Sections 25 and 25.1(c) of the CAISO Tariff. If the Interconnection Customer makes modifications without the Participating TO's and the CAISO's prior written authorization, the Participating TO or the CAISO shall have the right to temporarily disconnect the Small Generating Facility. Any change to the Point of Interconnection, except those deemed acceptable under this article of the GIDAP SGIA or so allowed elsewhere, shall constitute a Material Modification. The Interconnection Customer may then withdraw the proposed modification or proceed with a new Interconnection Request for such modification.

Notwithstanding Section 7.5 of Appendix DD, at any time after achieving its Commercial Operation Date, the Interconnection Customer may reduce the megawatt generating capacities of its Generating Facilities, subject to Section 25.1(c) of the CAISO Tariff. Section 7.5.11 of Appendix DD will still apply to such requests to reduce capacity.

### 3.4.6 Reconnection

The Parties shall cooperate with each other to restore the Small Generating Facility, Interconnection Facilities, the Participating TO's electric system, and the CAISO Controlled Grid to their normal operating state as soon as reasonably practicable following a temporary disconnection.

## Article 4. Costs for Interconnection Facilities, and Distribution Upgrades

### 4.1 Interconnection Facilities

**4.1.1** The Interconnection Customer shall pay for the cost of the Interconnection Facilities itemized in Attachment 2 of this Agreement. The Participating TO shall provide a best estimate cost, including overheads, for the purchase and construction of its Interconnection Facilities and provide a detailed itemization of such costs. Costs associated with Interconnection Facilities may be shared with other entities that may benefit from such facilities by agreement of the Interconnection Customer, such other entities, the CAISO, and the Participating TO.

**4.1.2** The Interconnection Customer shall be responsible for its share of all reasonable expenses, including overheads, associated with (1) owning, operating, maintaining, repairing, and replacing its own Interconnection Facilities, and (2) operating, maintaining, repairing, and replacing the Participating TO's Interconnection Facilities.

### 4.2 Distribution Upgrades

The Participating TO shall design, procure, construct, install, and own the Distribution Upgrades described in Attachment 6 of this Agreement. If the Participating TO and the Interconnection Customer agree, the Interconnection Customer may construct Distribution Upgrades that are located on land owned by the Interconnection Customer. The actual cost of the Distribution Upgrades, including overheads, shall be directly assigned to the Interconnection Customer.

## Article 5. Cost Responsibility For Network Upgrades

### 5.1 Applicability

No portion of this Article 5 shall apply unless the interconnection of the Small Generating Facility requires Network Upgrades.

### 5.2 Network Upgrades

The Participating TO shall design, procure, construct, install, and own the Network Upgrades described in Attachment 6 of this Agreement, except for Merchant Network Upgrades. If the Participating TO and the Interconnection Customer agree, the Interconnection Customer may construct Network Upgrades that are located on land owned by the Interconnection Customer. The actual cost of the Network Upgrades, including overheads, shall be borne initially by the Interconnection Customer. For costs associated with Area Delivery Network Upgrades and Area Off-Peak Network Upgrades, any cost estimates will be advisory in nature and will not be considered as definitive or as establishing a cap on the Maximum Cost Exposure of the Interconnection Customer.

#### 5.2.1 Merchant Network Upgrades

If the Interconnection Customer is an Option (B) Interconnection Customer, the Interconnection Customer may elect to have a party other than the applicable

Participating TO construct some or all of the LDNU and ADNU that the Interconnection Customer has the obligation to fund and that are not subject to reimbursement. Such LDNU and ADNU will be constructed and incorporated into the CAISO Controlled Grid pursuant to the provisions for Merchant Transmission Facilities in CAISO Tariff Sections 24.4.6.1 and 36.11.

## 5.3 Transmission Credits

No later than thirty (30) calendar days prior to the Commercial Operation Date, the Interconnection Customer may make a one-time election by written notice to the CAISO and the Participating TO to (a) receive Congestion Revenue Rights as defined in and as available under the CAISO Tariff at the time of the election in accordance with the CAISO Tariff, in lieu of a repayment of the cost of Network Upgrades in accordance with Article 5.3.1, and/or (b) decline all or a part of a refund of the cost of Network Upgrades entitled to the Interconnection Customer in accordance with Article 5.3.1.

### 5.3.1 Repayment of Amounts Advanced for Network Upgrades

#### 5.3.1.1 Repayment of Amounts Advanced Regarding Non-Phased Generating Facilities

An Interconnection Customer with a non-Phased Generating Facility in Queue Cluster 5 or earlier, or an Interconnection Customer in the Independent Study Process or the Fast Track Process that has been tendered a Generator Interconnection Agreement before December 19, 2014, shall be entitled to a repayment for the Interconnection Customer's contribution to the cost of Network Upgrades commencing upon the Commercial Operation Date of its Generating Facility.

An Interconnection Customer with a non-Phased Generating Facility in Queue Cluster 6 or later, or an Interconnection Customer in the Independent Study Process or the Fast Track Process that has not been tendered an Interconnection Agreement before December 19, 2014, shall be entitled to repayment for the Interconnection Customer's contribution to the cost of Network Upgrades placed in service on or before the Commercial Operation Date of its Small Generating Facility, commencing upon the Commercial Operation Date of the Small Generating Facility. Repayment for the Interconnection Customer's contribution to the cost of Network Upgrades placed into service after the Commercial Operation Date of its Small Generating Facility shall, for each of these Network Upgrades, commence no later than the later of: (i) the first month of the calendar year following the year in which the Network Upgrade is placed into service or (ii) 90 days after the Network Upgrade is placed into service.

An Interconnection Customer subject to this Article 5.3.1.1 shall be entitled to repayment for its contribution to the cost of Network Upgrades as follows:

(a) For Reliability Network Upgrades, the Interconnection Customer shall be entitled to a repayment of the amount paid by the Interconnection Customer for Reliability Network Upgrades up to a maximum amount established in Section 14.3.2.1 of the GIDAP. For purposes of this determination, generating capacity will be based on the capacity of the Interconnection Customer's Generating Facility at the time it achieves Commercial Operation. To the extent that such repayment does not cover all of the costs of the Interconnection Customer's Reliability Network Upgrades, the Interconnection Customer shall receive Merchant

Transmission CRRs for that portion of its Reliability Network Upgrades that are not covered by cash repayment.

(b) For Local Delivery Network Upgrades:

i. If the Interconnection Customer is an Option (B) Interconnection Customer and has been allocated and continues to be eligible to receive TP Deliverability pursuant to the GIDAP, the Interconnection Customer shall be entitled to repayment of a portion of the total amount paid to the Participating TO for the cost of Local Delivery Network Upgrades for which it is responsible. The repayment amount shall be determined by dividing the amount of TP Deliverability received by the amount of deliverability requested by the Interconnection Customer, and multiplying that percentage by the total amount paid to the Participating TO by the Interconnection Customer for Local Delivery Network Upgrades.

ii. If the Interconnection Customer is an Option (B) Interconnection Customer and has not been allocated any TP Deliverability, the Interconnection Customer shall not be entitled to repayment for the cost of Local Delivery Network Upgrades.

iii. If the Interconnection Customer is an Option (A) Interconnection Customer, the Interconnection Customer shall be entitled to a repayment equal to the total amount paid to the Participating TO for the costs of Local Delivery Network Upgrades for which it is responsible.

(c) For Area Delivery Network Upgrades, the Interconnection Customer shall not be entitled to repayment for the costs of Area Delivery Network Upgrades.

(d) If an Option (B) Interconnection Customer elects and is eligible to construct and own Merchant Network Upgrades as set forth in Article 5.2.1 of this SGIA, then the Interconnection Customer shall not be entitled to any repayment pursuant to this SGIA.

Unless an Interconnection Customer has provided written notice to the CAISO that it is declining all or part of such repayment, such amounts shall include any tax gross-up or other tax-related payments associated with Network Upgrades not refunded to the Interconnection Customer, and shall be paid to the Interconnection Customer by the Participating TO on a dollar-for-dollar basis either through (1) direct payments made on a levelized basis over the five-year period commencing on the applicable date as provided for in this Article 5.3.1.1; or (2) any alternative payment schedule that is mutually agreeable to the Interconnection Customer and Participating TO, provided that such amount is paid within five (5) years of the applicable commencement date. Notwithstanding the foregoing, if this Agreement terminates within five (5) years of the applicable commencement date, the Participating TO's obligation to pay refunds to the Interconnection Customer shall cease as of the date of termination.

(e) Where the Interconnection Customer finances the construction of Network Upgrades for more than one Participating TO, the cost

allocation, Interconnection Financial Security, and repayment will be conducted pursuant to Section 14.4.1 of the GIDAP, and set forth in this SGIA,

(f) For Local Off-Peak Network Upgrades, the Interconnection Customer will be entitled to a repayment equal to the total amount paid to the Participating TO for the costs of Local Delivery Network Upgrades for which it is responsible.

**5.3.1.2 Repayment of Amounts Advanced Regarding Phased Generating Facilities**

Upon the Commercial Operation Date of each phase of a Phased Generating Facility, the Interconnection Customer shall be entitled to a repayment equal to the amount paid to the Participating TO for the cost of Network Upgrades for that completed phase for which the Interconnection Customer is responsible, subject to the limitations specified in Article 5.3.1.1, if the following conditions are satisfied as described below:

(a) The Small Generating Facility is capable of being constructed in phases;

(b) The Small Generating Facility is specified in the SGIA as being constructed in phases;

(c) The completed phase corresponds to one of the phases specified in the SGIA;

(d) The Interconnection Customer has tendered notice pursuant to the SGIA that the phase has achieved Commercial Operation;

(e) All parties to the SGIA have agreed that the completed phase meets the requirements set forth in the SGIA and any other operating, metering, and interconnection requirements to permit generation output of the entire capacity of the completed phase as specified in the SGIA;

(f) The Network Upgrades necessary for the completed phase to meet the desired level of deliverability are in service; and

(g) The Interconnection Customer has posted one hundred (100) percent of the Interconnection Financial Security required for the Network Upgrades for all the phases of the Small Generating Facility.

Following satisfaction of these conditions (a) through (g), an Interconnection Customer in a Queue Cluster earlier than Queue Cluster 5, or an Interconnection Customer in the Independent Study Process or the Fast Track Process that has been tendered a Generator Interconnection Agreement before December 19, 2014, shall be entitled to receive a partial repayment of its financed cost responsibility, to the extent that it is otherwise eligible for such repayment pursuant to Article 5.3.1.1, in an amount equal to the percentage of the Small Generating Facility declared to be in Commercial Operation multiplied by the cost of the Network Upgrades associated with the completed phase. The Interconnection Customer shall be entitled to repayment in this manner for each completed phase until the entire Small Generating Facility is completed.

Following satisfaction of these conditions (a) through (e) and (g), an Interconnection Customer in Queue Cluster 6 or a later Queue Cluster, or an

Interconnection Customer in the Independent Study Process or the Fast Track Process that has not been tendered a Generator Interconnection Agreement before December 19, 2014, shall be entitled to receive a repayment of its financed cost responsibility for the Network Upgrades associated with the completed phase that have been placed in service. The Interconnection Customer shall be entitled to repayment in this manner for each completed phase until the entire Small Generating Facility is completed. With respect to any Network Upgrades necessary for a completed phase to meet its desired level of deliverability that are not in service by the time the phase achieves Commercial Operation, repayment for each such Network Upgrade will commence no later than the later of: (i) the first month of the calendar year following the year in which the Network Upgrade is placed into service or (ii) 90 days after the Network Upgrade is placed into service.

If the SGIA includes a partial termination provision and the partial termination right has been exercised with regard to a phase that has not been built, then the Interconnection Customer's eligibility for repayment under this Article 5.3.1.2 as to the remaining phases shall not be diminished. If the Interconnection Customer completes one or more phases and then defaults on the SGIA, the Participating TO and the CAISO shall be entitled to offset any losses or damages resulting from the default against any repayments made for Network Upgrades related to the completed phases, provided that the Party seeking to exercise the offset has complied with any requirements which may be required to apply the stream of payments utilized to make the repayment to the Interconnection Customer as an offset.

Any repayment amount provided pursuant to this Article 5.3.1.2 shall include any tax gross-up or other tax-related payments associated with Network Upgrades not refunded to the Interconnection Customer, and shall be paid to the Interconnection Customer by the Participating TO on a dollar-for-dollar basis either through (1) direct payments made on a levelized basis over the five-year period commencing on the applicable date as provided for in this Article 5.3.1.2; or (2) any alternative payment schedule that is mutually agreeable to the Interconnection Customer and Participating TO, provided that such amount is paid within five (5) years of the applicable commencement date. Notwithstanding the foregoing, if this Agreement terminates within five (5) years of the applicable commencement date, the Participating TO's obligation to pay refunds to the Interconnection Customer shall cease as of the date of termination.

**5.3.1.3 Interest Payments and Assignment Rights**

Any repayment shall include interest calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date of any payment for Network Upgrades through the date on which the Interconnection Customer receives a repayment of such payment. Interest shall continue to accrue on the repayment obligation so long as this Agreement is in effect. The Interconnection Customer may assign such repayment rights to any person.

**5.3.1.4 Failure to Achieve Commercial Operation**

If the Small Generating Facility fails to achieve commercial operation, but it or another generating facility is later constructed and makes use of the Network Upgrades, the Participating TO shall at that time reimburse Interconnection Customer for the amounts advanced for the Network Upgrades. Before any such reimbursement can occur, the Interconnection Customer, or the entity that

ultimately constructs the generating facility, if different, is responsible for identifying the entity to which reimbursement must be made.

### 5.3.2 Special Provisions for Affected Systems

The Interconnection Customer shall enter into an agreement with the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid, as applicable, in accordance with the GIDAP. Such agreement shall specify the terms governing payments to be made by the Interconnection Customer to the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid. In no event shall the Participating TO be responsible for the repayment for any facilities that are not part of the Participating TO's Transmission System.

### 5.3.3 Rights Under Other Agreements

Notwithstanding any other provision of this Agreement, nothing herein shall be construed as relinquishing or foreclosing any rights, including but not limited to firm transmission rights, capacity rights, transmission congestion rights, or transmission credits, that the Interconnection Customer shall be entitled to, now or in the future, under any other agreement or tariff as a result of, or otherwise associated with, the transmission capacity, if any, created by the Network Upgrades, including the right to obtain cash reimbursements or transmission credits for transmission service that is not associated with the Small Generating Facility.

### 5.3.4 Compensation for Customer-Funded Upgrades Utilized by Subsequent Interconnection Customers.

If the Interconnection Customer funds Network Upgrades for which it is not eligible for repayment, the Interconnection Customer will be entitled to direct compensation by any Interconnection Customers in later Queue Clusters that utilize such Network Upgrades. Such compensation will be determined based on the distribution flow factors of the Generating Facilities that will be using the Network Upgrades.

## Article 6. Billing, Payment, Milestones, and Financial Security

### 6.1 Billing and Payment Procedures and Final Accounting

**6.1.1** The Participating TO shall bill the Interconnection Customer for the design, engineering, construction, and procurement costs of Interconnection Facilities and Upgrades contemplated by this Agreement on a monthly basis, or as otherwise agreed by the Parties. The Interconnection Customer shall pay each bill within thirty (30) calendar days of receipt, or as otherwise agreed to by the Parties. Notwithstanding the foregoing, any invoices between the CAISO and another Party shall be submitted and paid in accordance with the CAISO Tariff.

**6.1.2** Within six (6) months of completing the construction and installation of the Participating TO's Interconnection Facilities and/or Upgrades described in the Attachments to this Agreement, the Participating TO shall provide the Interconnection Customer with a final accounting report of any difference between (1) the Interconnection Customer's cost responsibility for the actual cost of such facilities or Upgrades, and (2) the Interconnection Customer's previous aggregate payments to the Participating TO for such facilities or Upgrades. If the Interconnection Customer's cost responsibility exceeds its previous aggregate payments, the Participating TO shall invoice the Interconnection Customer for the amount due and the Interconnection Customer shall make payment to the Participating TO within thirty (30) calendar days. If the Interconnection Customer's previous aggregate payments exceed its cost responsibility under this Agreement, the

Participating TO shall refund to the Interconnection Customer an amount equal to the difference within thirty (30) calendar days of the final accounting report.

**6.2 Milestones**

The Parties shall agree on milestones for which each Party is responsible and list them in Attachment 4 of this Agreement. A Party's obligations under this provision may be extended by agreement. If a Party anticipates that it will be unable to meet a milestone for any reason other than a Force Majeure Event, as defined in Article 7.5.1, it shall immediately notify the other Parties of the reason(s) for not meeting the milestone and (1) propose the earliest reasonable alternate date by which it can attain this and future milestones, and (2) request appropriate amendments to Attachment 4. The Parties affected by the failure to meet a milestone shall not unreasonably withhold agreement to such an amendment unless (1) they will suffer significant uncompensated economic or operational harm from the delay, (2) attainment of the same milestone has previously been delayed, or (3) they have reason to believe that the delay in meeting the milestone is intentional or unwarranted notwithstanding the circumstances explained by the Party proposing the amendment.

**6.3 Interconnection Financial Security Arrangements for Small Generating Facilities Processed Under the Fast Track Process or Small Generating Facilities Processed under SGIP**

The terms and conditions of this Article 6.3 shall apply only to Small Generating Facilities that are no larger than 5 MW that are processed under the Fast Track Process under the GIDAP, CAISO Tariff Appendix DD.

*In such case, the terms of Article 6.4 below do not apply to this Agreement.*

*For easy reference, the Parties shall check the Box below when this Article 6.3 applies:*

**[ ] THIS ARTICLE 6.3 APPLIES**

**6.3.1** At least twenty (20) Business Days prior to the commencement of the design, procurement, installation, or construction of a discrete portion of the Participating TO's Interconnection Facilities and Upgrades, the Interconnection Customer shall provide the Participating TO, at the Interconnection Customer's option, a guarantee, a surety bond, letter of credit or other form of security that is reasonably acceptable to the Participating TO and is consistent with the Uniform Commercial Code of the jurisdiction where the Point of Interconnection is located. Such security for payment shall be in an amount sufficient to cover the costs for constructing, designing, procuring, and installing the applicable portion of the Participating TO's Interconnection Facilities and Upgrades and shall be reduced on a dollar-for-dollar basis for payments made to the Participating TO under this Agreement during its term.

**6.3.2** If a guarantee is provided, the guarantee must be made by an entity that meets the creditworthiness requirements of the Participating TO, and contain terms and conditions that guarantee payment of any amount that may be due from the Interconnection Customer, up to an agreed-to maximum amount.

**6.3.3** If a letter of credit or surety bond is provided, the letter of credit or surety bond must be issued by a financial institution or insurer reasonably acceptable to the Participating TO and must specify a reasonable expiration date.

**6.4 Interconnection Financial Security Arrangements for All Other Small Generating Facilities**

The terms of this Article 6.4 apply to Small Generating Facilities that have been processed under either the Cluster Study Process or the Independent Study Track Process of the GIDAP set forth in CAISO Tariff Appendix DD. In such case, the provisions of Article 6.3 do not apply to this Agreement.

*In such case, the terms of Article 6.3 above do not apply to this Agreement.*

For easy reference, the Parties shall check the Box below when this Article 6.4 applies:

**[ ] THIS ARTICLE 6.4 APPLIES**

**6.4.1** The Interconnection Customer is obligated to provide all necessary Interconnection Financial Security required under Section 11 of the GIDAP in a manner acceptable under Section 11 of the GIDAP. Failure by the Interconnection Customer to timely satisfy the GIDAP's requirements for the provision of Interconnection Financial Security shall be deemed a breach of this Agreement and a condition of Default of this Agreement.

**6.4.2** Notwithstanding any other provision in this Agreement for notice of Default and opportunity to cure such Default, the CAISO or the Participating TO shall provide Interconnection Customer with written notice of any Default due to timely failure to post Interconnection Financial Security, and the Interconnection Customer shall have five (5) Business Days from the date of such notice to cure such Default by posting the required Interconnection Financial Security. If the Interconnection Customer fails to cure the Default, then this Agreement shall be deemed terminated.

## Article 7. Assignment, Liability, Indemnity, Force Majeure, and Default

### 7.1 Assignment

This Agreement may be assigned by any Party upon fifteen (15) Business Days prior written notice and opportunity to object by the other Parties; provided that:

**7.1.1** Any Party may assign this Agreement without the consent of the other Parties to any affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement, provided that the Interconnection Customer promptly notifies the Participating TO and the CAISO of any such assignment;

**7.1.2** The Interconnection Customer shall have the right to assign this Agreement, without the consent of the Participating TO or the CAISO, for collateral security purposes to aid in providing financing for the Small Generating Facility, provided that the Interconnection Customer will promptly notify the Participating TO and the CAISO of any such assignment.

**7.1.3** Any attempted assignment that violates this article is void and ineffective. Assignment shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. An assignee is responsible for meeting the same financial, credit, and insurance obligations as the Interconnection Customer. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

### 7.2 Limitation of Liability

Each Party's liability to the other Parties for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its

performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall any Party be liable to the other Parties for any indirect, special, consequential, or punitive damages, except as authorized by this Agreement.

### 7.3 Indemnity

**7.3.1** This provision protects each Party from liability incurred to third parties as a result of carrying out the provisions of this Agreement. Liability under this provision is exempt from the general limitations on liability found in Article 7.2.

**7.3.2** The Parties shall at all times indemnify, defend, and hold the other Parties harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from another Party's action or failure to meet its obligations under this Agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

**7.3.3** If an indemnified Party is entitled to indemnification under this article as a result of a claim by a third party, and the indemnifying Party fails, after notice and reasonable opportunity to proceed under this article, to assume the defense of such claim, such indemnified Party may at the expense of the indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

**7.3.4** If an indemnifying Party is obligated to indemnify and hold any indemnified Party harmless under this article, the amount owing to the indemnified Party shall be the amount of such indemnified Party’s actual loss, net of any insurance or other recovery.

**7.3.5** Promptly after receipt by an indemnified Party of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in this article may apply, the indemnified Party shall notify the indemnifying Party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying Party.

### 7.4 Consequential Damages

Other than as expressly provided for in this Agreement, no Party shall be liable under any provision of this Agreement for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to another Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

### 7.5 Force Majeure

**7.5.1** As used in this article, a Force Majeure Event shall mean "any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party’s control. A Force Majeure Event does not include an act of negligence or intentional wrongdoing by the Party claiming Force Majeure."

**7.5.2** If a Force Majeure Event prevents a Party from fulfilling any obligations under this

Agreement, the Party affected by the Force Majeure Event (Affected Party) shall promptly notify the other Parties, either in writing or via the telephone, of the existence of the Force Majeure Event. The notification must specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the Affected Party is taking to mitigate the effects of the event on its performance. The Affected Party shall keep the other Parties informed on a continuing basis of developments relating to the Force Majeure Event until the event ends. The Affected Party will be entitled to suspend or modify its performance of obligations under this Agreement (other than the obligation to make payments) only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of Reasonable Efforts. The Affected Party will use Reasonable Efforts to resume its performance as soon as possible.

**7.6 Default**

**7.6.1** No Default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of a Force Majeure Event as defined in this Agreement or the result of an act or omission of another Party. Upon a Default, the affected non-defaulting Party(ies) shall give written notice of such Default to the defaulting Party. Except as provided in Article 7.6.2 and in Article 6.4.2, the defaulting Party shall have sixty (60) calendar days from receipt of the Default notice within which to cure such Default; provided however, if such Default is not capable of cure within 60 calendar days, the defaulting Party shall commence such cure within 20 calendar days after notice and continuously and diligently complete such cure within six months from receipt of the Default notice; and, if cured within such time, the Default specified in such notice shall cease to exist.

**7.6.2** If a Default is not cured as provided in this article, or if a Default is not capable of being cured within the period provided for herein, the affected non-defaulting Party(ies) shall have the right to terminate this Agreement by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not such Party(ies) terminates this Agreement, to recover from the defaulting Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this article will survive termination of this Agreement.

**Article 8. Insurance**

**8.1** The Interconnection Customer shall, at its own expense, maintain in force general liability insurance without any exclusion for liabilities related to the interconnection undertaken pursuant to this Agreement. The amount of such insurance shall be sufficient to insure against all reasonably foreseeable direct liabilities given the size and nature of the generating equipment being interconnected, the interconnection itself, and the characteristics of the system to which the interconnection is made. The Interconnection Customer shall obtain additional insurance only if necessary as a function of owning and operating a generating facility. Such insurance shall be obtained from an insurance provider authorized to do business in the State where the interconnection is located. Certification that such insurance is in effect shall be provided upon request of the Participating TO or CAISO, except that the Interconnection Customer shall show proof of insurance to the Participating TO and CAISO no later than ten Business Days prior to the anticipated Commercial Operation Date. If the Interconnection Customer is of sufficient credit-worthiness, it may propose to self-insure for such liabilities, and such a proposal shall not be unreasonably rejected.

**8.2** The Participating TO agrees to maintain general liability insurance or self-insurance consistent with the Participating TO's commercial practice. Such insurance or self-insurance shall not exclude coverage for the Participating TO's liabilities undertaken pursuant to this Agreement.

**8.3** The CAISO agrees to maintain general liability insurance or self-insurance consistent with the

CAISO's commercial practice. Such insurance shall not exclude coverage for the CAISO's liabilities undertaken pursuant to this Agreement.

**8.4** The Parties further agree to notify each other whenever an accident or incident occurs resulting in any injuries or damages that are included within the scope of coverage of such insurance, whether or not such coverage is sought.

**Article 9. Confidentiality**

**9.1** Confidential Information shall mean any confidential and/or proprietary information provided by one Party to another Party that is clearly marked or otherwise designated "Confidential." For purposes of this Agreement all design, operating specifications, and metering data provided by the Interconnection Customer shall be deemed Confidential Information regardless of whether it is clearly marked or otherwise designated as such.

**9.2** Confidential Information does not include information previously in the public domain, required to be publicly submitted or divulged by Governmental Authorities (after notice to the other Parties and after exhausting any opportunity to oppose such publication or release), or necessary to be divulged in an action to enforce this Agreement. Each Party receiving Confidential Information shall hold such information in confidence and shall not disclose it to any third party nor to the public without the prior written authorization from the Party providing that information, except to fulfill obligations under this Agreement, or to fulfill legal or regulatory requirements.

**9.2.1** Each Party shall employ at least the same standard of care to protect Confidential Information obtained from the other Parties as it employs to protect its own Confidential Information.

**9.2.2** Each Party is entitled to equitable relief, by injunction or otherwise, to enforce its rights under this provision to prevent the release of Confidential Information without bond or proof of damages, and may seek other remedies available at law or in equity for breach of this provision.

**9.3** Notwithstanding anything in this article to the contrary, and pursuant to 18 CFR § 1b.20, if FERC, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to this Agreement, the Party shall provide the requested information to FERC, within the time provided for in the request for information. In providing the information to FERC, the Party may, consistent with 18 CFR § 388.112, request that the information be treated as confidential and non-public by FERC and that the information be withheld from public disclosure. Parties are prohibited from notifying the other Parties to this Agreement prior to the release of the Confidential Information to FERC. The Party shall notify the other Parties to this Agreement when it is notified by FERC that a request to release Confidential Information has been received by FERC, at which time any of the Parties may respond before such information would be made public, pursuant to 18 CFR § 388.112. Requests from a state regulatory body conducting a confidential investigation shall be treated in a similar manner if consistent with the applicable state rules and regulations.

**Article 10. Disputes**

All disputes arising out of or in connection with this Agreement whereby relief is sought by or from CAISO shall be settled in accordance with the provisions of Article 13 of the CAISO Tariff, except that references to the CAISO Tariff in such Article 13 of the CAISO Tariff shall be read as reference to this Agreement. Disputes arising out of or in connection with this Agreement not subject to provisions of Article 13 of the CAISO Tariff shall be resolved as follows:

**10.1** The Parties agree to attempt to resolve all disputes arising out of the interconnection process according to the provisions of this article.

**10.2** In the event of a dispute, either Party shall provide the other Party with a written Notice of Dispute. Such Notice shall describe in detail the nature of the dispute.

**10.3** If the dispute has not been resolved within two Business Days after receipt of the Notice, either Party may contact FERC's Dispute Resolution Service (DRS) for assistance in resolving the dispute.

**10.4** The DRS will assist the Parties in either resolving their dispute or in selecting an appropriate dispute resolution venue (e.g., mediation, settlement judge, early neutral evaluation, or technical expert) to assist the Parties in resolving their dispute. DRS can be reached at 1-877-337-2237 or via the internet at http://www.ferc.gov/legal/adr.asp.

**10.5** Each Party agrees to conduct all negotiations in good faith and will be responsible for one-half of any costs paid to neutral third-parties.

**10.6** If neither Party elects to seek assistance from the DRS, or if the attempted dispute resolution fails, then either Party may exercise whatever rights and remedies it may have in equity or law consistent with the terms of this Agreement.

## Article 11. Taxes

**11.1** The Parties agree to follow all applicable tax laws and regulations, consistent with FERC policy and Internal Revenue Service requirements.

**11.2** Each Party shall cooperate with the other Parties to maintain the other Parties' tax status. Nothing in this Agreement is intended to adversely affect the Participating TO's tax exempt status with respect to the issuance of bonds including, but not limited to, local furnishing bonds.

## Article 12. Miscellaneous

### 12.1 Governing Law, Regulatory Authority, and Rules

The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of the state of _____ (where the Point of Interconnection is located), without regard to its conflicts of law principles. This Agreement is subject to all Applicable Laws and Regulations. Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.

### 12.2 Amendment

The Parties may amend this Agreement by a written instrument duly executed by all of the Parties, or under Article 12.12 of this Agreement.

### 12.3 No Third-Party Beneficiaries

This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and where permitted, their assigns.

### 12.4 Waiver

**12.4.1** The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

**12.4.2** Any waiver at any time by any Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Agreement. Termination or Default of this Agreement for any reason by Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Participating TO. Any waiver of this Agreement shall, if requested, be provided in writing.

### 12.5 Entire Agreement

This Agreement, including all Attachments, constitutes the entire agreement among the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between or among the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this Agreement.

### 12.6 Multiple Counterparts

This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

### 12.7 No Partnership

This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership among the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

### 12.8 Severability

If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall negotiate in good faith to restore insofar as practicable the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

### 12.9 Security Arrangements

Infrastructure security of electric system equipment and operations and control hardware and software is essential to ensure day-to-day reliability and operational security. FERC expects all transmission providers, market participants, and interconnection customers interconnected to electric systems to comply with Applicable Reliability Criteria. All public utilities are expected to meet basic standards for system infrastructure and operational security, including physical, operational, and cyber-security practices.

### 12.10 Environmental Releases

Each Party shall notify the other Parties, first orally and then in writing, of the release of any hazardous substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Small Generating Facility or the Interconnection Facilities, each of which may reasonably be expected to affect the other Parties. The notifying Party shall (1) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than 24 hours after such Party becomes aware of the occurrence, and (2) promptly furnish to the other Parties copies of any publicly available reports filed with any governmental

authorities addressing such events.

### 12.11 Subcontractors

Nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this Agreement; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this Agreement in providing such services and each Party shall remain primarily liable to the other Parties for the performance of such subcontractor.

**12.11.1** The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Parties for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall the Participating TO or the CAISO be liable for the actions or inactions of the Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under this Agreement. Any applicable obligation imposed by this Agreement upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

**12.11.2** The obligations under this article will not be limited in any way by any limitation of subcontractor's insurance.

### 12.12 Reservation of Rights

The CAISO and Participating TO shall each have the right to make a unilateral filing with FERC to modify this Agreement pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following articles of this Agreement and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these articles:

Introductory Paragraph, 1.1, 1.2, 1.3, 1.4, 1.5.1, 1.5.2, 1.5.3, 1.5.4, 1.5.5, 1.5.6, 1.5.7, 1.6, 1.7, 1.8.1, 1.9, 2.1, 2.2.1, 2.3, 3, 4.1.1 (last sentence only), 5.1, 5.3, 6.2, 7, 8, 9, 11, 12, 13, Attachment 1, Attachment 4, Attachment 5, and Attachment 7.

The Participating TO shall have the exclusive right to make a unilateral filing with FERC to modify this Agreement pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following articles of this Agreement and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these articles:

2.2.2, 4.1.1 (all but the last sentence), 4.1.2, 4.2, 5.2, 6.1.1 (all but the last sentence), 6.1.2, 10 (all but preamble), Attachment 2, Attachment 3 and Attachment 6.

The CAISO shall have the exclusive right to make a unilateral filing with FERC to modify this Agreement pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following articles of this Agreement and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these articles:

1.8.2, 6.1.1 (last sentence only) and 10 (preamble only).

The Interconnection Customer, the CAISO, and the Participating TO shall have the right to make a unilateral filing with FERC to modify this Agreement under any applicable provision of the Federal Power Act and FERC's rules and regulations; provided that each Party shall have the

right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations, except to the extent that the Parties otherwise mutually agree as provided herein.

### 12.13 Annual Reassessment Process

In accordance with Section 7.4 of the GIDAP, the CAISO will perform an annual reassessment in which it will update certain base case data prior to beginning the GIDAP Phase II Interconnection Studies. As set forth in Section 7.4 of the GIDAP, the CAISO may determine through this assessment that Delivery Network Upgrades and Off-Peak Network Upgrades already identified and included in executed Generator Interconnection Agreements should be modified in order to reflect the current circumstances of Interconnection Customers in the queue, including any withdrawals therefrom, and any additions and upgrades approved in the CAISO's most recent Transmission Planning Process cycle. To the extent that this determination modifies the scope or characteristics of, or the financial responsibility for, any Delivery Network Upgrades and Off-Peak Network Upgrades determined pursuant to this SGIA, such modification(s) will be reflected through an amendment to this SGIA.

## Article 13. Notices

### 13.1 General

Unless otherwise provided in this Agreement, any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if delivered in person, delivered by recognized national courier service, conveyed by e-mail, or sent by first class mail, postage prepaid, to the person specified below:

If to the Interconnection Customer:

Interconnection Customer: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ E-mail address: _____

If to the Participating TO:

Participating TO: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ E-mail address: _____

If to the CAISO:

California Independent System Operator Corporation

Attention: _____

250 Outcropping Way

Folsom, CA 95630

Phone: 916-351-4400 E-mail address: _____

**13.2 Billing and Payment**

Billings and payments shall be sent to the addresses set out below:

Interconnection Customer: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip: _____

Participating TO: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip: _____

**13.3 Alternative Forms of Notice**

Any notice or request required or permitted to be given by any Party to the other Parties and not required by this Agreement to be given as provided in Article 13.1 may be so given to the alternate contacts listed in this Article 13.3 by telephone, or e-mail to the telephone numbers and e-mail addresses set out below:

If to the Interconnection Customer:

Interconnection Customer: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ E-mail address: _____

If to the Participating TO:

Participating TO: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ E-mail address: _____

If to the CAISO:

California Independent System Operator Corporation

Attention: _____

250 Outcropping Way

Folsom, CA 95630

Phone: 916-351-4400

E-mail address: _____

**13.4 Designated Operating Representative**

The Parties may also designate operating representatives to conduct the communications which may be necessary or convenient for the administration of this Agreement. This person will also serve as the point of contact with respect to operations and maintenance of the Party's facilities.

Interconnection Customer's Operating Representative:

Interconnection Customer: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ E-mail address: _____

Participating TO's Operating Representative:

Participating TO: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ E-mail address: _____

CAISO's Operating Representative

California Independent System Operator Corporation

Attention: _____

250 Outcropping Way

Folsom, CA 95630

### 13.5 Changes to the Notice Information

Any Party may change this information by giving five Business Days written notice to the other Parties prior to the effective date of the change.

## Article 14. Signatures

**IN WITNESS WHEREOF,** the Parties have caused this Agreement to be executed by their respective duly authorized representatives.

For the California Independent System Operator Corporation

By: _____

Name: _____

Title: _____

Date: _____

For the Participating TO

By: _____

Name: _____

Title: _____

Date: _____

For the Interconnection Customer

By: _____

Name: _____

Title: _____

Date: _____

**Attachment 1**

**Glossary of Terms**

**Affected System** - An electric system other than the CAISO Controlled Grid that may be affected by the proposed interconnection, including the Participating TO's electric system that is not part of the CAISO Controlled Grid.

**Applicable Laws and Regulations** - All duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.

**Area Deliverability Constraint** - A previously identified transmission system operating limit, based on a CAISO interconnection study or transmission planning study and listed on the CAISO website, that would constrain the deliverability of a substantial number of generators if the CAISO were to assign full capacity or partial capacity deliverability status to additional generating facilities in one or more specified geographic or electrical areas of the CAISO Controlled Grid in a total amount that is greater than the TP Deliverability for those areas. May also be a transmission system operating limit that constrains all or most of the same generation already constrained by a previously identified Area Deliverability Constraint.

**Area Delivery Network Upgrade (ADNU)** - A transmission upgrade or addition identified by the CAISO to relieve an Area Deliverability Constraint.

**Area Off-Peak Constraints** - A transmission system operating limit that would cause excessive curtailment to a substantial number of Generating Facilities during Off-Peak Load conditions, as described in Section 6.3.2.2 of Appendix DD and the CAISO Off-Peak Deliverability Assessment posted on the CAISO Website.

**Area Off-Peak Network Upgrades (AOPNUs)** - A transmission upgrade or addition the CAISO identifies in the Transmission Planning Process to relieve an Area Off-Peak Constraint.

**Assigned Network Upgrade (ANU)** - Reliability Network Upgrades, Local Off-Peak Network Upgrades, and Local Delivery Network Upgrades currently assigned to the Interconnection Customer. Assigned Network Upgrades exclude Conditionally Assigned Network Upgrades unless they become Assigned Network Upgrades.

**Balancing Authority Area** - The collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.

**Business Day** - Monday through Friday, excluding federal holidays and the day after Thanksgiving Day.

**CAISO Controlled Grid** - The system of transmission lines and associated facilities of the parties to a Transmission Control Agreement that have been placed under the CAISO's Operational Control.

**CAISO Tariff** - The CAISO's tariff, as filed with FERC, and as amended or supplemented from time to time, or any successor tariff.

**Commercial Operation Date** - The date on which a Small Generating Facility commenced generating electricity for sale as agreed upon by the Participating TO and the Interconnection Customer and in accordance with any implementation plan agreed to by the Participating TO and the CAISO for multiple individual generating units or project phases at a Small Generating Facility where an Interconnection Customer intends to establish separate Commercial Operation Dates for those generating units or project phases.

**Conditionally Assigned Network Upgrade (CANU)** - Reliability Network Upgrades and Local Delivery

Network Upgrades currently assigned to an earlier Interconnection Customer, but which may be assigned to the Interconnection Customer.

**Current Cost Responsibility (CCR)** - The Interconnection Customer's current allocated costs for Assigned Network Upgrades, not to exceed the Maximum Cost Responsibility. This cost is used to calculate the Interconnection Customer's Interconnection Financial Security requirement.

**Default** - The failure of a breaching Party to cure its breach under this Agreement.

**Distribution System** - Those non-CAISO-controlled transmission and distribution facilities owned by the Participating TO.

**Distribution Upgrades** - The additions, modifications, and upgrades to the Participating TO's Distribution System. Distribution Upgrades do not include Interconnection Facilities.

**General Reliability Network Upgrade (GRNU)** - Reliability Network Upgrades that are not Interconnection Reliability Network Upgrades.

**Generator Interconnection and Deliverability Allocation Procedures (GIDAP)** - The CAISO protocol that sets forth the interconnection and allocation procedures applicable to an Interconnection Request pertaining to a Small Generating Facility that is included in CAISO Tariff Appendix DD.

**Good Utility Practice** - Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be any one of a number of the optimum practices, methods, or acts to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

**Governmental Authority** - Any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the Interconnection Customer, CAISO, Participating TO, or any affiliate thereof.

**Interconnection Facilities** - The Participating TO's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Small Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Small Generating Facility to the Participating TO's Transmission System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades or Network Upgrades.

**Interconnection Financial Security (IFS)** - Any of the financial instruments listed in Section 11.1 of the GIDAP that are posted by an Interconnection Customer to finance the construction of facilities or Network Upgrades.

**Interconnection Handbook** - A handbook, developed by the Participating TO and posted on the Participating TO's website or otherwise made available by the Participating TO, describing technical and operational requirements for wholesale generators and loads connected to the Participating TO's Transmission System, as such handbook may be modified or superseded from time to time. The Participating TO's standards contained in the Interconnection Handbook shall be deemed consistent with Good Utility Practice and applicable reliability standards.

**Interconnection Reliability Network Upgrade (IRNU)** - Reliability Network Upgrades at the Point of

Interconnection to accomplish the physical interconnection of the Generating Facility to the CAISO Controlled Grid. IRNUs are treated as Reliability Network Upgrades unless otherwise noted.

**Interconnection Request** - A request, in accordance with the CAISO Tariff, to interconnect a new Small Generating Facility, or to increase the capacity of, or make a Material Modification to the operating characteristics of, an existing Small Generating Facility that is interconnected with the CAISO Controlled Grid.

**Interconnection Study** -

(i) For Interconnection Requests processed under the Cluster Study Process described in the GIDAP, any of the following: the Phase I Interconnection Study conducted or caused to be performed by the CAISO, the reassessment of the Phase I Interconnection Study Base Case conducted or caused to be performed by the CAISO prior to the commencement of the Phase II Interconnection Study, or the Phase II Interconnection Study conducted or caused to be performed by the CAISO, pursuant to the GIDAP.

(ii) For Interconnection Requests processed under the Independent Study Process described in the GIDAP, the governing study(ies) conducted or caused to be performed by the CAISO pursuant to the GIDAP, which shall consist primarily of a system impact and facilities study as described in Section 4.4 of the GIDAP, and, as applicable to Full Capacity Deliverability Status or Partial Deliverability Status, Phase I and Phase Interconnection Studies as described in Section 2.4.3 of the GIDAP.

**Local Deliverability Constraint** - A transmission system operating limit modeled in the GIDAP study process that would be exceeded if the CAISO were to assign full capacity or partial capacity deliverability status to one or more additional generating facilities interconnecting to the CAISO Controlled Grid in a specific local area, and that is not an Area Deliverability Constraint.

**Local Delivery Network Upgrade (LDNU)** - A transmission upgrade or addition identified by the CAISO in the GIDAP study process to relieve a Local Deliverability Constraint.

**Local Off-Peak Constraints** - A transmission system operating limit modeled in the generator interconnection study process that would be exceeded or lead to excessive curtailment, as described in the Off-Peak Deliverability Assessment methodology, if the CAISO were to assign Off-Peak Deliverability Status to one or more Generating Facilities interconnecting to the CAISO Controlled Grid in a specific local area, and that is not an Area Off-Peak Constraint.

**Local Off-Peak Network Upgrades (LOPNUs)** - A transmission upgrade or addition the CAISO identifies in the generator interconnection study process to relieve a Local Off-Peak Constraint.

**Material Modification** - A modification that has a material impact on the cost or timing of any Interconnection Request or any other valid interconnection request with a later queue priority date.

**Maximum Cost Exposure (MCE)** - Pursuant to Appendix DD, the sum of (1) the Interconnection Customer's Maximum Cost Responsibility and (2) the Conditionally Assigned Network Upgrades from its Phase I or Phase II Interconnection Study.

**Maximum Cost Responsibility (MCR)** - Pursuant to Appendix DD, the lower sum of the Interconnection Customer's (1) full cost of assigned Interconnection Reliability Network Upgrades and (2) allocated costs for all other Assigned Network Upgrades, from its Phase I or Phase II Interconnection Studies, not to exceed the Maximum Cost Exposure.

**Merchant Network Upgrades** - Network Upgrades constructed and owned by an Interconnection Customer pursuant to Article 5.2.1 of this SGIA, Section 13.3 of the GIDAP, and Sections 24.4.6.1 and 36.11 of the CAISO Tariff.

**Network Upgrades** - Additions, modifications, and upgrades to the Participating TO's Transmission System required at or beyond the point at which the Small Generating Facility interconnects with the CAISO Controlled Grid to accommodate the interconnection of the Small Generating Facility with the CAISO Controlled Grid. Network Upgrades do not include Distribution Upgrades.

**Operational Control** - The rights of the CAISO under a Transmission Control Agreement and the CAISO Tariff to direct the parties to the Transmission Control Agreement how to operate their transmission lines and facilities and other electric plant affecting the reliability of those lines and facilities for the purpose of affording comparable non-discriminatory transmission access and meeting applicable reliability criteria.

**Off-Peak Deliverability Constraints** - A transmission system operating limit that constrains Generating Facilities in an area, leading to the excessive curtailment of expected Energy.

**Off-Peak Network Upgrades** - Network Upgrades needed to relieve Off-Peak Deliverability Constraints. Area Off-Peak Network Upgrades address Area Off-Peak Constraints. Local Off-Peak Network Upgrades address Local Off-Peak Constraints.

**Operating Requirements** - Any operating and technical requirements that may be applicable due to the CAISO, Western Electricity Coordinating Council, Balancing Authority Area, or the Participating TO's requirements, including those set forth in this Agreement.

**Option (A) Interconnection Customer** - An Interconnection Customer that elects to interconnect pursuant to Option (A) as set forth in Section 7.2 of the GIDAP.

**Option (B) Interconnection Customer** - An Interconnection Customer that elects to interconnect pursuant to Option (B) as set forth in Section 7.2 of the GIDAP.

**Party or Parties** - The Participating TO, CAISO, Interconnection Customer or the applicable combination of the above.

**Phased Generating Facility** - A Small Generating Facility that is structured to be completed and to achieve Commercial Operation in two or more successive sequences that are specified in this SGIA, such that each sequence comprises a portion of the total megawatt generation capacity of the entire Small Generating Facility.

**Point of Interconnection** - The point where the Interconnection Facilities connect with the Participating TO's Transmission System.

**Precursor Network Upgrades (PNU)** - Network Upgrades required for the Interconnection Customer consisting of (1) Network Upgrades assigned to an earlier Interconnection Customer in an earlier Queue Cluster, Independent Study Process, or Fast Track Process, that has executed its GIA pursuant to Section 14.2.2 of the GIDAP; and (2) Network Upgrades in the approved CAISO Transmission Plan.

**Reasonable Efforts** - With respect to an action required to be attempted or taken by a Party under this Agreement, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

**Reliability Network Upgrades (RNU)** - The transmission facilities at or beyond the Point of Interconnection identified in the Interconnection Studies as necessary to interconnect one or more Generating Facility(ies) safely and reliably to the CAISO Controlled Grid, which would not have been necessary but for the interconnection of one or more Generating Facility(ies), including Network Upgrades necessary to remedy short circuit or stability problems, or system operating limits. Reliability Network Upgrades shall only be deemed necessary for system operating limits, occurring under any system condition, which cannot be adequately mitigated through Congestion Management or Operating Procedures based on the characteristics of the Generating Facilities included in the Interconnection

Studies, limitations on market models, systems, or information, or other factors specifically identified in the Interconnection Studies. Reliability Network Upgrades also include, consistent with WECC practice, the facilities necessary to mitigate any adverse impact the Generating Facility's interconnection may have on a path's WECC rating. Reliability Network Upgrades include Interconnection Reliability Network Upgrades and General Reliability Network Upgrades.

**Small Generating Facility** - The Interconnection Customer's device for the production and/or storage for later injection of electricity identified in the Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

**TP Deliverability** - The capability, measured in MW, of the CAISO Controlled Grid as modified by transmission upgrades and additions identified in the annual Transmission Plan to support the interconnection with Full Capacity Deliverability Status or Partial Capacity Deliverability Status of additional Generating Facilities in a specified geographic or electrical area of the CAISO Controlled Grid.

**Transmission Control Agreement** - CAISO FERC Electric Tariff No. 7.

**Transmission System** - The facilities owned and operated by the Participating TO and that have been placed under the CAISO's Operational Control, which facilities form part of the CAISO Controlled Grid.

**Upgrades** - The required additions and modifications to the Participating TO's Transmission System and Distribution System at or beyond the Point of Interconnection. Upgrades may be Network Upgrades or Distribution Upgrades. Upgrades do not include Interconnection Facilities

**Attachment 2**

**Description and Costs of the Small Generating Facility,**

**Interconnection Facilities, and Metering Equipment**

Equipment, including the Small Generating Facility, Interconnection Facilities, and metering equipment shall be itemized and identified as being owned by the Interconnection Customer or the Participating TO. The Participating TO will provide a best estimate itemized cost, including overheads, of its Interconnection Facilities and metering equipment, and a best estimate itemized cost of the annual operation and maintenance expenses associated with its Interconnection Facilities and metering equipment.

**Attachment 3**

**One-line Diagram Depicting the Small Generating Facility, Interconnection Facilities, Metering Equipment, and Upgrades**

**Attachment 4**

**Milestones**

In-Service Date: _____

Critical milestones and responsibility as agreed to by the Parties:

| | Milestone/Date | Responsible Party |
|---|---|---|
| (1) | | |
| (2) | | |
| (3) | | |
| (4) | | |
| (5) | | |
| (6) | | |
| (7) | | |
| (8) | | |
| (9) | | |
| (10) | | |

Agreed to by:

For the CAISO _____ Date _____

For the Participating TO _____ Date _____

For the Interconnection Customer _____ Date _____

**Attachment 5**

**Additional Operating Requirements for the CAISO Controlled Grid and Affected Systems Needed to Support the Interconnection Customer's Needs**

The Participating TO and the CAISO shall also provide requirements that must be met by the Interconnection Customer prior to initiating parallel operation with the CAISO Controlled Grid.

**Attachment 6**

**Participating TO's Description of its Upgrades and Best Estimate of Upgrade Costs**

The Participating TO shall describe Upgrades and provide an itemized best estimate of the cost, including overheads, of the Upgrades and annual operation and maintenance expenses associated with such Upgrades. The Participating TO shall functionalize Upgrade costs and annual expenses as either transmission or distribution related.

## Attachment 7

## Interconnection Requirements for an Asynchronous Small Generating Facility

Attachment 7 sets forth requirements and provisions specific to all Asynchronous Generating Facilities. Except as provided in Section 25.4.2 of the CAISO tariff, existing individual generating units of an Asynchronous Generating Facility that are, or have been, interconnected to the CAISO Controlled Grid at the same location are exempt from the requirements of this Attachment 7 for the remaining life of the existing generating unit.

### A. Technical Standards Applicable to Asynchronous Generating Facilities

#### i. Voltage Ride-Through Capability

An Asynchronous Generating Facility shall be able to remain online during voltage disturbances up to the time periods and associated voltage levels set forth in the requirements below.

1. An Asynchronous Generating Facility shall remain online for the voltage disturbance caused by any fault on the transmission grid, or within the Asynchronous Generating Facility between the Point of Interconnection and the high voltage terminals of the Asynchronous Generating Facility's step up transformer, having a duration equal to the lesser of the normal three-phase fault clearing time (4-9 cycles) or one-hundred fifty (150) milliseconds, plus any subsequent post-fault voltage recovery to the final steady-state post-fault voltage unless clearing the fault effectively disconnects the generator from the system. Clearing time shall be based on the maximum normal clearing time associated with any three-phase fault location that reduces the voltage at the Asynchronous Generating Facility's Point of Interconnection to 0.2 per-unit of nominal voltage or less, independent of any fault current contribution from the Asynchronous Generating Facility.

2. An Asynchronous Generating Facility shall remain online for any voltage disturbance caused by a single-phase fault on the transmission grid, or within the Asynchronous Generating Facility between the Point of Interconnection and the high voltage terminals of the Asynchronous Generating Facility's step up transformer, with delayed clearing, plus any subsequent post-fault voltage recovery to the final steady-state post-fault voltage unless clearing the fault effectively disconnects the generator from the system. Clearing time shall be based on the maximum backup clearing time associated with a single point of failure (protection or breaker failure) for any single-phase fault location that reduces any phase-to-ground or phase-to-phase voltage at the Asynchronous Generating Facility's Point of Interconnection to 0.2 per-unit of nominal voltage or less, independent of any fault current contribution from the Asynchronous Generating Facility.

3. Remaining on-line shall be defined as continuous connection between the Point of Interconnection and the Asynchronous Generating Facility's units, without any mechanical isolation. Momentary cessation (namely, ceasing to inject current during a fault without mechanical isolation) is prohibited unless transient high voltage conditions rise to 1.20 per unit or more. For transient low voltage conditions, the Asynchronous Generating Facility's inverters will inject reactive current. The level of this reactive current must be directionally proportional to the decrease in per unit voltage at the inverter AC terminals. The inverter must produce full reactive current capability when the AC voltage at the inverter terminals drops to a level of 0.50 per unit or below. The Asynchronous

Generating Facility must continue to operate and absorb reactive current for transient voltage conditions between 1.10 and 1.20 per unit.

Upon the cessation of transient voltage conditions and the return of the grid to normal operating voltage ($0.90 < V < 1.10$ per unit), the Asynchronous Generating Facility's inverters automatically must transition to normal active (real power) current injection. The Asynchronous Generating Facility's inverters must ramp up to inject active (real power) current with a minimum ramping rate of at least 100% per second (from no output to full available output). The total time to complete the transition from reactive current injection or absorption to normal active (real power) current injection must be one second or less. The total time to return from momentary cessation, if used, during transient high voltage conditions over 1.20 per unit or more must be one second or less.

The Asynchronous Generating Facility's inverter will be considered to have tripped where its AC circuit breaker is open or otherwise has electrically isolated the inverter from the grid. Following an inverter trip, the inverter must make at least one attempt to resynchronize and connect back to the grid unless the trip resulted from a fatal fault code, as defined by the inverter manufacturer. This attempt must take place within 2.5 minutes from the inverter trip. An attempt to resynchronize and connect back to the grid is not required if the trip was initiated due to a fatal fault code, as determined by the original equipment manufacturer.

4. The Asynchronous Generating Facility is not required to remain on line during multi-phased faults exceeding the duration described in Section A.i.1 of this Attachment 7 or single-phase faults exceeding the duration described in Section A.i.2 of this Attachment 7.

5. The requirements of this Section A.i of this Attachment 7 do not apply to faults that occur between the Asynchronous Generating Facility's terminals and the high side of the step-up transformer to the high-voltage transmission system.

6. Asynchronous Generating Facilities may be tripped after the fault period if this action is intended as part of a special protection system.

7. Asynchronous Generating Facilities may meet the requirements of this Section A of this Attachment 7 through the performance of the generating units or by installing additional equipment within the Asynchronous Generating Facility or by a combination of generating unit performance and additional equipment.

8. The provisions of this Section A.i of this Attachment 7 apply only if the voltage at the Point of Interconnection has remained within the range of 0.9 and 1.10 per-unit of nominal voltage for the preceding two seconds, excluding any sub-cycle transient deviations.

9. Asynchronous Generating Facility inverters may not trip or cease to inject current for momentary loss of synchronism. As a minimum, the Asynchronous Generating Facility's inverter controls may lock the phase lock loop to the last synchronized point and continue to inject current into the grid at that last calculated phase prior to the loss of synchronism until the phase lock loop can regain synchronism. The current injection may be limited to protect the inverter. Any inverter may trip if the phase lock loop is unable to regain synchronism 150 milliseconds after loss of synchronism.

10. Inverter restoration following transient voltage conditions must not be impeded by plant level controllers. If the Asynchronous Generating Facility uses a plant level controller, it must be programmed to allow the inverters to automatically re-synchronize rapidly and ramp up to active current injection (without delayed ramping) following transient voltage recovery, before resuming overall control of the individual plant inverters.

**ii. Frequency Disturbance Ride-Through Capacity**

An Asynchronous Generating Facility shall comply with the off nominal frequency requirements set forth in the NERC Reliability Standard for Generator Frequency and Voltage Protective Relay Settings as they may be amended from time to time.

**iii. Power Factor Design Criteria (Reactive Power)**

An Asynchronous Generating Facility not studied under the Independent Study Process, as set forth in Section 4 of Appendix DD, shall operate within a power factor within the range of 0.95 leading to 0.95 lagging, measured at the high voltage side of the substation transformer, as defined in this SGIA in order to maintain a specified voltage schedule, if the Phase II Interconnection Study shows that such a requirement is necessary to ensure safety or reliability. An Asynchronous Generating Facility studied under the Independent Study Process, as set forth in Section 4 of Appendix DD, shall operate within a power factor within the range of 0.95 leading to 0.95 lagging, measured at the high voltage side of the substation transformer, as defined in this SGIA in order to maintain a specified voltage schedule. The power factor range standards set forth in this section can be met by using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors, or a combination of the two, if agreed to by the Participating TO and CAISO. The Interconnection Customer shall not disable power factor equipment while the Asynchronous Generating Facility is in operation. Asynchronous Generating Facilities shall also be able to provide sufficient dynamic voltage support in lieu of the power system stabilizer and automatic voltage regulation at the generator excitation system if the Phase II Interconnection Study shows this to be required for system safety or reliability.

**iv. Supervisory Control and Data Acquisition (SCADA) Capability**

An Asynchronous Generating Facility shall provide SCADA capability to transmit data and receive instructions from the Participating TO and CAISO to protect system reliability. The Participating TO and CAISO and the Asynchronous Generating Facility Interconnection Customer shall determine what SCADA information is essential for the proposed Asynchronous Generating Facility, taking into account the size of the plant and its characteristics, location, and importance in maintaining generation resource adequacy and transmission system reliability.

**v. Power System Stabilizers (PSS)**

Power system stabilizers are not required for Asynchronous Generating Facilities.

**vi. Transient Data Recording Equipment for Facilities**

Asynchronous Generating Facilities must monitor and record data for all frequency ride-through events, transient low voltage disturbances that initiated reactive current injection, reactive current injection or momentary cessation for transient high voltage disturbances, and inverter trips. The data may be recorded and stored in a central plant control system. The following data must be recorded:

**Plant Level:**

(1) Plant three phase voltage and current
(2) Status of ancillary reactive devices
(3) Status of all plant circuit breakers
(4) Status of plant controller
(5) Plant control set points
(6) Position of main plant transformer no-load taps
(7) Position of main plant transformer tap changer (if extant)
(8) Protective relay trips or relay target data

**Inverter Level:**

(1) Frequency, current, and voltage during frequency ride-through events
(2) Voltage and current during momentary cessation for transient high voltage events (when used)
(3) Voltage and current during reactive current injection for transient low or high voltage events
(4) Inverter alarm and fault codes
(5) DC current
(6) DC voltage

The data must be time synchronized, using a GPS clock or similar device, to a one millisecond level of resolution. All data except phase angle measuring unit data must be sampled at least every 10 milliseconds. Data recording must be triggered upon detecting a frequency ride-through event, a transient low voltage disturbance that initiated reactive current injection, momentary cessation or reactive current injection for a transient high voltage disturbance, or an inverter trip. Each recording will include as a minimum 150 milliseconds of data prior to the triggering event, and 1000 milliseconds of data after the event trigger. The Asynchronous Generating Facility must store this data for a minimum of 30 days. The Asynchronous Generating Facility will provide all data within 10 calendar days of a request from the CAISO or the Participating TO.

The Asynchronous Generating Facility must install and maintain a phase angle measuring unit or functional equivalent at the entrance to the facility or at the Generating Facility's main substation transformer. The phase angle measuring unit must have a resolution of at least 16 samples per cycle. The Asynchronous Generating Facility will store this data for a minimum of 30 days. The Asynchronous Generating Facility will provide all phase angle measuring unit data within 10 calendar days of a request from the CAISO or the Participating TO.

**Attachment 8**

**[This Attachment is Intentionally Omitted]**

**Appendix GG**

**[Not Used]**

**APPENDIX HH**

**[Not Used]**

# APPENDIX II

## Market-Based Rate Authority Suspension

This Appendix provides the rates, terms and conditions that apply to Scheduling Coordinators that submit Bids into the CAISO Markets for resources of Market Participants affected by a suspension or revocation of the Market Participant's market-based rate authority, issued pursuant to Section 35, Subpart H of the Federal Energy Regulatory Commission's Rules of Practice and Procedure (18 C.F.R §§ 35.36 to 35.42) where the Federal Energy Regulatory Commission has restricted participation to the following terms:

1) The Market Participant's authority to sell energy, capacity, and ancillary services at market-based rates is suspended or revoked.

2) The Market Participant will only be allowed to participate in wholesale electricity markets by either scheduling quantities of energy products without an associated price or by specifying a zero-price in their offer, as the relevant tariffs require.

3) The rate received by the Market Participant will be capped at the higher of the applicable Locational Marginal Price or its Default Energy Bid.

This Appendix details the application of the terms specified above as they apply to Market Participants engaged in transactions under the CAISO Tariff. These additional rates, terms and conditions apply in addition to those already specified in other provisions of the CAISO Tariff, which remain in effect for Scheduling Coordinators subject to this Appendix to the extent not inconsistent with this Appendix.

### 1. Bids for and Settlement of Energy

**1.1.** The Scheduling Coordinator may only participate in the Day-Ahead and Real-Time Markets for the resources of Market Participants subject to this Appendix by submitting either a Self-Schedule or an Economic Bid with a price of zero (0) dollars per megawatthour ($0/MWh).

**1.2.** Prior to the Market Close of the applicable CAISO Market, the CAISO will validate the Bids submitted by such Scheduling Coordinator based on the Resource ID. If the Scheduling Coordinator submits a Bid that is not either a Self-Schedule or an Economic Bid with a price of $0/MWh, the CAISO will reject the Bid.

**1.3.** Prior to the execution of the applicable CAISO Market run, the CAISO will replace all the resource's Economic Bid segments with a Generated Bid based on the resource's Proxy Costs.

**1.4.** After the execution of the CAISO Market run, for intervals in which the resource is dispatched or committed by the CAISO, including any Exceptional Dispatches, the CAISO will pay the higher of its Default Energy Bid or the applicable Locational Marginal Price.

### 2. Residual Unit Commitment Bids

**2.1.** The Scheduling Coordinator may only participate in the Residual Unit Commitment for the resources of Market Participants subject to this Appendix by submitting a RUC Availability Bid of zero (0) dollars per megawatt per hour ($0/MW-hour).

**2.2.** Prior to the Market Close of the applicable CAISO Market, the CAISO will validate the bids submitted by such Scheduling Coordinator based on the Resource ID. If the Scheduling Coordinator submits a RUC Availability Bid that is not a $0/MW-hour, the

CAISO will reject the RUC Availability Bid.

**3. Default Energy Bid**

**3.1.** The Scheduling Coordinator will not be entitled to select the Negotiated and LMP options for the resources of Market Participants subject to this Appendix and can only select the Variable Cost Option as specified in Section 39.7 of the CAISO Tariff for their Default Energy Bid during the period of the suspension.

**3.2.** If the resource lacks a Variable Cost Option Default Energy Bid during the period of the suspension or revocation, the CAISO will create a Default Energy Bid with a $0/MWh price for the resource.

**4. Minimum Load, Start-Up, and Transition Costs**

**4.1.** The Scheduling Coordinator responsible for submitting the resource's Minimum Load and Start-Up Costs for the resources of Market Participants subject to this Appendix will not be entitled to select the Registered Cost option available under Section 30.4.7 and can only select the Proxy Cost option as specified in Section 30.4.5 of the CAISO Tariff for their Minimum Load and Start-Up Costs.

**4.2.** If the resource is registered with the CAISO as a Multi-Stage Generating Unit resource, the Scheduling Coordinator may only register a Transition Cost of $0 per MW hour.

**4.3.** If the resource lacks a Start-Up or Minimum Load Cost in any market intervals, the CAISO will insert the Start-Up or Minimum Load Costs calculated based on the Proxy Cost option.

**5. Ancillary Services**

**5.1.** The Scheduling Coordinator for the resources of Market Participants subject to this Appendix may only submit either an Ancillary Services self-schedule consistent with the requirements of the ISO tariff or an Ancillary Service Bid with a zero price per megawatt ($0/MW).

**5.2.** Prior to the Market Close, the CAISO will reject any Ancillary Services Bid submitted for such resource that is not an Ancillary Services self-schedule consistent with the requirements of the ISO tariff or an Ancillary Services Bid with a $0/MW price.

**6. Ramping Rates**

**6.1.** All of the Operating Reserve, Operational and Regulating Ramp Rates for the resources of Market Participants subject to this Appendix will be based on the maximum ramp rate registered in the Master File.

**6.2.** To the extent the Scheduling Coordinator for such resources submits something other than the maximum ramp rate registered in the Master File for these rates, the CAISO will replace the ramp with the maximum ramp rate value in the Master File.

**6.3.** In the Real-Time Market, the Scheduling Coordinator may only modify their maximum Ramp Rate through a SLIC submission based on actual changes in physical conditions of the resource.

**Appendix JJ**

**Not Used**

# Appendix KK

## Resource Interconnection Standards (RIS)

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## Section 1 Objectives And Applicability

### 1.1 Objectives and Applicability

The objective of these Resource Interconnection Standards (RIS) is to implement the requirements for both Small and Large Generating Facility interconnections to the CAISO Controlled Grid and to provide a process for allocating Transmission Plan Deliverability for Interconnection Requests starting with Queue Cluster 15 and for subsequent Queue Clusters. This RIS applies to Interconnection Requests that are either assigned to Queue Cluster 15 and subsequent Queue Clusters, or submitted for the Fast Track Process after the RIS is effective. The exception to this rule of limited applicability is the annual reassessment process set forth in Section 7.4, which will apply to all CAISO Interconnection Customers in Queue Clusters.

### 1.2 Definitions

Unless the context otherwise requires, any word or expression defined in the Master Definitions Supplement, Appendix A to the CAISO Tariff, will have the same meaning where used in this RIS. References to the RIS are to this Appendix KK.

### 1.3 [Not Used]

## Section 2 Scope and Application

### 2.1 Application of Generator Interconnection Procedures

This RIS applies to processing an Interconnection Request pertaining to a Generating Facility that is either: (i) assigned to Queue Clusters 15 and subsequent Queue Clusters, or (ii) included in the Fast Track Process, after the RIS is effective.

### 2.2 Comparability

The CAISO shall receive, process, and analyze Interconnection Requests in a timely manner as set forth in this RIS. The CAISO will process and analyze Interconnection Requests from all Interconnection Customers as set forth in this RIS, regardless of whether the Generating Facilities are owned by a Participating TO, its subsidiaries, or Affiliates or others.

### 2.3 Interconnection Base Case Data

For each Interconnection Study Cycle, the CAISO, in coordination with applicable Participating TO(s), shall maintain updated Interconnection Base Case Data, including, as applicable, separate Interconnection Base Case Data for each Cluster Study to reflect system conditions particular to the Cluster Study, to a secured section of the CAISO Website. Interconnection Base Case Data will represent the network model and underlying assumptions used during the most recent Interconnection Study and represent system conditions in the near term planning horizon. The CAISO will update and publish the Interconnection Base Case Data prior to the Cluster Study, after the Cluster Study, before the annual reassessment, and after the annual reassessment to reflect new and withdrawn Interconnection Requests and resulting changes to identified transmission upgrades as applicable.

Interconnection Base Case Data shall include information subject to the confidentiality provisions in Section 15.1.

The CAISO shall require current and former Interconnection Customers, Market Participants, and electric utility regulatory agencies within California to sign a CAISO confidentiality agreement and, where the current or former Interconnection Customer or Market Participant is not a member of

WECC, or its successor, an appropriate form of agreement with WECC, or its successor, as necessary. All other entities or persons seeking Interconnection Base Case Data must satisfy the foregoing requirements as well as all requirements under 18 C.F.R. Section 388.113 for obtaining the release of Critical Energy Infrastructure Information (as that term is defined by FERC). The CAISO will maintain a link on OASIS to the secured section of the CAISO website with the Interconnection Base Case Data.

## 2.4 Interconnection Service and Studies

### 2.4.1 No Applicability to Transmission Service.

Nothing in this RIS shall constitute a request for transmission service or confer upon an Interconnection Customer any right to receive transmission service.

### 2.4.2 The Product.

Interconnection Service allows the Interconnection Customer to connect the Generating Facility to the CAISO Controlled Grid and be eligible to deliver the Generating Facility's output using the available capacity of the CAISO Controlled Grid. Interconnection Service does not in and of itself convey any right to deliver electricity to any specific customer or point of delivery or rights to any specific MW of available capacity on the CAISO Controlled Grid.

### 2.4.3 The Interconnection Studies.

For Interconnection Requests in Queue Cluster 15 and subsequent Queue Clusters, the Interconnection Studies consist of a Cluster Study, an annual reassessment, and an Interconnection Facilities Study, and any updates to reflect the results of a reassessment conducted after the TP Deliverability allocation process for the Queue Cluster.

#### 2.4.3.1 The Cluster Studies

The Cluster Studies for Queue Cluster Generating Facilities will include, but not be limited to, short circuit/fault duty, steady state (thermal and voltage) and stability analyses. The Cluster Studies will identify direct Interconnection Facilities and required Reliability Network Upgrades necessary to interconnect the Generating Facility, mitigate thermal overloads and voltage violations, and address short circuit, stability, and reliability issues associated with the requested Interconnection Service. The stability and steady state studies will identify necessary upgrades to allow full output of the proposed Generating Facility, except for Generating Facilities that include at least one electric storage resource that request to use operating assumptions pursuant to Section 3.1, unless the CAISO and Participating TO determine that Good Utility Practice, including Applicable Reliability Standards, otherwise requires the use of different operating assumptions, and would also identify the maximum allowed output, at the time the study is performed, of the interconnecting Generating Facility without requiring additional Network Upgrades. The Cluster Studies will also identify LDNUs that have selected Full Capacity or Partial Capacity Deliverability Status, as applicable. Such Network Upgrades shall be identified in accordance with the Deliverability Assessments set forth in Section 6.3.2. The Cluster Studies will also provide cost estimates for ADNUs, as described in Section 6.3.2. The Cluster Study report shall include cost estimates for RNUs, LDNUs, and ADNUs.

#### 2.4.3.2 The Reassessment

After each Cluster Study, the CAISO will conduct a reassessment, as specified in Section 7.4, to conform the Base Case and Interconnection Base Case Data to account for later conditions since the CAISO performed the Cluster Study in the prior Interconnection Study Cycle.

#### 2.4.3.3 The Interconnection Facilities Study

After the Cluster Study, the CAISO and Participating TO will conduct the Interconnection Facilities Study to determine a list of facilities (including the Participating TO's Interconnection Facilities and Network Upgrades as identified in the Cluster Study), the cost of those facilities, and the time required to interconnect the Generating Facility with the CAISO Controlled Grid. The scope of the study is defined in Section 8 of this RIS.

#### 2.4.3.4 Update Following TP Deliverability Allocation Process

Following the completion of Interconnection Facilities Studies for the Queue Cluster and provision by the CAISO of the results to Interconnection Customers in the Queue Cluster, the CAISO will perform the allocation of TP Deliverability to eligible Generating Facilities in accordance with Section 8.9. Based on the results of the allocation process and the responses to those results as reported by affected Interconnection Customers to the CAISO, the CAISO will provide updates where needed to the Interconnection Study reports of affected Interconnection Customers.

## Section 3 Interconnection Requests

### 3.1 General

Pursuant to CAISO Tariff Section 25.1, a duly authorized officer or agent of the Interconnection Customer will submit to the CAISO (1) an Interconnection Request consistent with Appendix 1 to this RIS, including (2) an executed Cluster Study Agreement consistent with Appendix 3 to this RIS. All forms may be submitted electronically as provided on the CAISO Website. Interconnection customers will submit Appendix B to the Cluster Study Agreement, the Interconnection Facilities Study Agreement, pursuant to Section 8 of this RIS. The CAISO will provide access to the Interconnection Request to the applicable Participating TO within five (5) Business Days of when the Interconnection Customer satisfies the Cluster Study criteria under Section 4 of this RIS.

The Interconnection Customer shall submit a separate Interconnection Request for each site. Where multiple Generating Units share a site, the Interconnection Customer(s) may submit separate Interconnection Requests or a single Interconnection Request. An Interconnection Request to evaluate one site at two different voltage levels shall be treated as two Interconnection Requests.

At the Interconnection Customer's option, the CAISO, Participating TO, and Interconnection Customer will identify alternative Point(s) of Interconnection and configurations within the Customer Engagement Window to evaluate in this process and attempt to eliminate alternatives in a reasonable fashion given resources and information available. The Interconnection Customer will select the definitive Point of Interconnection to be studied no later than ten (10) days after the close of the Cluster Application Window. For purposes of clustering Interconnection Requests, the CAISO and Participating TO may propose changes to the requested Point of Interconnection to facilitate efficient interconnection of Interconnection Customers at common Point(s) of Interconnection within the same Transmission Zone. The CAISO will notify Interconnection Customers in writing of any intended changes to the requested Point of Interconnection within the Customer Engagement Window, and the Point of

Interconnection will only change upon mutual agreement.

Interconnection Customers may request Interconnection Service Capacity below the Generating Facility Capacity. The CAISO will study these requests for Interconnection Service at the level of Interconnection Service Capacity requested for purposes of Interconnection Studies, Network Upgrades, and associated costs. If the Generating Facility Capacity requires additional Network Upgrades beyond the Interconnection Service Capacity, the CAISO will provide a detailed explanation of why the additional Network Upgrades are necessary. Any Interconnection Facility and/or Network Upgrade cost required for safety and reliability will be assigned to the Interconnection Customer and eligible for reimbursement consistent with the treatment of Interconnection Facilities and Network Upgrade provided in this RIS. Interconnection Customers may be subject to additional control technologies, as well as testing and validation of those technologies consistent with Article 6 of the GIA and Article 2 of the SGIA. The necessary control technologies and protection systems shall be established in Appendix C of that executed, or requested to be filed unexecuted, GIA.

The CAISO will study Generating Units that include at least one electric storage resource using operating assumptions (*i.e.*, whether the interconnecting Generating Facility will or will not charge at peak load) that reflect the proposed charging behavior of the Generating Facility as requested by the Interconnection Customer, unless the CAISO and Participating TO determine that Good Utility Practice, including Applicable Reliability Standards, otherwise requires the use of different operating assumptions. If the CAISO and Participating TO find the Interconnection Customer's requested operating assumptions conflict with Good Utility Practice, they must provide the Interconnection Customer an explanation in writing of why the submitted operating assumptions are insufficient or inappropriate by no later than thirty (30) calendar days before the end of the Customer Engagement Window and allow the Interconnection Customer to revise and resubmit requested operating assumptions one time at least ten (10) calendar days prior to the end of the Customer Engagement Window. The CAISO and Participating TO will study these requests for Interconnection Service, with the study costs borne by the Interconnection Customer, using the submitted operating assumptions for purposes of Interconnection Facilities, Network Upgrades, and associated costs. These requests for Interconnection Service also may be subject to other studies at the full Generating Facility Capacity to ensure safety and reliability of the system, with the study costs borne by the Interconnection Customer. The Interconnection Customer's Generating Facility may be subject to additional control technologies as well as testing and validation of such additional control technologies consistent with Article 6 of the LGIA. The necessary control technologies and protection systems will be set forth in Appendix C of the Interconnection Customer's LGIA.

## 3.2 Roles and Responsibilities

(a) Each Interconnection Request will be subject to the direction and oversight of the CAISO. The CAISO will conduct or cause to be performed the required Interconnection Studies and any additional studies the CAISO determines to be reasonably necessary, and will direct the applicable Participating TO to perform portions of studies where the Participating TO has specific and non-transferable expertise or data and can conduct the studies more efficiently and cost effectively than the CAISO. The CAISO will coordinate with Affected System Operators in accordance with Section 3.7.

(b) The CAISO will complete or cause to be completed all studies as required within the timelines provided in this. Any portion of the studies performed at the direction of the CAISO by the Participating TOs or by a third party shall also be completed within timelines provided in this RIS.

(c) The CAISO has established a pro forma Roles and Responsibilities Agreement, attached hereto as Appendix 4 and incorporated herein by reference, for execution by the CAISO and the applicable Participating TOs.

(d) Each Interconnection Customer shall pay the actual costs of all Interconnection Studies, and any additional studies the CAISO determines to be reasonably necessary in response to the Interconnection Request. The CAISO shall reimburse the Participating TO for the actual cost of any portion of all Interconnection Studies that such Participating TO performs at the direction of the CAISO.

## 3.3 Timing for Submitting Interconnection Requests

### 3.3.1 Timing for Submitting Interconnection Requests for a Queue Cluster

Except for Interconnection Customers requesting processing under the Fast Track Process, Interconnection Requests must be submitted during a Cluster Application Window.

The CAISO will accept Interconnection Requests during a fifteen (15) day period (the Cluster Application Window). Beginning in 2026, the initial Cluster Application Window for Interconnection Requests will open annually on October 1 and close on October 15. If any date set forth in this section is not a Business Day, then the applicable date shall be the next Business Day.

### 3.3.2 Timing for Submitting Interconnection Requests for Fast Track Process

Interconnection Customers may submit Interconnection Requests for processing under the Fast Track Process at any time during the year.

### 3.3.3 Timing for Wholesale Distribution Transfers

After the Cluster Application Window, the CAISO will accept Interconnection Requests from Utility Distribution Companies that accepted interconnection requests for wholesale participation the Interconnection Customer reasonably believed were to the distribution grid based on available information, but should have been to the CAISO Controlled Grid. The CAISO will only accept those Interconnection Requests it can include in the Cluster Study without delaying that Queue Cluster. The CAISO will not accept any Interconnection Request transfers after the commencement of the Cluster Study.

After the Utility Distribution Company has transferred the Interconnection Request to the CAISO, the CAISO will notify the Interconnection Customer whether it can be included in the Cluster Study and request any data still required under Section 3.5.1.

## 3.4 Surplus Interconnection Service

The CAISO will allow an Interconnection Customer to utilize or transfer Surplus Interconnection Service once the Interconnection Customer has executed the GIA or requested that the GIA be filed unexecuted. The Interconnection Customer will notify the CAISO that it has transferred its Surplus Interconnection Service to another entity. The total Interconnection Service Capacity of the original Interconnection Customer and the assignee of the Surplus Interconnection Capacity may not exceed the original Interconnection Customer's constructed Generating Facility Capacity, regardless of the Interconnection Service Capacity it requested in its Interconnection Request or memorialized in its GIA. The Generating Facility of the assignee must interconnect at the same Point of Interconnection as the original Interconnection Customer. The CAISO and Participating TO will study Surplus Interconnection Service requests for a Generating Facility that includes at least one electric storage resource using operating assumptions (*i.e.*, whether the interconnecting Generating Facility will or will not charge at peak load) that reflect the proposed charging behavior of the Generating Facility as requested by the Interconnection Customer, unless the CAISO and Participating TO determine that Good Utility Practice, including Applicable Reliability Standards,

otherwise requires the use of different operating assumptions.

If the assignee's Generating Facility would not require a new Interconnection Request pursuant to Section 25.1.1 of the CAISO Tariff, the original Interconnection Customer may transfer Surplus Interconnection Service, and the CAISO will study the transfer, as a modification under Section 6.7.2. Otherwise, the assignee of the Surplus Interconnection Service will submit an Interconnection Request pursuant to Section 3.3 of this RIS. The Cluster Study process will identify any additional Interconnection Facilities and/or Network Upgrades necessary. Reimbursement for additional Reliability Network Upgrades will be capped pursuant to Section 14.3.2 of this RIS. The CAISO will use the constructed Generating Facility Capacity of the original Interconnection Customer for the MW value of the RNU reimbursement cap, and will subtract the costs of the original Interconnection Customer's Reliability Network Upgrades to determine any remaining eligible reimbursement under the cap for the assignee's Reliability Network Upgrades, if any.

Notwithstanding any other provision in this RIS, if the original Interconnection Customer has Full or Partial Capacity Deliverability Status, it will notify the CAISO whether its transfer of Surplus Interconnection Service includes any Deliverability currently associated with the constructed Generating Facility capacity. The transfer amount of Deliverability may not exceed the transfer amount of Surplus Interconnection Service. The transfer amount of Surplus Interconnection Service will not operate as a basis to increase the Net Qualifying Capacity of the Generating Facility (including the expansion) that pre-existed the transfer. In all cases, the original Generating Facility and the behind-the-meter capacity expansion will be metered separately from one another and be assigned separate Resource IDs. If the original Interconnection Customer's Generating Facility permanently retires, or ceases operation for three (3) years without having begun active construction of a repowered Generating Facility, both the original Interconnection Customer and the assignee of the Surplus Interconnection Service will be converted to Energy Only. At any point, the assignee may seek its own TP Deliverability allocation pursuant to Section 8.9 of this RIS. If the assignee receives its own TP Deliverability allocation, it will exist completely independent of the original Interconnection Customer and will not be converted to Energy Only due to the retirement or inoperability of the original Interconnection Customer, notwithstanding any other provision herein.

The CAISO, Participating TO, and original Interconnection Customer will work in good faith to amend the original Interconnection Customer's GIA to reflect the transfer of Surplus Interconnection Service before the execution of the assignee's GIA.

## 3.5 Processing of Interconnection Requests

### 3.5.1 Initiating an Interconnection Request.

An Interconnection Customer seeking to join a Queue Cluster will submit its Interconnection Request to the CAISO within, and no later than the close of, the Cluster Application Window. Interconnection Requests submitted outside of the Cluster Application Window will not be considered. To initiate an Interconnection Request except as set forth for the Fast Track Process in Section 5, and have the Interconnection Request considered for validation under Section 3.5.2, the Interconnection Customer must submit all of the following during the Cluster Application Window:

(i) Applicable Interconnection Study Deposit amount, pursuant to Section 3.5.1.1 of this RIS.

(ii) A completed application in the forms of Appendix 1 and Appendix 2, including requested Deliverability statuses, requested study process (either Queue Cluster or Fast Track Study Process), preferred Point of Interconnection and voltage

level, and all other required technical data, including all data requested in Attachment A to Appendix 1 in Excel format.

(iii) Demonstration of no less than ninety percent (90%) Site Control; or (1) a signed affidavit from an officer of the company indicating that Site Control is unobtainable due to regulatory limitations as defined in the Business Practice Manuals; (2) documentation sufficiently describing and explaining the source and effects of such regulatory limitations, including a description of any conditions that must be met to satisfy the regulatory limitations and the anticipated time by which the Interconnection Customer expects to satisfy the regulatory requirements; and (3) a deposit in lieu of Site Control of $10,000 per MW, subject to a minimum of $500,000 and a maximum of $2,000,000. Interconnection Requests from multiple Interconnection Customers for multiple Generating Facilities that share a site must include a contract or other agreement that allows for shared land use.

(iv) A load flow model.

(v) A dynamic data file.

(vi) A reactive power capability document.

(vii) A site drawing.

(viii) A single-line diagram.

(ix) A flat run plot, bump test plot, voltage reference step change test plot, frequency reference step change test, and a voltage ride-through test plot from the positive sequence transient stability simulation application.

(x) A plot showing the requested MW at the Point of Interconnection from the positive sequence load flow application.

(xi) If applicable, (a) the requested operating assumptions (*i.e.*, whether the interconnecting Generating Facility will or will not charge at peak load) to be used by the CAISO and Participating TO that reflect the proposed charging behavior of the Generating Facility that includes at least one electric storage resource, and (2) a description of any control technologies (software and/or hardware) that will limit the operation of the Generating Facility to the operating assumptions submitted by the Interconnection Customer.

(xii) All supporting documentation required for the Interconnection Customer's selections on Appendix 2, as required by Section 4 of this RIS.

The CAISO requires the foregoing information to be complete and specific to the Interconnection Request. The CAISO will first determine whether a submitted Interconnection Request is complete. The CAISO will not initiate any review of an Interconnection Request for completeness until the Interconnection Study Deposit is received by the CAISO. Consistent with Section 3.5.3, the CAISO will review each Interconnection Request and notify the Interconnection Customer whether it is complete or contains omissions within five (5) Business Days of submission. Any Interconnection Customer that has not submitted a complete Interconnection Request by October 15 (or the next Business Day if October 15 is not a Business Day) will be deemed incomplete with no opportunity to cure or otherwise be included in that year's Queue Cluster.

The CAISO requires Interconnection Study Deposits to review and validate the Interconnection Request. Notwithstanding Section 3.5.2 of this RIS or any other provision regarding validation or the ability to cure deficiencies, the CAISO will not review, process, or validate an Interconnection Request absent the Interconnection Study Deposit. Any interconnection Customer that has not submitted a complete Interconnection Study Deposit by October 15 (or the next Business Day if October 15 is not a Business Day) will be deemed invalid with no opportunity to cure or otherwise be included in that year's Queue Cluster.

**3.5.1.1 Interconnection Study Deposit.**

The Interconnection Customer will submit to the CAISO, during a Cluster Application Window, an Interconnection Request in the form of Appendix 1 to this RIS, a non-refundable application fee of $5,000, and a refundable study deposit:

a. $35,000 plus $1,000 per MW for Interconnection Requests < 80 MW, or;
b. $150,000 for Interconnection Requests ≥ 80 MW < 200 MW; or
c. $250,000 for Interconnection Requests ≥ 200 MW.

The CAISO will apply the study deposit toward the cost of the Cluster Study Process.

The CAISO shall deposit all Interconnection Study Deposits in an interest bearing account at a bank or financial institution designated by the CAISO. The Interconnection Study Deposit shall be applied to pay for prudent costs incurred by the CAISO, the Participating TOs, or third parties at the direction of the CAISO or Participating TOs, as applicable, to perform and administer the Interconnection Studies and to meet and otherwise communicate with Interconnection Customers with respect to their Interconnection Requests.

**3.5.1.2 Obligation for Study Costs.**

In the event an Interconnection Customer withdraws its Interconnection Request prior to the commencement of the Cluster Study, Interconnection Customer must pay the CAISO the actual costs of processing its Interconnection Request.

In the event an Interconnection Customer withdraws after the commencement of the Cluster Study, the CAISO shall charge and the Interconnection Customer(s) shall pay the actual costs of the Interconnection Studies. The costs of any Interconnection Study conducted on a clustered basis will be allocated among each Interconnection Customer within the Cluster as follows:

Fifty percent (50%) of the study costs will be allocated to each Interconnection Request in a cluster on a per capita basis.

Fifty percent (50%) of the study costs will be allocated to each Interconnection Request in a cluster on a pro rata basis.

Following offsets from Withdrawal Penalties assessed pursuant to Section 7.6, the actual costs of each reassessment, as set forth in Section 7.4, will be allocated among each Interconnection Custer in the same manner as above.

Any difference between the study deposit and the actual cost of the Interconnection Studies will be paid by or refunded, except as otherwise provided herein, to Interconnection Customers. Any invoices for Interconnection Studies will include a detailed and itemized accounting of the cost of each Interconnection Study. Interconnection Customers will pay any such undisputed costs within thirty (30) days of receipt of an invoice therefor. If an Interconnection Customer fails to pay such undisputed costs within the time allotted, its Interconnection Request will be deemed withdrawn from the Cluster Study Process and will be subject to Withdrawal Penalties pursuant to Section 3.8 of this RIS.

The Participating TO and any third parties performing work on the Interconnection Customer's behalf shall invoice the CAISO for such work, and the CAISO shall issue invoices for Interconnection Studies that shall include a detailed and itemized accounting of the cost of each Interconnection Study. The CAISO shall draw from the Study Deposit any undisputed costs within thirty (30) calendar days of issuance of an invoice. Whenever the actual cost of performing the Interconnection Studies exceeds the Interconnection Study Deposit, the Interconnection Customer shall pay the undisputed difference in accordance with the CAISO issued invoice within thirty (30) calendar days. The CAISO shall not be obligated to continue to have any studies conducted unless the Interconnection Customer has paid all undisputed amounts in compliance herewith. In the event an Interconnection Study, or portions thereof, is performed by the CAISO, the Interconnection Customer shall pay only the costs of those activities performed by the Participating TO to adequately review or validate that Interconnection Study or portions thereof.

**3.5.1.3 Site Control and Site Control Deposit.**

Interconnection Customer shall promptly inform the CAISO of any material change to Interconnection Customer's demonstration of Site Control under Section 3.5.1(iii) of this RIS. If the CAISO determines, based on the Interconnection Customer's information, that the Interconnection Customer no longer satisfies the Site Control requirement, the CAISO shall give the Interconnection Customer ten (10) Business Days to demonstrate satisfaction with the applicable requirement subject to the CAISO's approval. Absent such, the CAISO shall deem the Interconnection Request withdrawn pursuant to Section 3.8 of this RIS.

An Interconnection Customer that submits a deposit in lieu of Site Control due to demonstrated regulatory limitations must demonstrate that it is taking identifiable steps to secure the necessary regulatory approvals from the applicable federal, state, and/or tribal entities before the end of the Customer Engagement Window. Such deposit will be held by the CAISO until the Interconnection Customer provides the required Site Control demonstration for its point in the Cluster Study Process. An Interconnection Customer facing qualifying regulatory limitations must demonstrate one-hundred percent (100%) Site Control within one hundred eighty (180) days of the effective date of the GIA.

The CAISO shall deposit all Site Control Deposits in an interest bearing account at a bank or financial institution designated by the CAISO. The Site Control Deposit and all interest shall be refundable to the Interconnection Customer at any time upon demonstration of Site Control.

**3.5.1.4 Proposed Commercial Operation Date.**

In the initial Interconnection Request, the proposed Commercial Operation Date of the new Generating Facility or increase in capacity of the existing Generating Facility shall not exceed seven (7) years from the date the Interconnection Request is received by the CAISO, unless the Interconnection Customer demonstrates, and the applicable Participating TO(s) and the CAISO agree, such agreement not to be unreasonably withheld, that engineering, permitting and construction of the new Generating Facility or increase in capacity of the existing Generating Facility will take longer than the seven (7) year period. The CAISO's agreement to an extension of the proposed Commercial Operation Date does not relieve the Interconnection Customer from compliance with the requirements of any of the criteria in Section 8.9.3 for retention of TP Deliverability.

Extensions of less than three (3) cumulative years in the Commercial Operation Date of the Generating Facility to which the Interconnection Request relates are not material and should be handled through construction sequencing. For purposes of this section, the Commercial Operation Date reflected in the initial Interconnection Request will be used to calculate the permissible extension prior to Interconnection Customer executing a GIA or requesting that the GIA be filed unexecuted. After a GIA is executed or requested to be filed unexecuted, the Commercial Operation Date reflected in the GIA will be used to calculate the permissible extension. Such cumulative extensions may not exceed three (3) years including both extensions requested after execution of the GIA by Interconnection Customer or the filing of an unexecuted GIA by the CAISO and those requested prior to execution of the GIA by Interconnection Customer or the filing of an unexecuted GIA by the CAISO. Notwithstanding, for any extension that will extend the Commercial Operation Date beyond seven (7) years from the date the Interconnection Request is received by the CAISO, the Interconnection Customer must satisfy the commercial viability criteria in Section 6.7.4.

#### 3.5.1.5 Third-party Interconnection Facilities.

Interconnection Customers proposing to use third-party Interconnection Facilities must provide documentation to the CAISO demonstrating they are negotiating or have secured rights on those Interconnection Facilities to be deemed valid pursuant to Section 3.5.2. Within twenty (20) days after the Cluster Study Report Meeting, such Interconnection Customers must provide documentation to the CAISO demonstrating they have secured rights on those Interconnection Facilities through their Commercial Operation Date.

#### 3.5.1.6 Commercial Readiness Deposit.

After notification that the Interconnection has satisfied the Cluster Study criteria in Section 4 of this RIS, and before the close of the Customer Engagement Window, the Interconnection Customer must submit a Commercial Readiness Deposit to the Participating TO equal to two times the study deposit described in Section 3.5.1.1 of this RIS in the form of an irrevocable letter of credit, cash, a surety bond, or other form of security that is reasonably acceptable to the Participating TO under Section 11.1 of this RIS. This Commercial Readiness Deposit may be refunded to the Interconnection Customer according to Section 3.8 of this RIS.

### 3.5.2 Customer Engagement Window.

Upon the close of each Cluster Application Window, the CAISO will open a ninety (90)

calendar day period (Customer Engagement Window). During the Customer Engagement Window, the CAISO will hold Scoping Meetings with all interested Interconnection Customers. Scoping Meetings will be segregated by Transmission Zone and Cluster Study criteria. Notwithstanding the preceding requirements and upon written consent of all Interconnection Customers within the Cluster, the CAISO may shorten the Customer Engagement Window and begin the Cluster Study. Within ten (10) Business Days of the opening of the Customer Engagement Window, the CAISO will post on its Website a list of Interconnection Requests for that Cluster. The list will identify, for each anonymized Interconnection Request: (1) the requested amount of Interconnection Service; (2) the location by county and state; (3) the station or transmission line or lines where the interconnection will be made; (4) the projected In-Service Date; (5) the Deliverability Status requested; and (6) the type of Generating Facility or Facilities to be constructed, including fuel types, such as coal, natural gas, solar, or wind. The CAISO must ensure that project information is anonymized and does not reveal the identity or commercial information of interconnection customers with submitted requests. During the Customer Engagement Window, the CAISO will provide to Interconnection Customer a non-binding updated good faith estimate of the cost and timeframe for completing the Cluster Study. Interconnection Customers can access and execute the Cluster Study Agreement through the CAISO Website. Interconnection Customers must execute the Cluster Study Agreement prior to the close of the Customer Engagement Window.

At the end of the Customer Engagement Window, all Interconnection Requests (1) deemed valid, (2) that have executed a Cluster Study Agreement in the form of Appendix 3 to this RIS, (3) that have satisfied the Cluster Study criteria in Section 4, and (4) that submitted a Commercial Readiness Deposit will be included in the Cluster Study. Any Interconnection Requests not deemed valid at the close of the Customer Engagement Window will be deemed withdrawn (without the cure period provided under Section 3.8 of this RIS) by the CAISO, the application fee will be forfeited to the CAISO, and the CAISO will return the Interconnection Study Deposit and Commercial Readiness Deposit to the Interconnection Customer. Immediately following the Customer Engagement Window, the CAISO will initiate the Cluster Study described in Section 6 of this RIS.

For each Interconnection Request that is deemed complete pursuant to Section 3.5.1, the CAISO and Participating TO will determine whether the Interconnection Request is valid. An Interconnection Request will be deemed valid if it does not contain deficiencies that would prevent its inclusion in the Cluster Study. Deficiencies include but are not limited to modeling errors, inaccurate data, and unusable files.

The Interconnection Customer will provide the CAISO the additional requested information needed to constitute a valid request within ten (10) Business Days after receipt of such notice but no later than the end of the Customer Engagement Window. At any time, if the CAISO finds that the technical data provided by Interconnection Customer is incomplete or contains errors, the Interconnection Customer, Participating TO, and the CAISO will work expeditiously and in good faith to remedy such issues. In the event that the Interconnection Customer fails to comply with this Section, the CAISO will deem the Interconnection Request withdrawn (without the cure period provided under Section 3.8 of this RIS), the application fee is forfeited to the CAISO, and the Interconnection Study and Commercial Readiness Deposit will be returned to Interconnection Customer.

**3.5.2.1 Validation Process.**

The CAISO will validate Interconnection Requests that satisfy the Cluster Study criteria in Section 4 of this RIS. The CAISO and Participating TO will notify the Interconnection Customer whether its Interconnection Request is valid or contains deficiencies within ten (10) Business Days of October 15 or when the Interconnection Request satisfies the Cluster Study criteria, whichever is later.

All Interconnection Requests must be deemed valid by the end of the Customer Engagement Window to be included in that year's Queue Cluster.

#### 3.5.2.2 Deficiencies in Interconnection Request.

If an Interconnection Request has deficiencies, the CAISO shall include in its notification to the Interconnection Customer that the Interconnection Request does not constitute a valid request and explain the deficiencies. The Interconnection Customer shall provide the CAISO the corrected requested information needed to constitute a valid request. Consistent with Section 3.5, whenever corrected requested information is provided by the Interconnection Customer, the CAISO shall notify the Interconnection Customer within five (5) Business Days of receipt of the corrected requested information whether the Interconnection Request is valid. If the Interconnection Request continues to provide deficient information, the CAISO shall include in its notification to the Interconnection Customer the reasons for such failure. If an Interconnection Request is not deemed valid, the Interconnection Customer must cure all deficiencies no later than the close of the Customer Engagement Window. Interconnection Requests with deficiencies after that date will be deemed invalid and will not be included in an Interconnection Study Cycle or otherwise studied.

Interconnection Requests deemed invalid under this Section 3.5.2.2 are not subject to Section 3.8. Interconnection Customers with invalid Interconnection Request under this Section 3.5.2.2 may seek relief under Section 15.5 by notifying the CAISO within two (2) Business Days of the notice of invalidity.

### 3.5.3 Day-for-day Extensions

To the extent the CAISO and Participating TO cannot meet any deadline in this Section 3.5.2, the Interconnection Customer will receive a day-for-day extension on all remaining deadlines requiring its response.

### 3.5.4 Scoring Process

Pursuant to Section 4 of this RIS, the CAISO will score Interconnection Requests to determine their eligibility for the Cluster Study. The CAISO will provide Load Serving Entities with a list of Interconnection Requests after the close of the Cluster Application Window. Load Serving Entities submitting commercial interest points must do so no later than ten (10) days after the CAISO provides the list of Interconnection Requests.

## 3.6 Internet Posting

The CAISO will maintain on the CAISO Website a list of all Interconnection Requests. The list will identify, for each Interconnection Request: (i) the maximum summer and winter megawatt electrical output; (ii) the location by county and state; (iii) the station or transmission line or lines where the interconnection will be made; (iv) the most recent projected Commercial Operation Date; (v) the status of the Interconnection Request, including whether it is active or withdrawn; (vi) the availability of any studies related to the Interconnection Request; (vii) the date of the Interconnection Request; (viii) the type of Generating Facility to be constructed (e.g., combined cycle, combustion turbine, wind turbine, and fuel type); (ix) requested Deliverability statuses, and (x) project name.

Except in the case of an Affiliate, the list will not disclose the identity of the Interconnection Customer until the Interconnection Customer executes a GIA or requests that the applicable Participating TO(s) and the CAISO file an unexecuted GIA with FERC. The CAISO shall post on the CAISO Website an advance notice whenever a Scoping Meeting will be held with an Affiliate of a Participating TO.

The CAISO shall maintain on the CAISO Website: (1) an interactive visual representation of the estimated incremental injection capacity (in megawatts) available at each Point of Interconnection in the CAISO's footprint under N-1 conditions, and (2) a table of metrics concerning the estimated impact of a potential Generating Facility on the CAISO's transmission system based on a user-specified addition of a particular number of megawatts at a particular voltage level at a particular Point of Interconnection. At a minimum, for each transmission facility impacted by the user-specified megawatt addition, the following information will be provided in the table: (1) the distribution factor; (2) the megawatt impact (based on the megawatt values of the proposed Generating Facility and the distribution factor); (3) the percentage impact on each impacted transmission facility (based on the megawatt values of the proposed Generating Facility and the facility rating); (4) the percentage of power flow on each impacted transmission facility before the injection of the proposed project; and (5) the percentage power flow on each impacted transmission facility after the injection of the proposed Generating Facility. These metrics must be calculated based on the power flow model of the transmission system with the transfer simulated from each Point of Interconnection to the whole CAISO footprint, and with the incremental capacity at each Point of Interconnection decremented by the existing and queued Generating Facilities (based on the existing or requested Interconnection Service limit of the generation). These metrics will be updated within thirty (30) days after the completion of each Cluster Study and Cluster Restudy. This information will be publicly posted, without a password or a fee on the CAISO Website. The CAISO Website will define all underlying assumptions, including the name of the most recent Cluster Study or Restudy used in the Base Case.

The CAISO shall post to the CAISO Website any deviations from the study timelines set forth herein. The CAISO shall further post to the secure CAISO Website portions of the Cluster Study that do not contain customer-specific information following the final Results Meeting and portions of the Interconnection Facilities Study that do not contain customer-specific information no later than publication of the final Transmission Plan under CAISO Tariff Section 24.2.5.2 (such posted information to be placed on the secure CAISO Website to protect any Critical Energy Infrastructure Information contained therein). The CAISO shall post to the secure CAISO Website any documents or other materials posted pursuant to this or a Business Practice Manual that contain Critical Energy Infrastructure Information.

### 3.6.1 Interconnection Studies Statistics

The CAISO will maintain on its Website summary statistics related to processing Interconnection Studies pursuant to Interconnection Requests, updated quarterly. The CAISO will maintain a link on OASIS to the CAISO Website with the interconnection statistics. These statistics will include:

#### 3.6.1.1 Cluster Studies

(A) The number of Interconnection Requests to the CAISO Controlled Grid that had Cluster Studies completed during the reporting quarter;

(B) The number of Interconnection Requests to the CAISO Controlled Grid that had Cluster Studies completed beyond the one hundred fifty (150) Calendar Days after the close of the Customer Engagement Window;

(C) The number of active, valid Interconnection Requests with ongoing incomplete Cluster Studies where such Interconnection Requests had executed a Cluster Study agreement received by the CAISO more than one hundred fifty (150) days before the reporting quarter end;

(D) The mean time (in days) of Cluster Studies completed within the CAISO's coordinated region during the reporting quarter, from the date when the CAISO notifies the Interconnection Customers in the Cluster that a Cluster Restudy is

required pursuant to Section 7.4.1 of this RIS to the date the CAISO provided the completed Cluster Study Report to the Interconnection Customer;

(E) The mean time (in days), Cluster Studies completed within the CAISO's coordinated region during the reporting quarter, from the close of the Cluster Application Window to the date when the CAISO provided the completed Cluster Study Report to the Interconnection Customer;

(F) The percentage of Cluster Studies exceeding the one hundred fifty (150) days to complete this reporting quarter, calculated as the sum of Section 3.6.1.1(B) plus Section 3.6.1.1(C), divided by the sum of Section 3.6.1.1(A) plus Section 3.6.1.1(C).

**3.6.1.2 Cluster Restudies**

(A) The number of Interconnection Requests to the CAISO Controlled Grid that had Cluster Restudies completed;

(B) The number of Interconnection Requests to the CAISO Controlled Grid that had Cluster Restudies completed beyond the one hundred eighty (180) days after the Cluster Study Report Meeting;

(C) The number of active, valid Interconnection Requests with ongoing incomplete Cluster Restudies where such Interconnection Requests had executed a Cluster Study agreement received by the CAISO more than one hundred fifty (150) days before the reporting quarter end;

(D) The mean time (in days) of Cluster Restudies completed within the CAISO's coordinated region during the reporting quarter, from the date when the CAISO notifies the Interconnection Customers in the Cluster that a Cluster Restudy is required pursuant to Section 7.4.1 of this RIS to the date the CAISO provided the completed Cluster Restudy Report to the Interconnection Customer;

(E) The mean time (in days) of Cluster Restudies completed within the CAISO's coordinated region during the reporting quarter, from the close of the Cluster Application Window to the date when the CAISO provided the completed Cluster Restudy Report to the Interconnection Customer;

(F) The percentage of Cluster Restudies exceeding the one hundred eighty (180) days to complete this reporting quarter, calculated as the sum of Section 3.6.1.2(B) plus Section 3.6.1.2(C), divided by the sum of Section 3.6.1.2(A) plus Section 3.6.1.2(C).

**3.6.1.3 Interconnection Facilities Studies Processing Time**

(A) The number of Interconnection Requests to the CAISO Controlled Grid that had Interconnection Facilities Studies completed;

(B) The number of Interconnection Requests to the CAISO Controlled Grid that had Interconnection Facilities Studies completed beyond the one hundred twenty (120) days planned for the Interconnection Facilities Study pursuant to Section 8.5 of this RIS;

(C) The number of active, valid Interconnection Requests with ongoing incomplete Interconnection Facilities Studies that have exceeded the one hundred twenty (120) days planned for the Interconnection Study pursuant to Section 8.5 of this RIS;

(D) The mean time (in days) of Interconnection Facilities Studies completed from the date when the CAISO began the annual Interconnection Facilities Study pursuant to Section 8.5 of this RIS to the date the CAISO provided the completed Interconnection Facilities Study to the Interconnection Customer;

(E) The mean time (in days) of Interconnection Facilities Studies completed within the CAISO's coordinated region during the reporting quarter, from the close of the Cluster Application Window to the date when the CAISO provided the completed Interconnection Facilities Study to Interconnection Customer;

(F) Percentage of delayed Interconnection Facilities Studies this reporting quarter, calculated as the sum of Section 3.6.1.3(B) plus Section 3.6.1.3(C) divided by the sum of Section 3.6.1.3(A) plus Section 3.6.1.3(C) of this RIS.

#### 3.6.1.4 Interconnection Requests Withdrawn

(A) The number of Interconnection Requests withdrawn;

(B) The number of Interconnection Requests withdrawn before completion of any Interconnection Studies;

(C) The number of Interconnection Requests withdrawn before completion of their Interconnection Facilities Study;

(D) The number of Interconnection Requests withdrawn after completion of an Interconnection Facilities Study but before execution of a GIA or before the Interconnection Customer requests filing an unexecuted, new GIA;

(E) The number of Interconnection Requests withdrawn from the CAISO's interconnection queue after execution of a GIA or Interconnection Customer requests the filing of an unexecuted, new GIA;

(F) The mean time (in days), for all withdrawals, from the date when the request was determined to be valid to when the CAISO received the request to withdraw from the queue.

### 3.6.2 Retention

The CAISO will keep the quarterly interconnection studies statistics on the CAISO Website for three (3) calendar years.

### 3.6.3 FERC Reporting

In the event that any of the percentages calculated in any subparagraph E of Section 3.6.1.1 and 3.6.1.2 exceeds twenty five (25) percent for two (2) consecutive quarters, the CAISO will, for the next four (4) quarters and until those percentages fall below twenty five (25) percent for two (2) consecutive quarters:

(i) submit a report to FERC describing the reason for each study or group of clustered studies pursuant to an Interconnection Request that exceeded its deadline for

completion. The CAISO will describe the reasons for each study delay and any steps taken to remedy these specific issues and, if applicable, prevent such delays in the future. The CAISO will file the report with FERC within forty five (45) days of the end of the calendar quarter.

(ii) aggregate and publish on the CAISO Website the total number of employee-hours and third party consultant hours expended towards its Interconnection Studies. The CAISO will publish these figures within thirty (30) days of the end of the calendar quarter.

### 3.6.4 Study Criteria Data

By September 1 each year, the CAISO will publish the following information on the CAISO Website to inform the preparation of Interconnection Requests under the Cluster Study criteria in Section 4:

(i) Single-line diagrams of each Transmission Zone with the Local Regulatory Authority portfolio resources identified at the substations to which the Local Regulatory Authority has mapped resources in its busbar mapping process;

(ii) Any Area Deliverability Constraints in each Transmission Zone, the amount of any available Deliverability, ADNUs to increase Deliverability in Merchant Zones, and the estimated cost and time to construct identified ADNUs;

(iii) Single-line diagrams identifying the Points of Interconnection studied for each Area Deliverability Constraint;

(iv) A list of current substations within each Transmission Zone;

(v) For each Area Deliverability Constraint, the Points of Interconnection for current Interconnection Customers;

(vi) The TP Deliverability already allocated for each Area Deliverability Constraint; and

(vii) The value of Local Capacity Area Resource Deficiencies in Transmission Zones and Local Capacity Areas.

## 3.7 Coordination with Affected Systems

Pursuant to Section 3.7.1, the CAISO will notify the Affected System Operators that are potentially affected by the Interconnection Customer's Interconnection Request or Cluster Study within which the Interconnection Customer's Interconnection Request will be studied. The CAISO will coordinate the conduct of any studies required to determine the impact of the Interconnection Request on Affected Systems with Affected System Operators, to the extent possible, and, if possible, the CAISO will include those results (if available) in its applicable Interconnection Study within the time frame specified in this RIS. The CAISO will include Affected System Operators in all meetings held with the Interconnection Customer as required by this RIS.

The Interconnection Customer will cooperate with the CAISO and Affected System Operator in all matters related to the conduct of studies and the determination of modifications to Affected Systems, including providing consent to CAISO's identification of Interconnection Customer's name, Generating Facility project name, and release of information that the Interconnection

Customer provided as part of its Interconnection Request to the Affected System, and participating in any coordinating activities and communications undertaken by the Affected System or CAISO. If required by an Identified Affected System, the Interconnection Customer will sign separate study agreements with the Identified Affected System and pay for necessary studies. Identified Affected Systems will cooperate with the CAISO in all matters related to the Identified Affected System Operators' determination of modifications to Identified Affected Systems.

### 3.7.1 Timing for Identification of Identified Affected Systems

The CAISO will provide notice to the Affected System Operators that are potentially affected by the Interconnection Customer's Interconnection Request or Cluster Study within ten (10) Business Days after determining which projects in each study cluster have posted their additional Commercial Readiness Deposit to bring the total to five percent (5%) of the Interconnection Customer's Network Upgrade cost, pursuant to Section 7.4 of this RIS.

The CAISO may later notify Affected Systems if (i) the CAISO failed to identify the Affected System initially; (ii) the Interconnection Customer modifies its project such that an electric system becomes a potentially Affected System; or (iii) the Interconnection Customer converts from a Wholesale Distribution Access Tariff to the CAISO Tariff and the same Affected Systems were not notified previously or the conversion was due to a system change. In such cases, the CAISO will coordinate with the Interconnection Customer and the potentially Affected System Operator to develop an expedited timeline to determine whether the Affected System is an Identified Affected System. The CAISO will then notify the Interconnection Customer as soon as practical of the new Identified Affected System.

Within sixty (60) calendar days of notification from the CAISO, the Affected System Operator will advise the CAISO in writing that either: (i) the CAISO should consider the electric system to be an Identified Affected System; or (ii) the electric system should not be considered an Identified Affected System. If the Affected System Operator fails to advise the CAISO within (60) calendar days of notification, the CAISO will assume that the electric system is not an Affected System.

If an electric system operator advises the CAISO that it is an Identified Affected System after the 60-day notification period, the CAISO will not delay the synchronization or Commercial Operation of the Generating Facility for mitigation required by the Affected System unless the Affected System identifies, and the CAISO confirms, a legitimate reliability issue. Where legitimate reliability issues are present, the CAISO will work with the Affected System and the Interconnection Customer to establish temporary mitigations, if possible, for the identified reliability issue. An Affected System's mitigation remedies that may be available outside the CAISO Tariff are unaffected by these provisions.

## 3.8 Withdrawal

The Interconnection Customer may withdraw its Interconnection Request at any time by written notice of such withdrawal to the CAISO, and the CAISO will notify the applicable Participating TO(s) and Affected System Operators, if any, within three (3) Business Days of receipt of such a notice. In addition, after confirmation by the CAISO of a valid Interconnection Request under Section 3.5.2, if the Interconnection Customer fails to adhere to all requirements of this RIS, except as provided in Section 15.5 (Disputes), the CAISO shall deem the Interconnection Request to be withdrawn and shall provide written notice to the Interconnection Customer within five (5) Business Days of the deemed withdrawal and an explanation of the reasons for such deemed withdrawal. Upon receipt of such written notice, the Interconnection Customer shall

have five (5) Business Days in which to respond with information or action that either cures the deficiency or supports its position that the deemed withdrawal was erroneous and notifies the CAISO of its intent to pursue Dispute Resolution.

Withdrawal shall result in the removal of the Interconnection Request from the Interconnection Study Cycle. If an Interconnection Customer disputes the withdrawal and removal from the Interconnection Study Cycle and has elected to pursue Dispute Resolution, the Interconnection Customer's Interconnection Request will not be considered in any ongoing Interconnection Study during the Dispute Resolution process.

If the Interconnection Customer withdraws its Interconnection Request or is deemed withdrawn by the CAISO under Section 3.8 of this RIS, the CAISO will (i) update the interconnection queue on the CAISO Website; (ii) impose the Withdrawal Penalty described in Section 3.8.1 of this RIS; and (iii) refund to the Interconnection Customer any portion of the refundable portion of Interconnection Customer's study deposit that exceeds the costs that the CAISO has incurred, including interest calculated in accordance with Section 35.19a(a)(2) of FERC's regulations. The CAISO will also refund any portion of the Commercial Readiness Deposit not applied to the Withdrawal Penalty and, if applicable, the deposit in lieu of site control.

In the event of such withdrawal, the CAISO, subject to the provisions of Sections 15.1 and 3.5.1.1, shall provide, at the Interconnection Customer's request, all information that the CAISO developed for any completed study conducted up to the date of withdrawal of the Interconnection Request.

### 3.8.1 Withdrawal Penalty

The Interconnection Customer will be subject to a Withdrawal Penalty if it withdraws its Interconnection Request or is deemed withdrawn, or the Generating Facility does not otherwise reach Commercial Operation unless: (1) the withdrawal does not have a material impact on the cost or timing of any Interconnection Request in the same Cluster; (2) Interconnection Customer withdraws after receiving Interconnection Customer's most recent Cluster Restudy Report and the Network Upgrade costs assigned to the Interconnection Request identified in that report have increased by more than twenty-five percent (25%) compared to costs identified in Interconnection Customer's preceding Cluster Study Report or Cluster Restudy Report; or (3) Interconnection Customer withdraws after receiving Interconnection Customer's Interconnection Facilities Study Report and the Network Upgrade costs assigned to the Interconnection Request identified in that report have increased by more than one hundred percent (100%) compared to costs identified in the Cluster Study Report or Cluster Restudy Report.

#### 3.8.1.1 Calculation of the Withdrawal Penalty

If the Interconnection Customer withdraws its Interconnection Request or is deemed withdrawn prior to the commencement of the initial Cluster Study, Interconnection Customer will not be subject to a Withdrawal Penalty. If Interconnection Customer withdraws, is deemed withdrawn, or otherwise does not reach Commercial Operation at any point after the commencement of the initial Cluster Study, that Interconnection Customer's Withdrawal Penalty will be the greater of: (1) the Interconnection Customer's study deposit required under Section 3.5.1.1 of this RIS; or (2) as follows in (a)–(d):

(a) If Interconnection Customer withdraws or is deemed withdrawn during the Cluster Study or after receipt of a Cluster Study Report, but prior to commencement of the Cluster Restudy or Interconnection Facilities Study if no Cluster Restudy is required, Interconnection Customer will be charged two (2) times its actual allocated cost of all studies performed for Interconnection Customers in the Cluster.

(b) If Interconnection Customer withdraws or is deemed withdrawn during the Cluster Restudy or after receipt of any applicable restudy reports issued pursuant to Section 7.4 of this RIS, but prior to commencement of the Interconnection Facilities Study, Interconnection Customer will be charged five percent (5%) of its estimated Network Upgrade costs.

(c) If Interconnection Customer withdraws or is deemed withdrawn during the Interconnection Facilities Study, after receipt of the Interconnection Facilities Study Report issued pursuant to Section 8.5 of this RIS, or after receipt of the draft GIA but before Interconnection Customer has executed a GIA or has requested that its GIA be filed unexecuted, and has satisfied the other requirements described in Section 13.3 of this RIS (i.e., Site Control demonstration, GIA Deposit, reasonable evidence of one or more milestones in the development of the Generating Facility), Interconnection Customer will be charged ten percent (10%) of its estimated Network Upgrade costs.

(d) If Interconnection Customer has executed a GIA or has requested that its GIA be filed unexecuted and has satisfied the other requirements described in Section 13.3 of this RIS (i.e., Site Control demonstration, GIA Deposit, reasonable evidence of one or more milestones in the development of the Generating Facility) and subsequently withdraws its Interconnection Request or if Interconnection Customer's Generating Facility otherwise does not reach Commercial Operation, that Interconnection Customer's Withdrawal Penalty will be twenty percent (20%) of its estimated Network Upgrade costs.

### 3.8.2 Notification to CAISO and Accounting by Applicable Participating TO(s).

The applicable Participating TO(s) shall notify the CAISO within one (1) Business Day of liquidating any deposit. Within twenty (20) calendar days of any liquidating event, the applicable Participating TO(s) shall provide the CAISO and Interconnection Customer with an accounting of the disposition of the proceeds of the liquidated deposit and remit to the CAISO all proceeds not otherwise reimbursed to the Interconnection Customer or applied to costs incurred or irrevocably committed by the applicable Participating TO(s) on behalf of the Interconnection Customer in accordance with this Section.

All Withdrawal Penalties remitted to the CAISO in accordance with this Section, and funds that are received by the CAISO from a Participating TO pursuant to a requirement in the Participating TO's wholesale distribution tariff for such funds to be distributed by the CAISO, shall be treated in accordance with Section 7.6.

## 3.9 Transferability of Interconnection Request

An Interconnection Customer may transfer its Interconnection Request to another entity only if such entity acquires the specific Generating Facility identified in the Interconnection Request and the Point of Interconnection does not change.

## 3.10 Emergency Interconnection Process

The CAISO and Participating TO(s) may conduct expedited studies to approve emergency interconnections when all of the following conditions are satisfied:

(a) The State of California Governor declared an emergency that requires capacity on an expedited basis;

(b) The CPUC, the CEC, or a California agency specifically identified the interconnection as needed to respond to the State of California Governor's emergency declaration;

(c) The interconnection would not have a negative impact on the cost or timing of any existing Interconnection Request unless the impacted Interconnection Request belongs to the same developer and the developer consents to the impact;

(d) The interconnection does not require Network Upgrades above $1 million. The CAISO will publish an annual inflation factor and adjusted amount for this figure with the per unit cost publication on the CAISO Website pursuant to Section 6.4 of this RIS;

(e) The Reliability Network Upgrades required will be constructed in fewer than six (6) months;

(f) The GIA or amendment for the emergency interconnection will expressly terminate the interconnection for the emergency capacity within three (3) years of the Commercial Operation Date of the emergency capacity. The Interconnection Customer may obtain standard Interconnection Service for the emergency capacity by submitting a subsequent Interconnection Request pursuant to Sections 3.5 or 5.1 of this RIS and supplanting the emergency GIA or amendment;

(g) The emergency interconnection will be ineligible for Delivery Network Upgrades or TP Deliverability except Interim Deliverability, or until it can obtain TP Deliverability by submitting a subsequent Interconnection Request pursuant to Sections 3.5 or 5.1 of this RIS;

(h) The emergency interconnection will not impact Affected Systems; and

(i) The expedited studies confirm the interconnection may mitigate the emergency.

The Interconnection Customer will provide the CAISO a $50,000 deposit and all necessary technical information to assess the interconnection. The Interconnection Customer will be responsible for the actual costs incurred by the CAISO and applicable Participating TO(s) in conducting the assessment. If the actual costs of the assessment are less than the deposit provided by the Interconnection Customer, the Interconnection Customer will be refunded the balance. If the actual costs of the assessment are greater than the deposit provided by the Interconnection Customer, the Interconnection Customer shall pay the balance within 30 days of being invoiced. The CAISO shall coordinate the assessment with the Participating TO(s). The Participating TO(s) shall invoice the CAISO for any assessment work within seventy-five (75) calendar days of completion of the assessment, and, within thirty (30) days thereafter, the CAISO shall issue an invoice or refund to the Interconnection Customer, as applicable, based upon such submitted Participating TO invoices and the CAISO's own costs for the assessment.

The CAISO and Participating TO(s) will conduct all necessary studies, publish study results, and tender a draft GIA or amendment to the Interconnection Customer.

Notwithstanding any other provision, all refunds pursuant to this section will be processed in accordance with the CAISO's generally accepted accounting practices, including monthly batched deposit refund disbursements. Any CAISO deadline will be tolled to the extent the Interconnection Customer has not provided the CAISO with the appropriate documents to facilitate the Interconnection Customer's refund, or if the Interconnection Customer has any outstanding invoice balance due to the CAISO on another project owned by the same Interconnection Customer.

### 3.11 Penalties for Failure to Meet Study Deadlines

(1) The interconnecting Participating TO will be subject to a penalty if it fails to complete a Cluster Study, Cluster Restudy, Interconnection Facilities Study, or Affected Systems Study by the applicable deadline set forth in this RIS. The Participating TO must pay the penalty for each late Cluster Study, Cluster Restudy, and Interconnection Facilities Study on a *pro rata* basis per Interconnection Request to all Interconnection Customer(s) included in the relevant study that did not withdraw, or were not deemed withdrawn, from the CAISO's interconnection queue before the missed study deadline. The Participating TO must pay the penalty for a late Affected Systems Study on a *pro rata* basis per interconnection request to all Affected System Interconnection Customer(s) included in the relevant Affected System Study that did not withdraw, or were not deemed withdrawn, from the host transmission provider's interconnection queue before the missed study deadline. The study delay penalty for each late study will be distributed no later than forty-five (45) calendar days after the late study has been completed.

(2) For penalties assessed in accordance with this Section, the penalty amount will be equal to: $1,000 per Business Day for delays of Cluster Studies beyond the applicable deadline set forth in this RIS; $2,000 per Business Day for delays of the Cluster Restudy beyond the applicable deadline set forth in this RIS; $2,000 per Business Day for delays of Affected System Studies beyond the applicable deadline set forth in this RIS; and $2,500 per Business Day for delays of Interconnection Facilities Studies beyond the applicable deadline set forth in this RIS. The total amount of a penalty assessed under this Section will not exceed: (a) one hundred percent (100%) of the initial study deposit(s) received for all of the Interconnection Requests in the Cluster for Cluster Studies and Cluster Restudies; (b) one hundred percent (100%) of the initial study deposit received for the single Interconnection Request in the study for Facilities Studies; and (c) one hundred percent (100%) of the study deposit(s) that the CAISO collects for conducting the Affected System Study.

(3) The Participating TO may appeal to FERC any penalties imposed under this Section. Any such appeal must be filed no later than forty-five (45) calendar days after the late study has been completed. While an appeal to FERC is pending, the Participating TO will remain liable for the penalty, but need not distribute the penalty until forty-five (45) calendar days after (1) the deadline for filing a rehearing request has ended, if no requests for rehearing of the appeal have been filed, or (2) the date that any requests for rehearing of FERC's decision on the appeal are no longer pending before FERC. FERC may excuse the Participating TO from penalties under this Section for good cause.

(4) No penalty will be assessed under this Section where a study is delayed by ten (10) Business Days or less. If the study is delayed by more than ten (10) Business Days, the penalty amount will be calculated from the first Business Day the Participating TO misses the applicable study deadline.

(5) If (a) the CAISO and Participating TO need to extend the deadline for a particular study subject to penalties under this Section and (b) all Interconnection Customers or Affected System Interconnection Customers included in the relevant study mutually agree to such an extension, the deadline for that study will be extended thirty (30) Business Days from the original deadline. In such a scenario, no penalty will be assessed for the Participating TO missing the original deadline.

(6) No penalties will be assessed until the third Cluster Study cycle after the FERC-approved effective date of the CAISO's filing made in compliance with the Final Rule in Docket No. RM22-14-000.

(7) The CAISO must maintain on its Website summary statistics related to penalties assessed under this Section, updated quarterly. For each calendar quarter, the CAISO must calculate and post (1) the total amount of penalties assessed under this Section during the previous reporting quarter and (2) the highest penalty assessed under this Section paid to a single Interconnection Customer or Affected System Interconnection Customer during the previous reporting quarter.

The CAISO must post on its Website these penalty amounts for each calendar quarter within thirty (30) calendar days of the end of the calendar quarter. The CAISO must maintain the quarterly measures posted on its Website for three (3) calendar years with the first required posting to be the third Cluster Study cycle under paragraph (6). Each Participating TO will notify the CAISO of its penalties to enable the CAISO to comply with this paragraph (7).

**Section 4 Cluster Study Criteria**

Only those Interconnection Requests that meet the criteria in this Section 4 will proceed to the Cluster Study. Any Interconnection Requests that do not meet the criteria or otherwise fail to comply with this Section 4 will be deemed withdrawn without the cure period provided under Section 3.8 of this RIS by the CAISO, the application fee will be forfeited to the CAISO, and the CAISO will return the Interconnection Study Deposit to the Interconnection Customer.

Each Interconnection Request can proceed to the Cluster Study based on one set of criteria only: the criteria for Deliverability in Deliverable Zones, Deliverability in Merchant Zones, Energy Only eligible for cash reimbursement, or Energy Only ineligible for cash reimbursement. Interconnection Requests seeking any Deliverability for any technology or Generating Unit at the Generating Facility will be subject to the criteria for Interconnection Requests for Deliverability. Interconnection Customers may not change their selected criteria after the Cluster Application Window.

Interconnection Requests that proceed to the Cluster Study based on the criteria for Energy Only Interconnection Requests may not obtain Deliverability for that Generating Facility and any associated Generating Units thereafter, including without limitation through transfers, modifications, or the TP Deliverability allocation process. Expansions to Energy Only Generating Facilities may receive Deliverability if their Interconnection Requests proceed to the Cluster Study based on the criteria for Interconnection Requests seeking Deliverability.

All scoresheets, documentation, and bids submitted will be Confidential Information consistent with Section 15.1 of this RIS. Notwithstanding, the CAISO may confirm any information as necessary with Load Serving Entities, counterparties, or Local Regulatory Authorities. The CAISO will notify the Interconnection Customer which screen was decisive to its Interconnection Request. The CAISO may publish composite data but will not publish or disclose which criteria or screen enabled individual Interconnection Requests to proceed to the Cluster Study. The CAISO will publish on the CAISO Website the number of bids and the clearing price of all winning bids for each Transmission Zone, but will not publish the names of any Interconnection Customers in the auctions or their corresponding bids.

**4.1 Criteria for Requests for Deliverability in Deliverable Zones**

Interconnection Requests in Deliverable Zones seeking any Deliverability will proceed to the Cluster Study only where they pass the screens of this Section.

1) There must be Deliverability available at the Interconnection Customer's Point of Interconnection.
2) If other Interconnection Customers in the Cluster are interconnecting in the same Deliverable Zone, and pass step one, only Interconnection Customers comprising one hundred fifty percent (150%) of the available Deliverability at their relevant Transmission Constraint may proceed to the Cluster Study. Interconnection Customers' capacity relevant to the available Deliverability will be based on their requested amount of Deliverability.
3) If two or more Interconnection Customers would exceed the 150% limit, only the highest-scoring Interconnection Customers that reach the 150% limit proceed to the Cluster Study. The CAISO may exceed the 150% limit only for the capacity of the last Interconnection Request that qualifies to reach the limit but which also would exceed it.

To determine which Interconnection Customers proceed to the Cluster Study, the CAISO will score Interconnection Customers pursuant to Section 4.1.1 of this RIS.

4) If Interconnection Customers with the same scores would exceed the 150% limit, the CAISO will use those Interconnection Customers with the lowest distribution factors until it reaches the 150% limit. The distribution factor is the percentage of the Interconnection Customer's incremental increase in output that flows on a particular transmission line or transformer when the displaced generation is spread proportionally across all dispatched resources in the Balancing Authority Area.
5) If Interconnection Customers with the same scores and same distribution factors would together exceed the 150% limit, the CAISO will auction the right for those Interconnection Customers to be studied pursuant to Section 4.1.2 of this RIS.

### 4.1.1 Scoring Criteria

Each Interconnection Customer's score under Section 4.1 will be the sum of its points based on three criteria: (1) commercial interest (up to 30 points), (2) project viability (up to 35 points), and (3) system need (up to 35 points). The Interconnection Customer will submit a scoresheet providing its points in its Interconnection Request consistent with Section 3.5. Interconnection Customers will receive sub-points toward the points in the three criteria as follows:

1) An Interconnection Customer may receive up to 30 points for commercial interest based on its ratio of sub-points to 100. The Interconnection Customer's sub-points may consist of (a) Load Serving Entity point allocations (up to 100 sub-points) or a Load Serving Entity full allocation (100 sub-points); and (b) an affidavit from a counterparty that is not a Load Serving Entity (up to 25 sub-points). Points from multiple Load Serving Entities may be combined to achieve up to 100 sub-points. Interconnection Customers may not combine affidavits from multiple counterparties that are not Load Serving Entities, but may combine point allocations from Load Serving Entities with an affidavit from a counterparty that is not a Load Serving Entity.

   Load Serving Entities will provide the CAISO their point allocations consistent with Section 3.5. The Interconnection Customers will receive up to 100 sub-points in the commercial interest category based on the ratio of its requested Interconnection Service Capacity at the Point of Interconnection to the number of points allocated to it from the Load Serving Entity.

   If a Load Serving Entity lacks sufficient points to match the capacity of one project, or otherwise elects, it may indicate a full allocation to a project in lieu of allocating any of its points in that Cluster Application Window. A Load Serving Entity exercising this option can select one Interconnection Request only per Cluster Application Window, and the Interconnection Customer's Interconnection Service Capacity may not exceed the lesser of 500 MW or 50% of the Load Serving Entity's load according to the California Energy Commission's most recent coincident peak demand forecasts of Resource Adequacy load share. Multiple Load Serving Entities may elect to exercise this option jointly for a single Interconnection Request up to their aggregate maximum capacity under this provision. An Interconnection Request with a full allocation will receive 100 sub-points in the commercial interest category.

   Affidavits from non-Load Serving Entities must be executed by an authorized representative. The affidavit must attest the capacity of the Interconnection Request aligns with its individual needs; the counterparty and its holding company, if any, is not affiliated with the Interconnection Customer or its holding company; and that the counterparty and its holding company and affiliates support this Interconnection Request only, and no other Interconnection Requests in this Cluster Application Window.

2) An Interconnection Customer may receive up to 35 points for project viability based on its

ratio of sub-points to 100. The Interconnection Customer's sub-points may include up to 50 sub-points for an engineering design plan of the Generating Facility, and up to 50 sub-points for expanding a Generating Facility. The Interconnection Customers will receive up to 50 sub-points for an engineering design plan based on the percent the plan is complete, with each percentage complete comprising one sub-point, as represented in an affidavit attesting to the completeness by a professional engineer. An Interconnection Customer will receive 10 sub-points if it is an expansion of a Generating Facility that has executed a GIA and submitted its notice to proceed and commenced Construction Activities, as confirmed by the Participating TO. Alternatively, an Interconnection Customer will receive 20 sub-points if it is an expansion of an online Generating Facility. Alternatively, an Interconnection Customer will receive 50 sub-points if it is an expansion of a Generating Facility that has executed a GIA, submitted its notice to proceed, commenced Construction Activities, as confirmed by the Participating TO, or is online, and the Generating Facility's generator tie line to the CAISO Controlled Grid has sufficient surplus capacity to accommodate the sum of the maximum capacities of the extant Generating Facility and the expansion. Interconnection Customers seeking expansion sub-points must submit documentation to describe and verify the expansion with their scoresheets.

3) An Interconnection Customer may receive up to 35 points for system need based on its ratio of sub-points to 100. The Interconnection Customer will receive 50 sub-points if the Generating Facility could be a Local Capacity Area Resource when the Interconnection Request is submitted, and the CAISO has projected a Local Capacity Area Resource Deficiency in that Local Capacity Area. The Interconnection Customer will receive 100 sub-points if the Generating Facility is designated by a Local Regulatory Authority as a long lead-time resource; meets the requirements of the Local Regulatory Authority resource portfolio; and corresponds to approved Network Upgrades in the Transmission Plan specifically designed to meet the long lead-time resource needs of the Local Regulatory Authority, or does not require additional transmission capacity. The CAISO will confirm eligibility for these sub-points with the applicable Local Regulatory Authority.

#### 4.1.1.1 Load Serving Entity Points

To allocate commercial interest points to Interconnection Customers, a Load Serving Entity must do the following at least two months prior to the Cluster Application Window's opening:

1) Provide the CAISO written, electronic notice of intent to participate in the points allocation. The notice must include (a) the publicly accessible website used by the Load Serving Entity; and (b) the contact information for the person or department conducting the points allocation for the Load Serving Entity.
2) Publish on the publicly accessible website (a) the selection criteria or consideration factors for awarding points; and (b) the contact information for the person or department conducting the points allocation for the Load Serving Entity. Public websites requiring registration are permissible.

Within five (5) Business Days after the deadline for Load Serving Entities to provide their notices, the CAISO will publish on the CAISO Website the contact information, website, and points allocation for each participating Load Serving Entity. To determine available Deliverable Option commercial interest points for allocation, the CAISO will take the aggregate available MW of Deliverability in each Transmission Zone and multiply it by a scaling factor of 0.5. The CAISO will then allocate shares of points to each Load Serving Entity based upon on their relative load ratio shares in the most recent coincident peak demand forecast from the California Energy Commission. Load Serving Entities are not required to allocate all of their allocated points. The CAISO will not redistribute forgone or otherwise unused points to other Load Serving Entities.

For each Cluster Application Window, a Load Serving Entity may allocate points to the greater of

three (3) Interconnection Requests from Affiliates, or no more than twenty-five percent (25%) of its points to Interconnection Requests from Affiliates based on their requested Interconnection Service Capacity.

### 4.1.2 Auction Process

After the points assessment and distribution factor analysis, the CAISO will notify any still tied Interconnection Customers required to win an auction to be included in the Cluster Study. Those Interconnection Customers may submit a single, sealed bid of a $/MW value of aggregate Generating Facility Capacity at the Point of Interconnection, or withdraw. The CAISO will consider bids based on the dollar per MW bid value only, and not the product of the dollar value and the Generating Facility capacity. The CAISO will accept the highest bid(s) for the Cluster Study until it reaches the one hundred fifty percent (150%) limit.

Interconnection Customers that win an auction and proceed to the Cluster Study must post an auction deposit by the end of the Cluster Engagement Window. The auction deposit may be in any form or combination of forms under Section 11.1. The value of the auction deposit is the product of the dollar value of the lowest winning bid in that Transmission Zone and the MW capacity of the Interconnection Customer's own Generating Facility at the Point of Interconnection. The CAISO and Participating TO will release or refund with any interest the auction deposit when the Generating Facility achieves Commercial Operation. If an Interconnection Customer withdraws its Interconnection Request, or is deemed withdrawn, it will lose the following portion of the auction deposit:

a) Fifteen percent (15%) prior to the commencement of the Cluster Restudy, or if no Cluster Restudy for that Queue Cluster takes place, the Interconnection Facilities Study;
b) Thirty percent (30%) between commencement of the Cluster Restudy, or if no Cluster Restudy takes place then the end of the Cluster Study, and commencement of the Interconnection Facility Study;
c) Fifty percent (50%) between commencement of the Interconnection Facilities Study and execution or the filing of an unexecuted GIA for the Interconnection Customer;
d) One hundred percent (100%) after the Interconnection Customer executes a GIA or an unexecuted GIA is filed on its behalf.

The CAISO and Participating TO will process any non-refundable auction deposit funds pursuant to Section 7.6 of this RIS.

## 4.2 Criteria for Requests for Deliverability in Merchant Zones

Interconnection Requests in Merchant Zones seeking any Deliverability proceed to the Cluster Study but are subject to the Merchant Option, and may not receive any cash reimbursement under this RIS or the GIA for any costs for Area Delivery Network Upgrades, and instead may receive Merchant Transmission CRRs pursuant to Section 36.11 of the CAISO Tariff. For all other Network Upgrades, the Interconnection Customer may receive reimbursement as provided in this RIS and its GIA.

An Interconnection Customer that submits an Interconnection Requests seeking Deliverability in a Merchant Zone must include an additional Merchant Option deposit of $10,000/MW of all requested deliverable Generating Facility capacity, but not less than $500,000 or more than $5,000,000. The deposit may be in any form or combination of forms under Section 11.1. The Merchant Option deposit is fully refundable prior to the close of the Customer Engagement Window. After the Customer Engagement Window, fifty percent (50%) is non-refundable. Before the Cluster Restudy commences or if no Cluster Restudy for that Queue Cluster occurs, the Interconnection Faculties Study, the Interconnection Customer must raise its Merchant Option deposit to fifty percent (50%) of its Current Cost Responsibility for its assigned Area Delivery Network Upgrades, without minimum or limit.

If the Merchant Option Interconnection Customer's assigned Area Delivery Network Upgrade is approved in the CAISO's Transmission Plan before any Interconnection Customer sharing the Area Delivery Network Upgrade executes its GIA, such that the Area Delivery Network Upgrade was not in the Base Case for that Transmission Plan, the Interconnection Customer may reduce its Merchant Option deposit to remove the costs for that Area Delivery Network Upgrade. To retain TP Deliverability from that Area Delivery Network Upgrade, the Interconnection Customer must meet the TP Deliverability allocation criteria under Section 8.9.2 (A) or (B) no later than the affidavit submission deadline for the second TP Deliverability allocation process after the approved Transmission Plan publication. Failure to retain TP Deliverability under this rule will result in conversion to Energy Only.

### 4.3 Criteria for Energy Only Requests Eligible for Cash Reimbursement

Energy Only Interconnection Requests seeking eligibility for cash reimbursement for Reliability Network Upgrades may proceed to the Cluster Study only where they meet the requirements of this Section. Reimbursement will still be subject, without limitation, to Section 14.3.2 of this RIS. The Interconnection Request must be in a Transmission Zone where the Local Regulatory Authority has designated a specific MW quantity of Energy Only capacity for procurement.

The Interconnection Customer will submit all information for scoring required by Section 4.1. The CAISO will administer the same scoring and tiebreaking processes in Section 4.1 with the following exceptions:

a) the CAISO will only consider the Energy Only Interconnection Requests subject to this Section 4.3, excluding all other Interconnection Requests submitted in the Cluster Application Window;
b) the CAISO will solve for one hundred fifty percent (150%) of Local Regulatory Authority Energy Only MW procurement target in that Transmission Zone instead of one hundred fifty percent (150%) of the available Deliverability at their relevant Transmission Constraint;
c) Instead of the auction as final tiebreaker, the CAISO will include the remaining tied Interconnection Request(s) with the least Interconnection Service Capacity until it satisfies the one hundred fifty percent (150%) threshold; and
d) The CAISO will allocate points for Load Serving Entities to demonstrate commercial interest pursuant to Section 4.3.1.

Interconnection Requests exceeding the one hundred fifty percent (150%) limit and losing all applicable tiebreakers may elect to proceed to the Cluster Study subject to Section 4.4. Interconnection Customers must make this election within five (5) Business Days of being informed that the Interconnection Request is not eligible for study under this Section 4.3.

#### 4.3.1 Load Serving Entity Points

To allocate commercial interest points to Energy Only Interconnection Customers, Load Serving Entities must comply with all requirements in Section 4.1.1.1. To determine available commercial interest points for allocation, the CAISO will take the total aggregate MW of Energy Only capacity procurement in the most recent CAISO Transmission Plan, as informed by Local Regulatory Authorities. The CAISO will then allocate shares of points to each Load Serving Entity based upon on their relative load ratio shares in the most recent coincident peak demand forecast from the California Energy Commission. Load Serving Entities are not required to allocate all of their allocated points. The CAISO will not redistribute forgone or otherwise unused points to other Load Serving Entities.

For each Cluster Application Window, a Load Serving Entity may allocate points to the greater of

three (3) Interconnection Requests from Affiliates, or no more than twenty-five percent (25%) of its points to Interconnection Requests from Affiliates based on their requested Interconnection Service Capacity.

### 4.4 Criteria for Energy Only Requests Ineligible for Cash Reimbursement

In any Transmission Zone, Energy Only Interconnection Requests may proceed to the Cluster Study without meeting the requirements of Section 4.3 where they elect to forgo eligibility for cash reimbursement for Reliability Network Upgrades. Interconnection Customers electing to proceed to the Cluster Study under this option may receive Merchant Transmission CRRs pursuant to Section 36.11 of the CAISO Tariff.

## Section 5 Fast Track Process

### 5.1 Applicability and Initiation of Fast Track Process Request

Applicability to a proposed Generating Facility. An Interconnection Customer may request interconnection of a proposed Generating Facility to the CAISO Controlled Grid under the Fast Track Process if the Generating Facility is no larger than 5 MW and is requesting Energy-Only Deliverability Status and if the Interconnection Customer's proposed Generating Facility meets the codes, standards, and certification requirements of Appendices 9 and 10 of this RIS, or if the applicable Participating TO notifies the CAISO that it has reviewed the design for or tested the proposed Small Generating Facility and has determined that the proposed Generating Facility may interconnect consistent with Reliability Criteria and Good Utility Practice. Fast Track Interconnection Requests may not obtain Deliverability for that Generating Facility and any associated Generating Units thereafter, including without limitation through transfers, modifications, or the TP Deliverability allocation process.

Applicability to an existing Generating Facility. If the Interconnection of an existing Generating Facility meets the qualifications for Interconnection under CAISO Tariff Section 25.1(d) or (e) but, at the same time, the Interconnection Customer also seeks to repower or reconfigure the existing Generating Facility in a manner that increases the gross generating capacity by not more than 5 MW, then the Interconnection Customer may request that the Fast Track Process be applied with respect to the repowering or reconfiguration of the existing Generating Facility that results in the incremental increase in MW.

Initiating the Fast Track Interconnection Request. To initiate an Interconnection Request under the Fast Track Process, and have the Interconnection Request considered for validation the Interconnection Customer must provide the CAISO with:

(i) a completed Interconnection Request as set forth in Appendix 1;

(ii) a non-refundable processing fee of $500; and

(iii) a demonstration of Site Control. For the Fast Track Process, such demonstration may include documentation reasonably demonstrating a right to locate the Generating Facility on real estate or real property improvements owned, leased, or otherwise legally held by another.

The CAISO shall review and validate the Fast Track Process Interconnection Request pursuant to Section 5.2.

In the event of a conflict between this Section 5 and another provision of this RIS, Section 5 shall govern.

## 5.2 Initial Review

Within thirty (30) Calendar Days after the CAISO notifies the Interconnection Customer that the Interconnection Request is deemed complete, valid, and ready to be studied, the applicable Participating TO shall perform an initial review using the screens set forth in Section 5.2.1 below, and shall notify the Interconnection Customer of the results in a report that provides the details of and data underlying the Participating TO's determinations under the screens.

### 5.2.1 Screens

**5.2.1.1** The proposed Generating Facility's Point of Interconnection must be on the CAISO Controlled Grid.

**5.2.1.2** For interconnection of a proposed Generating Facility to a radial transmission circuit on the CAISO controlled grid, the aggregated generation on the circuit, including the proposed Generating Facility, shall not exceed 15 percent of the line section annual peak load as most recently measured at the substation. For purposes of this Section 5.2.1.2, a line section shall be considered as that portion of a Participating TO's electric system connected to a customer bounded by automatic sectionalizing devices or the end of the transmission line.

This screen will not be required for a proposed interconnection of a Generating Facility to a radial transmission circuit with no load.

In cases where the circuit lacks the telemetry needed to provide the annual peak load measurement data, the CAISO shall use power flow cases from the latest completed Queue Cluster studies to perform this screen.

**5.2.1.3** [Not Used]

**5.2.1.4** The proposed Generating Facility, in aggregate with other Generating Facilities on the transmission circuit, shall not contribute more than 10 percent to the transmission circuit's maximum fault current at the point on the high voltage (primary) level nearest the proposed point of change of ownership.

The CAISO shall use the short circuit study data from the latest completed Queue Cluster studies to test this screen.

**5.2.1.5** The proposed Generating Facility, in aggregate with other Generating Facilities on the transmission circuit, shall not cause any transmission protective devices and equipment (including, but not limited to, substation breakers, fuse cutouts, and line reclosers), or Interconnection Customer equipment on the system to exceed 87.5 percent of the short circuit interrupting capability; nor shall the interconnection be proposed for a circuit that already exceeds 87.5 percent of the short circuit interrupting capability.

The CAISO shall use the short circuit study data from the most recently completed Queue Cluster studies to test this screen.

**5.2.1.6** A Generating Facility will fail this initial review, but will be eligible for a supplemental review, if it proposes to interconnect in an area where there are known transient stability, voltage, or thermal limitations identified in the most recently completed Queue Cluster studies or transmission planning process.

**5.2.1.7** No construction of facilities by a Participating TO on its own system shall be

required to accommodate the proposed Generating Facility.

**5.2.2** If the proposed interconnection passes the screens, the Interconnection Request shall be approved. Within fifteen (15) Business Days thereafter, the Participating TO will provide the Interconnection Customer with a Small Generator Interconnection Agreement for execution.

**5.2.3** If the proposed interconnection fails the screens, but the CAISO and Participating TO determine that the Generating Facility may nevertheless be interconnected consistent with safety, reliability, and power quality standards under these procedures, the Participating TO shall, within fifteen (15) Business Days, provide the Interconnection Customer with a Small Generator Interconnection Agreement for execution

**5.2.4** If the proposed interconnection fails the screens and the CAISO and Participating TO do not or cannot determine from the initial review that the Generating Facility may nevertheless be interconnected consistent with safety, reliability, and power qualify standards unless the Interconnection Customer is willing to consider minor modifications or further study, the Participating TO shall provide the Interconnection Customer with the opportunity to attend a customer options meeting as described in Section 5.4.

## 5.3 [Not Used]

## 5.4 Customer Options Meeting

If the CAISO and Participating TO determine the Interconnection Request cannot be approved without (1) minor modifications at minimal cost; (2) a supplemental study or other additional studies or actions; or (3) incurring significant cost to address safety, reliability, or power quality problems, the CAISO and Participating TO shall notify the Interconnection Customer within five (5) Business Days of that determination and provide copies of all data and analyses underlying their conclusion. Within ten (10) Business Days of the CAISO and Participating TO's determination, the CAISO and Participating TO shall offer to convene a customer options meeting with the CAISO and Participating TO to review possible Interconnection Customer facility modifications or the screen analysis and related results, to determine what further steps are needed to permit the Generating Facility to be connected safely and reliably. At the time of notification of the CAISO and Participating TO's determination, or at the customer options meeting, the CAISO and Participating TO shall:

**5.4.1** Offer to perform facility modifications or modifications to the Participating TO's electric system (*e.g.*, changing meters, fuses, relay settings) and provide a non-binding good faith estimate of the limited cost to make such modifications to the Participating TO's electric system. If the Interconnection Customer agrees to pay for the modifications to the Participating TO's electric system, the Participating TO will provide the Interconnection Customer with an executable interconnection agreement within ten (10) Business Days of the customer options meeting; or

**5.4.2** Offer to perform a supplemental review in accordance with Section 5.5 and provide a non-binding good faith estimate of the costs of such review; or

**5.4.3** Offer to include the Interconnection Request in the next Queue Cluster Window, and the provision of the study deposit set forth in Section 3. Within fifteen (15) Business Days of the customer options meeting the Interconnection Customer shall provide the CAISO, in writing, with its election on how to proceed with its Interconnection Request. If the Interconnection Customer does not make an election within this time period, the CAISO will deem the Interconnection Request withdrawn.

## 5.5 Supplemental Review

**5.5.1** To accept the offer of a supplemental review, the Interconnection Customer shall agree in writing and submit a deposit for the estimated costs of the supplemental review in the amount of the good faith estimate determined by the CAISO and Participating TO, both within fifteen (15) Business Days of the offer, or elect one of the options set forth in Section 5.4.3.

**5.5.2** The Interconnection Customer may specify the order in which the CAISO and Participating TO will complete the screens in Section 5.5.4.

**5.5.3** The Interconnection Customer shall be responsible for the CAISO and Participating TO's actual costs for conducting the supplemental review. The Interconnection Customer must pay any review costs that exceed the deposit within twenty (20) Business Days of receipt of the invoice or resolution of any dispute. If the deposit exceeds the invoiced costs, the CAISO and Participating TO will return such excess, without interest, within twenty (20) Business Days of the invoice.

**5.5.4** Within thirty (30) Business Days following receipt of the deposit for a supplemental review, or some longer period agreed to by the Interconnection Customer, CAISO, and Participating TO, the CAISO and Participating TO shall (1) perform a supplemental review using the screens set forth below; (2) notify in writing the Interconnection Customer of the results; and (3) include with the notification copies of the analysis and data underlying the CAISO and Participating TO's determinations under the screens. Unless the Interconnection Customer provided instructions for how to respond to the failure of any of the supplemental review screens below at the time the Interconnection Customer accepted the offer of supplemental review, the CAISO and Participating TO shall notify the Interconnection Customer following the failure of any of the screens, or if they are unable to perform the screen in Section 5.5.4.1, within two (2) Business Days of making such determination to obtain the Interconnection Customer's permission to: (1) continue evaluating the proposed interconnection under this Section 5.5.4; (2) terminate the supplemental review and offer the Interconnection Customer the options set forth in Section 5.4.3; or (3) terminate the supplemental review upon withdrawal of the Interconnection Request by the Interconnection Customer.

In conducting these screens, the CAISO and Participating TO will use power flow or short circuit study data from the most recently completed Queue Cluster studies.

**5.5.4.1** Minimum Load Screen: Where 12 months of line section minimum load data (including onsite load but not station service load served by the proposed Generating Facility) are available, can be calculated, can be estimated from existing data, or determined from a power flow model, the aggregate Generating Facility capacity on the line section is less than 100 percent of the minimum load for all line sections bounded by automatic sectionalizing devices upstream of the proposed Generating Facility. If minimum load data is not available, or cannot be calculated, estimated or determined, the CAISO and Participating TO shall include the reason(s) that they are unable to calculate, estimate or determine minimum load in their supplemental review results notification under Section 5.5.4.

**5.5.4.1.1** The type of generation used by the proposed Generating Facility will be taken into account when calculating, estimating, or determining circuit or line section minimum load relevant for the application of screen 5.5.4.1. Solar photovoltaic (PV) generation systems with no battery storage use daytime minimum load (i.e. 10 a.m. to 4 p.m. for fixed panel systems and 8 a.m. to 6 p.m. for PV systems utilizing

tracking systems), while all other generation uses absolute minimum load.

**5.5.4.1.2** When this screen is being applied to a Generating Facility that serves some station service load, only the net injection into the Participating TO's electric system will be considered as part of the aggregate generation.

**5.5.4.1.3** The CAISO and Participating TO will not consider as part of the aggregate generation for purposes of this screen generating facility capacity known to be already reflected in the minimum load data.

**5.5.4.2** Voltage and Power Quality Screen: In aggregate with existing generation on the line section, the proposed Generating Facility shall not cause the violation of voltage standards, as set forth in the CAISO's Planning Standards, on any part of the CAISO Controlled Grid.

**5.5.4.3** Safety and Reliability Screen: The location of the proposed Generating Facility and the aggregate generation capacity on the line section do not create impacts to safety or reliability that cannot be adequately addressed without studying the Generating Facility in the Queue Cluster. The CAISO and Participating TO shall give due consideration to the following and other factors in determining potential impacts to safety and reliability in applying this screen.

**5.5.4.3.1** Whether the line section has significant minimum loading levels dominated by a small number of customers (e.g., several large commercial customers).

**5.5.4.3.2** Whether the loading along the line section uniform or even.

**5.5.4.3.3** Whether the proposed Generating Facility is located in close proximity to the substation (i.e., less than 2.5 electrical circuit miles), and whether the line section from the substation to the Point of Interconnection is a Mainline rated for normal and emergency ampacity. For purposes of this screen, a Mainline is the three-phase backbone of a circuit and will typically constitute lines with wire sizes of 4/0 American wire gauge, 336.4 kcmil, 397.5 kcmil, 477 kcmil and 795 kcmil.

**5.5.4.3.4** Whether the proposed Generating Facility incorporates a time delay function to prevent reconnection of the generator to the system until system voltage and frequency are within normal limits for a prescribed time.

**5.5.4.3.5** Whether operational flexibility is reduced by the proposed Generating Facility, such that transfer of the line section(s) of the Generating Facility to a neighboring circuit/substation may trigger overloads or voltage issues.

**5.5.4.3.6** Whether the proposed Generating Facility employs equipment or systems certified by a recognized standards organization to address technical issues such as, but not limited to, islanding, reverse power flow, or voltage quality.

**5.5.5** If the proposed interconnection passes the supplemental screens in Sections 5.5.4.1, 5.5.4.2, and 5.5.4.3 above, the Interconnection Request shall be approved and the

Participating TO will provide the Interconnection Customer with an executable interconnection agreement within the timeframes established in Sections 5.5.5.1 and 5.5.5.2 below. If the proposed interconnection fails any of the supplemental review screens and the Interconnection Customer does not withdraw its Interconnection Request, it shall be treated in accordance with Section 5.5.5.3 below.

**5.5.5.1** If the proposed interconnection passes the supplemental screens in Sections 5.5.4.1, 5.5.4.2, and 5.5.4.3 above and does not require construction of facilities by the Participating TO on its own system, the interconnection agreement shall be provided within ten (10) Business Days after the notification of the supplemental review results.

**5.5.5.2** If interconnection facilities or minor modifications to the Participating TO's system are required for the proposed interconnection to pass the supplemental screens in Sections 5.5.4.1, 5.5.4.2, and 5.5.4.3 above, and the Interconnection Customer agrees to pay for the modifications to the Participating TO's electric system, the interconnection agreement, along with a non-binding good faith estimate for the interconnection facilities and/or minor modifications, shall be provided to the Interconnection Customer within fifteen (15) Business Days after receiving written notification of the supplemental review results.

**5.5.5.3** If the proposed interconnection would require more than interconnection facilities or minor modifications to the Participating TO's system to pass the supplemental screens in Sections 5.5.4.1, 5.5.4.2, and 5.5.4.3 above, the CAISO and Participating TO shall notify the Interconnection Customer, at the same time they notify the Interconnection Customer with the supplemental review results, and offer the options set forth in Section 5.4.3 above. If the Interconnection Customer does not make an election within fifteen (15) Business Days, the CAISO will deem the Interconnection Request withdrawn.

## Section 6 Cluster Study Process

### 6.1 Initial Activities Following the Close of the Cluster Application Window

#### 6.1.1 [Intentionally Omitted]

#### 6.1.2 Scoping Meeting

During the Customer Engagement Window, the CAISO will hold Scoping Meetings with all Interconnection Customers whose valid Interconnection Requests were received in that Cluster Application Window and satisfied the Cluster Study criteria in Section 4 of this RIS. Scoping Meetings will be segregated by Transmission Zone and Cluster Study criteria.

The purpose of the Cluster Study Scoping Meeting will be to discuss alternative interconnection options, to exchange information including any transmission data and earlier study evaluations that would reasonably be expected to impact such interconnection options, to discuss the Cluster Study materials posted to the CAISO Website pursuant to Section 3.5 and 3.6 of this RIS, if applicable, and to analyze such information. The CAISO and the Interconnection Customer(s) will bring to the meeting such technical data, including, but not limited to: (i) general facility loadings, (ii) general instability issues, (iii) general short circuit issues, (iv) general voltage issues, and (v) general reliability issues as may be reasonably required to accomplish the purpose of the meeting. The CAISO and the Interconnection Customer(s) also will bring to the meeting personnel and other resources as may be reasonably required to accomplish the purpose

of the meeting in the time allocated for the meeting. The duration of the meeting will be sufficient to accomplish its purpose. All Interconnection Customers must execute the non-disclosure agreement under Section 2.3 of this RIS prior to a group Cluster Study Scoping Meeting, which provides for confidentiality of identifying information or commercially sensitive information pertaining to any other Interconnection Customers.

### 6.1.3 Grouping Interconnection Requests

The CAISO will assign a Queue Position as follows: the Queue Position within the queue will be assigned based upon the date and time of receipt of all items required pursuant to the provisions of Section 3.5 of this RIS. All Interconnection Requests submitted and validated in a single Cluster Application Window will be considered equally queued.

A higher Queue Position assigned to an Interconnection Request is one that has been placed "earlier" in the queue in relation to another Interconnection Request that is assigned a lower Queue Position. All requests studied in a single Cluster will be considered equally queued. Interconnection Customers that are part of Clusters initiated earlier in time than an instant queue will be considered to have a higher Queue Position than Interconnection Customers that are part of Clusters initiated later than an instant queue.

Interconnection Studies performed within the Cluster Study Process will be conducted in such a manner to ensure the efficient implementation of the applicable regional transmission expansion plan in light of the transmission system's capabilities at the time of each study and consistent with Good Utility Practice.

At the CAISO's option, and in coordination with the applicable Participating TO(s), Interconnection Requests received during the Cluster Application Window for a particular year may be studied in subgroups for the purpose of conducting one or more of the analyses forming the Interconnection Studies. For each Interconnection Study within an Interconnection Study Cycle, the CAISO may develop one or more subgroups. A subgroup will include, at the CAISO's sole judgment after coordination with the applicable Participating TO(s), Interconnection Requests that electrically affect one another with respect to the analysis being performed and the annual Transmission Plan, without regard to the nature of the underlying Interconnection Service. The CAISO may also, in its sole judgment after coordination with the applicable Participating TO(s), conduct an Interconnection Study for an Interconnection Request separately to the extent warranted by Good Utility Practice based upon the electrical remoteness of the proposed Generating Facility from other Generating Facilities with Interconnection Requests in the Cluster Application Window for a particular year. In all instances in which the CAISO elects to use subgroups in the Cluster Study Process, the CAISO must publish the criteria used to define and determine the subgroups on the CAISO Website.

An Interconnection Request's inclusion in a subgroup will not relieve the CAISO or Participating TO(s) from meeting the timelines for conducting the Cluster Study provided in the RIS. Subgroups will be studied in such a manner to ensure the efficient implementation of the annual CAISO Transmission Plan in light of the transmission system's capabilities at the time of each study.

## 6.2. Scope and Purpose of Cluster Study

The Cluster Study will:

(i) evaluate the impact of all Interconnection Requests received during the Cluster

Application Window for a particular year on the CAISO Controlled Grid;

(ii) identify all LDNUs and RNUs needed to address the impacts on the CAISO Controlled Grid of the Interconnection Requests, as Assigned Network Upgrades or Conditionally Assigned Network Upgrades;

(iii) preliminarily identify for each Interconnection Request required Interconnection Facilities;

(iv) assess the Point of Interconnection selected by each Interconnection Customer and potential alternatives to evaluate potential efficiencies in overall transmission upgrades costs;

(v) establish the estimated, non-binding Current Cost Responsibility, Maximum Cost Responsibility, and Maximum Cost Exposure for each Interconnection Request, until the issuance of the Interconnection Facilities Study report;

(vi) provide a cost estimate of ADNUs for each Generating Facility in a Queue Cluster Study;

(vii) identify controls required for each Interconnection Request where the Interconnection Customer requested Interconnection Service Capacity lower than the Generating Facility Capacity;

(viii) identify any Precursor Network Upgrades; and

(ix) identify RNUs as GRNUs or IRNUs.

The Cluster Study will consist of a short circuit analysis, a stability analysis to the extent the CAISO and applicable Participating TO(s) reasonably expect transient or voltage stability concerns, a power flow analysis, including off-peak analysis, and an On-Peak Deliverability Assessment, for the purpose of identifying LDNUs and estimating the cost of ADNUs, as applicable.

The Cluster Study will state for each subgroup or Interconnection Request studied individually (i) the assumptions upon which it is based, (ii) the results of the analyses, and (iii) the requirements or potential impediments to providing the requested Interconnection Service to all Interconnection Requests in a subgroup or to the Interconnection Request studied individually.

The Cluster Study will provide, without regard to the requested Commercial Operation Dates of the Interconnection Requests, a list of RNUs, and LDNUs to the CAISO Controlled Grid that are preliminarily identified as Assigned Network Upgrades or Conditionally Assigned Network Upgrades required as a result of the Interconnection Requests in a subgroup or as a result of any Interconnection Request studied individually and Participating TO's Interconnection Facilities associated with each Interconnection Request, the estimated costs of ADNUs, if applicable, and an estimate of any other financial impacts (i.e., on Local Furnishing Bonds). For purposes of determining necessary Interconnection Facilities and Network Upgrades, the Cluster Study will consider the level of Interconnection Service Capacity requested by the Interconnection Customer, unless otherwise required to study the full Generating Facility Capacity due to safety or reliability concerns.

For purposes of determining necessary Interconnection Facilities and Network Upgrades, the Cluster Study will use operating assumptions (*i.e.*, whether the interconnecting Generating Facility will or will not charge at peak load) that reflect the proposed charging behavior of a Generating Facility that includes at least one electric storage resource as requested by the Interconnection Customer, unless the CAISO determines that Good Utility Practice, including Applicable Reliability Standards, otherwise requires the use of different operating assumptions. The CAISO may require the inclusion of control technologies sufficient to limit the operation of the

Generating Facility per the operating assumptions as set forth in the Interconnection Request and to respond to dispatch instructions by the CAISO. As determined by the CAISO, the Interconnection Customer may be subject to testing and validation of those control technologies consistent with Article 6 of the LGIA and Article 2 of the SGIA.

The Cluster Study will evaluate the use of static synchronous compensators, static VAR compensators, advanced power flow control devices, transmission switching, synchronous condensers, voltage source converters, advanced conductors, and tower lifting. The CAISO and Participating TO will evaluate each identified alternative transmission technology and determine whether the above technologies should be used, consistent with Good Utility Practice, Applicable Reliability Standards, and Applicable Laws and Regulations. The CAISO and Participating TO will include an explanation of the results of the evaluation for each technology in the Cluster Study Report.

## 6.3 Identification of and Cost Allocation for Network Upgrades

### 6.3.1 Reliability Network Upgrades (RNUs).

The CAISO, in coordination with the applicable Participating TO(s), will perform short circuit and stability analyses for each Interconnection Request either individually or as part of a subgroup to preliminarily identify the RNUs needed to interconnect the Generating Facilities to the CAISO Controlled Grid. The CAISO, in coordination with the applicable Participating TO(s), shall also perform power flow analyses, under a variety of system conditions, for each Interconnection Request either individually or as part of a subgroup to identify Reliability Criteria violations, including applicable thermal overloads, that must be mitigated by RNUs.

The cost of all RNUs identified in the Cluster Study shall be estimated in accordance with Section 6.4. The estimated costs of short circuit related GRNUs identified through a subgroup shall be assigned to all Interconnection Requests in that subgroup pro rata on the basis of the short circuit duty contribution of each Generating Facility. The estimated costs of all other GRNUs identified through a subgroup shall be assigned to all Interconnection Requests in that subgroup pro rata on the basis of the maximum megawatt electrical output of each proposed new Generating Facility or the amount of megawatt increase in the generating capacity of each existing Generating Facility as listed by the Interconnection Customer in its Interconnection Request. The estimated costs of RNUs identified as a result of an Interconnection Request studied separately shall be assigned solely to that Interconnection Request. The CAISO will allocate assigned IRNU costs proportional to the number of Interconnection Requests that have been assigned the IRNU in the current Queue Cluster. The Current Cost Responsibility will reflect the allocated costs of IRNUs.

The Interconnection Customer's Maximum Cost Responsibility will include the full cost of Assigned Network Upgrades that are Interconnection Reliability Network Upgrades until another Interconnection Customer in the same Queue Cluster provides its payment under Article 5.6.4 of the GIA for the assigned Interconnection Reliability Network Upgrade, in which case the CAISO will reduce the Interconnection Customer's Maximum Cost Responsibility to its allocated share.

### 6.3.2 Delivery Network Upgrades.

The Cluster Study will identify ADNUs for Interconnection Customers in Merchant Zones that have selected the Merchant Option. The Base Cases will include Deliverable Option Generating Facilities in the current Interconnection Study Cycle and earlier queued Generating Facilities that will utilize TP Deliverability in a total amount that fully utilizes but does not exceed the available

TP Deliverability. The CAISO will reserve TP Deliverability for those Merchant Option Interconnection Customers that triggered and finance ADNUs.

If the MW capacity of the Deliverable Option Generating Facilities and earlier queued Generating Facilities utilizing TP Deliverability in an area is less than or equal to the total TP Deliverability in any electrical area, the Base Case will include all Deliverable Option and earlier queued Generating Facilities in the electrical area.

If the MW capacity of the Deliverable Option Generating Facilities and earlier queued Generating Facilities utilizing TP Deliverability in an area exceeds the TP Deliverability in any electrical area, the Base Case will include a representative subset of Generating Facilities that fully utilizes but does not exceed the TP Deliverability.

After the CAISO has modeled the Deliverable Option Generating Facilities, the CAISO will add Merchant Option Generating Facilities to the Base Case. ADNUs that are identified as needed for each electrical area shall be assigned to Merchant Option Generating Facilities based upon their flow impacts.

The cost responsibility for Area Delivery Network Upgrades identified in the Cluster Study will be assigned to Interconnection Customers who have selected the Merchant Option Full Capacity or Partial Capacity Deliverability Status based on the flow impact of each such Generating Facility on each Area Delivery Network Upgrade as determined by the Generation distribution factor methodology set forth in the On-Peak Deliverability Assessment methodology.

**6.3.2.1 The On-Peak Deliverability Assessment.**

The CAISO, in coordination with the applicable Participating TO(s), shall perform On-Peak Deliverability Assessments for Interconnection Customers selecting Full Capacity or Partial Capacity Deliverability Status in their Interconnection Requests. The On-Peak Deliverability Assessment shall determine the Interconnection Customer's Generating Facility's ability to deliver its Energy to the CAISO Controlled Grid under peak load conditions, and identify preliminary Delivery Network Upgrades required to provide the Generating Facility with Full Capacity or Partial Capacity Deliverability Status, accounting for Generating Facilities that include at least one electric storage resource that request to use, and for which the CAISO approves, operating assumptions pursuant to Section 3.1. The Deliverability Assessment will consist of two rounds, the first of which will identify any transmission constraints that limit the Deliverability of the Generating Facilities in the Cluster Study and will identify LDNUs to relieve the local constraints, and second of which will determine ADNUs to relieve the area constraints. The On-Peak Deliverability Assessment does not convey any right to deliver electricity to any specific customer or Delivery Point, nor guarantee any level of deliverability, or transmission capacity, or avoided curtailment.

**6.3.2.1.1 Local Delivery Network Upgrades**

The On-Peak Deliverability Assessment will be used to establish the Maximum Cost Responsibility and Maximum Cost Exposure for LDNUs for each Interconnection Customer selecting Full Capacity or Partial Capacity Deliverability Status. Deliverability of a new Generating Facility will be assessed on the same basis as all existing resources interconnected to the CAISO Controlled Grid.

The methodology for the On-Peak Deliverability Assessment will be published on the CAISO Website or, when effective, included

in a CAISO Business Practice Manual. The On-Peak Deliverability Assessment does not convey any right to deliver electricity to any specific customer or Delivery Point.

The cost of LDNUs identified in the On-Peak Deliverability Assessment as part of a Cluster Study shall be estimated in accordance with Section 6.4. The estimated costs of Delivery Network Upgrades identified in the On-Peak Deliverability Assessment shall be assigned to all Interconnection Requests selecting Full Capacity or Partial Capacity Deliverability Status based on the flow impact of each such Generating Facility on the Delivery Network Upgrades as determined by the Generation distribution factor methodology set forth in the On-Peak Deliverability Assessment methodology.

**6.3.2.1.2 Area Delivery Network Upgrades**

The On-Peak Deliverability Assessment will be used in the Cluster Study to identify those facilities necessary to provide the incremental Deliverability between the level of TP Deliverability and such additional amount of Deliverability as is necessary for the MW capacity amount of generation targeted in the Cluster Study. Based on such facility cost estimates, the CAISO will calculate a rate for ADNU costs equal to the facility cost estimate divided by the additional amount of Deliverability targeted in the study. The Cluster Study will provide a cost estimate for each Interconnection Customer which equals the rate multiplied by the requested deliverable MW capacity of the Generating Facility in the Interconnection Request.

**6.3.2.1.3 [Intentionally Omitted]**

**6.3.2.2 [Not Used]**

**6.3.2.3 [Not Used]**

### 6.3.3 Interconnection Facilities

The costs of any needed Interconnection Facilities identified in the Cluster Study Process will be directly assigned to the Interconnection Customer(s) using such facilities. Where Interconnection Customers in the Cluster agree to share Interconnection Facilities, the cost of such Interconnection Facilities shall be allocated based on the number of Generating Facilities sharing use of such Interconnection Facilities on a per capita basis (i.e., on a per Generating Facility basis), unless Parties mutually agree to a different cost sharing arrangement.

## 6.4 Use of Per Unit Costs to Estimate Network Upgrade and PTO Interconnection Facilities Costs

Each Participating TO, under the direction of the CAISO, shall publish per unit costs for facilities generally required to interconnect Generation to their respective systems.

These per unit costs shall reflect the anticipated cost of procuring and installing such facilities during the current Interconnection Study Cycle, and may vary among Participating TOs and within a Participating TO Service Territory based on geographic and other cost input differences, and should include an annual adjustment for the following ten (10) years to account for the anticipated timing of procurement to accommodate a potential range of Commercial Operation Dates of

Interconnection Requests in the Interconnection Study Cycle. The per unit costs will be used to develop the cost of Network Upgrades and Participating TO's Interconnection Facilities. Deviations from a Participating TO's benchmark per unit costs will be permitted if a reasonable explanation for the deviation is provided and there is no undue discrimination.

Prior to adoption and publication of final per unit costs for use in the Interconnection Study Cycle, the CAISO shall publish to the CAISO Website draft per unit costs, including non-confidential information regarding the bases therefore, hold a stakeholder meeting to address the draft per unit costs, and permit stakeholders to provide comments on the draft per unit costs. A schedule for the release and review of per unit costs is set forth in Appendix 5.

### 6.5 Assigned and Contingent Facilities

The CAISO and Participating TO will provide, upon request of the Interconnection Customer, its estimated Interconnection Facility and/or Network Upgrade costs and estimated in-service completion time of each Assigned Network Upgrade, Conditionally Assigned Network Upgrade, or Precursor Network Upgrade when this information is readily available and not commercially sensitive.

### 6.6 Cluster Study Procedures

The CAISO shall coordinate the Cluster Study with applicable Participating TO(s) pursuant to Section 3.2 and any Affected System that is affected by the Interconnection Request pursuant to Section 3.7. Existing studies shall be used to the extent practicable when conducting the Cluster Study. The CAISO will coordinate Base Case development with the applicable Participating TOs to ensure the Base Cases are accurately developed. The CAISO will complete and issue to Interconnection Customers the Cluster Study report within one hundred and fifty (150) days after the close of the Customer Engagement Window; however, the Cluster Study may be completed prior to this maximum time where practicable based on factors, including, but not limited to, the number of Interconnection Requests in the Cluster Application Window, study complexity, and reasonable availability of subcontractors as provided under Section 15.2. The CAISO will share applicable study results with the applicable Participating TO(s) for review and comment and will incorporate comments into the study report. The CAISO will issue a final Cluster Study report to the Interconnection Customer.

At any time the CAISO determines that it will not meet the required time frame for completing the Cluster Study due to the large number of Interconnection Requests in the associated Cluster Application Window, study complexity, or unavailability of subcontractors on a reasonable basis to perform the study in the required time frame, the CAISO shall notify the Interconnection Customers as to the schedule status of the Cluster Study and provide an estimated completion date with an explanation of the reasons why additional time is required.

Upon request, the CAISO shall provide the Interconnection Customer all supporting documentation, workpapers and relevant pre-Interconnection Request and post-Interconnection Request power flow, short circuit and stability databases for the Cluster Study, subject to confidentiality arrangements consistent with Section 15.1.

### 6.7 Cluster Study Report Meeting

Within ten (10) Business Days of simultaneously furnishing a Cluster Study Report to each Interconnection Customer within the Cluster and posting such report on the CAISO Website, the CAISO will convene a Cluster Study Report Meeting.

#### 6.7.1 [Not Used]

**6.7.2 Modifications.**

**6.7.2.1** During the course of the Interconnection Studies, the Interconnection Customer, Participating TO, or the CAISO may identify changes to the planned interconnection that may improve the costs and benefits (including reliability) of the interconnection, and the ability of the proposed change to accommodate the Interconnection Request. To the extent the identified changes are acceptable to the CAISO, the Participating TO, and the Interconnection Customer, such acceptance not to be unreasonably withheld, the CAISO will modify the Point of Interconnection.

**6.7.2.2** Prior to the end of the Customer Engagement Window, modifications permitted under this Section shall include specifically:

(a) a decrease in the electrical output (MW) of the proposed project; through either (1) a decrease in Generating Facility Capacity or (2) a decrease in Interconnection Service Capacity (consistent with the process described in Section 3.1) accomplished by CAISO-approved limiting equipment;

(b) modifying the technical parameters associated with the Generating Facility technology or the Generating Facility step-up transformer impedance characteristics;

(c) modifying the interconnection configuration;

(d) modifying the In-Service Date, Initial Synchronization Date, Trial Operation Date, and/or Commercial Operation Date that meets the criteria set forth in Section 3.5.1.4 and is acceptable to the applicable Participating TO(s) and the CAISO, such acceptance not to be unreasonably withheld; and

(e) Permissible Technological Advancements consistent with Section 6.7.2.4.

For plant increases, the incremental increase in plant output will go in the next Cluster Application Window for the purposes of cost allocation and study analysis. For any modification other than these, the Interconnection Customer must first request that the CAISO evaluate whether such modification is a Material Modification. The CAISO and Participating TO will study the addition of a Generating Facility that includes at least one electric storage resource using operating assumptions (*i.e.*, whether the interconnecting Generating Facility will or will not charge at peak load) that reflect the proposed charging behavior of the Generating Facility as requested by the Interconnection Customer, unless the CAISO and Participating TO determine that Good Utility Practice, including Applicable Reliability Standards, otherwise requires the use of different operating assumptions. In response to the Interconnection Customer's request, the CAISO, in coordination with the affected Participating TO(s) and, if applicable, any Affected System Operator, shall evaluate the proposed modifications prior to making them and the CAISO shall inform the Interconnection Customer in writing of whether the modifications would constitute a Material Modification. The CAISO may engage the services of the applicable Participating TO to assess the modification. Costs incurred by the Participating TO and CAISO (if any) shall be borne by the party making the request under Section 6.7.2, and such costs shall be included in any CAISO invoice for modification assessment activities. Any change to the Point of Interconnection, except for that specified by the CAISO in

an Interconnection Study or otherwise allowed under this Section, shall constitute a Material Modification. The Interconnection Customer may then withdraw the proposed modification or proceed with a new Interconnection Request for such modification.

Prior to the return of the executed Interconnection Facilities Study Agreement to the CAISO, the modifications permitted under this Section will include specifically:

(a) additional fifteen percent (15%) decrease of electrical output of the proposed project through either (1) a decrease in plant size (MW) or (2) a decrease in Interconnection Service level (consistent with the process described in Section 3.1) accomplished by applying the CAISO-approved injection-limiting equipment;

(b) Generating Facility technical parameters associated with modifications to Generating Facility technology and transformer impedances; provided, however, the incremental costs associated with those modifications are the responsibility of the requesting Interconnection Customer; and

(c) a Permissible Technological Advancement for the Generating Facility after the submission of the Interconnection Request. Section 6.7.2.4 specifies a separate technological change procedure including the requisite information and process that will be followed to assess whether the Interconnection Customer's proposed technological advancement under Section 6.7.2.2(c) is a Material Modification. Appendix A to the CAISO Tariff contains a definition of Permissible Technological Advancement.

If any Interconnection Customer requested modification after the Cluster Study report would change the scope, schedule, or cost of the Interconnection Facilities or Network Upgrades, the CAISO will issue a report to the Interconnection Customer. Potential adjustments to the Maximum Cost Responsibility or Maximum Cost Exposure for Network Upgrades for the Interconnection Customer will be determined in accordance with Section 7.4.3.

**6.7.2.3** The Interconnection Customer shall provide the CAISO a $30,000 deposit for the modification assessment at the time the request is submitted. Except as provided below, any modification assessment will be concluded, and a response provided to the Interconnection Customer in writing, within sixty (60) calendar days from the date the CAISO receives all of the following: the Interconnection Customer's written notice to modify the project, technical data required to assess the request, and payment of the $30,000 deposit. Any request for modification of the Interconnection Request must be accompanied by any resulting updates to the models described in Attachment A to Appendix 1 of this RIS. If the modification request results in a change to the Interconnection Facilities or Network Upgrades the modification assessment could take up to one hundred twenty (120) total calendar days. If the modification assessment cannot be completed within that time period, the CAISO shall notify the Interconnection Customer and provide an estimated completion date with an explanation of the reasons why additional time is required.

The Interconnection Customer will be responsible for the actual costs incurred by the CAISO and applicable Participating TO(s) in conducting the modification assessment. If the actual costs of the modification assessment are less than the deposit provided by the Interconnection Customer, the Interconnection Customer

will be refunded the balance. If the actual costs of the modification assessment are greater than the deposit provided by the Interconnection Customer, the Interconnection Customer shall pay the balance within thirty (30) days of being invoiced. The CAISO shall coordinate the modification request with the Participating TO(s). The Participating TO(s) shall invoice the CAISO for any assessment work within seventy-five (75) calendar days of completion of the assessment, and, within thirty (30) days thereafter, the CAISO shall issue an invoice or refund to the Interconnection Customer, as applicable, based upon such submitted Participating TO invoices and the CAISO's own costs for the assessment.

The CAISO will publish cost data regarding modification assessments in accordance with the terms set forth in a Business Practice Manual.

Notwithstanding any other provision, all refunds pursuant to this Appendix KK will be processed in accordance with the CAISO's generally accepted accounting practices, including monthly batched deposit refund disbursements. Any CAISO deadline will be tolled to the extent the Interconnection Customer has not provided the CAISO with the appropriate documents to facilitate the Interconnection Customer's refund, or if the Interconnection Customer has any outstanding invoice balance due to the CAISO on another project owned by the same Interconnection Customer.

**6.7.2.4** Interconnection Customers may request Permissible Technological Advancements. Permissible Technological Advancements may include, for example, removing equipment; aligning the Commercial Operation Date with an executed power purchase agreement; adding less than 5 MW of energy storage once without increasing the net output at the Point of Interconnection; and other changes that have little or no potential to affect other Interconnection Customers or Affected Systems, require a new Interconnection Request, or otherwise require a re-study or evaluation. The CAISO will update its Business Practice Manual to list any additional Permissible Technological Advancement approved but not specifically enumerated here when identified. The Interconnection Customer's written request to evaluate technological advancements must include the technical data required to assess the request.

For all Permissible Technological Advancement requests not expressly enumerated in this Section or the Business Practice Manual, the CAISO and Participating TO will determine whether such change would constitute a Material Modification. Such evaluation will include an analysis of the short circuit capability limits, steady-state thermal and voltage limits, or dynamic system stability, and impact on other Interconnection Customers. The CAISO will determine whether a Permissible Technological Advancement request is a Material Modification within thirty (30) calendar days of receipt of the request. Interconnection Customers requesting Permissible Technological Advancements must pay a non-refundable fee of $2,500.

**6.7.2.5** Notwithstanding any other provisions in this RIS or the Interconnection Customer's GIA, the Interconnection Customer may not modify its fuel type, including through the addition or replacement of Generating Units, by more than the greater of five percent (5%) of its capacity or 10 MW (but by no more than twenty-five percent (25%) of its capacity), where:

(a) the Interconnection Customer has exceeded seven (7) years from the date the CAISO received its Interconnection Request without achieving its Commercial Operation Date;

(b) the Interconnection Customer's current Commercial Operation Date exceeds seven (7) years from the date the CAISO received its Interconnection Request; or

(c) the change in fuel type will require the Interconnection Customer's Commercial Operation Date to exceed seven (7) years from the date the CAISO received its Interconnection Request.

The CAISO will not consider the addition of energy storage; changes to the type, number, or manufacturer of inverters; or insubstantial changes to the Generating Facility as fuel-type modifications. Interconnection Customers may request such modifications pursuant to this RIS.

**6.7.2.6** In addition to the options provided in this RIS, an Interconnection Customer may convert to Energy Only, Partial Capacity Deliverability Status, or a lower fraction of Partial Capacity Deliverability Status after the completion of its Interconnection Facilities Study. This conversion will become effective through the reassessment process described in Section 7.4. Interconnection Customers electing to convert to Energy Only after the completion of their Interconnection Facilities Studies will forgo eligibility for cash reimbursement for all Network Upgrades, but may receive Merchant Transmission CRRs pursuant to Section 36.11 of the CAISO Tariff. Except (i) as provided in Section 8.9.3.2 (ii) due to not receiving the requested TP Deliverability allocation, or (iii) due to declining a TP Deliverability allocation, Interconnection Customers that become Energy Only after their Interconnection Facilities Study may not reduce their cost responsibility for any assigned Delivery Network Upgrades as a result of converting to Energy Only unless the CAISO and Participating TO(s) determine that the Interconnection Customer's assigned Delivery Network Upgrade(s) is no longer needed for current Interconnection Customers.

**6.7.2.7** Interconnection Customers may request to downsize their Interconnection Service Capacity pursuant to Section 6.7.2.3. Interconnection Customers with Network Upgrades requesting to downsize will not see the impacts to their Network Upgrades or cost responsibility until the CAISO publishes the reassessment results that include the downsized capacity pursuant to Section 7.4 unless the CAISO can determine the impacts prior to the reassessment. Interconnection Customers with Network Upgrades must submit downsizing requests, including the $30,000 deposit, by May 30 to be included in the following annual reassessment. Once the CAISO publishes the reassessment results, the Participating TO will tender a draft amendment to the Interconnection Customer's Generator Interconnection Agreement to incorporate any required changes. If an Interconnection withdraws or is deemed withdrawn, any partial recovery of deposits or penalties will be calculated based on the Generating Facility's most recent MW capacity prior to its downsizing request.

A downsizing generator will continue to be obligated to finance the costs of (1) Network Upgrades that its Generating Facility previously triggered, and (2) Network Upgrades that are alternatives to the previously triggered Network Upgrades, if such previously triggered Network Upgrades or alternative Network Upgrades are needed by Interconnection Customers in the same Queue Cluster or later-queued Interconnection Customers, up to the Maximum Cost Exposure of the downsizing generator as determined by the CAISO Tariff interconnection study procedures applicable to the downsizing generator. For determining any changes to a downsizing generator's Network Upgrade cost responsibilities as a result of a reassessment process conducted pursuant to Section 7.4, the CAISO

will reallocate the costs of Network Upgrades that are still needed based on the downsizing generator's pre-downsizing share of the original cost allocation.

#### 6.7.2.8 Additional Generation

The Interconnection Customer may request, and the CAISO and Participating TO will evaluate, the addition to the Interconnection Request of a Generating Unit with the same Point of Interconnection indicated in the initial Interconnection Request, if the addition of the Generating Unit does not increase the requested Interconnection Service level. The CAISO and Participating TO must evaluate such modifications prior to deeming them a Material Modification, but only if the Interconnection Customer submits them prior to the return of the executed Interconnection Facilities Study Agreement by the Interconnection Customer to the CAISO. Interconnection Customers requesting that such a modification be evaluated must demonstrate the required Site Control at the time such request is made.

### 6.7.3 [Not Used]

### 6.7.4 Commercial Viability Criteria

The CAISO's agreement to modifications requested by the Interconnection Customer pursuant to Section 6.7.2.3 for a Generating Facility or Generating Unit with a Commercial Operation Date that has exceeded or will exceed seven (7) years from the date the Interconnection Request is received by the CAISO will be predicated upon the Interconnection Customer's ability to meet and maintain the following commercial viability criteria:

a) Providing proof of having, at a minimum, applied for the necessary governmental permits or authorizations, and that the permitting authority has deemed such documentation as data adequate for the authority to initiate its review process;

b) Providing proof of having an executed power purchase agreement. Power purchase agreements must have the Point of Interconnection, capacity, fuel type, technology, and site location in common with the Interconnection Customer and GIA;

c) Demonstrating Site Control for 100% of the property necessary to construct the facility through the Commercial Operation Date requested in the modification request. A Site Control Deposit does not satisfy this criterion;

d) Having an executed Generator Interconnection Agreement ("GIA"); and

e) Being in good standing with the GIA such that neither the Participating TO nor the CAISO has provided a Notice of Breach that has not been cured and the Interconnection Customer has not commenced sufficient curative actions.

The CAISO's agreement to an extension of the proposed Commercial Operation Date does not relieve the Interconnection Customer from compliance with this RIS or the GIA, including without limitation the criteria in Section 8.9.3 to retain TP Deliverability. The CAISO will not consider the addition of energy storage; changes to the type, number, or manufacturer of inverters; or insubstantial changes to the Generating Facility as modifications under this Section. Interconnection Customers may request such modifications pursuant to this RIS.

If an Interconnection Customer satisfies all the commercial viability criteria except criterion (b), the CAISO will postpone withdrawing the Generating Facility for one year from the day the Interconnection Customer submits the modification request, or eight years after the CAISO received the Interconnection Request, whichever occurs later. Interconnection Customers may exercise this provision only once. Interconnection Customers exercising this provision must continue to meet all other commercial viability criteria.

If an Interconnection Customer has declared Commercial Operation for a portion of a Generating Facility, or one or more Phases of a Phased Generating Facility, the CAISO will not withdraw the portion of the Generating Facility that is in service and operating in the CAISO Markets. Instead, the portion of the Generating Facility that has not been developed will be withdrawn.

Where the Generating Facility has multiple Resource IDs for the Generating Facility, each Resource ID will have its own Deliverability Status independent from the Generating Facility. Any individual Resource ID may have Full Capacity Deliverability Status where the Generating Facility as a whole would have Partial Capacity Deliverability Status. If the Generating Facility downsizes to the amount in service and operating in the CAISO Markets, it will be Full Capacity Deliverability Status.

#### 6.7.4.1 Annual Review

For Interconnection Customers extending their Commercial Operation Date beyond the seven-year threshold pursuant to Section 6.7.4, the CAISO will perform an annual review of commercial viability. If any Interconnection Customer fails to maintain its level of commercial viability, the CAISO will deem them withdrawn pursuant to Section 3.8. Interconnection Customers will not be subject to annual review requirements in any year the Participating TO unilaterally extends their Commercial Operation Date, but will resume compliance the following year.

### 6.7.5 Alignment with Power Purchase Agreements

An Interconnection Customer with an executed GIA and an executed power purchase agreement may request to automatically extend the GIA Commercial Operation Date to align with its power purchase agreement for that Generating Facility, including any extension or amendment. Interconnection Customers requesting alignment must (1) provide a copy of the power purchase agreement, and (2) confirm the power purchase agreement's standing and details in the annual TP Deliverability affidavit process. Requests to align the Commercial Operation Date with power purchase agreements are not exempt from the commercial viability criteria provisions in Section 6.7.4, where applicable.

## 6.8 Revisions and Addenda to Final Interconnection Study Reports

### 6.8.1 Substantial Revisions; Revised Study Report

Should the CAISO discover, through written comments submitted by an Interconnection Customer or otherwise, that a final Interconnection Study Report (which can mean a final Cluster Study report or Interconnection Facilities Study report) contains a substantial revision, the CAISO will cause a revised final report to be issued to the Interconnection Customer.

A substantial revision shall mean a revision that results in one or more of the following:

(i) an increase to the Interconnection Customer's Current Cost Responsibility, Maximum Cost Responsibility, Maximum Cost Exposure, and Participating TO Interconnection Facilities, as set by the Interconnection Facilities Study, by more than five (5) percent or one million dollars ($1,000,000), whichever is greater;

(ii) delay of the Commercial Operation Date, In-Service Date, or requested Deliverability Status by more than one year; or

(iii) termination of the Interconnection Customer's power purchase agreement by the counterparty.

The CAISO will include examples of how Interconnection Customers can demonstrate power purchase agreement terminations in the Business Practice Manual. The CAISO will confirm power purchase agreement terminations with the Interconnection Customer's counterparty.

A dispute over the plan of service by an Interconnection Customer shall not be considered a revision unless the Interconnection Customer demonstrates that the plan of service was based on an invalid or erroneous study assumption that meets the criteria set forth above. Changes to Interconnection Studies resulting from Interconnection Customer requests, including without limitation, modifications, suspensions, or failures to meet GIA milestones, are not considered revisions.

### 6.8.2 Other Revisions; Addendum

If a revision in an Interconnection Study report is not a substantial revision, the CAISO shall not issue a revised final Interconnection Study report. Rather, the CAISO shall document such revision and make any appropriate correction by issuing an addendum to the final report.

The CAISO and applicable Participating TO shall also incorporate, as needed, any corrected information pertinent to the terms or conditions of the GIA in the draft GIA provided to an Interconnection Customer pursuant to Section 13.

### 6.8.3 [Not Used]

### 6.8.4 Substantial Revisions Allowing Refunds

Notwithstanding Section 3.5.1, after the Interconnection Customer has posted its second Commercial Readiness Deposit, it is eligible for a one-hundred percent (100%) refund of its remaining, unspent Commercial Readiness Deposit and all remaining, unspent Study Deposit funds if:

(i) it receives a substantial revision; and

(ii) it withdraws its Interconnection Request within sixty (60) days of the publication of the revised Study Report or the termination of its power purchase agreement by the counterparty resulting from the substantial revision, as applicable.

## Section 7 Annual Reassessment, Cluster Restudy, and Activities in Preparation for the Interconnection Facilities Study

**7.1 [Not Used]**

**7.2 [Not Used]**

**7.3 [Not Used]**

**7.4 Reassessment Process**

The CAISO will perform a reassessment of the Base Case after each Cluster Study. The reassessment will evaluate the impacts on those Network Upgrades identified in previous interconnection studies and assumed in the Cluster Study of:

(a) Interconnection Request withdrawals occurring after the completion of the Interconnection Studies for the immediately preceding Queue Cluster;

(b) downsizing requests from Interconnection Customers pursuant to Section 6.7.2.3;

(c) the performance of earlier queued Interconnection Customers with executed GIAs with respect to required milestones and other obligations;

(d) changes in TP Deliverability allocations or Deliverability Status;

(e) the results of the TP Deliverability allocation from the prior Interconnection Study cycle; and,

(f) transmission additions and upgrades approved or removed in the most recent TPP cycle.

The CAISO will complete the annual reassessment, including the Cluster Restudy, within one hundred eighty (180) days of the Cluster Study Report Meeting.

**7.4.1 Cluster Study Restudy**

The CAISO will conduct the Cluster Study Restudy as part of the annual reassessment of the Base Case pursuant to Section 7.4.

(1) Within twenty (20) days after the Cluster Study Report Meeting, the Interconnection Customer must provide the following:

(a) Demonstration of continued Site Control pursuant to Section 3.5.1 of this RIS; and

(b) An additional deposit that brings the total Commercial Readiness Deposit submitted to the PTO to five percent (5%) of the Interconnection Customer's Network Upgrade cost assignment identified in the Cluster Study. The CAISO will refund the deposit to the Interconnection Customer upon withdrawal in accordance with Section 3.8 of this RIS.

The Interconnection Customer will promptly inform the CAISO of any material change to its demonstration of Site Control under Section 3.5.1 of this RIS. Upon the CAISO determining that Interconnection Customer no longer satisfies the Site Control requirement, the CAISO will notify Interconnection Customer. Within ten (10) Business Days of such notification, Interconnection Customer must demonstrate compliance with

the applicable requirement subject to the CAISO's approval, not to be unreasonably withheld. Absent such demonstration, the CAISO will deem the subject Interconnection Request withdrawn pursuant to Section 3.8 of this RIS.

(2) If no Interconnection Customer withdraws from the Cluster after completion of the Cluster Study or Cluster Restudy or is deemed withdrawn pursuant to Section 3.8 of this RIS after completion of the Cluster Study or Cluster Restudy, the CAISO will notify Interconnection Customers in the Cluster that a Cluster Restudy is not required.

(3) If one or more Interconnection Customers withdraw from the Cluster or are deemed withdrawn pursuant to Section 3.8 of this RIS, the CAISO will conduct a Cluster Restudy as part of the annual reassessment. If the CAISO determines a Cluster Restudy is not necessary, the CAISO will notify Interconnection Customers in the Cluster that a Cluster Restudy is not required and the CAISO will provide an updated Cluster Study Report within thirty (30) days of such determination.

(4) If one or more Interconnection Customers withdraws from the Cluster or is deemed withdrawn pursuant to Section 3.8 of this RIS, the CAISO will notify Interconnection Customers in the Cluster and post on the CAISO Website that a Cluster Restudy is required within thirty (30) days after the Cluster Study Report Meeting. The CAISO will continue with such restudies until the CAISO determines that no further restudies are required. If a Cluster Restudy is required due to a higher queued project withdrawing from the queue, or a modification of a higher or equally queued project, the CAISO will so notify affected Interconnection Customers in writing.

(5) The scope of any Cluster Restudy will be consistent with the scope of an initial Cluster Study pursuant to Section 6.2 of this RIS. The results of the Cluster Restudy will be combined into a single report (Cluster Restudy Report). The CAISO will hold a meeting with the Interconnection Customers in the Cluster (Cluster Restudy Report Meeting) within ten (10) Business Days of simultaneously furnishing the Cluster Restudy Report to each Interconnection Customer in the Cluster Restudy and publishing the Cluster Restudy Report on the CAISO Website.

If additional restudies are required, Interconnection Customer and the CAISO will follow the procedures of this Section 7.4 of this RIS until such time that the CAISO determines that no further restudies are required. The CAISO will notify each Interconnection Customer within the Cluster when no further restudies are required.

**7.4.2** Where, as a consequence of the reassessment, the CAISO determines that changes to the previously identified Network Upgrades in Queue Clusters earlier than the current Interconnection Study Cycle will cause changes to plans of service set out in executed GIAs, such changes will serve as a basis for amendments to GIAs.

**7.4.3** Such changes to plans of service in Queue Clusters earlier than the current Interconnection Study Cycle will also serve as the basis for potential adjustments to the Current Cost Responsibility, Maximum Cost Responsibility, and Maximum Cost Exposure, as applicable, for Network Upgrades for Interconnection Customers in such earlier Queue Clusters, as follows:

(i) An Interconnection Customer shall be eligible for an adjustment to its Maximum Cost Responsibility for Network Upgrades if a reassessment undertaken pursuant to this Section 7.4 reduces its estimated cost responsibility for Network Upgrades by at least twenty (20) percent and $1 million, as compared to its current Maximum Cost Responsibility for Network Upgrades based on its

Interconnection Studies or a previous reassessment.

The Maximum Cost Responsibility for an Interconnection Customer who meets this eligibility criterion will be the lesser of (a) its current Maximum Cost Responsibility and (b) 100 percent of the costs of all remaining Assigned Network Upgrades included in the Interconnection Customer's plan of service.

(ii) If an Interconnection Customer's Maximum Cost Responsibility for Network Upgrades is adjusted downward pursuant to (i) above, and a subsequent reassessment identifies a change on the CAISO's system that occurs after the completion of the Interconnection Customer's Interconnection Studies and requires additional or expanded Network Upgrades, resulting in an increase in the Interconnection Customer's estimated cost responsibility for Network Upgrades above the Maximum Cost Responsibility as adjusted based on the results of a prior reassessment, then the Interconnection Customer's Maximum Cost Responsibility for Network Upgrades will be the estimated cost responsibility determined in the subsequent reassessment, so long as this amount does not exceed the Maximum Cost Exposure established by the Interconnection Customer's Interconnection Facilities Study. In such cases, where the Current Cost Responsibility determined in the subsequent reassessment exceeds the Maximum Cost Responsibility as adjusted based on the results of a prior reassessment, the Interconnection Customer's Maximum Cost Responsibility for Network Upgrades shall not exceed the Maximum Cost Exposure established by its Interconnection Facilities Study. For Interconnection Customers with complete Phase II Interconnection Studies or Interconnection Facilities Studies, the CAISO will publish advisory, non-binding updates to those studies in the reassessment, and binding updates in the following Interconnection Facilities Study.

(iii) To the extent the CAISO determines that previously identified Conditionally Assigned Network Upgrades become Precursor Network Upgrades pursuant to Section 14.2.2, or are otherwise removed, the CAISO will adjust the Interconnection Customer's Maximum Cost Exposure, as applicable.

(iv) To the extent the CAISO determines that a Conditionally Assigned Network Upgrade becomes an Assigned Network Upgrade, the CAISO will adjust the Interconnection Customer's Current Cost Responsibility and Maximum Cost Responsibility, as applicable.

## 7.5 [Not Used]

## 7.6 Application of Withdrawal Penalties and Non-Refundable Amounts

In conjunction with each reassessment, the CAISO will calculate and disburse withdrawal penalties and non-refundable deposits from Interconnection Requests subject to this RIS as follows:

(a) Withdrawal Period

The CAISO shall calculate Withdrawal Penalties based on the period during which the interconnection customer withdrew its interconnection request or terminated its generator interconnection agreement, pursuant to Section 3.8.1.

For each withdrawal period, the CAISO shall calculate and disburse available Withdrawal

Penalties in conjunction with the annual reassessment performed during the year that the withdrawal period ends.

(b) Disbursement of Withdrawal Penalties Assessed Prior to Cluster Study Results

For any Withdrawal Penalties assessed pursuant to 3.8.1.1(a) and for an Interconnection Customer that withdraws or is deemed withdrawn during the Cluster Study but before the receipt of a Cluster Study Report, the CAISO will use such funds to offset the costs of the Cluster Restudy on an equal basis for all Interconnection Customers studied in the restudy.

(c) Calculation and Disbursement of Withdrawal Penalties for Still-Needed Network Upgrades At or Above $100,000 Threshold

For each interconnection customer that withdrew its interconnection request or terminated its generator interconnection agreement after the Cluster Study results, the CAISO shall calculate the proportion of the Withdrawal Penalty that is attributable to Network Upgrades that the CAISO determines will still be needed by remaining Interconnection Customers. For each such still-needed Network Upgrade, the CAISO will divide the Interconnection Customer's Current Cost Responsibility for the Network Upgrade by the Interconnection Customer's total Current Cost Responsibility for all Network Upgrades and multiply this result by the Interconnection Customer's total amount of Withdrawal Penalty.

If the amount of Withdrawal Penalty attributable to a still-needed Network Upgrade, for all Interconnection Customers that withdrew during the same withdrawal period, is equal to or greater than $100,000, then the portion of such amount held or received by the CAISO prior to the stage of the applicable annual reassessment in which the CAISO reallocates cost responsibility for remaining Network Upgrades shall: (a) be disbursed to the applicable Participating TO(s) as a contribution in aid of construction of the still-needed Network Upgrade, and (b) be reflected as a reduction in the cost of this Network Upgrade for purposes of reallocating the cost responsibility for this Network Upgrade. Any portions of such amounts that the CAISO receives after reallocating cost responsibility for remaining Network Upgrades during the applicable annual reassessment shall be disbursed by the CAISO in the same manner in a subsequent reassessment, based on the date of collection, unless the applicable Network Upgrade is no longer needed, in which case such amounts will be disbursed pursuant to Section 7.6(d).

If a Network Upgrade for which the CAISO disburses funds as a contribution in aid of construction under this Section 7.6(b) is determined, in a subsequent reassessment, to be no longer needed, such funds will be promptly returned to the CAISO by the applicable Participating TO and re-disbursed by the CAISO pursuant to Section 7.6(d).

(d) Calculation and Disbursement of Other Non-Refundable Security and Study Deposits

For each Interconnection Customer that withdrew its Interconnection Request or terminated its Generator Interconnection Agreement during a withdrawal period, any Withdrawal Penalty, as well as any non-refundable deposit not disbursed pursuant to subsection (b) above, shall be applied to offset Regional Transmission Revenue Requirements, as recovered through the CAISO's Transmission Access Charge, and to offset Local Transmission Revenue Requirements.

This offset shall be performed by first allocating these Withdrawal Penalties and non-refundable deposit amounts to the following three categories in proportion to the Interconnection Customer's most recent Current Cost Responsibility, prior to withdrawal or termination, for Network Upgrades whose costs would be recovered through each of

the following categories: (1) a Regional Transmission Revenue Requirement, (2) the Local Transmission Revenue Requirement of the Participating TO to which the interconnection customer had proposed to interconnect, and (3) the Local Transmission Revenue Requirement of any other Participating TO on whose system the interconnection customer was responsible for funding Network Upgrades recovered through a Local Transmission Revenue Requirement.

Each year, prior to the cutoff date for including annual regional TRBA adjustments in Regional Transmission Revenue Requirements, the CAISO will disburse to each Participating TO's Transmission Revenue Balancing Account: (a) a share of the total funds held or received by the CAISO from category (1) above in proportion to the ratio of each Participating TO's most recent Regional Transmission Revenue Requirement to the total of all Participating TOs' most recent Regional Transmission Revenue Requirements, and (b) all funds held or received by the CAISO in categories (2) and (3) applicable to that Participating TO.

(e) Disbursement of Funds by CAISO; Participating TO Responsibility for Collection

The CAISO shall disburse, in accordance with the rules set forth in this Section 7.6, only those amounts that it holds or has received. The applicable Participating TO shall have the exclusive obligation to administer the collection of any Withdrawal Penalty where the applicable Participating TO is a beneficiary. The applicable Participating TO has the responsibility to manage the financial security and to transmit to the CAISO the non-refundable amounts in cash or equivalent within seventy-five (75) days of the CAISO's submission to the Participating TO of the financial security liquidation form. This deadline can be modified by mutual agreement of the CAISO and applicable Participating TO.

## Section 8 Interconnection Facilities Study and TP Deliverability Allocation Processes

### 8.1 Interconnection Facilities Study

#### 8.1.1 Interconnection Facilities Study Agreement

Within five (5) Business Days following the CAISO's notifying each Interconnection Customer within the Cluster that no further Cluster Restudy is required (per Section 7.4), the CAISO will provide to Interconnection Customer an Interconnection Facilities Study Agreement in the form of Appendix B to this RIS. The Interconnection Customer will compensate the CAISO and Participating TO for the actual cost of the Interconnection Facilities Study. Within five (5) Business Days following the Cluster Report Meeting or Cluster Restudy Report Meeting if applicable, the CAISO will provide to Interconnection Customer a non-binding good faith estimate of the cost and timeframe for completing the Interconnection Facilities Study.

The Interconnection Customer will execute the Interconnection Facilities Study Agreement and deliver the executed Interconnection Facilities Study Agreement to the CAISO within thirty (30) days after its receipt, together with:

(1) any required technical data;

(2) Demonstration of one hundred percent (100%) Site Control or demonstration of a regulatory limitation and applicable deposit in lieu of Site Control provided to the CAISO in accordance with Section 3.5.1.3 of this RIS; and

(3) An additional deposit that brings the total Commercial Readiness Deposit submitted to the PTO to ten percent (10%) of the Interconnection Customer's Network Upgrade cost assignment identified in the Cluster Study or Cluster Restudy, if applicable. The CAISO

will refund the deposit to the Interconnection Customer upon withdrawal in accordance with Section 3.8 of this RIS.

The Interconnection Customer will promptly inform the CAISO of any material change to Interconnection Customer's demonstration of Site Control under Section 3.5.1(iii) of this RIS. Upon the CAISO determining separately that Interconnection Customer no longer satisfies the Site Control requirement, the CAISO will notify Interconnection Customer. Within ten (10) Business Days of such notification, Interconnection Customer must demonstrate compliance with the applicable requirement subject to the CAISO's approval, not to be unreasonably withheld. Absent such demonstration, the CAISO will deem the subject Interconnection Request withdrawn pursuant to Section 3.8 of this RIS.

### 8.1.2 Scope of the Interconnection Facilities Study

The Interconnection Facilities Study will be performed on a clustered basis. The Interconnection Facilities Study will specify and provide Current Cost Responsibility, Maximum Cost Responsibility, and Maximum Cost Exposure to each Interconnection Customer to implement the conclusions of the Cluster Study Report (and any associated reassessment) in accordance with Good Utility Practice to physically and electrically connect the Interconnection Facilities to the Transmission System. The Interconnection Facilities Study will also identify the electrical switching configuration of the connection equipment, including, without limitation: the transformer, switchgear, meters, and other station equipment; the nature and estimated cost of any the Participating TO's Interconnection Facilities and Network Upgrades necessary to accomplish the interconnection; and an estimate of the time required to complete the construction and installation of such facilities. The Interconnection Facilities Study will also identify any potential control equipment for (1) requests for Interconnection Service that are lower than the Generating Facility Capacity, and/or (2) requests to study a Generating Facility that includes at least one electric storage resource using operating assumptions (*i.e.*, whether the interconnecting Generating Facility will or will not charge at peak load) that reflect its proposed charging behavior, as requested by Interconnection Customer, unless the CAISO determines that Good Utility Practice, including Applicable Reliability Standards, otherwise requires the use of different operating assumptions.

### 8.1.3 [Not Used]

### 8.1.4 [Not Used]

### 8.1.5 [Not Used]

## 8.2 [Not Used]

## 8.3 [Not Used]

## 8.4 [Not Used]

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## 8.5 Interconnection Facilities Study Procedures

The CAISO will coordinate the Interconnection Facilities Study with the Participating TO and any

Affected System pursuant to Section 3.7 of this RIS. The CAISO and Participating TO will utilize existing studies to the extent practicable in performing the Interconnection Facilities Study. The CAISO and Participating TO will complete the study and issue a draft Interconnection Facilities Study Report to the Interconnection Customer within one hundred twenty (120) days after receipt of an executed Interconnection Facilities Study Agreement.

At the request of the Interconnection Customer or at any time the CAISO determines that it will not meet the required time frame for completing the Interconnection Facilities Study, the CAISO will notify Interconnection Customer as to the schedule status of the Interconnection Facilities Study. If the CAISO is unable to complete the Interconnection Facilities Study and issue a draft Interconnection Facilities Study Report within the time required, it will notify Interconnection Customer and provide an estimated completion date and an explanation of the reasons why additional time is required.

Interconnection Customer may, within thirty (30) days after receipt of the draft Interconnection Facilities Study Report, provide written comments to the CAISO, which the CAISO will include in completing the final Interconnection Facilities Study Report. The CAISO will issue the final Interconnection Facilities Study Report within fifteen (15) Business Days of receiving Interconnection Customer's comments or promptly upon receiving Interconnection Customer's statement that it will not provide comments. The CAISO may reasonably extend such fifteen (15) Business Day period upon notice to Interconnection Customer if Interconnection Customer's comments require the CAISO and Participating TO to perform additional analyses or make other significant modifications prior to the issuance of the final Interconnection Facilities Study Report. Upon request, the CAISO and Participating TO will provide the Interconnection Customer supporting documentation, workpapers, and databases or data developed in the preparation of the Interconnection Facilities Study, subject to confidentiality arrangements consistent with Section 15.1 of this RIS.

### 8.6 Interconnection Facilities Restudy

If restudy of the Interconnection Facilities Study is required due to a higher or equally queued project withdrawing from the queue or a modification of a higher or equally queued project pursuant to Section 6.7.2 of this RIS, the CAISO will update the Interconnection Facilities Study results via the annual reassessment described in Section 7.4. Any cost of restudy will be borne by the Interconnection Customer being restudied.

### 8.7 Results Meeting With the CAISO and Applicable PTO(s)

Within thirty (30) calendar days of providing the final Interconnection Facilities Study report to the Interconnection Customer, the applicable Participating TO(s), the CAISO and the Interconnection Customer shall meet to discuss the results of the Interconnection Facilities Study, including selection of the final Commercial Operation Date.

### 8.8 [Intentionally Omitted]

### 8.9 Allocation Process for TP Deliverability

After the Interconnection Facilities Study reports are issued, the CAISO will perform the allocation of the TP Deliverability to Deliverable Option Generating Facilities that meet the eligibility criteria set forth in Section 8.9.2, and Merchant Option Generating Facilities that did not require ADNUs in their Interconnection Studies. The TP Deliverability available for allocation will be determined from the most recent Transmission Plan. Once a Generating Facility is allocated TP Deliverability,

the facility will be required to comply with retention criteria specific in Section 8.9.3 in order to retain the allocation.

Allocation of TP Deliverability shall not provide any Interconnection Customer or Generating Facility with any right to a specific MW of capacity on the CAISO Controlled Grid or any other rights (such as title, ownership, rights to lease, transfer or encumber).

The CAISO will issue a Market Notice to inform interested parties as to the timeline for commencement of allocation activities, for Interconnection Customer submittal of eligibility status and retention information, and anticipated release of allocation results to Interconnection Customers. There are two components to the allocation process.

### 8.9.1 First Component: Representing TP Deliverability Used by Prior Commitments

The CAISO will identify the following commitments that will utilize MW quantities of TP Deliverability:

(a) The proposed Generating Facilities corresponding to earlier queued Interconnection Requests meeting the criteria set forth below:

(i) proposed Generating Facilities in Queue Cluster 4 or earlier that have executed PPAs with Load-Serving Entities and have GIAs that are in good standing.

(ii) proposed Generating Facilities in Queue Cluster 5 and subsequent Queue Clusters that were previously allocated TP Deliverability and have met the criteria to retain the allocation set forth in Section 8.9.3.

(b) any Maximum Import Capability included as a planning objective in the Transmission Plan and a Subscriber Participating TO that is a non-contiguous portion of the CAISO BAA can use Maximum Import Capability made available by Participating Generators and System Resources if such allocation is made available in accordance with Section 40.4.6.2.1 (Step 13) of the CAISO Tariff; the available Maximum Import Capability made available by the Load Serving Entities that have access to Subscriber Rights until the Load Serving Entity(ies) cease using this Maximum Import Capability allocation or Delivery Network Upgrade(s) pursuant to Section 4.3A4.2(b) of the CAISO Tariff is completed to support the Subscriber Rights and then the TP Deliverability will be awarded to such Subscriber consistent with Section 8.9.1(c) of this RIS;

(c) any other commitments having a basis in the Transmission Plan, including without limitation, long lead-time resources with corresponding transmission solutions, and any commitments established due to a Subscriber's exercise of its first option to acquire Deliverability made possible by Delivery Network Upgrades pursuant to Section 4.3A.4.2(a) of the CAISO Tariff, provided this first option has been exercised before the Subscriber is no longer eligible to apply for TP Deliverability allocation under Section 8.9 of this RIS. Generating Units possessing Subscriber Rights seeking to receive TP Deliverability must submit a request and will be subject to Sections 8.9.2 and 8.9.3 of this RIS. For each Subscriber that submits a TP Deliverability request, the CAISO will provide the Subscriber with a Queue Position. The CAISO will reserve TP Deliverability for long lead-time resources specified in the Transmission Plan up to the lower of (a) the capacity of deliverable long lead-time resources in the approved Local Regulatory Authority portfolios submitted to the CAISO for the most recent Transmission Plan, or (b) the transmission capacity created by the Category 1 policy-driven transmission solutions and available on existing transmission for the

long lead-time resources.

This first component is performed for the purpose of determining the amount of TP Deliverability available for allocation to the current queue cluster in accordance with section 8.9.2, and shall not affect the rights and obligations of proposed Generating Facilities in Queue Cluster 4 or earlier with respect to the construction and funding of Network Upgrades identified for such Generating Facilities, or their requested Deliverability Status. Such rights and obligations will continue to be determined pursuant to the GIP and the Generating Facility's GIA.

### 8.9.2 Second Component: Allocating Remaining TP Deliverability

Following the process set forth in Section 8.9.1, the CAISO will allocate any remaining TP Deliverability in the following order.

The CAISO shall allocate available TP Deliverability to all or a portion of the full MW capacity of the Generating Facility as specified in the Interconnection Request. Where a criterion is met by a portion of the full MW generating capacity of the Generating Facility, the eligibility score associated with that criterion shall apply to the portion that meets the criterion. The demonstration must relate to the same proposed Generating Facility as described in the Interconnection Request.

(A) To Interconnection Customers that have executed power purchase agreements, and to Interconnection Customers in the current Queue Cluster that are Load Serving Entities serving their own Load.

(B) To Interconnection Customers that are actively negotiating a power purchase agreement or on an active short list to receive a power purchase agreement.

(C) To Interconnection Customers that have achieved Commercial Operation for the capacity seeking TP Deliverability.

(D) To Interconnection Customers electing to be subject to Section 8.9.2.3.

Energy Only capacity seeking TP Deliverability may not trigger the construction of Delivery Network Upgrades pursuant to Section 6.3.2. This includes, without limitation, capacity expansions effected through modification requests and capacity converted to Energy Only after failing to receive or retain a TP Deliverability allocation. The CAISO will allocate TP Deliverability to Energy Only Interconnection Customers requesting Deliverability after FCDS and PCDS Interconnection Customers within its allocation group and solely based on TP Deliverability available from existing transmission facilities, from already planned upgrades in the CAISO Transmission Planning Process, or upgrades assigned to an interconnection project that has an executed GIA and currently has a TP Deliverability allocation.

Interconnection Customers requesting Deliverability for Energy Only capacity must submit to the CAISO a non-refundable $5,000 fee for each Interconnection Request seeking TP Deliverability.

For an Interconnection Customer seeking to receive or retain TP Deliverability to represent that it has, is negotiating, or is shortlisted for a power purchase agreement under this RIS, the agreement must meet the following criteria:

(1) the agreement has a term of no less than five (5) years. Interconnection Customers with multiple, short-term agreements for the same capacity

may meet this criterion where the combined terms are five (5) years or more; and

(2) the counterparty must:

(a) be a Load Serving Entity procuring the capacity to meet its own Resource Adequacy obligation; or

(b) demonstrate it has a contract to provide the capacity for at least one (1) year to a Load Serving Entity for a Resource Adequacy obligation.

Interconnection Customers may seek or retain a TP Deliverability allocation if they meet all tariff criteria except the counterparty criterion (2); however, within thirty (30) days of receiving a TP Deliverability allocation, they must demonstrate they meet the counterparty criterion or provide a deposit of $10,000 per MW of allocated TP Deliverability, but in no case less than $500,000. The CAISO will deposit these funds in an interest-bearing account at a bank or financial institution designated by the CAISO. The CAISO will refund the deposit when the Generating Facility begins Commercial Operation or meets the counterparty criterion, whichever is earlier. To the extent the Interconnection Customer withdraws, is deemed withdrawn, converts to Energy Only, or otherwise downsizes or eliminates the capacity allocated TP Deliverability, the deposit or commensurate portion thereof will be non-refundable, and the CAISO will process it and any accrued interest pursuant to Section 7.6.

For all TP Deliverability allocations based upon having, negotiating, or being shortlisted for power purchase agreements, the CAISO will allocate TP Deliverability up to the amount of deliverable MW capacity procured by the power purchase agreement. All Load Serving Entities building Generating Facilities to serve their own Load must be doing so to fulfill a regulatory requirement that warrants Deliverability. Load Serving Entities acting as Interconnection Customers are otherwise eligible for all other attestations.

Notwithstanding any other provision, all refunds pursuant to this Appendix KK will be processed in accordance with the CAISO's generally accepted accounting practices, including monthly batched deposit refund disbursements. Any CAISO deadline will be tolled to the extent the Interconnection Customer has not provided the CAISO with the appropriate documents to facilitate the Interconnection Customer's refund, or if the Interconnection Customer has any outstanding invoice balance due to the CAISO on another project owned by the same Interconnection Customer.

**8.9.2.1 Deliverability Affidavits**

To determine TP Deliverability allocation order, Interconnection Customers will be assigned a numerical score reflecting the its demonstration of having met the criteria below under the methodology set forth in the Business Practice Manual.

(1) Permitting status. An Interconnection Customer's Generating Facility must meet at least one of the following:

a. The Interconnection Customer has received its final governmental permit or authorization allowing the Generating Facility to commence construction.

b. The Interconnection Customer has received a draft environmental report document (or equivalent environmental permitting document) indicating

likely approval of the requested permit and/or which indicates that the permitting authority has not found an environmental impact which would likely prevent the permit approval.

c. The Interconnection Customer has applied for the necessary governmental permits or authorizations and the authority has deemed such documentation as data adequate for the authority to initiate its review process.

d. The Interconnection Customer has applied for the necessary governmental permit or authorization for the construction.

(2) Project financing status. An Interconnection Customer's Generating Facility must meet at least one of the following criteria:

a. The Interconnection Customer has an executed and regulator-approved power purchase agreement.

b. The Interconnection Customer has an executed power purchase agreement but such agreement has not yet received regulatory approval.

c. The Interconnection Customer is on an active short list or other commercially recognized method of preferential ranking of power providers by a prospective purchaser Load Serving Entity or procuring entity, or is currently negotiating a power purchase agreement.

d. The Interconnection Customer is a Load Serving Entity constructing its project to serve its own Load pursuant to a regulatory requirement.

(3) Land acquisition

a. The Interconnection Customer demonstrates a present legal right to begin construction of the Generation Facility on one hundred percent (100%) of the real property footprint necessary for the entire Generating facility.

b. The Interconnection Customer demonstrates Site Exclusivity.

In allocating TP Deliverability under this section, in a situation where the TP Deliverability cannot accommodate all of the Interconnection Customers in a qualifying group, the CAISO will allocate TP Deliverability based on the highest numerical score. In a situation where the available amount of TP Deliverability can accommodate all Interconnection Customers with equal scores, the CAISO will allocate the TP Deliverability to the Interconnection Customers with the lowest LDNU cost estimates. For all TP Deliverability allocations based upon having, negotiating, or being shortlisted for power purchase agreements, the CAISO will allocate TP Deliverability up to the amount of deliverable MW capacity procured by the power purchase agreement.

All power purchase agreements must require Deliverability above zero for the Interconnection Customer to represent that it has, is negotiating, or is shortlisted for a power purchase agreement. All Load Serving Entities building Generating Facilities to serve their own Load must be doing so to fulfill a regulatory requirement that warrants Deliverability.

**8.9.2.2 [Not Used]**

### 8.9.2.3 TP Deliverability Group D

This section applies to any Interconnection Customer that seeks a TP Deliverability allocation under group D, regardless of whether the Interconnection Customer receives an allocation from group D or later converts to Energy Only. For the entire Generating Facility, including Energy Only portions, the Interconnection Customer may not request suspension under its GIA, delay providing its notice to proceed as specified in its GIA, or delay its Commercial Operation Date beyond the date established in its Interconnection Request when it requested TP Deliverability. Extensions due to Participating TO construction delays will extend these deadlines equally. Interconnection Customers that fail to proceed toward their Commercial Operation Dates under these requirements and as specified in their GIAs will be withdrawn.

If an Interconnection Customer demonstrates it has received a power purchase agreement, the portion of the Generating Facility procured by the power purchase agreement is not subject to this Section. Notwithstanding Section 8.9.4, if an Interconnection Customer receives a TP Deliverability allocation in the amount it requested, it must accept the allocation or withdraw.

Interconnection Customers may not seek TP Deliverability through this group D for any capacity that is Energy Only. This includes, without limitation, capacity expansions effected through modification requests and capacity converted to Energy Only after failing to receive or retain a TP Deliverability allocation.

For Interconnection Customers in Cluster 13 or earlier, this Section 8.9.2.3 does not apply to their Generating Facility except for any portion of the Generating Facility that seeks TP Deliverability from Group D.

### 8.9.3 Retaining TP Deliverability Allocation

Interconnecting Customers that received TP Deliverability must provide documentation demonstrating they meet the following requirements by the annual due date established via market notice pursuant to Section 8.9:

(1) Interconnection Customers that received TP Deliverability on the basis of negotiating or being shortlisted for a power purchase agreement must execute the agreement.

(2) Interconnection Customers that received TP Deliverability from group D, must demonstrate that they executed a power purchase agreement, are actively negotiating a power purchase agreement, or on an active short list to receive a power purchase agreement. Interconnection Customers that retain TP Deliverability by demonstrating they are actively negotiating or shortlisted for a power purchase agreement must demonstrate they executed the power purchase agreement in the following year.

Failure to meet the requirements of this Section by the annual due date established via market notice will result in conversion to Energy Only. To the extent TP Deliverability has been allocated, lost, or relinquished only for a portion of the Interconnection Customer's project, this section 8.9.3 will apply to that portion of the project only. An Interconnection Customer's failure to retain its TP Deliverability will not be considered a Breach of its GIA. Except as provided in Section 8.9.3.2, Interconnection Customers that become Energy Only for failure to retain their TP Deliverability allocation may not reduce their Maximum Cost Responsibility or Current Cost Responsibility for any assigned Delivery Network Upgrades unless the CAISO and Participating TO(s) determine that the Interconnection

Customer's assigned Delivery Network Upgrade(s) is no longer needed for current Interconnection Customers.

**8.9.3.1 [Not Used]**

**8.9.3.2 Loss of Power Purchase Agreement or Short List Status**

Notwithstanding any provision of this RIS, if an Interconnection Customer receives or retains TP Deliverability for all or a portion of its project by attesting that:

(a) it had a power purchase agreement, and the Load Serving Entity or procuring entity unilaterally terminates that power purchase agreement through no fault of the Interconnection Customer; or

(b) it was actively negotiating a power purchase agreement or on an active short list to receive a power purchase agreement, and then did not finalize a power purchase agreement.

The Interconnection Customer may park its Interconnection Request, and re-seek TP Deliverability with its Queue Cluster. Alternatively, if such an Interconnection Customer's Queue Cluster is no longer eligible to park and has already completed the TP Deliverability allocation cycle after its parking opportunities, the Interconnection Customer will be converted to Energy Only but will not retain cost responsibility for its assigned Delivery Network Upgrades. Such an Interconnection Customers may elect to reduce its Commercial Readiness Deposit as a result.

**8.9.4 Parking for Generating Facilities**

For a Generating Facility in the current Interconnection Study Cycle that either was allocated less TP Deliverability than requested or does not desire to accept the amount allocated the Interconnection Customer shall select one of the following options:

(1) Withdraw its Interconnection Request

(2) Enter into a GIA, in which case the Interconnection Request shall automatically convert to Energy Only Deliverability Status. In such circumstances, upon execution of the GIA, any Commercial Readiness Deposit will be adjusted to remove the obligation pertaining to LDNUs

(3) Park the Interconnection Request; in which case the Interconnection Request may remain in the Interconnection queue until the next allocation of TP Deliverability in which it may participate in accordance with the requirements of Section 8.9.2. Parking an Interconnection Request does not confer a preference with respect to any other Interconnection Request with respect to allocation of TP Deliverability.

An Interconnection Customer that selects option (2) or (3) above may, at the time it selects the option, elect to reduce the generating capacity of its Generating Facility. Parked Interconnection Customers may not submit modification requests except for the following modifications:

(1) reducing the Interconnection Service Capacity;

(2) changing fuel type or technology;

(3) Permissible Technological Advancements; or

(4) changing the Point of Interconnection.

Parked Interconnection Customers must post their Commercial Readiness Deposit prior to submitting any of these modification requests, and submit a modification request pursuant to Section 6.7.2.3 of this RIS.

#### 8.9.4.1 Extended Parking for Generating Facilities

A Generating Facility that parked its Interconnection Request and participated in a second allocation of TP Deliverability may remain parked for one final (third) allocation of TP Deliverability where: (a) the most recent TP Deliverability allocation shows that TP Deliverability will still be available to the Generating Facility; and (b) the Generating Facility has not been assigned Network Upgrades identified as needed by other Interconnection Customers in the Generating Facility's cluster study group or later cluster study groups. Criterion (b) will not apply where the Generating Facility has been assigned Network Upgrades identified as needed only by other Interconnection Customers in the Generating Facility's own cluster study group and all of those active Interconnection Customers also elect to remain parked.

### 8.9.5 Partial Allocations of Transmission Based Deliverability to Generating Facilities

If a Generating Facility is allocated TP Deliverability in the current Interconnection Study Cycle in an amount less than the amount of Deliverability requested, then the Interconnection Customer must choose one of the following options:

(i) Accept the allocated amount of TP Deliverability and reduce the MW generating capacity of the proposed Generating Facility such that the allocated amount of TP Deliverability will provide Full Capacity Deliverability Status to the reduced generating capacity;

(ii) Accept the allocated amount of TP Deliverability and adjust the Deliverability status of the proposed Generating Facility to achieve Partial Capacity Deliverability corresponding to the allocated TP Deliverability;

(iii) For Generating Facilities, accept the allocated amount of TP Deliverability and seek additional TP Deliverability for the remainder of the requested Deliverability of the Interconnection Request in the next allocation cycle. In such instance, the Interconnection Customer shall execute a GIA for the entire Generating Facility having Partial Capacity Deliverability corresponding to the allocated amount of TP Deliverability. Following the next cycle of TP Deliverability allocation, the GIA shall be amended as needed to adjust its Deliverability status to reflect any additional allocation of TP Deliverability. At this time the Interconnection Customer may also adopt options (i) or (ii) above based on the final amount of TP Deliverability allocated to the Generating Facility. There will be no further opportunity for this Generating Facility to participate in any subsequent cycle of TP Deliverability allocation; or

(iv) Decline the allocated amount of TP Deliverability and either withdraw the Interconnection Request or convert to Energy Only Deliverability Status. An Interconnection Customer having a Generating Facility that has not previously parked may decline the allocation of TP Deliverability and park until the next cycle of TP Deliverability allocation in the next Interconnection Study Cycle.

An Interconnection Customer that selects option (iii) or (iv) above may, at the time it

selects the option, elect to reduce the generating capacity of its Generating Facility.

Interconnection Customers accepting a partial allocation of TP Deliverability may pursue additional deliverability as described in Section 8.9.2.

### 8.9.6 Declining TP Deliverability Allocation

An Interconnection Customer having a Generating Facility and allocated the entire amount of requested TP Deliverability may decline all or a portion of the TP Deliverability allocation and park the Generating Facility Request as described in Section 8.9.4(3). An Interconnection Customer that selects this option may, at the time it selects the option, elect to reduce the generating capacity of its Generating Facility.

### 8.9.7 Interim Deliverability

If the Generating Facility (or increase in capacity of an existing Generating Facility) achieves its Commercial Operation Date before the Deliverability Assessment is completed or before any necessary Delivery Network Upgrades are in service, the CAISO will determine whether Interim Deliverability is available, and will award it to the Generating Facility. The CAISO will make this determination as soon as practical, but no later than the calendar month before the Generating Facility or capacity increase achieves its Commercial Operation Date. The Generating Facility will maintain any Interim Deliverability until (1) the Interconnection Customer to which that Deliverability was originally allocated achieves its Commercial Operation Date; or (2) the CAISO completes the next scheduled Deliverability Assessment and the Generating Facility's Delivery Network Upgrades are complete, enabling Partial Capacity or Full Capacity Deliverability Status. If the CAISO determines Interim Deliverability is not available, the Generating Facility or capacity increase will be Energy Only until the CAISO completes the next scheduled Deliverability Assessment and the Generating Facility's Delivery Network Upgrades are complete.

### 8.9.8 Updates to Interconnection Study Results

Upon completion of the allocation of TP Deliverability in accordance with Section 8.9.2, the CAISO will provide the allocation results to the Interconnection Customers for eligible Generating Facilities in the current Queue Cluster and eligible parked Generating Facilities. Each of these Interconnection Customers will then have seven (7) days to inform the CAISO of its decisions in accordance with Sections 8.9.4, 8.9.5, and 8.9.6. Following the CAISO's receipt of this information from all affected Interconnection Customers, the CAISO will provide updates where needed to the Interconnection Study reports for all Generating Facilities whose Network Upgrades have been affected.

### 8.9.9 Deliverability Transfers

Deliverability may not be assigned or otherwise transferred except as expressly provided by the CAISO Tariff. An Interconnection Customer may reallocate its Generating Facility's Deliverability among its own Generating Units or Resource IDs at the Generating Facility and to other Interconnection Customers interconnected at the same substation and at the same voltage level. The Generating Facility's aggregate output as evaluated in the Deliverability Assessment cannot increase as the result of any transfer, but may decrease based on the assignee's characteristics and capacity. The CAISO will inform the Interconnection Customer of each Generating Unit's Deliverability Status and associated capacity as the result of any transfer. The results will be based on the current Deliverability Assessment methodology.

An Interconnection Customer may request to reallocate its Deliverability among its Generating Units and to other Interconnection Customers interconnected at the same substation and at the same voltage level pursuant to Section 6.7.2.2 of this RIS, Article 5.19 of the LGIA, and Article 3.4.5 of the SGIA, as applicable. A repowering Interconnection Customer may transfer Deliverability as part of the repowering process pursuant to Section 25.1.2 of the CAISO Tariff. An Interconnection Customer expanding its capacity behind-the-meter as a modification request also may transfer Deliverability as part of that process, or subsequently under the other processes in this Section. The assignee of a Deliverability transfer does not need to submit a modification request to receive a transfer.

## Section 9 Additional Deliverability Assessment Options

### 9.1 [Intentionally Omitted]

### 9.2 [Intentionally Omitted]

### 9.3 PTO Tariff Option for Deliverability Status

To the extent that a Participating TO's tariff provides the option for customers taking interconnection service under the Participating TO's tariff to obtain Full or Partial Capacity Deliverability Status, the CAISO will, in coordination with the applicable Participating TO, perform the necessary Deliverability studies to determine the Deliverability of customers electing such option. The CAISO shall execute any necessary agreements for reimbursement of study costs it incurs and to assure cost attribution for any Network Upgrades relating to any Deliverability status conferred to such customers under the Participating TO's tariff. The CAISO will include all Generating Facilities subject to this provision, including predecessor studies, in its determination of available Deliverability pursuant to Sections 3.6 and 4 without limitation.

The Generating Facility seeking Full or Partial Capacity Deliverability Status under the CAISO Tariff must submit a request to the CAISO to study it for such status. As described in the Business Practice Manual, such study request will be in the form of the CAISO's pro forma Interconnection Request, where applicable, including Cluster Study criteria under Section 4 of this RIS. The Interconnection Request must be submitted during the Cluster Application Window and must include the Generating Facility's intended Point of Delivery to the CAISO Controlled Grid. The CAISO will determine the Transmission Zone eligibility and include the Generating Facility in the Cluster Study criteria process and Deliverability assessments based upon the Participating TO's interconnection to the CAISO Controlled Grid. The Generating Facility will be eligible for Deliverability where it satisfies the criteria in this RIS.

Except for the financial requirements described in Section 4 of this RIS, the Generating Facility will be subject to the interconnection fee, deposit, and financing requirements of the Participating TO tariff and not the CAISO Tariff. Generating Facilities sharing Delivery Network Upgrades will be subject to Section 13.6, and must provide security and authorization to their Participating TOs by the same deadlines as CAISO Interconnection Customers sharing upgrades.

The Generating Facility may withdraw its CAISO study request at any time pursuant to Section 3.8. If at any time the Generating Facility no longer has an active Interconnection Request under the Participating TO tariff, the CAISO will deem it withdrawn pursuant to Section 3.8.

Following the Interconnection Facility Study for the Generating Facility deliverability study, the Participating TO will tender a draft GIA or GIA amendment pursuant to the Participating TO's tariff.

### 9.4 Deliverability from Non-Participating TOs

This process applies to Generating Facilities that interconnect to the transmission facilities of a Non-Participating TO located within the CAISO Balancing Authority Area that wish to obtain Full Capacity Deliverability Status or Partial Capacity Deliverability Status under the CAISO Tariff. Such Generating Facilities will be eligible to be studied by the CAISO for Full or Partial Capacity Deliverability Status pursuant to the following provisions:

(a) The Generating Facility seeking Full or Partial Capacity Deliverability Status under the CAISO Tariff must submit a request to the CAISO to study it for such Status. Such study request will be in the form of the CAISO's pro forma Interconnection Request, including Cluster Study criteria under Section 4 of this RIS. The Interconnection Request must be submitted during the Cluster Application Window and must include the Generating Facility's intended Point of Delivery to the CAISO Controlled Grid, and must be submitted during a Cluster Application Window. The Generating Facility will be required to satisfy the same study deposit and Commercial Readiness Deposit posting requirements as an Interconnection Customer. The CAISO will determine the Transmission Zone eligibility and include the Generating Facility in the Cluster Study criteria process and Deliverability assessments based upon the Non-Participating TO's interconnection to the CAISO Controlled Grid. The Generating Facility will be eligible for Deliverability and cash reimbursement for Delivery Network Upgrades where it satisfies the Cluster Study criteria in Section 4.

(b) The Non-Participating TO that serves as the interconnection provider to the Generating Facility must treat the CAISO as an Affected System in the interconnection study process for the Generating Facility.

(c) As part of the Non-Participating TO's interconnection study process, the CAISO, in its sole discretion and on a case-by-case basis, will determine the adequacy of transmission on the Non-Participating TO's system for the Generating Facility to be deemed fully deliverable to the elected Point of Delivery to the CAISO Controlled Grid. Only those proposed Generating Facilities (or proposed increases in Generating Facility capacity) for which the CAISO has determined there is adequate transmission capacity on the Non-Participating TO system to provide full Deliverability to the applicable Point of Delivery will be eligible to be assessed for Full or Partial Capacity Deliverability Status under the CAISO Tariff.

(d) If the Generating Facility is eligible for study for Full or Partial Capacity Deliverability Status, the CAISO will include the Generating Facility in the Interconnection Study process for the Queue Cluster associated with the Cluster Application Window in which the Generating Facility has submitted its study request. The Point of Delivery with the CAISO will be treated as the Point of Interconnection for purposes of including the Generating Facility in a Cluster Study with any applicable CAISO Interconnection Customers in the relevant Queue Cluster. Pursuant to the Queue Cluster Interconnection Study process the Generating Facility will be allocated its cost responsibility share of any applicable LDNUs or ADNUs.

(e) The CAISO, Participating TO, and Interconnection Customer will execute any necessary agreements for reimbursement of study costs incurred by it to assure cost attribution for any Network Upgrades relating to any Deliverability status conferred to each such interconnection customer under the Non-Participating TO's tariff.

(f) The Non-Participating TO's interconnection customer will receive repayment of funds expended for the construction of the LDNUs , and, as applicable, ADNUs, on the CAISO Controlled Grid in the same manner as CAISO Interconnection Customers, as specified in Section 14.3.2.

## Section 10 Cost Responsibility for Interconnection Customers

### 10.1 Interconnection Customers in a Queue Cluster.

(a) RNUs and LDNUs. The Interconnection Studies will establish Interconnection Customers' Current Cost Responsibility, Maximum Cost Responsibility, and Maximum Cost Exposure consistent with the cost allocations described in Section 8. The CAISO will adjust Interconnection Customers' cost responsibilities as described in this RIS. Interconnection Customers will post Commercial Readiness Deposit and GIA Deposit based on their Current Cost Responsibility.

(b) ADNUs. Interconnection Customers selecting the Deliverable Option do not include ADNUs in the Commercial Readiness Deposit and GIA Deposit. The Current Cost Responsibility provided in the Cluster Studies establishes the basis for the Commercial Readiness Deposit. For Interconnection Customers selecting the Merchant Option, the Interconnection Facilities Study and annual reassessment shall refresh the Current Cost Responsibility for ADNUs.

The ADNU cost estimates provided in any Interconnection Study report are estimates only and do not provide a maximum value for cost responsibility to an Interconnection Customer for ADNUs. However, subsequent to the Interconnection Customer's receipt of its Interconnection Facilities Study report, an Interconnection Customer having selected the Merchant Option may have its ADNUs adjusted in the reassessment process undertaken under Section 7.4. Accordingly, for such Interconnection Customers, the most recent annual reassessment undertaken under Section 7.4 shall provide the most recent cost estimates for the Interconnection Customer's ADNUs.

### 10.2 [Not Used]

## Section 11 Commercial Readiness Deposit and GIA Deposit

### 11.1 Types of Commercial Readiness Deposit and GIA Deposit

The Commercial Readiness Deposit and GIA Deposit posted by an Interconnection Customer may be any combination of the following types of Commercial Readiness Deposit or GIA Deposit:

(a) an irrevocable and unconditional letter of credit issued by a bank or financial institution that has a credit rating of A or better by Standard and Poors or A2 or better by Moody's;

(b) an irrevocable and unconditional surety bond issued by an insurance company that has a credit rating of A or better by Standard and Poors or A2 or better by Moody's;

(c) an unconditional and irrevocable guaranty issued by a company has a credit rating of A or better by Standard and Poors or A2 or better by Moody's;

(d) a cash deposit standing to the credit of the applicable Participating TO(s) in an interest-bearing escrow account maintained at a bank or financial institution that is reasonably acceptable to the applicable Participating TO(s);

(e) a certificate of deposit in the name of the applicable Participating TO(s) issued by a bank or financial institution that has a credit rating of A or better by Standard and Poors or A2 or better by Moody's; or

(f) a payment bond certificate in the name of the applicable Participating TO(s) issued by a bank or financial institution that has a credit rating of A or better by Standard and Poors or A2 or better by Moody's.

Commercial Readiness Deposit and GIA Deposit instruments as listed above shall be in such form as the CAISO and applicable Participating TO(s) may reasonably require from time to time by notice to Interconnection Customers or in such other form as has been evaluated and approved as reasonably acceptable by the CAISO and applicable Participating TO(s).

The CAISO shall publish and maintain standardized forms related to the types of deposits listed above which shall be accessible on the CAISO Website. The CAISO shall require the use of standardized forms of Commercial Readiness Deposit and GIA Deposit to the greatest extent possible. If at any time the guarantor of the Commercial Readiness Deposit or GIA Deposit fails to maintain the credit rating required by this Section, the Interconnection Customer shall provide to the applicable Participating TO(s) replacement Commercial Readiness Deposit or GIA Deposit meeting the requirements of this Section within five (5) Business Days of the change in credit rating.

The Participating TO shall, upon receipt, deposit all Commercial Readiness Deposit, GIA Deposit, and other deposit amounts in an interest-bearing account at a bank or financial institution designated by the Participating TO. Interest on a cash deposit standing to the credit of the applicable Participating TO(s) in an interest-bearing escrow account under subpart (d) of this Section will accrue to the Interconnection Customer's benefit and will be added to the Interconnection Customer's account on a monthly basis. Any interest earned on such amounts, based on the actual rate of the account, shall be allocated and disbursed in the same manner as the principal, in accordance with the methodology set forth in this Section 7.6.

Notwithstanding any other provision, Interconnection Customers owned by Participating TOs, and interconnecting to their own Participating TO service area, are not required to post Commercial Readiness Deposits or GIA Deposits to themselves. If the Interconnection Customer withdraws, it must remit all funds that would have been forfeited upon withdrawal or termination absent this exemption.

**Section 12 Engineering & Procurement ("E&P") Agreement**

Prior to executing a GIA, an Interconnection Customer may, in order to advance the implementation of its interconnection, request and the applicable Participating TO(s) shall offer the Interconnection Customer, an E&P Agreement that authorizes the applicable Participating TO(s) to begin engineering and procurement of long lead-time items necessary for the establishment of the interconnection. However, the applicable Participating TO(s) shall not be obligated to offer an E&P Agreement if the Interconnection Customer is in Dispute Resolution as a result of an allegation that the Interconnection Customer has failed to meet any milestones or comply with any prerequisites specified in other parts of the RIS. The E&P Agreement is an optional procedure. The E&P Agreement shall provide for the Interconnection Customer to pay the cost of all activities authorized by the Interconnection Customer and to make advance payments or provide other satisfactory security for such costs.

The Interconnection Customer shall pay the cost of such authorized activities and any cancellation costs for equipment that is already ordered for its interconnection, which cannot be mitigated as hereafter described, whether or not such items or equipment later become unnecessary. If the Interconnection Customer withdraws its application for interconnection or either Party terminates the E&P Agreement, to the extent the equipment ordered can be canceled under reasonable terms, the Interconnection Customer shall be obligated to pay the associated cancellation costs. To the extent that the equipment cannot be reasonably canceled, the applicable Participating TO(s) may elect: (i) to take title to the equipment, in which event the applicable Participating TO(s) shall refund the Interconnection Customer any amounts paid by Interconnection Customer for such equipment and shall pay the cost of delivery of

such equipment, or (ii) to transfer title to and deliver such equipment to the Interconnection Customer, in which event the Interconnection Customer shall pay any unpaid balance and cost of delivery of such equipment.

**Section 13 Generator Interconnection Agreement (GIA)**

**13.1 Tender**

**13.1.1**

The Interconnection Customer will tender comments on the draft Interconnection Facilities Study Report within thirty (30) calendar days of receipt of the report. Within thirty (30) calendar days after the latter of (a) the comments are submitted, (b) the Interconnection Customer notifies the CAISO it will not provide comments, the Participating TO will tender a draft GIA, together with draft appendices. The draft GIA will be in the form of the CAISO's FERC-approved standard form GIA, which is in Appendix LL or MM, as applicable. The Interconnection Customer will execute and return the GIA and completed draft appendices within thirty (30) calendar days, unless (1) the sixty (60) calendar day negotiation period under Section 13.2 of this RIS has commenced, or (2) GIA execution, or filing unexecuted, has been delayed to await the Affected System Study Report pursuant to Section 13.2.1 of this RIS.

**13.1.2** Consistent with Section 13.1.1, when the transmission system of a Participating TO, in which the Point of Interconnection is not located, is affected, such Participating TO shall tender a separate agreement, in the form of the GIA, as appropriately modified.

**13.2 Negotiation**

Notwithstanding Section 13.1 of this RIS, at the request of Interconnection Customer, the CAISO and Participating TO will begin negotiations with the Interconnection Customer concerning the appendices to the GIA at any time after Interconnection Customer executes the Interconnection Facilities Study Agreement. The CAISO, Participating TO, and the Interconnection Customer will negotiate concerning any disputed provisions of the appendices to the draft GIA for not more than sixty (60) calendar days after tender of the final Interconnection Facilities Study Report. If the Interconnection Customer determines that negotiations are at an impasse, it may request termination of the negotiations at any time after tender of the draft GIA pursuant to Section 13.1 of this RIS and request submission of the unexecuted GIA with FERC or initiate Dispute Resolution procedures pursuant to Section 15.5 of this RIS. If the Interconnection Customer requests termination of the negotiations, but within sixty (60) calendar days thereafter fails to request either the filing of the unexecuted GIA or initiate Dispute Resolution, it will be deemed to have withdrawn its Interconnection Request. Unless otherwise agreed by the Parties, if the Interconnection Customer has not executed the GIA, requested filing of an unexecuted GIA, or initiated Dispute Resolution procedures pursuant to Section 15.5 of this RIS within sixty (60) calendar days of tender of draft GIA, it will be deemed to have withdrawn its Interconnection Request. The Participating TO will provide to the Interconnection Customer a final GIA within fifteen (15) Business Days after the completion of the negotiation process.

**13.2.1 Delay in LGIA Execution, or Filing Unexecuted, to Await Affected System Study Report**

If the Interconnection Customer has not received its Affected System Study Report from an Identified Affected System prior to the date it would be required to execute its GIA (or request that its GIA be filed unexecuted) pursuant to Section 13.1 of this RIS, the CAISO will, upon request of the Interconnection Customer, extend this deadline to thirty (30) calendar days after the

Interconnection Customer's receipt of the Affected System Study Report, or two hundred and ten (210) calendar days after the tendering of the GIA and appendices, whichever is earlier.

If the Interconnection Customer, after delaying GIA execution, or requesting unexecuted filing, to await Affected System Study Report, decides to proceed to GIA execution, or request unexecuted filing, without those results, it may notify the CAISO of its intent to proceed with GIA execution (or request that its GIA be filed unexecuted) pursuant to Section 13.1 of this RIS.

If the CAISO determines that further delay to the GIA execution date would cause a material impact on the cost or timing of an equal- or lower-queued Interconnection Customer, the CAISO must notify the Interconnection Customer of such impacts and set the deadline to execute the GIA (or request that the GIA be filed unexecuted) to thirty (30) calendar days after such notice is provided.

## 13.3 Execution and Filing

The Interconnection Customer shall either: (i) execute the appropriate number of originals of the tendered GIA as specified in the directions provided by the CAISO and return them to the CAISO, as directed, for completion of the execution process; or (ii) request in writing that the applicable Participating TO(s) and CAISO file with FERC a GIA in unexecuted form. The GIA shall be considered executed as of the date that all three Parties have signed the GIA. As soon as practicable, but not later than ten (10) Business Days after receiving either the executed originals of the tendered GIA (if it does not conform with a FERC-approved standard form of interconnection agreement) or the request to file an unexecuted GIA, the applicable Participating TO(s) and CAISO shall file the GIA with FERC, as necessary, together with an explanation of any matters as to which the Interconnection Customer and the applicable Participating TO(s) or CAISO disagree and support for the costs that the applicable Participating TO(s) propose to charge to the Interconnection Customer under the GIA. An unexecuted GIA should contain terms and conditions deemed appropriate by the applicable Participating TO(s) and CAISO for the Interconnection Request. If the Parties agree to proceed with design, procurement, and construction of facilities and upgrades under the agreed-upon terms of the unexecuted GIA, they may proceed pending FERC action.

Simultaneously with submitting the executed GIA, or within ten (10) Business Days after the Interconnection Customer requests that the CAISO file the GIA unexecuted at FERC, the Interconnection Customer shall provide the following: (1) demonstration of continued Site Control pursuant to Section 8.1.1(2) of this RIS provided to the CAISO; and (2) the GIA Deposit provided to the Participating TO equal to twenty percent (20%) of Interconnection Customer's estimated Network Upgrade costs identified in the draft GIA minus the total amount of Commercial Readiness Deposits that Interconnection Customer has provided to the Participating TO for its Interconnection Request. The Participating TO shall use the GIA Deposit as (or as a portion of) the Interconnection Customer's security required under GIA Article 11.5. The Interconnection Customer may not request to suspend its GIA under GIA Article 5.16 until Interconnection Customer has provided (1) and (2) to the CAISO and Participating TO. If the Interconnection Customer fails to provide (1) and (2) to the CAISO and Participating TO within the thirty (30) days allowed for returning the executed GIA and appendices under RIS Section 13.1.1, or within ten (10) Business Days after the Interconnection Customer requests that the CAISO file the GIA unexecuted at FERC as allowed in this Section 13.3 of this RIS, the Interconnection Request will be deemed withdrawn pursuant to Section 3.8 of this RIS.

### 13.3.1 Implementation Deposit

Within thirty (30) days of the effective date of the GIA, the Interconnection Customer will provide the CAISO with a $35,000 implementation deposit. Generating Facilities interconnecting pursuant to a Participating TO tariff must submit a $6,000 implementation deposit at the commencement of

the CAISO new resource implementation process. The CAISO will deposit the implementation deposit in an interest bearing account at a bank or financial institution designated by the CAISO. The implementation deposit will be applied to pay for prudent costs incurred by the CAISO or third parties at the direction of the CAISO to manage the Interconnection Request between GIA execution and the Commercial Operation Date, including without limitation executing GIA amendments, modeling and testing for synchronization, preparing for metering and telemetry, and incorporating the Generating Units into the CAISO Markets. The CAISO will not use implementation deposit funds to offset or obviate processes that require separate deposits under this RIS, including without limitation Material Modification Assessments, Permissible Technological Advancements, and Limited Operation Studies.

The Interconnection Customer will be responsible for the actual costs incurred by the CAISO and applicable Participating TO(s). If the actual costs are less than the deposit provided by the Interconnection Customer, the Interconnection Customer will be refunded the balance, including interest earned. If the actual costs are greater than the deposit provided by the Interconnection Customer, the Interconnection Customer will pay the balance within thirty (30) days of being invoiced. The Participating TO(s) will invoice the CAISO for any work within seventy-five (75) days of the Commercial Operation Date or withdrawal, and, within thirty (30) days thereafter, the CAISO will issue an invoice or refund to the Interconnection Customer, as applicable, based upon such submitted Participating TO invoices and the CAISO's own costs.

### 13.4 Commencement of Interconnection Activities

If the Interconnection Customer executes the final GIA, the applicable Participating TO(s), CAISO and the Interconnection Customer shall perform their respective obligations in accordance with the terms of the GIA, subject to modification by FERC. Upon submission of an unexecuted GIA, the Interconnection Customer, applicable Participating TO(s) and CAISO may proceed to comply with the unexecuted GIA, pending FERC action.

### 13.5 Interconnection Customer to Meet PTO Handbook Requirements

The Interconnection Customer's Interconnection Facilities shall be designed, constructed, operated and maintained in accordance with the applicable Participating TO's Interconnection Handbook.

### 13.6 Shared Network Upgrades

Interconnection Studies and GIAs will identify when Network Upgrades are shared, and their estimated construction timelines. Once identified in the Interconnection Studies, or no later than when the first Interconnection Customer sharing the Assigned Network Upgrade executes its GIA with for the Assigned Network Upgrade, the CAISO and Participating TO will notify the other Interconnection Customers sharing the Assigned Network Upgrade when their provision of security under Article 11.5 of the GIA will be required based on the construction timeline required to meet the earliest In-Service Date of the Interconnection Customers sharing the Assigned Network Upgrade. All Interconnection Customers sharing the Assigned Network Upgrade must submit (a) their authorizations to proceed with design and procurement of the shared Network Upgrade and (b) their provision of security under Article 11.5 of the GIA for the shared Network Upgrade, by the same deadline. Interconnection Customers and Participating TOs may have separate posting and authorization deadlines for each shared Network Upgrade and other non-shared Network Upgrades, but Interconnection Customers sharing Assigned Network Upgrades must have the same deadlines for them. At all times, Interconnection Customers must have sufficient Commercial Readiness Deposit, GIA Deposit, and provision of security under Article 11.5 of the GIA to meet the requirements of this RIS and the GIA.

All Interconnection Customers sharing the Assigned Network Upgrade must execute an engineering and procurement agreement under Section 12 or a GIA prior to submitting their

security for the shared Network Upgrade. Where any Interconnection Customer sharing the Assigned Network Upgrade has not executed either agreement, the Participating TO will tender (1) a draft engineering and procurement agreement if the Interconnection Customer is parked, or (2) a draft GIA or GIA amendment, to the Interconnection Customer no later than one-hundred twenty (120) days before the provision of security deadline. The Interconnection Customer must execute the engineering and procurement agreement or GIA or request that the GIA be filed unexecuted prior to the deadline to post. The failure by an Interconnection Customer to timely (a) execute an engineering and procurement agreement or GIA or request an unexecuted filing, (b) submit the authorization to proceed, or (c) submit the provision of security for the shared Assigned Network Upgrade, under this Section, will result in the Interconnection Request being deemed withdrawn and subject to Section 3.8. The Interconnection Customer will provide the CAISO and the Participating TO with written notice that it has posted the required security no later than the applicable final day for posting.

No later than thirty (30) days after each Interconnection Customer sharing the Assigned Network Upgrade complies with this Section, the Participating TO will commence Construction Activities on the shared Assigned Network Upgrade.

## Section 14 Construction and Neighboring System Impacts

### 14.1 Schedule

The applicable Participating TO(s) and the Interconnection Customer shall negotiate in good faith concerning a schedule for the construction of the applicable Participating TO's Interconnection Facilities and the Network Upgrades.

### 14.2 Construction Sequencing

#### 14.2.1 General

In general, the sequence of construction of Stand Alone Network Upgrades or other Network Upgrades for a single Interconnection Request, or Network Upgrades identified for the interconnection of Generating Facilities associated with multiple Interconnection Requests, shall be determined, to the maximum extent practical, in a manner that accommodates the proposed Commercial Operation Date set forth in the GIA of the Interconnection Customer(s) associated with the Stand Alone Network Upgrades or other Network Upgrades.

#### 14.2.2 Construction of Network Upgrades that are or were an Obligation of an Entity other than the Interconnection Customer

The applicable Participating TO(s) shall be responsible for financing and constructing any Network Upgrades necessary to support the interconnection of the Generating Facility of an Interconnection Customer with a GIA whenever the Network Upgrades were included in the Interconnection Base Case Data for an Interconnection Study on the basis that they were Network Upgrades associated with Generating Facilities of Interconnection Customers that have an executed GIA (or its equivalent predecessor agreement) or unexecuted GIA (or its equivalent predecessor agreement) filed with FERC, and such GIA specifies that the Participating TO would construct the Network Upgrades, and either:

(i) the Network Upgrades will not otherwise be completed because such GIA or equivalent predecessor agreement was subsequently terminated or the Interconnection Request has otherwise been withdrawn; or

(ii) the Network Upgrades will not otherwise be completed in time to support the

Interconnection Customer's In-Service Date because construction has not commenced in accordance with the terms of such GIA (or its equivalent predecessor agreement).

Where the Participating TO is constructing ADNUs for Merchant Option Interconnection Customers and one of the two conditions above occurs, the Participating TO shall continue to construct such ADNUs with financing provided from the Commercial Readiness Deposit and Merchant Option deposit of those Merchant Option Interconnection Customers' Interconnection referred to above, with any additional financing requirements to be reapportioned among those remaining Merchant Option Interconnection Customers who still need the ADNUs.

The obligation under this Section arises only after the CAISO, in coordination with the applicable Participating TO(s), determines that the Network Upgrades remain needed to support the interconnection of the Interconnection Customer's Generating Facility notwithstanding, as applicable, the absence or delay of the Generating Facility that is contractually, or was previously contractually, associated with the Network Upgrades.

Further, to the extent the timing of such Network Upgrades was not accounted for in determining a reasonable Commercial Operation Date among the CAISO, applicable Participating TO(s), and the Interconnection Customer as part of the Interconnection Study, the applicable Participating TO(s) will use Reasonable Efforts to ensure that the construction of such Network Upgrades can accommodate the Interconnection Customer's proposed Commercial Operation Date. If, despite Reasonable Efforts, it is anticipated that the Network Upgrades cannot be constructed in time to accommodate the Interconnection Customer's proposed Commercial Operation Date, the Interconnection Customer may commit to pay the applicable Participating TO(s) any costs associated with expediting construction of the Network Upgrades to meet the original proposed Commercial Operation Date. The expediting costs under Section shall be in addition to the Interconnection Customer's cost responsibility.

### 14.2.3 Advancing Construction of Network Upgrades that are Part of the CAISO's Transmission Plan

An Interconnection Customer with a GIA, in order to maintain its In-Service Date as specified in the GIA, may request that the CAISO and applicable Participating TO(s) advance to the extent necessary the completion of Network Upgrades that: (i) are necessary to support such In-Service Date and (ii) would otherwise not be completed, pursuant to an approved CAISO Transmission Plan covering the PTO Service Territory of the applicable Participating TO(s), in time to support such In-Service Date. Upon such request, the applicable Participating TO(s) will use Reasonable Efforts to advance the construction of such Network Upgrades to accommodate such request; provided that the Interconnection Customer commits to pay the applicable Participating TO(s) any associated expediting costs. The Interconnection Customer shall be entitled to refunds, if any, in accordance with the GIA, for any expediting costs paid.

### 14.2.4 Limited Operation Study

**14.2.4.1** Pursuant to Article 5.9 of the Large Generator Interconnection Agreement set forth in Appendices V, BB, CC, and EE, Generating Facilities may request a limited operation study. The Participating TO and/or the CAISO, as applicable, will, upon the request and at the expense of the Interconnection Customer, perform operating studies on a timely basis to determine the extent to which the Generating Unit and the Interconnection Customer's Interconnection Facilities may operate prior to the completion of the Participating TO's Interconnection Facilities or Network Upgrades consistent with Applicable Laws

and Regulations, Applicable Reliability Standards, and Good Utility Practice. The Participating TO and the CAISO will permit the Interconnection Customer to operate the Generating Unit and the Interconnection Customer's Interconnection Facilities in accordance with the results of such studies. To the extent study assumptions change, the CAISO and Participating TO will update study results as needed.

**14.2.4.2** The Generating Unit owner will provide the CAISO a $10,000 deposit for the limited operation study with the request. Except as provided below, any limited operation study will be concluded, and a response provided to the Generating Unit owner in writing, within forty-five (45) calendar days from when the CAISO receives all of the following: the Generating Unit owner's written approval of the limited operation study plan, technical data required to assess the request, and the $10,000 deposit. If the limited operation study cannot be completed within that time period, the CAISO will notify the Generating Unit owner and provide an estimated completion date and an explanation of the reasons why additional time is required.

Notwithstanding any other provision, all refunds pursuant to this Appendix KK will be processed in accordance with the CAISO's generally accepted accounting practices, including monthly batched deposit refund disbursements. Any CAISO deadline will be tolled to the extent the Interconnection Customer has not provided the CAISO with the appropriate documents to facilitate the Interconnection Customer's refund, or if the Interconnection Customer has any outstanding invoice balance due to the CAISO on another project owned by the same Interconnection Customer.

**14.2.4.3** The Generating Unit owner will be responsible for the actual costs incurred by the CAISO and the Participating TO(s) in conducting the modification assessment. If the actual costs of the limited operation study are less than the deposit provided by the Generating Unit owner, the Generating Unit owner will be refunded the balance. If the actual costs of the limited operation study are greater than the deposit provided by the Generating Unit owner, the Generating Unit owner shall pay the balance within thirty (30) days of being invoiced. The CAISO will coordinate the request with the Participating TO(s). The Participating TO(s) will invoice the CAISO for any limited operation study work within seventy-five (75) calendar days of completion of the study, and, within thirty (30) days of payment of the Participating TO(s) invoice, the CAISO will issue an invoice or refund to the Generating Unit owner, as applicable, based upon such submitted Participating TO invoices and the CAISO's costs for the assessment.

## 14.3 Network Upgrades

With the exception of LDNUs and ADNUs for Merchant Option Generating Facilities that were not allocated TP Deliverability, Network Upgrades will be constructed by the applicable Participating TO(s). Interconnection Customers may, at their discretion, select parties other than the applicable PTOs to construct certain LDNUs and ADNUs required by their Merchant Option Generating Facilities that are not allocated TP Deliverability, if such LDNUs and ADNUs are eligible for construction by parties other than the applicable PTO pursuant to Section 24.5.2 of the CAISO Tariff. Such ADNUs and LDNUs will be incorporated into the CAISO Controlled Grid pursuant to the provisions for Merchant Transmission Facilities in CAISO Tariff Sections 24.4.6.1, and 36.11. Unless the Interconnection Customer elects construction by a party other than the applicable Participating TO, the applicable Participating TO(s) will be obligated to construct the LDNUs and ADNUs. This Section shall not apply to an Interconnection Customer's right to build Stand Alone Network Upgrade(s) in accordance with the LGIA.

### 14.3.1 Initial Funding

Assigned Network Upgrades shall be funded by the Interconnection Customer(s) either by means of drawing down the Commercial Readiness Deposit or GIA Deposit or by the provision of additional capital, at each Interconnection Customer's election, up to a maximum amount no greater than that established by the Current Cost Responsibility assigned to each Interconnection Customer(s). Current Cost Responsibility may be adjusted consistent with this RIS and up to the Interconnection Customer's Maximum Cost Responsibility, but the applicable Participating TO(s) shall be responsible for funding any capital costs for the Assigned Network Upgrades that exceed the Current Cost Responsibility assigned to the Interconnection Customer(s).

(a) Where the funding responsibility for any RNUs and LDNUs has been assigned to a single Interconnection Customer, the applicable Participating TO(s) shall invoice the Interconnection Customer under LGIA Article 12.1 or SGIA Article 6.1, whichever is applicable, up to a maximum amount no greater than that established by the Current Cost Responsibility assigned to each Interconnection Customer(s) for the RNUs or LDNUs, respectively.

(b) Where the funding responsibility for an RNU or LDNU has been assigned to more than one Interconnection Customer in accordance with this RIS, the applicable Participating TO(s) shall invoice each Interconnection Customer under LGIA Article 12.1 or SGIA Article 6.1, whichever is applicable, for such Network Upgrades in accordance with their respective Current Cost Responsibilities. Each Interconnection Customer may be invoiced up to a maximum amount no greater than that established by the Current Cost Responsibility assigned to that Interconnection Customer.

(c) Where the funding responsibility for an ADNU being constructed by one or more Participating TO has been assigned to more than one Merchant Option Interconnection Customer, the applicable Participating TO(s) shall invoice each Interconnection Customer under LGIA Article 12.1 or SGIA Article 6.1, whichever is applicable, for such ADNUs based on their respective Current Cost Responsibilities.

Any permissible extension of the Commercial Operation Date of a Generating Facility will not alter the Interconnection Customer's obligation to finance its Assigned Network Upgrades where the Network Upgrades are required to meet the earlier Commercial Operation Date(s) of other Generating Facilities that have also been assigned cost responsibility for the Network Upgrades.

### 14.3.2 Repayment of Amounts Advanced for Network Upgrades and Refund of Interconnection Financial Security

#### 14.3.2.1 Repayment of Amounts Advanced Regarding Non-Phased Generating Facilities

Interconnection Customers will be entitled to repayment for the Interconnection Customer's contribution to the cost of Network Upgrades placed in service on or before the Commercial Operation Date of its Generating Facility, commencing upon the Commercial Operation Date of the Generating Facility. Repayment for the Interconnection Customer's contribution to the cost of Network Upgrades placed into service after the Commercial Operation Date of its Generating Facility shall, for each of these Network Upgrades, commence no later than the later of: (i) the first month of the calendar year following the year in which the Network

Upgrade is placed into service or (ii) 90 days after the Network Upgrade is placed into service.

An Interconnection Customer subject to this Section 14.3.2.1 shall be entitled to repayment for its contribution to the cost of Network Upgrades as follows:

(1) For RNUs, in accordance with the Interconnection Customer's cost responsibility assigned up to a maximum of $60,000 per MW of generating capacity as specified in the GIA. The CAISO will publish an annual inflation factor and adjusted amount for this figure with the per unit cost publication on the CAISO Website pursuant to Section 6.4 of this RIS. Interconnection Customers will be entitled to repayment subject to the figure corresponding to their Commercial Operation Date. Energy Only Interconnection Customers that proceeded to the Cluster Study under Section 4.4 are ineligible for cash repayment for any RNU costs.

(2) For LDNUs in accordance with the Interconnection Customer's Current Cost Responsibility.

(3) Merchant Option Generating Facilities will not receive repayment for ADNUs.

Unless an Interconnection Customer has provided written notice to the CAISO that it is declining all or part of such repayment, such amounts shall include any tax gross-up or other tax-related payments associated with the Network Upgrades not refunded to the Interconnection Customer, and shall be paid to the Interconnection Customer by the applicable Participating TO(s) on a dollar-for-dollar basis either through (1) direct payments made on a levelized basis over the five-year period commencing on the applicable date as provided for in this Section 14.3.2.1; or (2) any alternative payment schedule that is mutually agreeable to the Interconnection Customer and Participating TO, provided that such amount is paid within five (5) years of the applicable commencement date.

For Network Upgrades the Interconnection Customer funded but did not receive repayment, the Interconnection Customer will be eligible to receive Merchant Transmission Congestion Revenue Rights (CRRs) in accordance with CAISO Tariff Section 36.11 associated with those Network Upgrades, or portions thereof that were funded by the Interconnection Customer. Such CRRs would take effect upon the Commercial Operation Date of the Generating Facility in accordance with the GIA.

#### 14.3.2.2 Repayment of Amounts Advanced Regarding Phased Generating Facilities

Upon the Commercial Operation Date of each phase of a Phased Generating Facility, unless the Interconnection Customer has provided written notice to the CAISO that it is declining all or part of such repayment, the Interconnection Customer shall be entitled to a repayment for the Interconnection Customer's contribution to the cost of Network Upgrades for that completed phase in accordance with the Interconnection Customer's Current Cost Responsibility assigned for the phase and subject to the limitations specified in Section 14.3.2.1, if the following conditions are satisfied as described below:

(a) The Generating Facility is capable of being constructed in phases;

(b) The Generating Facility is specified in the GIA as being constructed in phases;

(c) The completed phase corresponds to one of the phases specified in the GIA;

(d) The phase has achieved Commercial Operation and the Interconnection Customer has tendered notice of the same pursuant to the GIA;

(e) All parties to the GIA have confirmed that the completed phase meets the requirements set forth in the GIA and any other operating, metering, and interconnection requirements to permit generation output of the entire capacity of the completed phase as specified in the GIA;

(f) The Network Upgrades necessary for the completed phase to meet the desired level of Deliverability are in service; and

(g) The Interconnection Customer has posted one hundred (100) percent of the Interconnection Financial Security required for the Network Upgrades for all the phases of the Generating Facility (or if less than one hundred (100) percent has been posted, then all required Interconnection Financial Security instruments to the date of commencement of repayment).

Following satisfaction of these conditions (a) through (e) and (g), an Interconnection Customer will be entitled to receive a repayment of its financed cost responsibility for the Network Upgrades associated with the completed phase that have been placed in service. The Interconnection Customer shall be entitled to repayment in this manner for each completed phase until the entire Generating Facility is completed. With respect to any Network Upgrades necessary for a completed phase to meet its desired level of deliverability that are not in service by the time the phase achieves Commercial Operation, repayment for each such Network Upgrade will commence no later than the later of: (i) the first month of the calendar year following the year in which the Network Upgrade is placed into service or (ii) 90 days after the Network Upgrade is placed into service.

A reduction in the electrical output (MW capacity) of the Generating Facility pursuant to the CAISO Tariff shall not diminish the Interconnection Customer's right to repayment pursuant to this Section 14.3.2.2. If the GIA includes a partial termination provision and the partial termination right has been exercised with regard to a phase that has not been built, then the Interconnection Customer's eligibility for repayment under this Section 14.3.2.2 as to the remaining phases shall not be diminished. If the Interconnection Customer completes one or more phases and then defaults on the GIA, the Participating TO and the CAISO shall be entitled to offset any losses or damages resulting from the default against any repayments made for Network Upgrades related to the completed phases provided that the party seeking to exercise the offset has complied with any requirements which may be required to apply the stream of payments utilized to make the repayment to the Interconnection Customer as an offset.

Any repayment amount provided pursuant to this Section 14.3.2.2 shall include any tax gross-up or other tax-related payments associated with the Network Upgrades not refunded to the Interconnection Customer, and shall be paid to the Interconnection Customer by the applicable Participating TO(s) on a dollar-for-

dollar basis either through (1) direct payments made on a levelized basis over the five-year period commencing on the applicable date as provided for in this Section 14.3.2.2 ; or (2) any alternative payment schedule that associates the completion of Network Upgrades with the completion of particular phases and that is mutually agreeable to the Interconnection Customer and Participating TO, provided that such amount is paid within five (5) years of the applicable commencement date.

#### 14.3.2.3 Interest Payments and Assignment Rights

Any phased or non-phased repayment shall include interest calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date of any payment for Network Upgrades through the date on which the Interconnection Customer receives a repayment of such payment. The Interconnection Customer may assign such repayment rights to any person.

## 14.4 Special Provisions for Affected Systems, Other Affected PTOs

The Interconnection Customer shall enter into an agreement with the owner of the Affected System and/or other affected Participating TO(s), as applicable. The agreement shall specify the terms governing payments to be made by the Interconnection Customer to the owner of the Affected System and/or other affected Participating TO(s). If the affected entity is another Participating TO, the initial form of agreement will be the GIA, as appropriately modified.

### 14.4.1 Cost Allocation, Commercial Readiness Deposit, GIA Deposit, and Reimbursement for Multiple Participating TOs

Interconnection Studies will list separate cost estimates for facilities and Network Upgrades required on the interconnecting Participating TO and affected Participating TO's systems. These separate sums will produce a single, combined Maximum Cost Responsibility and a single, combined Maximum Cost Exposure for the Interconnection Customer. Current Cost Responsibilities for each Participating TO's facilities and Network Upgrades may be adjusted up to the Interconnection Customer's Maximum Cost Responsibility and Maximum Cost Exposure, as applicable.

The Interconnection Customer will post its Commercial Readiness Deposits and GIA Deposit to each Participating TO based on the separate Current Cost Responsibilities for facilities and Network Upgrades on their respective systems.

Each Participating TO will repay amounts received for Network Upgrades pursuant to this RIS. Reimbursement for Reliability Network Upgrades will be paid by each Participating TO but subject to a single, combined maximum based upon the Interconnection Customer's generating capacity, as described in Section 14.3.2. If the amount funded for the Reliability Network Upgrades exceeds this maximum, each Participating TO will repay the Interconnection Customer proportional to its share of the Interconnection Customer's Current Cost Responsibility for the Reliability Network Upgrades.

## 14.5 CAISO as an Affected System

The CAISO and Participating TOs whose system may be impacted by a proposed interconnection on another transmission provider's transmission system will cooperate with the transmission provider with whom interconnection has been requested in all matters related to the conduct of studies and the determination of modifications to the CAISO Controlled Grid.

### 14.5.1 Applicability

This Section 14.5 outlines the duties of the CAISO and affected Participating TO when the CAISO receives notification that an Affected System Interconnection Customer's proposed interconnection to its host transmission provider may impact the CAISO Controlled Grid. The interconnection customer will be eligible for repayment of amounts advanced for Network Upgrades consistent with Section 14.3.2.1.

### 14.5.2 Response to Notifications

When the CAISO receives notification that an Affected System Interconnection Customer's proposed interconnection to its host transmission provider may impact the CAISO Controlled Grid, the CAISO must respond in writing within twenty (20) Business Days whether the Participating TO intends to conduct an Affected System Study.

By fifteen (15) Business Days after the CAISO responds with its affirmative intent to conduct an Affected System Study, the Participating TO will share with Affected System Interconnection Customer(s) and the Affected System Interconnection Customer's host transmission provider a non-binding good faith estimate of the cost and the schedule to complete the Affected System Study.

Within five (5) Business Days of receipt of notification of Cluster Restudy, the Participating TO will send written notification to Affected System Interconnection Customer(s) involved in the Cluster Restudy and the host transmission provider that the Participating TO intends to delay a planned or in-progress Affected System Study until after completion of the Cluster Restudy. If the Participating TO decides to delay the Affected System Study, it is not required to meet its obligations under Section 14 of this RIS until the time that it receives notification from the host transmission provider that the Cluster Restudy is complete. If the Participating TO decides to move forward with its Affected System Study despite the Cluster Restudy, then it must meet all requirements under Section 14.5 of this RIS.

### 14.5.3 Affected System Queue Position

The CAISO must assign an Affected System Queue Position to Affected System Interconnection Customer(s) that require(s) an Affected System Study. Such Affected System Queue Position will be assigned based upon the date of execution of the Affected System Study Agreement. Relative to the CAISO's Interconnection Customers, this Affected System Queue Position will be higher-queued than any Cluster that has not yet received its Cluster Study Report and will be lower-queued than any Cluster that has already received its Cluster Study Report. Consistent with Section 14.5.7 of this RIS, the CAISO and Participating TO(s) will study the Affected System Interconnection Customer(s) via Clustering, and all Affected System Interconnection Customers studied in the same Cluster under Section 14.5.7 of this RIS will be equally queued. For Affected System Interconnection Customers that are equally queued, the Affected System Queue Position will have no bearing on the assignment of Affected System Network Upgrades identified in the applicable Affected System Study. The costs of the Affected System Network Upgrades will be allocated among the Affected System Interconnection Customers in accordance with Section14.5.9 of this RIS.

### 14.5.4 Affected System Study Agreement/Multiparty Affected System Study Agreement

Unless otherwise agreed, the Participating TO will provide to Affected System Interconnection Customer(s) an Affected System Study Agreement/Multiparty Affected System Study Agreement, in the form of Appendix 11 or Appendix 12 to this RIS, as applicable, within ten (10) Business Days of the Participating TO sharing the schedule for

the Affected System Study per Section 14.5.2 of this RIS.

Upon Affected System Interconnection Customer(s)' receipt of the Affected System Study Report, Affected System Interconnection Customer(s) will compensate the Participating TO for the actual cost of the Affected System Study. Any difference between the study deposit and the actual cost of the Affected System Study will be paid by or refunded to the Affected System Interconnection Customer(s). Any invoices for the Affected System Study will include a detailed and itemized accounting of the cost of the study. Affected System Interconnection Customer(s) will pay any excess costs beyond the already-paid Affected System Study deposit or be reimbursed for any costs collected over the actual cost of the Affected System Study within thirty (30) calendar days of receipt of an invoice thereof. If Affected System Interconnection Customer(s) fail to pay such undisputed costs within the time allotted, it will lose its Affected System Queue Position. The Participating TO will notify the CAISO and the Affected System Interconnection Customer's host transmission provider of such failure to pay.

### 14.5.5 Execution of Affected System Study Agreement/Multiparty Affected System Study Agreement

The Affected System Interconnection Customer(s) will execute the Affected System Study Agreement/Multiparty Affected System Study Agreement, deliver the executed Affected System Study Agreement/Multiparty Affected System Study Agreement to the Participating TO, and provide the Affected System Study deposit within ten (10) Business Days of receipt. If the Participating TO notifies Affected System Interconnection Customer(s) that it will delay the Affected System Study pursuant to Section 14.5.2 of this RIS, Affected System Interconnection Customer(s) are neither required to execute and return the previously tendered Affected System Study/Multiparty Affected System Study Agreement nor provide the Affected System Study deposit for the previously tendered Affected System Study/Multiparty Affected System Study Agreement.

If the Affected System Interconnection Customer does not provide all required technical data when it delivers the Affected System Study Agreement/Multiparty Affected System Study Agreement, the Participating TO will notify the deficient Affected System Interconnection Customer, the CAISO, and the host transmission provider with which Affected System Interconnection Customer seeks to interconnect, of the technical data deficiency within five (5) Business Days of the receipt of the executed Affected System Study Agreement/Multiparty Affected System Study Agreement and the deficient Affected System Interconnection Customer will cure the technical deficiency within ten (10) Business Days of receipt of the notice: provided, however, that such deficiency does not include failure to deliver the executed Affected System Study Agreement/Multiparty Affected System Study Agreement or deposit for the Affected System Study Agreement/Multiparty Affected System Study Agreement. If Affected System Interconnection Customer does not cure the technical data deficiency within the cure period or fails to execute the Affected System Study Agreement/Multiparty Affected System Study Agreement or provide the deposit, the Affected System Interconnection Customer will lose its Affected System Queue Position.

### 14.5.6 Scope of Affected System Study

The Affected System Study will evaluate the impact that any Affected System Interconnection Customer's proposed interconnection to another transmission provider's transmission system will have on the reliability of the CAISO Controlled Grid. The Affected System Study will consider the Base Case as well as all Generating Facilities (and with respect to (iii) below, any identified Affected System Network Upgrades associated with such higher-queued Interconnection Request) that, on the date the Affected System Study is commenced: (i) are directly interconnected to the CAISO

Controlled Grid; (ii) are directly interconnected to another transmission provider's transmission system and may have an impact on Affected System Interconnection Customer's interconnection request; (iii) have a pending higher-queued Interconnection Request to interconnect to the CAISO Controlled Grid; and (iv) have no queue position but have executed a GIA or requested that an unexecuted GIA be filed with FERC. The CAISO and Participating TO have no obligation to study impacts of Affected System Interconnection Customers of which they are not notified.

The Affected System Study will consist of a power flow, stability, and short circuit analysis. The Affected System Study Report will: state the assumptions upon which it is based; state the results of the analyses; and provide the potential impediments to Affected System Interconnection Customer's receipt of interconnection service on its host transmission provider's transmission system, including a preliminary indication of the cost and length of time that would be necessary to correct any problems identified in those analyses and implement the interconnection. For purposes of determining necessary Affected System Network Upgrades, the Affected System Study will consider the level of interconnection service requested in megawatts by Affected System Interconnection Customer, unless otherwise required to study the full generating facility capacity due to safety or reliability concerns. The Affected System Study Report will provide a list of facilities that are required as a result of Affected System Interconnection Customer's proposed interconnection to another transmission provider's system, a non-binding good faith estimate of cost responsibility, and a non-binding good faith estimated time to construct. The Affected System Study may consist of a system impact study, a facilities study, or some combination thereof.

### 14.5.7 Affected System Study Procedures

The CAISO and Participating TOs will use Clustering in conducting the Affected System Study and will use existing studies to the extent practicable, when multiple Affected System Interconnection Customers that are part of a single Cluster may cause the need for Affected System Network Upgrades. The Participating TO will complete the Affected System Study and provide the Affected System Study Report to Affected System Interconnection Customer(s), the CAISO, and the host transmission provider with whom interconnection has been requested within one hundred fifty (150) calendar days after the receipt of the Affected System Study Agreement and deposit.

At the request of Affected System Interconnection Customer, the Participating TO will notify Affected System Interconnection Customer as to the status of the Affected System Study. If the Participating TO is unable to complete the Affected System Study within the requisite time period, it will notify Affected System Interconnection Customer(s), as well as the transmission provider with which Affected System Interconnection Customer seeks to interconnect, and will provide an estimated completion date with an explanation of the reasons why additional time is required. If the Participating TO does not meet the deadlines in this Section, the Participating TO will be subject to the financial penalties as described in Section 3.11 of this RIS. Upon request, the Participating TO will provide Affected System Interconnection Customer(s) with all supporting documentation, workpapers and relevant power flow, short circuit and stability databases for the Affected System Study, subject to confidentiality arrangements consistent with Section 15.1 of this RIS.

The Participating TO must study an Affected System Interconnection Customer as Energy Only, regardless of the level of interconnection service that the Affected System Interconnection Customer is seeking from the host transmission provider with whom it seeks to interconnect.

#### 14.5.8 Meeting with the CAISO and Participating TO

Within ten (10) Business Days of providing the Affected System Study Report to Affected System Interconnection Customer(s), the Participating TO, the CAISO, and the Affected System Interconnection Customer(s) will meet to discuss the results of the Affected System Study.

#### 14.5.9 Affected System Cost Allocation

The Participating TO will allocate Affected System Network Upgrade costs identified during the Affected System Study to Affected System Interconnection Customer(s) using a proportional impact method, consistent with Section 6.3.1 of this RIS.

#### 14.5.10 Tender of Affected Systems Facilities Construction Agreement/Multiparty Affected System Facilities Construction Agreement

The Participating TO will tender to Affected System Interconnection Customer(s) an Affected System Facilities Construction Agreement/Multiparty Affected System Facilities Construction Agreement, as applicable, in the form of Appendix 13 or 14 to this RIS, within thirty (30) calendar days of providing the Affected System Study Report. Within ten (10) Business Days of the receipt of the Affected System Facilities Construction Agreement/Multiparty Affected System Facilities Construction Agreement, the Affected System Interconnection Customer(s) must execute the agreement or request the agreement to be filed unexecuted with FERC. The Participating TO will execute the agreement or file the agreement unexecuted within five (5) Business Days after receiving direction from Affected System Interconnection Customer(s). The Affected System Interconnection Customer's failure to execute the Affected System Facilities Construction Agreement/Multiparty Affected System Facilities Construction Agreement, or failure to request the agreement to be filed unexecuted with FERC, will result in the loss of its Affected System Queue Position.

#### 14.5.11 Restudy

If restudy of the Affected System Study is required, the Participating TO will notify Affected System Interconnection Customer(s) and the CAISO in writing within thirty (30) calendar days of discovery of the need for restudy. Such restudy will take no longer than sixty (60) calendar days from the date of notice. Any cost of restudy will be borne by the Affected System Interconnection Customer(s) being restudied.

## Section 15 Miscellaneous

### 15.1 Confidentiality

For the purposes of this Section 15.1, "Party" or "Parties" shall mean the CAISO, Participating TO(s), Interconnection Customer or any combination of the CAISO, Participating TO(s) or the Interconnection Customer.

Confidential Information shall include, without limitation, all information relating to a Party's technology, research and development, business affairs, and pricing.

Information is Confidential Information only if it is clearly designated or marked in writing as confidential on the face of the document, or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Parties receiving the information that the information is confidential.

If requested by any Party, the other Parties shall provide in writing, the basis for asserting that the information referred to in this Section warrants confidential treatment, and the requesting Party may disclose such writing to the appropriate Governmental Authority. Each Party shall be responsible for the costs associated with affording confidential treatment to its information.

These confidentiality provisions are limited to information provided pursuant to this RIS.

**15.1.1 Scope**

Confidential Information shall not include information that the receiving Party can demonstrate: (1) is generally available to the public other than as a result of a disclosure by the receiving Party; (2) was in the lawful possession of the receiving Party on a non-confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a third party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the disclosing Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the disclosing Party; (5) is, or becomes, publicly known, through no wrongful act or omission of the receiving Party or breach of the GIA; or (6) is required, in accordance with Section 15.1.6 of this RIS, Order of Disclosure, to be disclosed by any Governmental Authority or is otherwise required to be disclosed by law or subpoena, or is necessary in any legal proceeding establishing rights and obligations under the RIS. Information designated as Confidential Information will no longer be deemed confidential if the Party that designated the information as confidential notifies the other Parties that it no longer is confidential.

**15.1.2 Release of Confidential Information**

No Party shall release or disclose Confidential Information to any other person, except to its employees, consultants, Affiliates (limited by FERC's Standards of Conduct requirements set forth in Part 358 of FERC's Regulations, 18 C.F.R. Part 358), or to Affected Systems, or to parties who may be or considering providing financing to or equity participation with the Interconnection Customer, or to potential purchasers or assignees of the Interconnection Customer, on a need-to-know basis in connection with these procedures, unless such person has first been advised of the confidentiality provisions of this Section and has agreed to comply with such provisions. Notwithstanding the foregoing, a Party providing Confidential Information to any person shall remain primarily responsible for any release of Confidential Information in contravention of this Section.

**15.1.3 Rights**

Each Party retains all rights, title, and interest in the Confidential Information that each Party discloses to the other Parties. The disclosure by each Party to the other Parties of Confidential Information shall not be deemed a waiver by a Party or any other person or entity of the right to protect the Confidential Information from public disclosure.

**15.1.4 No Warranties**

By providing Confidential Information, no Party makes any warranties or representations as to its accuracy or completeness. In addition, by supplying Confidential Information, no Party obligates itself to provide any particular information or Confidential Information to the other Parties nor to enter into any further agreements or proceed with any other relationship or joint venture.

**15.1.5 Standard of Care**

Each Party shall use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from unauthorized disclosure, publication or dissemination. Each Party may use Confidential Information solely to fulfill its obligations to the other Parties under these procedures or its regulatory requirements.

**15.1.6 Order of Disclosure**

If a court or a Government Authority or entity with the right, power, and apparent authority to do so requests or requires any Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party shall provide the other Parties with prompt notice of such request(s) or requirement(s) so that the other Parties may seek an appropriate protective order or waive compliance with the terms of these confidentiality provisions . Notwithstanding the absence of a protective order or waiver, the Party may disclose such Confidential Information which, in the opinion of its counsel, the Party is legally compelled to disclose. Each Party will use Reasonable Efforts to obtain reliable assurance that confidential treatment will be accorded any Confidential Information so furnished.

**15.1.7 Remedies**

Monetary damages are inadequate to compensate a Party for another Party's breach of its obligations under this Section 15.1. Each Party accordingly agrees that the other Parties shall be entitled to equitable relief, by way of injunction or otherwise, if the first Party breaches or threatens to breach its obligations under this Section 15.1, which equitable relief shall be granted without bond or proof of damages, and the receiving Party shall not plead in defense that there would be an adequate remedy at law. Such remedy shall not be deemed an exclusive remedy for the breach of this Section 15.1, but shall be in addition to all other remedies available at law or in equity. Further, the covenants contained herein are necessary for the protection of legitimate business interests and are reasonable in scope. No Party, however, shall be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with this Section 15.1.

**15.1.8 Disclosure to FERC, its Staff, or a State**

Notwithstanding anything in this Section 15.1 to the contrary, and pursuant to 18 C.F.R. section 1b.20, if FERC or its staff, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence, the Party shall provide the requested information to FERC or its staff, within the time provided for in the request for information. In providing the information to FERC or its staff, the Party must, consistent with 18 C.F.R. Section 388.112, request that the information be treated as confidential and non-public by FERC and its staff and that the information be withheld from public disclosure. Parties are prohibited from notifying the other Parties prior to the release of the Confidential Information to FERC or its staff. The Party shall notify the other applicable Parties when it is notified by FERC or its staff that a request to release Confidential Information has been received by FERC, at which time any of the Parties may respond before such information would be made public, pursuant to 18 C.F.R. Section 388.112. Requests from a state regulatory body conducting a confidential investigation shall be treated in a similar manner, consistent with applicable state rules and regulations.

**15.1.9** Subject to the exception in Section 15.1.8, any Confidential Information shall not be disclosed by the other Parties to any person not employed or retained by the other Parties, except to the extent disclosure is (i) required by law; (ii) reasonably

deemed by the disclosing Party to be required to be disclosed in connection with a dispute between or among the Parties, or the defense of litigation or dispute; (iii) otherwise permitted by consent of the other Parties, such consent not to be unreasonably withheld; or (iv) necessary to fulfill its obligations under this RIS or as a transmission service provider or a Balancing Authority including disclosing the Confidential Information to an RTO or ISO or to a subregional, regional or national reliability organization or planning group. The Party asserting confidentiality shall notify the other Parties in writing of the information it claims is confidential. Prior to any disclosures of another Party's Confidential Information under this subparagraph, or if any third party or Governmental Authority makes any request or demand for any of the information described in this subparagraph, the disclosing Party agrees to promptly notify the other Party in writing and agrees to assert confidentiality and cooperate with the other Party in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order or other reasonable measures.

**15.1.10** This provision shall not apply to any information that was or is hereafter in the public domain (except as a result of a breach of this provision).

**15.1.11** The Participating TO or CAISO shall, at the Interconnection Customer's election, destroy, in a confidential manner, or return the Confidential Information provided at the time of Confidential Information is no longer needed.

### 15.2 Delegation of Responsibility

The CAISO and the Participating TOs may use the services of subcontractors as deemed appropriate to perform their obligations under this RIS. The applicable Participating TO or CAISO shall remain primarily liable to the Interconnection Customer for the performance of its respective subcontractors and compliance with its obligations of this RIS. The subcontractor shall keep all information provided confidential and shall use such information solely for the performance of such obligation for which it was provided and no other purpose.

### 15.3 [Not Used]

### 15.4 [Not Used]

### 15.5 Disputes

If an Interconnection Customer disputes withdrawal of its Interconnection Request under Section 3.8, the CAISO will forward any information regarding the disputed withdrawal received under Section 3.8 within one (1) Business Day to the executive dispute committee, consisting of the Vice President responsible for administration of this RIS, the CAISO Vice President responsible for customer affairs, and an additional Vice President. The executive dispute committee shall have five (5) Business Days to determine whether or not to restore the Interconnection Request. The CAISO may replace Vice Presidents unavailable during the five (5) Business Days with another CAISO Vice President. If the executive dispute committee concludes that the Interconnection Request should have been withdrawn, the Interconnection Customer may seek relief in accordance with the CAISO ADR Procedures.

All disputes, other than those arising from Section 3.8, arising out of or in connection with this RIS whereby relief is sought by or from the CAISO shall be settled in accordance with the CAISO ADR Procedures.

Disputes arising out of or in connection with this RIS not subject to the CAISO ADR Procedures shall be resolved as follows:

### 15.5.1 Submission

In the event either Party has a dispute, or asserts a claim, that arises out of or in connection with the GIA, the RIS, or their performance, such Party (the "disputing Party") shall provide the other Party with written notice of the dispute or claim ("Notice of Dispute"). Such dispute or claim shall be referred to a designated senior representative of each Party for resolution on an informal basis as promptly as practicable after receipt of the Notice of Dispute by the other Party. In the event the designated representatives are unable to resolve the claim or dispute through unassisted or assisted negotiations within thirty (30) calendar days of the other Party's receipt of the Notice of Dispute, such claim or dispute may, upon mutual agreement of the Parties, be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below. In the event the Parties do not agree to submit such claim or dispute to arbitration, each Party may exercise whatever rights and remedies it may have in equity or at law consistent with the terms of the GIA and RIS.

### 15.5.2 External Arbitration Procedures

Any arbitration initiated under these procedures shall be conducted before a single neutral arbitrator appointed by the Parties. If the Parties fail to agree upon a single arbitrator within ten (10) calendar days of the submission of the dispute to arbitration, each Party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty (20) calendar days select a third arbitrator to chair the arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the Parties an opportunity to be heard and, except as otherwise provided herein, shall conduct the arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("Arbitration Rules") and any applicable FERC regulations or RTO rules; provided, however, in the event of a conflict between the Arbitration Rules and the terms of this Section 15.5, the terms of this Section 15.5 shall prevail.

### 15.5.3 Arbitration Decisions

Unless otherwise agreed by the Parties, the arbitrator(s) shall render a decision within ninety (90) calendar days of appointment and shall notify the Parties in writing of such decision and the reasons therefore. The arbitrator(s) shall be authorized only to interpret and apply the provisions of the GIA and shall have no power to modify or change any provision of the GIA and in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in the Federal Arbitration Act or the Administrative Dispute Resolution Act. The final decision of the arbitrator must also be filed with FERC if it affects jurisdictional rates, terms and conditions of service, Interconnection Facilities, or Network Upgrades.

### 15.5.4 Costs

Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable: (1) the cost of the arbitrator chosen by the Party to sit on the three member panel and one half of the cost of the third arbitrator chosen; or (2) one half the cost of the single arbitrator jointly chosen by the Parties.

#### 15.5.5 Non-binding Alternative Dispute Resolution

If a Party has submitted a Notice of Dispute pursuant to Section 15.5.1, and the Parties are unable to resolve the claim or dispute through unassisted or assisted negotiations within the thirty (30) calendar days provided in that section, and the Parties cannot reach mutual agreement to pursue the Section 15.5 arbitration process, a Party may request that the CAISO engage in non-binding Alternative Dispute Resolution pursuant to this section by providing written notice to the CAISO. Conversely, either Party may file a request for non-binding Alternative Dispute Resolution pursuant to this section without first seeking mutual agreement to pursue the Section 15.5 arbitration process. The process in this Section 15.5.5 shall serve as an alternative to, and not a replacement of, the Section 15.5 arbitration process. Pursuant to this process, the CAISO must within thirty (30) calendar days of receipt of the request for non-binding Alternative Dispute Resolution appoint a neutral decision-maker that is an independent subcontractor that shall not have any current or past substantial business or financial relationships with either Party. Unless otherwise agreed by the Parties, the decision-maker shall render a decision within sixty (60) calendar days of appointment and shall notify the Parties in writing of such decision and reasons therefore. This decision-maker shall be authorized only to interpret and apply the provisions of the RIS and GIA and shall have no power to modify or change any provision of the RIS and GIA in any manner. The result reached in this process is not binding, but, unless otherwise agreed, the Parties may cite the record and decision in the non-binding dispute resolution process in future dispute resolution processes, including in a Section 15.5 arbitration, or in a Federal Power Act section 206 complaint. Each Party shall be responsible for its own costs incurred during the process and the cost of the decision-maker shall be divided equally among each Party to the dispute.

### 15.6 Local Furnishing Bonds

#### 15.6.1 Participating TOs that Own Facilities Financed by Local Furnishing Bonds

This provision is applicable only to a Participating TO that has financed facilities for the local furnishing of electric energy with Local Furnishing Bonds. Notwithstanding any other provisions of this , the Participating TO and the CAISO shall not be required to provide Interconnection Service to the Interconnection Customer pursuant to this and the GIA if the provision of such Interconnection Service would jeopardize the tax-exempt status of any Local Furnishing Bond(s) issued for the benefit of the Participating TO.

#### 15.6.2 Alternative Procedures for Requesting Interconnection Service

If a Participating TO determines that the provision of Interconnection Service requested by the Interconnection Customer would jeopardize the tax-exempt status of any Local Furnishing Bond(s) issued for the benefit of the Participating TO, it shall advise the Interconnection Customer and the CAISO within (30) calendar days of receipt of the Interconnection Request.

The Interconnection Customer thereafter may renew its request for the same interconnection Service by tendering an application under Section 211 of the Federal Power Act, in which case the Participating TO, within ten (10) calendar days of receiving a copy of the Section 211 application, will waive its rights to a request for service under Section 213(a) of the Federal Power Act and to the issuance of a proposed order under Section 212(c) of the Federal Power Act, and the CAISO and Participating TO shall provide the requested Interconnection Service pursuant to the terms and conditions set forth in this and the GIA.

### 15.7 Change in CAISO Operational Control

If the CAISO no longer has control of the portion of the CAISO Controlled Grid at the Point of Interconnection during the period when an Interconnection Request is pending, the CAISO shall transfer to the applicable former Participating TO or successor entity which has ownership of the Point of Interconnection any amount of the deposit or payment with interest thereon that exceeds the cost that it incurred to evaluate the request for interconnection. Any difference between such net deposit amount and the costs that the former Participating TO or successor entity incurs to evaluate the request for interconnection shall be paid by or refunded to the Interconnection Customer, as appropriate. The CAISO shall coordinate with the applicable former Participating TO or successor entity which has ownership of the Point of Interconnection to complete any Interconnection Study, as appropriate, that the CAISO has begun but has not completed. If the Participating TO has tendered a draft GIA to the Interconnection Customer but the Interconnection Customer has neither executed the GIA nor requested the filing of an unexecuted GIA with FERC, unless otherwise provided, the Interconnection Customer must complete negotiations with the applicable former Participating TO or successor entity which has the ownership of the Point of Interconnection.

## Section 16 Reliability Network Upgrade Prioritization

### 16.1 [Not Used]

### 16.2 [Not Used]

### 16.3 Reliability Network Upgrade Prioritization

For any assigned Reliability Network Upgrades with construction schedules of four (4) or more years that delay an Interconnection Customer's earliest available In-Service Date by two (2) years or more, the CAISO and Participating TO will assess whether impacted Interconnection Customers may interconnect safely and reliably without the completion of all such Reliability Network Upgrades. Reliability Network Upgrades considered will include Precursor Network Upgrades approved in the Transmission Plan, and Assigned Network Upgrades. Interconnection Studies and GIAs will be updated to reflect where an Interconnection Customer may interconnect earlier under this Section 16.3, including whether there is insufficient projected margin such that a Limited Operation Study will be required.

The CAISO will post the methodology for this assessment on the CAISO Website. The CAISO will issue a Market Notice specifying the timeline for commencement of activities, for Interconnection Customer submissions, and anticipated release of results to Interconnection Customers. The CAISO will notify Interconnection Customers whether they have qualifying Reliability Network Upgrades and there may be available capacity to interconnect earlier at least thirty (30) days before the deadline to submit affidavits for scoring.

To participate, Interconnection Customers must submit affidavits on their project status. The CAISO will determine scores based on the criteria below under the methodology set forth in the Business Practice Manual:

(1) Permitting status.

a. The Interconnection Customer has received its final governmental permit or authorization allowing the Generating Facility to commence construction.

b. The Interconnection Customer has received a draft environmental report document (or equivalent environmental permitting document) indicating likely approval of the requested permit and/or which indicates that the permitting authority has not found an environmental impact which would likely prevent the permit approval.

c. The Interconnection Customer has applied for the necessary governmental permits or authorizations and the authority has deemed such documentation as data adequate for the authority to initiate its review process.

d. The Interconnection Customer has applied for the necessary governmental permit or authorization for the construction.

(2) Project financing status.

a. The Interconnection Customer is a Load Serving Entity constructing its project to serve its own Load pursuant to a regulatory requirement or meet its own Resource Adequacy obligation.

b. The Interconnection Customer has an executed power purchase agreement.

(3) GIA and posting status.

a. The Interconnection Customer has an executed GIA, has provided the Participating TO a notice to proceed to construction, and has provided its final financing to the Participating TO, as agreed in its GIA.

b. The Interconnection Customer has an executed GIA and has provided the Participating TO a notice to proceed to construction.

c. The Interconnection Customer has an executed GIA or its GIA has been filed with FERC unexecuted and is still pending before or approved by FERC.

(4) Deliverability Network Upgrades status.

a. All of the Interconnection Customer's Delivery Network Upgrades are online, or the Interconnection Customer does not require Delivery Network Upgrades, including for Energy Only Interconnection Customers.

b. The Interconnection Customer is waiting for its Delivery Network Upgrades.

Interconnection Customers also must submit a $50,000 deposit by the deadline for affidavits. The Interconnection Customer will be responsible for the actual costs incurred by the CAISO and applicable Participating TO(s) in conducting the assessment. If the actual costs of the assessment are less than the deposit provided by the Interconnection Customer, the Interconnection Customer will be refunded the balance. If the actual costs of the assessment are greater than the deposit provided by the Interconnection Customer, the Interconnection Customer shall pay the balance within thirty (30) days of being invoiced.

In allocating transmission capacity under this section, the CAISO, in coordination with the applicable Participating TO(s), will allocate transmission capacity based on the highest numerical score. The CAISO will resolve any ties for capacity from short-circuit related General Reliability Network Upgrades by short-circuit duty contribution, with the lowest contribution per MW prevailing. The CAISO will resolve any ties for capacity from power-flow related General Reliability Network Upgrades by flow contribution, with the lowest contribution prevailing. The CAISO will resolve any ties for capacity from Interconnection Reliability Network Upgrades by Generating Facility capacity, with the largest capacity prevailing.

**Appendix 1 Interconnection Request**
**INTERCONNECTION REQUEST**

Provide one copy of this completed form pursuant to Section 7 of this Appendix 1 below.

1. The undersigned Interconnection Customer submits this request to interconnect its Generating Facility with the CAISO Controlled Grid pursuant to the CAISO Tariff (check one):
_____ Fast Track Process.

_____ Queue Cluster process.
_____ Annual Deliverability Assessment pursuant to Section 9.

2. This Interconnection Request is for (check one):
_____ A proposed new Generating Facility.
_____ An increase in the generating capacity or a Material Modification to an existing Generating Facility.

3. Requested Deliverability Statuses are (check one):

On-Peak (for purposes of Net Qualifying Capacity):

_ Full Capacity
_ Partial Deliverability for __ MW of electrical output
_ Energy Only

4. The Interconnection Customer provides the following information:

a. Address or location, including the county, of the proposed new Generating Facility site or, in the case of an existing Generating Facility, the name and specific location, including the county, of the existing Generating Facility;

Project Name:_____

Project Location:
Street Address:_____
City, State:_____
County:_____
Zip Code:_____
GPS Coordinates:_____

b. Maximum net megawatt electrical output (as defined by section 2.c of Attachment A to this appendix) of the proposed new Generating Facility or the amount of net megawatt increase in the generating capacity of an existing Generating Facility;

Maximum net megawatt electrical output (MW):_____ or
Net Megawatt increase (MW): _____

c. Type of project (i.e., gas turbine, hydro, wind, etc.) and general description of the equipment configuration (if more than one type is chosen include nameplate MW for each);

| Technology | Nameplate |
|---|---|
| ___ Cogeneration | ____ (MW) |
| ___ Reciprocating Engine | ____ (MW) |
| ___ Biomass | ____ (MW) |
| ___ Steam Turbine | ____ (MW) |
| ___ Gas Turbine | ____ (MW) |
| ___ Wind | ____ (MW) |
| ___ Hydro | ____ (MW) |
| ___ Photovoltaic | ____ (MW) |
| ___ Combined Cycle | ____ (MW) |

___Other (please describe):

General description of the equipment configuration (e.g. number, size, type, etc):

d. Proposed In-Service Date (first date transmission is needed to the facility), Trial Operation date and Commercial Operation Date by month, day, and year and term of service (dates must be sequential); _____

Proposed Trial Operation Date: _____
Proposed Commercial Operation Date: _____
Proposed Term of Service (years): _____

e. Name, address, telephone number, and e-mail address of the Interconnection Customer's contact person (primary person who will be contacted);

Name: _____
Title: _____
Company Name: _____
Street Address:_____
City, State: _____
Zip Code: _____
Phone Number:_____
Fax Number: _____
Email Address:_____

f. Approximate location of the proposed Point of Interconnection (i.e., specify transmission facility interconnection point name, voltage level, and the location of interconnection);

_____

g. Interconnection Customer data (set forth in Attachment A)

**The Interconnection Customer shall provide to the CAISO the technical data called for in Attachment A to this Interconnection Request. One (1) copy is required.**

h. Requested Interconnection Service Capacity (in MW) (if lower than the Generating Facility Capacity; may not exceed Generating Facility Capacity);

_____

5. Applicable deposit amount made payable to California ISO. Send check to CAISO (see section 7 below for details) along with the:
   a. Interconnection Request for processing.
   b. Attachment A (Interconnection Request Generating Facility Data).

6. This Interconnection Request shall be submitted to the CAISO representative indicated below:

California ISO
Attn: Grid Assets
P.O. Box 639014
Folsom, CA 95763-9014

Overnight address:
California ISO
Attn: Grid Assets
250 Outcropping Way
Folsom, CA 95630

7. Representative of the Interconnection Customer to contact:

[To be completed by the Interconnection Customer]
Name:_____
Title: _____
Company Name:_____
Street Address: _____
City, State: _____
Zip Code: _____
Phone Number: _____
Fax Number: _____
Email Address: _____

8. This Interconnection Request is submitted by:

Legal name of the Interconnection Customer: _____

By (signature):_____

Name (type or print):_____

Title:_____

Date:_____

**Interconnection Request**

**Attachment A Generating Facility Data**

**GENERATING FACILITY DATA**

Provide one copy of this completed form.

1. **Provide one set of original prints (no larger than 11" x 17") or soft copy on cd/flashdrive of the following:**

   A. Site drawing to scale, showing generator location and Point of Interconnection with the CAISO Controlled Grid.
   B. Single-line diagram showing applicable equipment such as generating units, step-up transformers, auxiliary transformers, switches/disconnects of the proposed interconnection, including the required protection devices and circuit breakers. For wind and photovoltaic generator plants, the one line diagram should include the distribution lines connecting the various groups of generating units, the generator capacitor banks, the step up transformers, the distribution lines, and the substation transformers and capacitor banks at the Point of Interconnection with the CAISO Controlled Grid.

**2. Generating Facility Information**

A. Total Generating Facility rated output (MW): _____
B. Generating Facility auxiliary Load (MW): _____
C. Project net capacity (A-B)(MW): _____
D. Standby Load when Generating Facility is off-line (MW): _____
E. Number of Generating Units: _____
(Please repeat the following items for each generator)
F. Individual generator rated output (MW for each unit): _____
G. Manufacturer: _____
H. Year Manufactured _____
I. Nominal Terminal Voltage (kV): _____
J. Rated Power Factor (%): _____
K. Type (Induction, Synchronous, D.C. with Inverter): _____
L. Phase (three phase or single phase): _____
M. Connection (Delta, Grounded WYE, Ungrounded WYE, impedance grounded): _____
N. Generator Voltage Regulation Range (+/- %): _____
O. Generator Power Factor Regulation Range: _____
P. For combined cycle plants, specify the plant net output capacity (MW) for an outage of the steam turbine or an outage of a single combustion turbine_____

**3. Synchronous Generator – General Information:**
(Please repeat the following for each generator model)

A. Rated Generator speed (rpm):_____
B. Rated MVA: _____
C. Rated Generator Power Factor: _____
D. Generator Efficiency at Rated Load (%): _____
E. Moment of Inertia (including prime mover): _____
F. Inertia Time Constant (on machine base) H: _____ sec or MJ/MVA
G. SCR (Short-Circuit Ratio - the ratio of the field current required for rated open-circuit voltage to the field current required for rated short-circuit current): _____
H. Please attach generator reactive capability curves.
I. Rated Hydrogen Cooling Pressure in psig (Steam Units only): _____
J. Please attach a plot of generator terminal voltage versus field current that shows the air

gap line, the open-circuit saturation curve, and the saturation curve at full load and rated power factor.

**4. Excitation System Information**

(Please repeat the following for each generator model)

A. Indicate the Manufacturer _____ and Type _____of excitation system used for the generator. For exciter type, please choose from 1 to 9 below or describe the specific excitation system.

(1) Rotating DC commutator exciter with continuously acting regulator. The regulator power source is independent of the generator terminal voltage and current.

(2) Rotating DC commentator exciter with continuously acting regulator. The regulator power source is bus fed from the generator terminal voltage.

(3) Rotating DC commutator exciter with non-continuously acting regulator (i.e., regulator adjustments are made in discrete increments).

(4) Rotating AC Alternator Exciter with non-controlled (diode) rectifiers. The regulator power source is independent of the generator terminal voltage and current (not bus-fed).

(5) Rotating AC Alternator Exciter with controlled (thyristor) rectifiers. The regulator power source is fed from the exciter output voltage.

(6) Rotating AC Alternator Exciter with controlled (thyristor) rectifiers.

(7) Static Exciter with controlled (thyristor) rectifiers. The regulator power source is bus-fed from the generator terminal voltage.

(8) Static Exciter with controlled (thyristor) rectifiers. The regulator power source is bus-fed from a combination of generator terminal voltage and current (compound-source controlled rectifiers system).

(9) Other (specify):_____

B. Attach a copy of the block diagram of the excitation system from its instruction manual. The diagram should show the input, output, and all feedback loops of the excitation system.

C. Excitation system response ratio (ASA): _____

D. Full load rated exciter output voltage: _____

E. Maximum exciter output voltage (ceiling voltage): _____

F. Other comments regarding the excitation system?

_____
_____
_____

**5. Power System Stabilizer Information**

(Please repeat the following for each generator model. All new generators are required to install PSS unless an exemption has been obtained from WECC. Such an exemption can be obtained for units that do not have suitable excitation systems.)

A. Manufacturer: _____

B. Is the PSS digital or analog? _____

C. Note the input signal source for the PSS?
_____ Bus frequency _____ Shaft speed _____ Bus Voltage
_____ Other (specify source)

D. Please attach a copy of a block diagram of the PSS from the PSS Instruction Manual and the correspondence between dial settings and the time constants or PSS gain.

E: Other comments regarding the PSS?

_____
_____
_____

**6. Turbine-Governor Information**
(Please repeat the following for each generator model)

Please complete Part A for steam, gas or combined-cycle turbines, Part B for hydro turbines, and Part C for both.

A. Steam, gas or combined-cycle turbines:

(1) List type of unit (Steam, Gas, or Combined-cycle):_____
(2) If steam or combined-cycle, does the turbine system have a reheat process (i.e., both high and low pressure turbines)? _____
(3) If steam with reheat process, or if combined-cycle, indicate in the space provided, the percent of full load power produced by each turbine:
Low pressure turbine or gas turbine:_____%
High pressure turbine or steam turbine:_____%

B. Hydro turbines:

(1) Turbine efficiency at rated load: _____%
(2) Length of penstock: _____ft
(3) Average cross-sectional area of the penstock: _____ft2
(4) Typical maximum head (vertical distance from the bottom of the penstock, at the gate, to the water level): _____ft
(5) Is the water supply run-of-the-river or reservoir: _____
(6) Water flow rate at the typical maximum head: _____ft3/sec
(7) Average energy rate: _____kW-hrs/acre-ft
(8) Estimated yearly energy production: _____kW-hrs

C. Complete this section for each machine, independent of the turbine type.

(1) Turbine manufacturer: _____
(2) Maximum turbine power output: _____MW
(3) Minimum turbine power output (while on line): _____MW
(4) Governor information:
(a) Droop setting (speed regulation): _____
(b) Is the governor mechanical-hydraulic or electro-hydraulic (Electro-hydraulic governors have an electronic speed sensor and transducer)? _____
(c) Other comments regarding the turbine governor system?
_____
_____
_____
_____

**7. Induction Generator Data:**

A. Rated Generator Power Factor at rated load: _____
B. Moment of Inertia (including prime mover): _____
C. Do you wish reclose blocking? Yes ___, No ___
Note: Sufficient capacitance may be on the line now, or in the future, and the generator may self-excite unexpectedly.

**7a Wind Generators**
Number of generators to be interconnected pursuant to this Interconnection Request: _____
Average Site Elevation: _____ Single Phase _____ Three Phase_____

Field Volts: _____
Field Amperes: _____
Motoring Power (MW): _____
Neutral Grounding Resistor (If Applicable): _____
I22t or K (Heating Time Constant): _____
Rotor Resistance: _____
Stator Resistance: _____
Stator Reactance: _____
Rotor Reactance: _____
Magnetizing Reactance: _____
Short Circuit Reactance: _____
Exciting Current: _____
Temperature Rise: _____
Frame Size: _____
Design Letter: _____
Reactive Power Required In Vars (No Load):_____
Reactive Power Required In Vars (Full Load):_____
Total Rotating Inertia, H: _____ Per Unit on 100 MVA Base

Note: A completed General Electric Company Power Systems Load Flow (PSLF) data sheet must be supplied with the Interconnection Request. If other data sheets are more appropriate to the proposed device then they shall be provided and discussed at Scoping Meeting.

**8. Generator Short Circuit Data**

For each generator model, provide the following reactances expressed in p.u. on the generator base:

- X"1 – positive sequence subtransient reactance: _____p.u**
- X2 – negative sequence reactance: _____p.u**
- X0 – zero sequence reactance: _____

Generator Grounding (select 1 for each model):

A. _____ Solidly grounded
B. _____ Grounded through an impedance
(Impedance value in p.u on generator base. R: _____p.u.
X: _____p.u.)
C. _____ Ungrounded

**9. Step-Up Transformer Data**

For each step-up transformer, fill out the data form provided in Table 1.

**10. Interconnection Facilities Line Data**

There is no need to provide data for new lines that are to be planned by the Participating TO. However, for transmission lines that are to be planned by the generation developer, please provide the following information:

Nominal Voltage: _____kV
Line Length: _____miles
Line termination Points: _____
Conductor Type: _____ Size: _____
If bundled. Number per phase: _____, Bundle spacing: _____in.

Phase Configuration. Vertical: _____, Horizontal: _____
Phase Spacing: A-B: _____ft., B-C: _____ft., C-A: _____ft.
Distance of lowest conductor to Ground at full load and 40 C.º_____ft
Ground Wire Type: _____ Size: _____ Distance to Ground: _____ft
Attach Tower Configuration Diagram
Summer line ratings in amperes (normal and emergency) _____
Positive Sequence Resistance ( R ): _____ p.u.** (for entire line length)
Positive Sequence Reactance: ( X ): _____ p.u**(for entire line length)
Zero Sequence Resistance ( R0 ): _____ p.u.** (for entire line length)
Zero Sequence Reactance: ( X0 ): _____ p.u** (for entire line length)
Line Charging (B/2): _____ p.u**
** On 100-MVA and nominal line voltage (kV) Base

**10a. For Wind/photovoltaic plants, provide collector System Equivalence Impedance Data Provide values for each equivalence collector circuit at all voltage levels.**

Nominal Voltage: _____
Summer line ratings in amperes (normal and emergency) _____
Positive Sequence Resistance (R1):_____ p.u. ** (for entire line length of each collector circuit)
Positive Sequence Reactance: (X1):_____ p.u** (for entire line length of each collector circuit)
Zero Sequence Resistance (R0):_____ p.u. ** (for entire line length of each collector circuit)
Zero Sequence Reactance: (X0):_____ p.u** (for entire line length of each collector circuit)
Line Charging (B/2): _____ p.u** (for entire line length of each collector circuit)
** On 100-MVA and nominal line voltage (kV) Base

**11. Inverter-Based Machines**

Number of inverters to be interconnected pursuant to this Interconnection Request:_____

Inverter manufacturer, model name, number, and version:
_____

List of adjustable set points for the protective equipment or software:
_____

Max design fault contribution current:

Harmonics Characteristics:

Start-up requirements:

Note: A completed General Electric Company Power Systems Load Flow (PSLF) data sheet must be supplied with the Interconnection Request. If other data sheets are more appropriate to the proposed device then they shall be provided and discussed at Scoping Meeting.

**12. Load Flow and Dynamic Models:**

**Provide load flow model for the generating plant and its interconnection facilities in GE PSLF *.epc format, including new buses, generators, transformers, interconnection facilities. An equivalent model is required for the plant with generation collector systems. This data should reflect the technical data provided in this Attachment A.**

For each generator, governor, exciter and power system stabilizer, select the appropriate dynamic model

from the General Electric PSLF Program Manual and provide the required input data. For inverter based generating facilities, select the appropriate generator and control models from the General Electric PSLF Program Manual and provide the required input data. **Provide a completed *.dyd file that contains the information specified in this section. One copy of this data should be provided on DVD, CD, or USB flash drive media.**

If you require assistance in developing the models, we suggest you contact General Electric. Accurate models are important to obtain accurate study results. Costs associated with any changes in facility requirements that are due to differences between model data provided by the generation developer and the actual generator test data, may be the responsibility of the generation developer.

## 13. MODELS FOR NON-SYNCHRONOUS GENERATORS

For a non-synchronous Generating Facility, the Interconnection Customer will provide (1) a validated user-defined root mean squared (RMS) positive sequence dynamics model; and (2) an appropriately parameterized generic library RMS positive sequence dynamics model, including model block diagram of the inverter control and plant control systems, as defined by the selection in Table 1 or a model otherwise approved by the Western Electricity Coordinating Council, that corresponds to Interconnection Customer's Generating Facility; A user-defined model is a set of programming code created by equipment manufacturers or developers that captures the latest features of controllers that are mainly software based and represents the entities' control strategies but does not necessarily correspond to any generic library model. The Interconnection Customer must also demonstrate that the model is validated by providing evidence that the equipment behavior is consistent with the model behavior (e.g., an attestation from the Interconnection Customer that the model accurately represents the entire Generating Facility; attestations from each equipment manufacturer that the user defined model accurately represents the component of the Generating Facility; or test data).

Table 1: Acceptable Generic Library RMS Positive Sequence Dynamics Models

| GE PSLF | Description |
|---|---|
| pvd1 | Distributed PV system model |
| der_a | Distributed energy resource model |
| regc_a | Generator/converter model |
| regc_b | Generator/converter model |
| wt1g | Wind turbine model for Type-1 wind turbines (conventional directly connected induction generator) |
| wt2g | Generator model for generic Type-2 wind turbines |
| wt2e | Rotor resistance control model for wound-rotor induction wind-turbine generator wt2g |
| reec_a | Renewable energy electrical control model |
| reec_c | Electrical control model for battery energy storage system |
| reec_d | Renewable energy electrical control model |
| wt1t | Wind turbine model for Type-1 wind turbines (conventional directly connected induction generator) |
| wt1p_b | Generic wind turbine pitch controller for WTGs of Types 1 and 2 |

| GE PSLF | Description |
|---|---|
| wt2t | Wind turbine model for Type-2 wind turbines (directly connected induction generator wind turbines with an external rotor resistance) |
| wtgt_a | Wind turbine drive train model |
| wtga_a | Simple aerodynamic model |
| wtgp_a | Wind Turbine Generator Pitch controller |
| wtgq_a | Wind Turbine Generator Torque controller |
| wtgwgo_a | Supplementary control model for Weak Grids |
| wtgibffr_a | Inertial-base fast frequency response control |
| wtgp_b | Wind Turbine Generator Pitch controller |
| wtgt_b | Drive train model |
| repc_a | Power Plant Controller |

## 14. Operating Assumptions

If applicable, include (1) the requested operating assumptions (*i.e.*, whether the interconnecting Generating Facility will or will not charge at peak load) to be used by the CAISO and Participating TO that reflect the proposed charging behavior of a Generating Facility that includes at least one electric storage resource, and (2) a description of any control technologies (software and/or hardware) that will limit the operation of the Generating Facility to its intended operation.

TABLE 1

TRANSFORMER DATA
**(Provide for each level of transformation)**

UNIT_____

NUMBER OF TRANSFORMERS_____ PHASE _____

| RATING | H Winding | X Winding | Y Winding |
|---|---|---|---|
| Rated MVA | _____ | _____ | _____ |
| Connection (Delta, Wye, Gnd.) | _____ | _____ | _____ |
| Cooling Type (OA,OA/FA, etc) : | _____ | _____ | _____ |
| Temperature Rise Rating | _____ | _____ | _____ |
| Rated Voltage | _____ | _____ | _____ |
| BIL | _____ | _____ | _____ |
| Available Taps (% of rating) | _____ | _____ | _____ |
| Load Tap Changer? (Y or N) | _____ | _____ | _____ |
| Tap Settings | _____ | _____ | _____ |
| IMPEDANCE | H-X | H-Y | X-Y |
| Percent | _____ | _____ | _____ |
| MVA Base | _____ | _____ | _____ |
| Tested Taps | _____ | _____ | _____ |
| WINDING RESISTANCE | H | X | Y |
| Ohms | _____ | _____ | _____ |

CURRENT TRANSFORMER RATIOS

H_____ X_____ Y_____ N_____

Percent exciting current at 100 % Voltage; _____ 110% Voltage_____

Supply copy of nameplate and manufacture's test report when available

**Appendix 2**

**Cluster Study Criteria**

1. Select one set of cluster study criteria pursuant to Section 4 of this RIS:

   (a) ___ Request for Deliverability in Deliverable Zone

   (b) ___ Request for Deliverability in Merchant Zone

   (c) ___ Energy Only Interconnection Request eligible for cash reimbursement

   (d) ___ Energy Only Interconnection Request ineligible for cash reimbursement

2. For Interconnection Customers selecting criteria (1)(a) or (1)(c), select which of the following are applicable and include all supporting documentation and deposits required by Section 4 of the RIS. The CAISO will validate all selections consistent with the RIS. Interconnection Customers expecting a Load Serving Entity to indicate commercial interest may select (2)(a) on an advisory basis to the CAISO. The CAISO will receive binding commercial interest points from Load Serving Entities pursuant to the RIS regardless of the indication here.

   Commercial Interest (select one):

   (a) ___ The Interconnection Customer expects [_____], a Load Serving Entity to indicate commercial interest (up to 100 sub-points for commercial interest).

   (b) ___ The Interconnection Request has commercial interest from an entity that is not a Load Serving Entity (25 sub-points for commercial interest).

   (c) ___ The Interconnection Request does not have commercial interest at this time.

   Project Viability Engineering Plan (select one):

   (a) ___ The Interconnection Request has an engineering design plan [___] percent complete (up to 50 sub-points for project viability).

   (b) ___ The Interconnection Request does not have an engineering design plan at this time.

   Project Viability Expansion (select one):

   (a) ___ The Interconnection Request is an expansion of a Generating Facility that has executed a GIA and submitted its notice to proceed and is under active construction (10 sub-points for project viability.

   (b) ___ The Interconnection Request is an expansion of an online Generating Facility (20 sub-points for project viability).

   (c) ___ The Interconnection Request is an expansion of a Generating Facility that has executed a GIA and submitted its notice to proceed and is under active construction or is online, and the Generating Facility's generator tie line to the CAISO Controlled Grid has sufficient surplus capacity to accommodate the sum of the maximum capacities of the extant Generating Facility and the expansion (50 sub-points for project viability).

   (d) ___ The Interconnection Request is not (a), (b), or (c).

   System Need (select one):

   (a) ___ The Interconnection Request may provide Local Resource Adequacy in a local area the

CAISO has designated in need of Local Resource Adequacy (50 sub-points for system need).

(b) ___ The Local Regulatory Authority has designed the Interconnection Request as a potential long-lead-time resource and the CAISO Transmission Plan includes Network Upgrades to support its potential interconnection (100 sub-points for system need). Interconnection Customers selecting (b) must provide supporting documentation of their Commercial Operation Date pursuant to Section 3.5.1.4 of this RIS.

(c) ___ Neither (a) nor (b) apply at this time.

**Appendix 3**

**CLUSTER STUDY AGREEMENT
FOR QUEUE CLUSTERS**

THIS AGREEMENT is made and entered into this day of , 20 by and between _____ , a organized and existing under the laws of the State of , ("Interconnection Customer") and the California Independent System Operator Corporation, a California nonprofit public benefit corporation existing under the laws of the State of California, ("CAISO"). The Interconnection Customer and the CAISO each may be referred to as a "Party," or collectively as the "Parties."

**RECITALS**

WHEREAS, the Interconnection Customer is proposing to develop a Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by the Interconnection Customer dated _____; and

WHEREAS, the Interconnection Customer desires to interconnect the Generating Facility with the CAISO Controlled Grid pursuant to Appendix KK to the CAISO Tariff; and

WHEREAS, the Interconnection Customer has requested the CAISO to conduct or cause to be performed Interconnection Studies to assess the system impact of interconnecting the Generating Facility to the CAISO Controlled Grid and to specify and estimate the cost of the equipment, engineering, procurement and construction work needed on the Participating TO's electric system in accordance with Good Utility Practice to physically and electrically connect the Generating Facility to the CAISO Controlled Grid;

NOW, THEREFORE, in consideration of and subject to the mutual covenants contained herein the Parties agree as follows:

1.0 When used in this Agreement, with initial capitalization, the terms specified shall have the meanings indicated in the CAISO's FERC-approved Resource Interconnection Standards in CAISO Tariff Appendix KK "RIS" or the Master Definitions Supplement, Appendix A to the CAISO Tariff, as applicable.

2.0 The Interconnection Customer elects and the CAISO shall conduct or cause to be performed Interconnection Studies, including any accelerated Interconnection Study, in accordance with the CAISO Tariff.

3.0 The scope of the Interconnection Studies shall be subject to the assumptions set forth in Appendices A and B to this Agreement.

4.0 The Interconnection Studies will be based upon the technical information provided by the Interconnection Customer in the Interconnection Request, as may be modified under the CAISO Tariff. The CAISO reserves the right to request additional technical information from the Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Interconnection Studies.

5.0 [Not Used]

6.0 Consistent with the RIS and CAISO Tariff, the Interconnection Customer will provide deposits and pay its share of actual costs of applicable studies, including in excess of provided deposits. The CAISO and Participating TO will provide invoices and refunds on a timely basis required by the RIS and the CAISO Tariff.

Following the issuance of an Interconnection Study report, the CAISO shall charge and the Interconnection Customer shall pay its share of the actual costs of the Interconnection Study pursuant to Section 3.5.1 of the RIS.

Any difference between the deposits made toward the Interconnection Study process and associated administrative costs, including any accelerated studies, and the actual cost of the Interconnection Studies and associated administrative costs shall be paid by or refunded to the Interconnection Customer, in the appropriate allocation, in accordance with Section 3.5.1 of the RIS.

7.0 Pursuant to Section 3.7 of the RIS, the CAISO will coordinate the conduct of any studies required to determine the impact of the Interconnection Request on Affected Systems. The CAISO may provide a copy of the Interconnection Studies or other assessments to an Affected System Operator and the Western Electricity Coordinating Council. Requests for review and input from Affected System Operators or the Western Electricity Coordinating Council may arrive at any time prior to interconnection.

8.0 Substantial portions of technical data and assumptions used to perform the Cluster Study, such as system conditions, existing and planned generation, and unit modeling, may change after the CAISO provides the Interconnection Study results to the Interconnection Customer. Interconnection Study results will reflect available data at the time the CAISO provides the Cluster Study report to the Interconnection Customer. The CAISO shall not be responsible for any additional costs, including, without limitation, costs of new or additional facilities, system upgrades, or schedule changes, that may be incurred by the Interconnection Customer as a result of changes in such data and assumptions.

9.0 [Not Used]

10.0 The CAISO and Participating TO(s) shall maintain records and accounts of all costs incurred in performing the Interconnection Study in sufficient detail to allow verification of all costs incurred, including associated overheads. The Interconnection Customer shall have the right, upon reasonable notice, within a reasonable time at the CAISO's offices and at its own expense, to audit the CAISO's records as necessary and as appropriate in order to verify costs incurred by the CAISO. Any audit requested by the Interconnection Customer shall be completed, and written notice of any audit dispute provided to the CAISO representative, within one hundred eighty (180) calendar days following receipt by the Interconnection Customer of the CAISO's notification of the final costs of the Interconnection Study.

11.0 In accordance with Section 3.8 of the RIS, the Interconnection Customer may withdraw its Interconnection Request at any time by written notice to the CAISO. Upon receipt of such notice, this Agreement shall terminate.

12.0 This Agreement shall become effective on the date the CAISO notifies the Interconnection Customer that the Interconnection Request is complete pursuant to Section 3.5.1 of the RIS.

13.0 Miscellaneous.

13.1 Dispute Resolution. Any dispute, or assertion of a claim, arising out of or in connection with this Agreement, shall be resolved in accordance with Section 15.5 of the RIS.

13.2 Confidentiality. Confidential Information shall be treated in accordance with Section 15.1 of the RIS.

13.3 Binding Effect. This Agreement and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

13.4 Conflicts. In the event of a conflict between the body of this Agreement and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this Agreement shall prevail and be deemed the final intent of the Parties.

13.5 Rules of Interpretation. This Agreement, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this Agreement, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this Agreement), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any applicable laws and regulations means such applicable laws and regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article or Section of this Agreement or such Appendix to this Agreement, or such Section of the RIS or such Appendix to the RIS, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this Agreement as a whole and not to any particular Article, Section, or other provision hereof or thereof; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".

13.6 Entire Agreement. This Agreement, including all Appendices and Schedules attached hereto, constitutes the entire agreement between the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this Agreement.

13.7 No Third Party Beneficiaries. This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

13.8 Waiver. The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Agreement. Termination or default of this Agreement for any reason by the Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Participating TO or CAISO. Any waiver of this Agreement shall, if requested, be provided in writing.

Any waivers at any time by any Party of its rights with respect to any default under this

Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

13.9 Headings. The descriptive headings of the various Articles and Sections of this Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Agreement.

13.10 **[Not Used]**

13.11 Amendment. The Parties may by mutual agreement amend this Agreement by a written instrument duly executed by both of the Parties.

13.12 Modification by the Parties. The Parties may by mutual agreement amend the Appendices to this Agreement by a written instrument duly executed by both of the Parties. Such amendment shall become effective and a part of this Agreement upon satisfaction of all applicable laws and regulations.

13.13 Reservation of Rights. The CAISO shall have the right to make a unilateral filing with FERC to modify this Agreement with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and Interconnection Customer shall have the right to make a unilateral filing with FERC to modify this Agreement pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

13.14 No Partnership. This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

13.15 Assignment. This Agreement may be assigned by a Party only with the written consent of the other Party; provided that a Party may assign this Agreement without the consent of the other Party to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement; and provided further that the Interconnection Customer shall have the right to assign this Agreement, without the consent of the other Party, for collateral security purposes to aid in providing financing for the Generating Facility, provided that the Interconnection Customer will require any secured party, trustee or mortgagee to notify the other Party of any such assignment. Any financing arrangement entered into by the Interconnection Customer pursuant to this Section will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify the other Party of the date and particulars of any such exercise of assignment right(s). Any attempted assignment that violates this Section is void and ineffective. Any assignment under this Agreement shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason

thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

IN WITNESS THEREOF, the Party has caused this Agreement to be duly executed by its duly authorized officers or agents on the day and year first above written.

**[Insert name of the Interconnection Customer]**

By: _____

Printed Name: _____

Title: _____

Date: _____

**Appendix A**

**[Not Used]**

**Appendix B**

**INTERCONNECTION FACILITIES STUDY AGREEMENT AND DATA FORM TO BE PROVIDED BY THE INTERCONNECTION CUSTOMER PRIOR TO COMMENCEMENT OF THE INTERCONNECTION FACILITIES STUDY**

**THIS AGREEMENT** is made and entered into this___day of _____, 20___ by and between_____, a _____ organized and existing under the laws of the State of _____, ("Interconnection Customer,") and _____ a _____organized and existing under the laws of the State of California , ("the CAISO "). Interconnection Customer and the CAISO each may be referred to as a "Party," or collectively as the "Parties."

**RECITALS**

**WHEREAS,** Interconnection Customer is proposing to develop a Generating Facility or generating capacity addition to an existing Generating Facility consistent with the Interconnection Request submitted by Interconnection Customer dated _____; and

**WHEREAS,** Interconnection Customer desires to interconnect the Generating Facility with the Transmission System; and

**WHEREAS,** the CAISO and Participating TO have completed a Cluster Study (the "Cluster Study") and provided the results of said study to Interconnection Customer; and

**WHEREAS,** Interconnection Customer has requested the CAISO and Participating TO to perform an Interconnection Facilities Study to specify and estimate the cost of the equipment, engineering, procurement and construction work needed to implement the conclusions of the Cluster Study in accordance with Good Utility Practice to physically and electrically connect the Generating Facility to the Transmission System.

**NOW, THEREFORE,** in consideration of and subject to the mutual covenants contained herein the Parties agreed as follows:

1.0 When used in this Agreement, with initial capitalization, the terms specified will have the meanings indicated in the CAISO's FERC-approved RIS.

2.0 Interconnection Customer elects and the CAISO and Participating TO will cause an Interconnection Facilities Study consistent with Section 8.0 of this RIS to be performed in accordance with the Tariff.

3.0 The scope of the Interconnection Facilities Study will be subject to the assumptions set forth in and the data provided with this Agreement, as set forth in this Appendix B.

4.0 The Interconnection Facilities Study Report (i) will provide a description, estimated cost of (consistent with Attachment A), schedule for required facilities to interconnect the Generating Facility to the Transmission System and (ii) will address the short circuit, instability, and power flow issues identified in the Cluster Study.

5.0 Interconnection Customer will provide a Commercial Readiness Deposit per Section 8.1 of this RIS to enter the Interconnection Facilities Study. The time for completion of the Interconnection Facilities Study is specified in the data form attached to this agreement.

6.0 Miscellaneous. The Interconnection Facilities Study Agreement will include standard

miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability and assignment, that reflect best practices in the electric industry, and that are consistent with regional practices, Applicable Laws and Regulations, and the organizational nature of each Party. All of these provisions, to the extent practicable, will be consistent with the provisions of the RIS and the GIA.

**IN WITNESS WHEREOF,** the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**CAISO**

By: _____

Title: _____

Date: _____

**Interconnection Customer**

By: _____

Title: _____

Date: _____

**DATA FORM TO BE PROVIDED BY THE INTERCONNECTION CUSTOMER PRIOR TO COMMENCEMENT OF THE INTERCONNECTION FACILITIES STUDY**

Generating Facility size (MW): _____

Provide two copies of this completed form and other required plans and diagrams in accordance with Section 8.1 of the RIS.

Provide location plan and one-line diagram of the plant and station facilities. For staged projects, please indicate future generation, transmission circuits, etc.

One set of metering is required for each generation connection to the new bus or existing CAISO Controlled Grid station. Number of generation connections: _____

On the one line indicate the generation capacity attached at each metering location. (Maximum load on CT/PT)

On the one line indicate the location of auxiliary power. (Minimum load on CT/PT)

Will an alternate source of auxiliary power be available during CT/PT maintenance? _____ Yes _____ No

Will a transfer bus on the generation side of the metering require that each meter set be designed for the total plant generation? Yes No
(Please indicate on one line).

What type of control system or PLC will be located at the Interconnection Customer's Generating Facility?
_____
_____

What protocol does the control system or PLC use?
_____
_____

Please provide a 7.5-minute quadrangle of the site. Sketch the plant, station, transmission line, and property line.

Physical dimensions of the proposed interconnection station:

Bus length from generation to interconnection station:

Line length from interconnection station to the Participating TO's transmission line.

Tower number observed in the field. (Painted on tower leg)*

Number of third party easements required for transmission lines*:

* To be completed in coordination with the Participating TO or CAISO.

Is the Generating Facility in the Participating TO's service area?

Yes No

Local service provider for auxiliary and other power: _____

Point of Interconnection: _____

Please provide proposed schedule dates:

Environmental survey start: _____

Environmental impact report submittal: _____

Procurement of project equipment: _____

Begin Construction Date: _____

In-Service Date: _____

Trial Operation Date:_____

Commercial Operation Date: _____

Level of Deliverability: Choose one of the following:

_____Energy Only

_____Full Capacity

The CAISO and Participating TO will complete the Interconnection Facilities Study and issue a draft Interconnection Facilities Study Report to the Interconnection Customer within one hundred twenty (120) days after receipt of an executed copy of this Interconnection Facilities Study Agreement.

Please provide any additional modification request pursuant to Section 6.7.2.2 of Appendix KK.

**Appendix 4**

**AGREEMENT FOR THE ALLOCATION OF RESPONSIBILITIES WITH REGARD TO GENERATOR INTERCONNECTION PROCEDURES AND INTERCONNECTION STUDY AGREEMENTS**

This Agreement for the Allocation of Responsibilities With Regard to Generator Interconnection Procedures and Interconnection Study Agreements ("Agreement"), dated _____ , is entered into between the California Independent System Operator Corporation ("CAISO") and [NAME OF PTO] _____ ("PTO"). The CAISO and PTO are jointly referred to as the "Parties" and individually, as a "Party."

WHEREAS, this Agreement will ensure an independent assessment of new Generating Facility impacts on the CAISO Controlled Grid and take advantage of the respective expertise of the Parties to facilitate efficient and cost effective Interconnection Study procedures in a manner consistent with the Federal Energy Regulatory Commission's ("FERC") July 1, 2005 Order (112 FERC ¶ 61,009), FERC's August 26, 2005 Order (112 FERC ¶ 61,231), and prior FERC Orders recognizing that Order No. 2003 did not allocate responsibilities between transmission owners and transmission providers for the provision of Interconnection Service and suggesting those parties enter into an agreement to allocate those responsibilities. Southwest Power Pool, Inc., 106 FERC ¶ 61,254 (2004).

NOW THEREFORE, in view of the respective responsibilities assigned to the Parties and the foregoing FERC orders, and the provisions of the CAISO's Generator Interconnection Procedures set forth in CAISO Tariff Appendix KK, the CAISO and PTO agree to the following allocation of responsibilities for a centralized Interconnection Study process under the direction and oversight of the CAISO:

**1. DEFINITIONS**

Unless otherwise defined herein, all capitalized terms shall have the meaning set forth in the CAISO Tariff.

**2. TERM OF AGREEMENT**

This Agreement shall become effective upon the date specified in the first paragraph above and shall remain in effect until (1) terminated by all Parties in writing, or (2) with respect to the PTO, upon the termination of that entity's status as a PTO pursuant to the Transmission Control Agreement, as amended from time to time.

**3. PROVISIONS FOR ALLOCATION OF RESPONSIBILITIES BETWEEN CAISO AND PTO**

**3.1** Interconnection Service: The Parties acknowledge that, as the transmission provider, the CAISO is responsible for reliably operating the transmission grid. The Parties also recognize that while the CAISO is a transmission provider under the CAISO Tariff, the CAISO does not own any transmission facilities, and the PTO owns, constructs, and maintains the facilities to which Generating Facilities are to be interconnected, and that the PTO may construct or modify facilities to allow the interconnection. While the Parties recognize that the CAISO will be responsible for conducting or causing to be performed Interconnection Studies and similar studies, the PTO will participate in these studies and conduct certain portions of studies, under the direction and oversight of, and approval by, the CAISO, as provided in this Agreement. The CAISO shall not enter into any Interconnection Study agreement with an Interconnection Customer that is contrary to these rights.

**3.2 [INTENTIONALLY LEFT BLANK]**

**3.3 Transmission Owners' Right to Participation in Studies, Committees and Meetings:**

**3.3.1** In the event that an Interconnection Customer proposes to interconnect a Generating Facility with the PTO's facilities, or the PTO is an owner of an affected system, the PTO shall have the right to participate in any Interconnection Study or any other study conducted in connection with such request for Interconnection Service. "Participate" in this Section 3.3.1 means physically perform any study or portion thereof in connection with an Interconnection Request, under the direction and oversight of, and approval by, the CAISO pursuant to Section 3.4 of this Agreement; provide or receive input, data or other information regarding any study or portion thereof consistent with Section 3.4 of this Agreement; and, when any study or portion thereof in connection with an Interconnection Request is physically performed by an entity other than the PTO, perform activities necessary to adequately review or validate, as appropriate, any results of the study or portions thereof and provide recommendations.

**3.3.2** In the event that an Interconnection Customer proposes to interconnect a Generating Facility with the PTO's facilities, or the PTO is an owner of an affected system, the PTO shall have the right to participate in all meetings expressly established pursuant to the CAISO . As appropriate, the PTO may participate in all other material or substantive communications in connection with an Interconnection Request.

**3.4** Interconnection Study Responsibility Allocation: In complying with its responsibility for conducting or causing to be performed Interconnection Studies, the CAISO will assign responsibility for performance of portions of the Interconnection Studies to the PTO, under the direction and oversight of, and approval by, the CAISO, as set forth in Attachment A, except as specifically qualified as follows:

**3.4.1** For any tasks specifically assigned to the PTO pursuant to Attachment A or otherwise mutually agreed upon by the CAISO and the PTO, the CAISO reserves the right, on a case-by-case basis, to perform or reassign to a mutually agreed upon and pre-qualified contractor such task only where: (a) the quality and accuracy of prior PTO Interconnection Study work product resulting from assigned tasks has been deemed deficient by the CAISO, the CAISO has notified the PTO pursuant to the notice provision of Section 4.15 of this Agreement in writing of the deficiency, and the deficiency has not been cured pursuant to Section 3.4.2 of this Agreement; (b) the timeliness of PTO Interconnection Study work product has been deemed deficient, and either (i) the CAISO has not been notified of the reasons and actions taken to address the timeliness of the work, or (ii) if notified, the stated reasons and actions taken are insufficient or unjustifiable and the PTO has not cured the deficiency pursuant to Section 3.4.2 of this Agreement; (c) the PTO has failed, in a mutually agreed upon timeframe, to provide the CAISO with information or data related to an Interconnection Request despite a written request by the CAISO, pursuant to Section 3.5 hereof, to do so, and such data is the responsibility of the PTO to provide to the CAISO, subject to Section 4.3 of this Agreement; (d) the PTO advises the CAISO in writing that it does not have the resources to adequately or timely perform the task according to the applicable timelines set forth in Attachment A; or (e) the estimated cost of the PTO performing the task has been determined in writing by the CAISO to significantly exceed the cost of the CAISO or mutually agreed upon contractor performing the task, inclusive of the costs that will be incurred by the PTO in exercising its review rights of the results of any such tasks performed by such third party(ies). If the CAISO deviates from the assignments set forth in Attachment A based on the foregoing factors, the CAISO will provide the PTO with a written explanation for the deviation and any associated reassignments of work. The PTO may contest the deviation pursuant

to the Dispute Resolution procedures set forth in Section 4.1 of this Agreement.

Task(s) may only be reassigned in accordance with this Section 3.4.1 where the PTO has been deemed to be deficient in relation to that (those) particular task(s).

**3.4.2 Cure for reassigned Interconnection Study work**
The CAISO shall not reassign task(s) without the opportunity to cure, as specified in Section 3.4.1 of this Agreement. The following actions will serve to cure the deficiencies and result in restoring the assignment(s) as provided in Attachment A:

(a) The CAISO and PTO shall negotiate in good faith and agree to a corrective action plan proposed by the PTO, including a reasonably adequate cure period, and the corrective action plan is satisfactorily implemented.

(b) The CAISO determines the deficiency is cured without an action plan.

**3.4.3** Assessment of prior PTO Interconnection Study work shall only be based on work conducted under the process that becomes effective concurrent with the effective date of this Agreement. Further, assessment of prior PTO Interconnection Study work shall be based on work conducted no earlier than the eighteen (18) month period prior to the date of the CAISO notice of deviation from assignments set forth in Attachment A to this Agreement.

**3.5** Information Exchange: The PTO shall provide the CAISO, subject to confidentiality requirements in Section 4.3 of this Agreement, with any documentation or data requested by the CAISO reasonably necessary to permit the CAISO to perform, review, validate and approve any Interconnection Study, or portion thereof, performed by the PTO. The CAISO shall provide the PTO with any documentation or data requested by the PTO, subject to confidentiality requirements in Section 4.3 of this Agreement, reasonably necessary to perform, review, and validate any Interconnection Study, or portion thereof.

**3.6** Consistency with Provisions for Centralized Interconnection Study Process: The CAISO and PTO have determined that the processes and allocation of responsibilities in Section 3.4 of this Agreement ensure that impacts to the CAISO Controlled Grid are independently assessed and that the assignment of responsibilities minimizes handoffs, takes advantage of non-transferable skills, and promotes the efficiency and cost-effectiveness of the centralized Interconnection Study processes, consistent with Section 3.2.

**3.7** Re-Studies: If any re-studies are required, the CAISO will confer with the PTO as to the need for a re-study. The CAISO will make the final determination regarding the need for a re-study, subject to dispute resolution procedures.

**3.8** Use of Contractors: Nothing in this Agreement shall prevent either the CAISO or the PTO from using qualified, mutually agreed upon third party contractors to meet that Party's rights or obligations under this Agreement or the . To promote the efficiency of the process, the CAISO and PTO will collaborate to identify a list of the mutually agreed to qualified contractors available to the Parties.

**3.9** Performance Standards: Each Party shall perform all of its obligations under the RIS, this Agreement, and any FERC approved Interconnection Study procedures that may be adopted by the CAISO to implement the RIS or this Agreement in accordance with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice.

**3.10** Recovery of Costs: In accordance with Section 3.5.1 of the RIS, the PTO shall recover all actual costs from the CAISO incurred in performing Interconnection Studies or portions thereof assigned to it by the CAISO, including all costs incurred in exercising its right to review, and make recommendations on, Interconnection Studies or portions thereof performed by the CAISO and/or contractors under Section 3.8 of this Agreement.

## 4 GENERAL TERMS AND CONDITIONS

**4.1** Dispute Resolution: In the event any dispute regarding the terms, conditions, and performance of this Agreement is not settled informally, the Parties shall follow the CAISO ADR Procedures set forth in Section 13 of the CAISO Tariff.

**4.2** Liability: No Party to this Agreement shall be liable to any other Party for any direct, indirect, special, incidental or consequential losses, damages, claims, liabilities, costs or expenses (including attorneys fees and court costs) arising from the performance or non-performance of its obligations under this Agreement regardless of the cause (including intentional action, willful action, gross or ordinary negligence, or force majeure); provided, however, that a Party may seek equitable or other non-monetary relief as may be necessary to enforce this Agreement and that damages for which a Party may be liable to another Party under another agreement will not be considered damages under this Agreement.

**4.3** Confidentiality: Confidential Information shall be treated in accordance with Section 15.1 of the RIS.

**4.4** Binding Effect: This Agreement and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

**4.5** Conflicts: In the event of a conflict between the body of this Agreement and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this Agreement shall prevail and be deemed the final intent of the Parties.

**4.6** Rules of Interpretation: This Agreement, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this Agreement, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this Agreement), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any applicable laws and regulations means such applicable laws and regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section, Attachment, or Appendix means such Article or Section of this Agreement or such Attachment or Appendix to this Agreement, or such Section of the or such Appendix to the , as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this Agreement as a whole and not to any particular Article or Section; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".

**4.7** Entire Agreement: This Agreement, including all Attachments hereto, constitutes the entire agreement among the Parties with reference to the subject matter hereof, and

supersedes all prior and contemporaneous understandings or agreements, oral or written, among the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants, which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this Agreement.

**4.8** No Third Party Beneficiaries: This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

**4.9** Waiver: The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party. Any waiver at any time by a Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Agreement. Any waiver of this Agreement shall, if requested, be provided in writing. Any waivers at any time by any Party of its rights with respect to any default under this Agreement, or with respect to any other matter arising in connection with this Agreement, shall not constitute or be deemed a waiver with respect to any subsequent default or other matter arising in connection with this Agreement. Any delay, short of the statutory period of limitations, in asserting or enforcing any right under this Agreement shall not constitute or be deemed a waiver of such right.

**4.10** Headings: The descriptive headings of the various Articles and Sections of this Agreement have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this Agreement.

**4.11** Multiple Counterparts: This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

**4.12** Modification by the Parties: The Parties may amend this Agreement and any Appendices to this Agreement only (1) by mutual agreement of the Parties by a written instrument duly executed by the Parties, subject to FERC approval or (2) upon the issuance of a FERC order, pursuant to Section 206 of the Federal Power Act. It is the Parties' intent that FERC's right to change any provision of this Agreement shall be limited to the maximum extent permissible by law and that any such change, if permissible, shall be in accordance with the Mobile-Sierra public interest standard applicable to fixed rate agreements. United Gas Pipe Line Co. v. Mobile Gas Service Corp., 350 U.S. 332 (1956). Such amendment shall become effective and a part of this Agreement upon satisfaction of all applicable laws and regulations. Notwithstanding the foregoing, Attachment B (Notices) may be modified as set forth in Section 4.15 of this Agreement, and the CAISO and the PTO may from time to time mutually agree to deviate from Attachment A in accordance with the provisions of this Agreement, however, such deviation shall be subject to Section 4.9 of this Agreement and not considered a course of dealing.

**4.13** No Partnership: This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership between the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

**4.14** Assignment: This Agreement may be assigned by a Party only with the written consent

of the other Parties; provided that a Party may assign this Agreement without the consent of the other Parties to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this Agreement. Any attempted assignment that violates this Article is void and ineffective. Any assignment under this Agreement shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

**4.15** Notices: Any notice, demand, or request provided in this Agreement, or served, given, or made in connection with it, will be in writing and deemed properly served, given, or made if delivered in person, transmitted by facsimile, or sent by United States mail, postage prepaid, to the persons specified in Attachment B hereto unless otherwise provided in this Agreement. Any Party may at any time, by notice to all other Parties, change the designation or address of the person specified in Attachment B as the person who receives notices pursuant to this Agreement.

IN WITNESS WHEREOF, the Parties have executed this Agreement in multiple originals, each of which shall constitute and be an original effective agreement among the Parties.

**California Independent System Operator Corporation**

By:_____

Printed Name:_____

Title:_____

Date:_____

**[NAME OF PTO]**

By:_____

Printed Name:_____

Title:_____

Date:_____

## ATTACHMENT A

## INTERCONNECTION STUDY RESPONSIBILITY ALLOCATION

Description of Generator Interconnection Process: Roles and Responsibilities of CAISO and PTOs.

Purpose: This Attachment A to the "AGREEMENT FOR THE ALLOCATION OF RESPONSIBILITIES WITH REGARD TO GENERATOR INTERCONNECTION PROCEDURES AND INTERCONNECTION STUDY AGREEMENTS" serves as further clarification of the roles and responsibilities of the parties to this Agreement. The CAISO will assign responsibility for performance of portions of the Interconnection Studies to the relevant PTOs, under the direction and oversight of, and approval by, the CAISO, as set forth in this Attachment A. This document serves as a general overview of only the roles and responsibilities as between the CAISO and PTOs. This Agreement does not include the process steps, involvement or obligations of the Interconnection Customer (IC). This Agreement is not inclusive of all procedures necessary to comply with all provisions of the GIA, Cluster Study Agreement, and Interconnection Facilities Study Agreement for Queue Clusters.

**Interconnection Request (IR) Process**

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| **Cluster Study Timeline** | | | |
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**Interconnection Facilities Study Process****

**All Interconnection Studies will be under the direction and oversight of, and approval by, the CAISO and may involve more than one PTO.

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**ATTACHMENT B**

**CONTACTS FOR NOTICES**

**[Section 4.15]**

**California ISO**

Manager, Transmission Engineering
250 Outcropping Way
Folsom, CA 95630
Phone: 916.351.2104
Fax: 916.351.2264

**[NAME OF PTO]**

[Address of PTO]

**Appendix 5**

**Schedule for Release and Review of Per Unit Costs**

**SCHEDULE FOR RELEASE AND REVIEW OF PER UNIT COSTS**

| Line | Schedule for the Release and Review of Per Unit Costs | Anticipated Calendar Date(s) |
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| | **Annual Review, Update, and Posting of Per Unit Costs** | |
| □ | PTOs to review and update their per unit costs. | June – September |
| □ | PTOs to provide their updated per unit costs to the CAISO for CAISO review and posting to the CAISO Website. | First week of October |
| □ | CAISO to review and post the PTO per unit costs to the CAISO Website for stakeholder review. | Third week of October |
| □ | Provide two weeks for stakeholders to review the posted per unit costs. | First week of November |
| □ | CAISO to schedule and conduct a one-day stakeholder meeting in November to discuss the posted per unit costs with stakeholders. | Second week of November |
| □ | Provide two weeks following the scheduled stakeholder meeting for stakeholders to provide comments to the CAISO. | First week of December |
| □ | Provide one week for CAISO and PTOs to review and address stakeholder comments. | Second week of December |
| □ | Provide three weeks following the stakeholder meeting for PTOs to review, update as needed, and finalize their per unit costs. | Third week of December |
| □ | PTOs to provide their final per unit costs to the CAISO for posting to the CAISO Website. | Third week of December |
| □ | CAISO to review and post the PTOs' final per unit costs to the CAISO Website. | Fourth week of December |
| □ | Final per unit costs are posted and available for use to estimate the costs of Network Upgrades and Interconnection Facilities. | Fourth week of December |

**Appendix 6**
**[Intentionally Omitted]**

**Appendix 7**

**Application, Procedures, and Terms and Conditions for Interconnecting a Certified Inverter-Based Small Generating Facility No Larger than 10 kW ("10 kW Inverter Process")**

1.0 The Interconnection Customer ("Customer") completes the Interconnection Request ("Application") and submits it to the Participating TO ("Company").

2.0 The Company acknowledges to the Customer receipt of the Application within three Business Days of receipt.

3.0 The Company evaluates the Application for completeness and notifies the Customer within ten Business Days of receipt that the Application is or is not complete and, if not, advises what material is missing.

4.0 The Company verifies that the Small Generating Facility can be interconnected safely and reliably using the screens contained in the Fast Track Process in the Resource Interconnection Standards (RIS). The Company has 15 Business Days to complete this process. Unless the Company determines and demonstrates that the Small Generating Facility cannot be interconnected safely and reliably, the Company approves the Application and returns it to the Customer. Note to Customer: Please check with the Company before submitting the Application if disconnection equipment is required.

5.0 After installation, the Customer returns the Certificate of Completion to the Company. Prior to parallel operation, the Company may inspect the Small Generating Facility for compliance with standards which may include a witness test, and may schedule appropriate metering replacement, if necessary.

6.0 The Company notifies the Customer in writing that interconnection of the Small Generating Facility is authorized. If the witness test is not satisfactory, the Company has the right to disconnect the Small Generating Facility. The Customer has no right to operate in parallel until a witness test has been performed, or previously waived on the Application. The Company is obligated to complete this witness test within ten Business Days of the receipt of the Certificate of Completion. If the Company does not inspect within ten Business Days or by mutual agreement of the Parties, the witness test is deemed waived.

7.0 Contact Information – The Customer must provide the contact information for the legal applicant (i.e., the Interconnection Customer). If another entity is responsible for interfacing with the Company, that contact information must be provided on the Application.

8.0 Ownership Information – Enter the legal names of the owner(s) of the Small Generating Facility. Include the percentage ownership (if any) by any utility or public utility holding company, or by any entity owned by either.

9.0 UL1741 Listed – This standard ("Inverters, Converters, and Controllers for Use in Independent Power Systems") addresses the electrical interconnection design of various forms of generating equipment. Many manufacturers submit their equipment to a Nationally Recognized Testing Laboratory (NRTL) that verifies compliance with UL1741. This "listing" is then marked on the equipment and supporting documentation.

**Application for Interconnecting a Certified Inverter-Based Small Generating Facility No Larger than 10kW**

This Application is considered complete when it provides all applicable and correct information required below. Additional information to evaluate the Application may be required.

Processing Fee
A non-refundable processing fee of $100 must accompany this Application.

Interconnection Customer
Name: _____
Contact Person: _____
Address: _____
City:_____State:_____Zip_____:
Telephone (Day): _____(Evening):_____
Fax:_____ E-Mail Address:_____

Contact (if different from Interconnection Customer)
Name: _____
Address: _____
City:_____State:_____Zip:_____
Telephone (Day):_____(Evening):_____
Fax:_____ __E-Mail Address:_____

Owner of the facility (include % ownership by any electric utility):_____

Small Generating Facility Information
Location (if different from above): _____
Electric Service Company: _____
Account Number: _____
Inverter Manufacturer:_ _____ Model_____
Nameplate Rating: _____ (kW) _____ (kVA) _____ (AC Volts)_____
Single Phase _____ Three Phase_____
System Design Capacity: _____ (kW) _____ (kVA)_____
Prime Mover: Photovoltaic Reciprocating Engine Fuel Cell
Turbine Other _____
Energy Source: Solar Wind Hydro Diesel Natural Gas
Fuel Oil Other (describe) _____
Is the equipment UL1741 Listed? _____Yes_____ No _____
If Yes, attach manufacturer's cut-sheet showing UL1741 listing

Estimated Installation Date: _____Estimated In-Service Date: _____

The 10 kW Inverter Process is available only for inverter-based Small Generating Facilities no larger than 10 kW that meet the codes, standards, and certification requirements of Appendices 9 and 10 of the Generator Interconnection Procedures (), or the Participating TO has reviewed the design or tested the proposed Small Generating Facility and is satisfied that it is safe to operate.

List components of the Small Generating Facility equipment package that are currently certified:

| | Equipment Type | Certifying Entity |
|---|---|---|
| 1. | _____ | _____ |
| 2. | _____ | _____ |
| 3. | _____ | _____ |
| 4. | _____ | _____ |
| 5. | _____ | _____ |

Interconnection Customer Signature

I hereby certify that, to the best of my knowledge, the information provided in this Application is true. I agree to abide by the Terms and Conditions for Interconnecting an Inverter-Based Small Generating Facility No Larger than 10kW and return the Certificate of Completion when the Small Generating Facility has been installed.

Signed: _____

Title: _____ Date: _____

Contingent Approval to Interconnect the Small Generating Facility

(For Company use only)

Interconnection of the Small Generating Facility is approved contingent upon the Terms and Conditions for Interconnecting an Inverter-Based Small Generating Facility No Larger than 10kW and return of the Certificate of Completion.

Company Signature: _____

Title: _____ Date: _____

Application ID number: _____

Company waives inspection/witness test? Yes___ No___

**Small Generating Facility Certificate of Completion**

Is the Small Generating Facility owner-installed? Yes_____ No _____

Interconnection Customer: _____

Contact Person: _____

Address: _____

Location of the Small Generating Facility (if different from above):

_____

City: _____ State: _____Zip Code: _____

Telephone (Day): _____ (Evening): _____

Fax: _____ E-Mail Address: _____

Electrician:

Name: _____

Address: _____

City: _____ State: _____ Zip Code: _____

Telephone (Day): _____ (Evening): _____

Fax: _____ E-Mail Address: _____

License number: _____

Date Approval to Install Facility granted by the Company: _____

Application ID number: _____

Inspection:

The Small Generating Facility has been installed and inspected in compliance with the local

building/electrical code of _____

Signed (Local electrical wiring inspector, or attach signed electrical inspection):

_____

Print Name: _____

Date: _____

As a condition of interconnection, you are required to send/fax a copy of this form along with a copy of the signed electrical permit to (insert Company information below):

Name: _____

Company: _____

Address:_____

City _____State _____ZIP: _____

Fax: _____

Approval to Energize the Small Generating Facility (For Company use only)
Energizing the Small Generating Facility is approved contingent upon the Terms and Conditions for Interconnecting an Inverter-Based Small Generating Facility No Larger than 10kW

Company Signature: _____

Title: _____ Date: _____

**Terms and Conditions for Interconnecting an Inverter-Based Small Generating Facility No Larger than 10kW**

## 1.0 Construction of the Facility

The Interconnection Customer (the "Customer") may proceed to construct (including operational testing not to exceed two hours) the Small Generating Facility when the Participating TO (the "Company") approves the Interconnection Request (the "Application") and returns it to the Customer.

## 2.0 Interconnection and Operation

The Customer may operate Small Generating Facility and interconnect with the Company's electric system once all of the following have occurred:

2.1 Upon completing construction, the Customer will cause the Small Generating Facility to be inspected or otherwise certified by the appropriate local electrical wiring inspector with jurisdiction, and

2.2 The Customer returns the Certificate of Completion to the Company, and

2.3 The Company has either:

2.3.1 Completed its inspection of the Small Generating Facility to ensure that all equipment has been appropriately installed and that all electrical connections have been made in accordance with applicable codes. All inspections must be conducted by the Company, at its own expense, within ten Business Days after receipt of the Certificate of Completion and shall take place at a time agreeable to the Parties. The Company shall provide a written statement that the Small Generating Facility has passed inspection or shall notify the Customer of what steps it must take to pass inspection as soon as practicable after the inspection takes place; or

2.3.2 If the Company does not schedule an inspection of the Small Generating Facility within ten business days after receiving the Certificate of Completion, the witness test is deemed waived (unless the Parties agree otherwise); or

2.3.3 The Company waives the right to inspect the Small Generating Facility.

2.4 The Company has the right to disconnect the Small Generating Facility in the event of improper installation or failure to return the Certificate of Completion.

2.5 Revenue quality metering equipment must be installed and tested in accordance with applicable ANSI standards.

## 3.0 Safe Operations and Maintenance

The Customer shall be fully responsible to operate, maintain, and repair the Small Generating Facility as required to ensure that it complies at all times with the interconnection standards to which it has been certified.

## 4.0 Access

The Company shall have access to the disconnect switch (if the disconnect switch is required) and metering equipment of the Small Generating Facility at all times. The Company shall provide reasonable notice to the Customer when possible prior to using its right of access.

**5.0 Disconnection**

The Company may temporarily disconnect the Small Generating Facility upon the following conditions:

5.1 For scheduled outages upon reasonable notice.

5.2 For unscheduled outages or emergency conditions.

5.3 If the Small Generating Facility does not operate in the manner consistent with these Terms and Conditions.

5.4 The Company shall inform the Customer in advance of any scheduled disconnection, or as is reasonable after an unscheduled disconnection.

**6.0 Indemnification**

The Parties shall at all times indemnify, defend, and save the other Party harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from the other Party's action or inactions of its obligations under this agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

**7.0 Insurance**

The Parties each agree to maintain commercially reasonable amounts of insurance.

**8.0 Limitation of Liability**

Each party's liability to the other party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either party be liable to the other party for any indirect, incidental, special, consequential, or punitive damages of any kind whatsoever, except as allowed under paragraph 6.0.

**9.0 Termination**

The agreement to operate in parallel may be terminated under the following conditions:

9.1 By the Customer

By providing written notice to the Company.

9.2 By the Company

If the Small Generating Facility fails to operate for any consecutive 12-month period or the Customer fails to remedy a violation of these Terms and Conditions.

9.3 Permanent Disconnection

In the event this Agreement is terminated, the Company shall have the right to disconnect its facilities or direct the Customer to disconnect its Small Generating Facility.

9.4 Survival Rights

This Agreement shall continue in effect after termination to the extent necessary to allow or require either Party to fulfill rights or obligations that arose under the Agreement.

**10.0 Assignment/Transfer of Ownership of the Facility**

This Agreement shall survive the transfer of ownership of the Small Generating Facility to a new owner when the new owner agrees in writing to comply with the terms of this Agreement and so notifies the Company.

**Appendix 8**

**[intentionally omitted]**

**Appendix 9**

**Certification Codes and Standards**

IEEE1547 Standard for Interconnecting Distributed Resources with Electric Power Systems (including use of IEEE 1547.1 testing protocols to establish conformity)

UL 1741 Inverters, Converters, and Controllers for Use in Independent Power Systems

IEEE Std 929-2000 IEEE Recommended Practice for Utility Interface of Photovoltaic (PV) Systems

NFPA 70 (2002), National Electrical Code

IEEE Std C37.90.1-1989 (R1994), IEEE Standard Surge Withstand Capability (SWC) Tests for Protective Relays and Relay Systems

IEEE Std C37.90.2 (1995), IEEE Standard Withstand Capability of Relay Systems to Radiated Electromagnetic Interference from Transceivers

IEEE Std C37.108-1989 (R2002), IEEE Guide for the Protection of Network Transformers

IEEE Std C57.12.44-2000, IEEE Standard Requirements for Secondary Network Protectors

IEEE Std C62.41.2-2002, IEEE Recommended Practice on Characterization of Surges in Low Voltage (1000V and Less) AC Power Circuits

IEEE Std C62.45-1992 (R2002), IEEE Recommended Practice on Surge Testing for Equipment Connected to Low-Voltage (1000V and Less) AC Power Circuits

ANSI C84.1-1995 Electric Power Systems and Equipment – Voltage Ratings (60 Hertz)

IEEE Std 100-2000, IEEE Standard Dictionary of Electrical and Electronic Terms

NEMA MG 1-1998, Motors and Small Resources, Revision 3

IEEE Std 519-1992, IEEE Recommended Practices and Requirements for Harmonic Control in Electrical Power Systems

NEMA MG 1-2003 (Rev 2004), Motors and Generators, Revision 1

## Appendix 10

## Certification of Small Generator Equipment Packages

1.0 Small Generating Facility equipment proposed for use separately or packaged with other equipment in an interconnection system shall be considered certified for interconnected operation if (1) it has been tested in accordance with industry standards for continuous utility interactive operation in compliance with the appropriate codes and standards referenced below by any Nationally Recognized Testing Laboratory (NRTL) recognized by the United States Occupational Safety and Health Administration to test and certify interconnection equipment pursuant to the relevant codes and standards listed in Appendix 9, (2) it has been labeled and is publicly listed by such NRTL at the time of the interconnection application, and (3) such NRTL makes readily available for verification all test standards and procedures it utilized in performing such equipment certification, and, with consumer approval, the test data itself. The NRTL may make such information available on its website and by encouraging such information to be included in the manufacturer's literature accompanying the equipment.

2.0 The Interconnection Customer must verify that the intended use of the equipment falls within the use or uses for which the equipment was tested, labeled, and listed by the NRTL.

3.0 Certified equipment shall not require further type-test review, testing, or additional equipment to meet the requirements of this interconnection procedure; however, nothing herein shall preclude the need for an on-site commissioning test by the parties to the interconnection nor follow-up production testing by the NRTL.

4.0 If the certified equipment package includes only interface components (switchgear, inverters, or other interface devices), then an Interconnection Customer must show that the generator or other electric source being utilized with the equipment package is compatible with the equipment package and is consistent with the testing and listing specified for this type of interconnection equipment.

5.0 Provided the generator or electric source, when combined with the equipment package, is within the range of capabilities for which it was tested by the NRTL, and does not violate the interface components' labeling and listing performed by the NRTL, no further design review, testing or additional equipment on the customer side of the point of common coupling shall be required to meet the requirements of this interconnection procedure.

6.0 An equipment package does not include equipment provided by the utility.

7.0 Any equipment package approved and listed in a state by that state's regulatory body for interconnected operation in that state prior to the effective date of these small generator interconnection procedures shall be considered certified under these procedures for use in that state.

**APPENDIX 11**

## TWO-PARTY AFFECTED SYSTEM STUDY AGREEMENT

**THIS AGREEMENT** is made and entered into this ___ day of _____, 20___, by and between _____, a _____ organized and existing under the laws of the State of _____ (Affected System Interconnection Customer), and _____, a _____ organized and existing under the laws of the State of _____ (the Participating TO), and the California Independent System Operator Corporation, organized and existing under the laws of the State of California (the CAISO). Affected System Interconnection Customer, the CAISO, and the Participating TO each may be referred to as a "Party," or collectively as the "Parties."

## RECITALS

**WHEREAS,** Affected System Interconnection Customer is proposing to develop a {description of generating facility or generating capacity addition to an existing generating facility} consistent with the interconnection request submitted by Affected System Interconnection Customer to {name of host transmission provider}, dated _____, for which {name of host transmission provider} found impacts on the CAISO Controlled Grid; and

**WHEREAS,** Affected System Interconnection Customer desires to interconnect the {generating facility} with {name of host transmission provider}'s transmission system;

**NOW, THEREFORE,** in consideration of and subject to the mutual covenants contained herein, the Parties agree as follows:

1.0 When used in this Agreement, with initial capitalization, the terms specified will have the meanings indicated in this RIS.

2.0 the Participating TO will coordinate with Affected System Interconnection Customer to perform an Affected System Study consistent with Section 14.5 of this RIS.

3.0 The scope of the Affected System Study will be subject to the assumptions set forth in Attachment A to this Agreement.

4.0 The Affected System Study will be based upon the technical information provided by Affected System Interconnection Customer and {name of host transmission provider}. the CAISO reserves the right to request additional technical information from Affected System Interconnection Customer as may reasonably become necessary consistent with Good Utility Practice during the course of the Affected System Study.

5.0 The Affected System Study will provide the following information:

- identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;
- identification of any thermal overload or voltage limit violations resulting from the interconnection;
- identification of any instability or inadequately damped response to system disturbances resulting from the interconnection;

- non-binding, good faith estimated cost and time required to construct facilities required on the CAISO Controlled Grid to accommodate the interconnection of the {generating facility} to the transmission system of the host transmission provider; and

- description of how such facilities will address the identified short circuit, instability, and power flow issues.

6.0 Affected System Interconnection Customer will provide a deposit of _____ for performance of the Affected System Study. Upon receipt of the results of the Affected System Study by the Affected System Interconnection Customer, the Participating TO will charge, and Affected System Interconnection Customer will pay, the actual cost of the Affected System Study. Any difference between the deposit and the actual cost of the Affected System Study will be paid by or refunded to Affected System Interconnection Customer, as appropriate, including interest calculated in accordance with section 35.19a(a)(2) of FERC's regulations.

7.0 This Agreement will include standard miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability, and assignment, which reflect best practices in the electric industry, that are consistent with regional practices, Applicable Laws and Regulations and the organizational nature of each Party. All of these provisions, to the extent practicable, will be consistent with the provisions of the RIS.

**IN WITNESS THEREOF,** the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**{Insert name of the Participating TO }**

By: _____ By: _____
Title: _____ Title: _____
Date: _____ Date: _____

**{Insert name of the CAISO }**

By: _____ By: _____
Title: _____ Title: _____
Date: _____ Date: _____

**{Insert name of Affected System Interconnection Customer}**

By: _____
Title: _____
Date: _____

Project No. ____

**Attachment A to Appendix 11**
**Two-Party Affected System Study Agreement**

**ASSUMPTIONS USED IN CONDUCTING THE AFFECTED SYSTEM STUDY**

The Affected System Study will be based upon the following assumptions:
{Assumptions to be completed by Affected System Interconnection Customer and the Participating TO }

**APPENDIX 12**
**MULTIPARTY AFFECTED SYSTEM STUDY AGREEMENT**

**THIS AGREEMENT** is made and entered into this ___ day of _____, 20___, by and among _____, a _____ organized and existing under the laws of the State of _____ (Affected System Interconnection Customer); _____, a _____ organized and existing under the laws of the State of_____ (Affected System Interconnection Customer); and _____, a _____ organized and existing under the laws of the State of _____ (the Participating TO); and the California Independent System Operator Corporation, organized and existing under the laws of the State of California (the CAISO). Affected System Interconnection Customers, the CAISO, and the Participating TO each may be referred to as a "Party," or collectively as the "Parties." When it is not important to differentiate among them, Affected System Interconnection Customers each may be referred to as "Affected System Interconnection Customer" or collectively as the "Affected System Interconnection Customers."

**RECITALS**

**WHEREAS,** Affected System Interconnection Customers are proposing to develop {description of generating facilities or generating capacity additions to an existing generating facility}, consistent with the interconnection requests submitted by Affected System Interconnection Customers to {name of host transmission provider}, dated _____, for which {name of host transmission provider} found impacts on the CAISO Controlled Grid; and

**WHEREAS,** Affected System Interconnection Customers desire to interconnect the {generating facilities} with {name of host transmission provider}'s transmission system;

**NOW, THEREFORE,** in consideration of and subject to the mutual covenants contained herein, the Parties agree as follows:

1.0 When used in this Agreement, with initial capitalization, the terms specified will have the meanings indicated in this RIS.

2.0 the Participating TO will coordinate with Affected System Interconnection Customers to perform an Affected System Study consistent with Section 14.5 of this RIS.

3.0 The scope of the Affected System Study will be subject to the assumptions set forth in Attachment A to this Agreement.

4.0 The Affected System Study will be based upon the technical information provided by Affected System Interconnection Customers and {name of host transmission provider}. the Participating TO reserves the right to request additional technical information from Affected System Interconnection Customers as may reasonably become necessary consistent with Good Utility Practice during the course of the Affected System Study.

5.0 The Affected System Study will provide the following information:

- identification of any circuit breaker short circuit capability limits exceeded as a result of the interconnection;

- identification of any thermal overload or voltage limit violations resulting from the interconnection;

- identification of any instability or inadequately damped response to system disturbances resulting from the interconnection;

- non-binding, good faith estimated cost and time required to construct facilities required on the CAISO Controlled Grid to accommodate the interconnection of the {generating facilities} to the transmission system of the host transmission provider; and

- description of how such facilities will address the identified short circuit, instability, and power flow issues.

6.0 Affected System Interconnection Customers will each provide a deposit of _____ for performance of the Affected System Study. Upon receipt of the results of the Affected System Study by the Affected System Interconnection Customers, the Participating TO will charge, and Affected System Interconnection Customers will pay, the actual cost of the Affected System Study. Any difference between the deposit and the actual cost of the Affected System Study will be paid by or refunded to Affected System Interconnection Customers, as appropriate, including interest calculated in accordance with section 35.19a(a)(2) of FERC's regulations.

7.0 This Agreement will include standard miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability, and assignment, which reflect best practices in the electric industry, that are consistent with regional practices, Applicable Laws and Regulations, and the organizational nature of each Party. All of these provisions, to the extent practicable, will be consistent with the provisions of the RIS.

**IN WITNESS THEREOF,** the Parties have caused this Agreement to be duly executed by their duly authorized officers or agents on the day and year first above written.

**{Insert name of the Participating TO }**

By: _____ By: _____
Title: _____ Title: _____
Date: _____ Date: _____

**{Insert name of the CAISO }**

By: _____ By: _____
Title: _____ Title: _____
Date: _____ Date: _____

**{Insert name of Affected System Interconnection Customer}**

By: _____
Title: _____
Date: _____

Project No. ____

**{Insert name of Affected System Interconnection Customer}**

By: _____
Title: _____
Date: _____

Project No. ____

**Attachment A to Appendix 12**
**Multiparty Affected System Study Agreement**

**ASSUMPTIONS USED IN CONDUCTING THE MULTIPARTY AFFECTED SYSTEM STUDY**

The Affected System Study will be based upon the following assumptions:
{Assumptions to be completed by Affected System Interconnection Customers and the Participating TO }

## APPENDIX 13
## TWO-PARTY AFFECTED SYSTEM FACILITIES CONSTRUCTION AGREEMENT

**THIS AGREEMENT** is made and entered into this ____ day of _____, 20__, by and between _____, organized and existing under the laws of the State of _____ (Affected System Interconnection Customer) and_____, an entity organized and existing under the laws of the State of _____ (the Participating TO). Affected System Interconnection Customer and the Participating TO each may be referred to as a "Party" or collectively as the "Parties."

### RECITALS

**WHEREAS,** Affected System Interconnection Customer is proposing to develop a {description of generating facility or generating capacity addition to an existing generating facility} consistent with the interconnection request submitted by Affected System Interconnection Customer to {name of host transmission provider}, dated _____, for which {name of host transmission provider} found impacts on the CAISO Controlled Grid; and

**WHEREAS,** Affected System Interconnection Customer desires to interconnect the {generating facility} to {name of host transmission provider}'s transmission system; and

**WHEREAS,** additions, modifications, and upgrade(s) must be made to certain existing facilities of the CAISO Controlled Grid to accommodate such interconnection; and

**WHEREAS,** Affected System Interconnection Customer has requested, and the Participating TO has agreed, to enter into this Agreement for the purpose of facilitating the construction of necessary Affected System Network Upgrade(s);

**NOW, THEREFORE,** in consideration of and subject to the mutual covenants contained herein, the Parties agree as follows:

### ARTICLE 1
### DEFINITIONS

When used in this Agreement, with initial capitalization, the terms specified and not otherwise defined in this Agreement will have the meanings indicated in this RIS.

### ARTICLE 2
### TERM OF AGREEMENT

**2.1 Effective Date.** This Agreement will become effective upon execution by the Parties subject to acceptance by FERC (if applicable), or if filed unexecuted, upon the date specified by FERC.

**2.2 Term.**

**2.2.1 General.** This Agreement will become effective as provided in Article 2.1 and will continue in full force and effect until the earlier of (1) the final repayment, where applicable, by the Participating TO of the amount funded by Affected System Interconnection Customer for the Participating TO's design, procurement, construction and installation of the Affected System Network Upgrade(s) provided in Appendix A; (2) the Parties agree to mutually terminate this Agreement; (3) earlier termination is permitted or provided for under Appendix A of this Agreement; or (4) Affected System Interconnection Customer terminates this Agreement after providing the Participating TO with written notice at least sixty (60) days prior to the proposed termination date, provided that Affected System Interconnection Customer has no outstanding contractual obligations to the Participating TO under this Agreement. No termination

of this Agreement will be effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination. The term of this Agreement may be adjusted upon mutual agreement of the Parties if (1) the commercial operation date for the {generating facility} is adjusted in accordance with the rules and procedures established by {name of host transmission provider} or (2) the in-service date for the Affected System Network Upgrade(s) is adjusted in accordance with the rules and procedures established by the Participating TO.

**2.2.2 Termination Upon Default.** Default will mean the failure of a Breaching Party to cure its Breach in accordance with Article 5 of this Agreement where Breach and Breaching Party are defined in Article 5. Defaulting Party will mean the Party that is in Default. In the event of a Default by a Party, the non-Defaulting Party will have the termination rights described in Articles 5 and 6; provided, however, the Participating TO may not terminate this Agreement if Affected System Interconnection Customer is the Defaulting Party and compensates the Participating TO within thirty (30) days for the amount of damages billed to Affected System Interconnection Customer by the Participating TO for any such damages, including costs and expenses, incurred by the Participating TO as a result of such Default.

**2.2.3 Consequences of Termination.** In the event of a termination by either Party, other than a termination by Affected System Interconnection Customer due to a Default by the Participating TO, Affected System Interconnection Customer will be responsible for the payment to the Participating TO of all amounts then due and payable for construction and installation of the Affected System Network Upgrade(s) (including, without limitation, any equipment ordered related to such construction), plus all out-of-pocket expenses incurred by the Participating TO in connection with the construction and installation of the Affected System Network Upgrade(s), through the date of termination, and, in the event of the termination of the entire Agreement, any actual costs which the Participating TO reasonably incurs in (1) winding up work and construction demobilization and (2) ensuring the safety of persons and property and the integrity and safe and reliable operation of the CAISO Controlled Grid. The Participating TO will use Reasonable Efforts to minimize such costs.

**2.2.4 Reservation of Rights.** The Participating TO will have the right to make a unilateral filing with FERC to modify this Agreement with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and Affected System Interconnection Customer will have the right to make a unilateral filing with FERC to modify this Agreement pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party will have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement will limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**2.3 Filing.** The Participating TO will file this Agreement (and any amendment hereto) with the appropriate Governmental Authority, if required. Affected System Interconnection Customer may request that any information so provided be subject to the confidentiality provisions of Article 8. If Affected System Interconnection Customer has executed this Agreement, or any amendment thereto, Affected System Interconnection Customer will reasonably cooperate with the Participating TO with respect to such filing and to provide any information reasonably requested by the Participating TO needed to comply with applicable regulatory requirements.

**2.4 Survival.** This Agreement will continue in effect after termination, to the extent necessary, to provide for final billings and payments and for costs incurred hereunder, including billings and payments pursuant to this Agreement; to permit the determination and enforcement of liability and indemnification obligations arising from acts or events that occurred while this Agreement was in effect; and to permit each Party to have access to the lands of the other Party pursuant to this Agreement or other applicable agreements, to disconnect, remove, or salvage its own facilities and equipment.

**2.5 Termination Obligations.** Upon any termination pursuant to this Agreement, Affected System Interconnection Customer will be responsible for the payment of all costs or other contractual obligations incurred prior to the termination date, including previously incurred capital costs, penalties for early termination, and costs of removal and site restoration.

## ARTICLE 3
## CONSTRUCTION OF AFFECTED SYSTEM NETWORK UPGRADE(S)

### 3.1 Construction.

**3.1.1 The Participating TO Obligations.** The Participating TO will (or will cause such action to) design, procure, construct, and install, and Affected System Interconnection Customer will pay, consistent with Article 3.2, the costs of all Affected System Network Upgrade(s) identified in Appendix A. All Affected System Network Upgrade(s) designed, procured, constructed, and installed by the Participating TO pursuant to this Agreement will satisfy all requirements of applicable safety and/or engineering codes and comply with Good Utility Practice, and further, will satisfy all Applicable Laws and Regulations. The Participating TO will not be required to undertake any action which is inconsistent with its standard safety practices, its material and equipment specifications, its design criteria and construction procedures, its labor agreements, or any Applicable Laws and Regulations.

**3.1.2 Suspension of Work.**

**3.1.2.1 Right to Suspend.** Affected System Interconnection Customer must provide to the Participating TO written notice of its request for suspension. Only the milestones described in the Appendices of this Agreement are subject to suspension under this Article 3.1.2. Affected System Network Upgrade(s) will be constructed on the schedule described in the Appendices of this Agreement unless: (1) construction is prevented by the order of a Governmental Authority; (2) the Affected System Network Upgrade(s) are not needed by any other Interconnection Customer; or (3) the Participating TO determines that a Force Majeure event prevents construction. In the event of (1), (2), or (3), any security paid to the Participating TO under Article 4.1 of this Agreement will be released by the Participating TO upon the determination by the Participating TO that the Affected System Network Upgrade(s) will no longer be constructed. If suspension occurs, Affected System Interconnection Customer will be responsible for the costs which the Participating TO incurs (i) in accordance with this Agreement prior to the suspension; (ii) in suspending such work, including any costs incurred to perform such work as may be necessary to ensure the safety of persons and property and the integrity of the CAISO Controlled Grid and, if applicable, any costs incurred in connection with the cancellation of contracts and orders for material which the Participating TO cannot reasonably avoid;~~,~~ and (iii) reasonably incurs in winding up work and construction demobilization; provided, however, that, prior to canceling any such contracts or orders, the Participating TO will obtain Affected System Interconnection Customer's authorization. Affected System Interconnection Customer will be responsible for all costs incurred in connection with Affected System Interconnection Customer's failure to authorize cancellation of such contracts or orders.

Interest on amounts paid by Affected System Interconnection Customer to the Participating TO for the design, procurement, construction, and installation of the Affected System Network Upgrade(s) will not accrue during periods in which Affected System Interconnection Customer has suspended construction under this Article 3.1.2.

The Participating TO will invoice Affected System Interconnection Customer pursuant to Article 4 and will use Reasonable Efforts to minimize its costs. In the event Affected System Interconnection Customer suspends work by Affected System the Participating TO required under this Agreement pursuant to this Article 3.1.2.1, and has not requested Affected System the Participating TO to recommence the work required under this Agreement on or before the expiration of three (3) years following commencement of such suspension, this Agreement will be deemed terminated. The three-year period will begin on the date the suspension is requested, or the date of the written notice to Affected System the Participating TO, whichever is earlier, if no effective date of suspension is specified.

**3.1.3 Construction Status.** The Participating TO will keep Affected System Interconnection Customer advised periodically as to the progress of its design, procurement and construction efforts, as described in Appendix A. Affected System Interconnection Customer may, at any time and reasonably, request a progress report from the Participating TO. If, at any time, Affected System Interconnection Customer determines that the completion of the Affected System Network Upgrade(s) will not be required until after the specified in-service date, Affected System Interconnection Customer will provide written notice to the Participating TO of such later date upon which the completion of the Affected System Network Upgrade(s) would be required. The Participating TO may delay the in-service date of the Affected System Network Upgrade(s) accordingly.

**3.1.4 Timely Completion.** The Participating TO will use Reasonable Efforts to design, procure, construct, install, and test the Affected System Network Upgrade(s) in accordance with the schedule set forth in Appendix A, which schedule may be revised from time to time by mutual agreement of the Parties. If any event occurs that will affect the time or ability to complete the Affected System Network Upgrade(s), the Participating TO will promptly notify Affected System Interconnection Customer. In such circumstances, the Participating TO will, within fifteen (15) days of such notice, convene a meeting with Affected System Interconnection Customer to evaluate the alternatives available to Affected System Interconnection Customer. The Participating TO will also make available to Affected System Interconnection Customer all studies and work papers related to the event and corresponding delay, including all information that is in the possession of the Participating TO that is reasonably needed by Affected System Interconnection Customer to evaluate alternatives, subject to confidentiality arrangements consistent with Article 8. The Participating TO will, at Affected System Interconnection Customer's request and expense, use Reasonable Efforts to accelerate its work under this Agreement to meet the schedule set forth in Appendix A, provided that (1) Affected System Interconnection Customer authorizes such actions, such authorization to be withheld, conditioned, or delayed by Affected System Interconnection Customer only if it can demonstrate that the acceleration would have a material adverse effect on it; and (2) the Affected System Interconnection Customer funds costs associated therewith in advance.

**3.2 Interconnection Costs.**

**3.2.1 Costs.** Affected System Interconnection Customer will pay to the Participating TO costs (including taxes and financing costs) associated with seeking and obtaining all necessary approvals and of designing, engineering, constructing, and testing the Affected System Network Upgrade(s), as identified in Appendix A, in accordance with the cost recovery method provided herein. Unless the Participating TO elects to fund the Affected System Network Upgrade(s), they will be initially funded by Affected System Interconnection Customer.

**3.2.1.1 Lands of Other Property Owners.** If any part of the Affected System Network Upgrade(s) is to be installed on property owned by persons other than Affected System Interconnection Customer or the Participating TO, the Participating TO will, at Affected System Interconnection Customer's expense, use efforts similar in nature and extent to those that it typically undertakes on its own behalf or on behalf of its Affiliates, including use of its eminent domain authority to the extent permitted and consistent with Applicable Laws and Regulations and, to the extent consistent with such Applicable Laws and Regulations, to procure from such persons any rights of use, licenses, rights-of-way, and easements that are necessary to construct, operate, maintain, test, inspect, replace, or remove the Affected System Network Upgrade(s) upon such property.

**3.2.2 Repayment.**

**3.2.2.1 Repayment.** Consistent with Articles 11.4.1 and 11.4.2 of the CAISO's pro forma LGIA, Affected System Interconnection Customer will be entitled to a cash repayment by the Participating TO of the amount paid to the Participating TO, if any, for the Affected System Network Upgrade(s), including any tax gross-up or other tax-related payments associated with the Affected System Network Upgrade(s), and not refunded to Affected System Interconnection Customer pursuant to Article 3.3.1 or otherwise. The

Parties may mutually agree to a repayment schedule, to be outlined in Appendix A, not to exceed twenty (20) years from the commercial operation date, for the complete repayment for all applicable costs associated with the Affected System Network Upgrade(s). Any repayment will include interest calculated in accordance with the methodology set forth in FERC's regulations at 18 CFR 35.19 a(a)(2)(iii) from the date of any payment for Affected System Network Upgrade(s) through the date on which Affected System Interconnection Customer receives a repayment of such payment pursuant to this subparagraph. Interest will not accrue during periods in which Affected System Interconnection Customer has suspended construction pursuant to Article 3.1.2. Affected System Interconnection Customer may assign such repayment rights to any person.

**3.2.2.2 Impact of Failure to Achieve Commercial Operation.** If the Affected System Interconnection Customer's generating facility fails to achieve commercial operation, but it or another generating facility is later constructed and makes use of the Affected System Network Upgrade(s), the Participating TO will at that time reimburse Affected System Interconnection Customer for the amounts advanced for the Affected System Network Upgrade(s). Before any such reimbursement can occur, Affected System Interconnection Customer (or the entity that ultimately constructs the generating facility, if different), is responsible for identifying the entity to which the reimbursement must be made.

**3.3 Taxes.**

**3.3.1 Indemnification for Contributions in Aid of Construction.** With regard only to payments made by Affected System Interconnection Customer to the Participating TO for the installation of the Affected System Network Upgrade(s), the Participating TO will not include a gross-up for income taxes in the amounts it charges Affected System Interconnection Customer for the installation of the Affected System Network Upgrade(s) unless (1) the Participating TO has determined, in good faith, that the payments or property transfers made by Affected System Interconnection Customer to the Participating TO should be reported as income subject to taxation, or (2) any Governmental Authority directs the Participating TO to report payments or property as income subject to taxation. Affected System Interconnection Customer will reimburse the Participating TO for such costs on a fully grossed-up basis, in accordance with this Article, within thirty (30) days of receiving written notification from the Participating TO of the amount due, including detail about how the amount was calculated.

The indemnification obligation will terminate at the earlier of (1) the expiration of the ten (10)-year testing period and the applicable statute of limitation, as it may be extended by the Participating TO upon request of the Internal Revenue Service, to keep these years open for audit or adjustment, or (2) the occurrence of a subsequent taxable event and the payment of any related indemnification obligations as contemplated by this Article. Notwithstanding the foregoing provisions of this Article 3.3.1, and to the extent permitted by law, to the extent that the receipt of such payments by the Participating TO is determined by any Governmental Authority to constitute income by the Participating TO subject to taxation, Affected System Interconnection Customer will protect, indemnify, and hold harmless the Participating TO and its Affiliates, from all claims by any such Governmental Authority for any tax, interest, and/or penalties associated with such determination. Upon receiving written notification of such determination from the Governmental Authority, the Participating TO will provide Affected System Interconnection Customer with written notification within thirty (30) days of such determination and notification. the Participating TO, upon the timely written request by Affected System Interconnection Customer and at Affected System Interconnection Customer's expense, will appeal, protest, seek abatement of, or otherwise oppose such determination. the Participating TO reserves the right to make all decisions with regard to the prosecution of such appeal, protest, abatement or other contest, including the compromise or settlement of the claim; provided that the Participating TO will cooperate and consult in good faith with Affected System Interconnection Customer regarding the conduct of such contest. Affected System Interconnection Customer will not be required to pay the Participating TO for the tax, interest, and/or penalties prior to the seventh (7th) day before the date on which the Participating TO (1) is required to pay the tax, interest, and/or penalties or other amount in lieu thereof pursuant to a compromise or settlement of the appeal, protest, abatement, or other contest; (2) is required to pay the tax, interest, and/or penalties as the result of a final, non-appealable order by a Governmental Authority; or (3) is required to pay the tax, interest, and/or penalties as a prerequisite to an appeal, protest,

abatement, or other contest. In the event such appeal, protest, abatement, or other contest results in a determination that the Participating TO is not liable for any portion of any tax, interest, and/or penalties for which Affected System Interconnection Customer has already made payment to the Participating TO, the Participating TO will promptly refund to Affected System Interconnection Customer any payment attributable to the amount determined to be non-taxable, plus any interest (calculated in accordance with 18 CFR 35.19a(a)(2)(iii)) or other payments the Participating TO receives or which the Participating TO may be entitled with respect to such payment. Affected System Interconnection Customer will provide the Participating TO with credit assurances sufficient to meet Affected System Interconnection Customer's estimated liability for reimbursement of the Participating TO for taxes, interest, and/or penalties under this Article 3.3.1. Such estimated liability will be stated in Appendix A.

To the extent that the Participating TO is a limited liability company and not a corporation, and has elected to be taxed as a partnership, then the following will apply: The Participating TO represents, and the Parties acknowledge, that the Participating TO is a limited liability company and is treated as a partnership for federal income tax purposes. Any payment made by Affected System Interconnection Customer to the Participating TO for Affected System Network Upgrade(s) is to be treated as an upfront payment. It is anticipated by the Parties that any amounts paid by Affected System Interconnection Customer to the Participating TO for Affected System Network Upgrade(s) will be reimbursed to Affected System Interconnection Customer in accordance with the terms of this Agreement, provided Affected System Interconnection Customer fulfills its obligations under this Agreement.

**3.3.2 Private Letter Ruling.** At Affected System Interconnection Customer's request and expense, the Participating TO will file with the Internal Revenue Service a request for a private letter ruling as to whether any property transferred or sums paid, or to be paid, by Affected System Interconnection Customer to the Participating TO under this Agreement are subject to federal income taxation. Affected System Interconnection Customer will prepare the initial draft of the request for a private letter ruling and will certify under penalties of perjury that all facts represented in such request are true and accurate to the best of Affected System Interconnection Customer's knowledge. The Participating TO and Affected System Interconnection Customer will cooperate in good faith with respect to the submission of such request.

**3.3.3 Other Taxes.** Upon the timely request by Affected System Interconnection Customer, and at Affected System Interconnection Customer's sole expense, the Participating TO will appeal, protest, seek abatement of, or otherwise contest any tax (other than federal or state income tax) asserted or assessed against the Participating TO for which Affected System Interconnection Customer may be required to reimburse the Participating TO under the terms of this Agreement. Affected System Interconnection Customer will pay to the Participating TO on a periodic basis, as invoiced by the Participating TO, the Participating TO's documented reasonable costs of prosecuting such appeal, protest, abatement, or other contest. Affected System Interconnection Customer and the Participating TO will cooperate in good faith with respect to any such contest. Unless the payment of such taxes is a prerequisite to an appeal or abatement or cannot be deferred, no amount will be payable by Affected System Interconnection Customer to the Participating TO for such taxes until they are assessed by a final, non-appealable order by any court or agency of competent jurisdiction. In the event that a tax payment is withheld and ultimately due and payable after appeal, Affected System Interconnection Customer will be responsible for all taxes, interest and penalties, other than penalties attributable to any delay caused by the Participating TO. Each Party will cooperate with the other Party to maintain each Party's tax status. Nothing in this Agreement is intended to adversely affect any Party's tax-exempt status with respect to the issuance of bonds including, but not limited to, local furnishing bonds, as described in section 142(f) of the Internal Revenue Code.

## ARTICLE 4
## SECURITY, BILLING, AND PAYMENTS

**4.1 Provision of Security.** By the earlier of (1) thirty (30) days prior to the due date for Affected System Interconnection Customer's first payment under the payment schedule specified in Appendix A, or (2) the first date specified in Appendix A for the ordering of equipment by the Participating TO for

installing the Affected System Network Upgrade(s), Affected System Interconnection Customer will provide the Participating TO, at Affected System Interconnection Customer's option, a guarantee, a surety bond, letter of credit or other form of security that is reasonably acceptable to the Participating TO. Such security for payment will be in an amount sufficient to cover the costs for constructing, procuring, and installing the applicable portion of Affected System Network Upgrade(s) and will be reduced on a dollar-for-dollar basis for payments made to the Participating TO for these purposes.

The guarantee must be made by an entity that meets the creditworthiness requirements of the Participating TO and contain terms and conditions that guarantee payment of any amount that may be due from Affected System Interconnection Customer, up to an agreed-to maximum amount. The letter of credit must be issued by a financial institution reasonably acceptable to the Participating TO and must specify a reasonable expiration date. The surety bond must be issued by an insurer reasonably acceptable to the Participating TO and must specify a reasonable expiration date.

**4.2 Invoice.** Each Party will submit to the other Party, on a monthly basis, invoices of amounts due, if any, for the preceding month. Each invoice will state the month to which the invoice applies and fully describe the services and equipment provided. The Parties may discharge mutual debts and payment obligations due and owing to each other on the same date through netting, in which case all amounts a Party owes to the other Party under this Agreement, including interest payments, will be netted so that only the net amount remaining due will be paid by the owing Party.

**4.3 Payment.** Invoices will be rendered to the paying Party at the address specified by the Parties. The Party receiving the invoice will pay the invoice within thirty (30) days of receipt. All payments will be made in immediately available funds payable to the other Party, or by wire transfer to a bank named and account designated by the invoicing Party. Payment of invoices by a Party will not constitute a waiver of any rights or claims that Party may have under this Agreement.

**4.4 Final Invoice.** Within six (6) months after completion of the construction of the Affected System Network Upgrade(s), the Participating TO will provide an invoice of the final cost of the construction of the Affected System Network Upgrade(s) and will set forth such costs in sufficient detail to enable Affected System Interconnection Customer to compare the actual costs with the estimates and to ascertain deviations, if any, from the cost estimates. the Participating TO will refund, with interest (calculated in accordance with 18 CFR 35.19a(a)(2)(iii)), to Affected System Interconnection Customer any amount by which the actual payment by Affected System Interconnection Customer for estimated costs exceeds the actual costs of construction within thirty (30) days of the issuance of such final construction invoice.

**4.5 Interest.** Interest on any unpaid amounts will be calculated in accordance with 18 CFR 35.19a(a)(2)(iii).

**4.6 Payment During Dispute.** In the event of a billing dispute among the Parties, the Participating TO will continue to construct the Affected System Network Upgrade(s) under this Agreement as long as Affected System Interconnection Customer: (1) continues to make all payments not in dispute; and (2) pays to the Participating TO or into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If Affected System Interconnection Customer fails to meet these two requirements, then the Participating TO may provide notice to Affected System Interconnection Customer of a Default pursuant to Article 5. Within thirty (30) days after the resolution of the dispute, the Party that owes money to another Party will pay the amount due with interest calculated in accordance with the methodology set forth in 18 CFR 35.19a(a)(2)(iii).

## ARTICLE 5
## BREACH, CURE AND DEFAULT

**5.1 Events of Breach.** A Breach of this Agreement will include the:

(a) Failure to pay any amount when due;

(b) Failure to comply with any material term or condition of this Agreement, including but not limited to any material Breach of a representation, warranty, or covenant made in this Agreement;

(c) Failure of a Party to provide such access rights, or a Party's attempt to revoke access or terminate such access rights, as provided under this Agreement; or

(d) Failure of a Party to provide information or data to another Party as required under this Agreement, provided the Party entitled to the information or data under this Agreement requires such information or data to satisfy its obligations under this Agreement.

**5.2 Definition.** Breaching Party will mean the Party that is in Breach.

**5.3 Notice of Breach, Cure, and Default.** Upon the occurrence of an event of Breach, the Party not in Breach, when it becomes aware of the Breach, will give written notice of the Breach to the Breaching Party and to any other person representing a Party to this Agreement identified in writing to the other Party in advance. Such notice will set forth, in reasonable detail, the nature of the Breach, and where known and applicable, the steps necessary to cure such Breach.

**5.3.1** Upon receiving written notice of the Breach hereunder, the Breaching Party will have a period to cure such Breach (hereinafter referred to as the "Cure Period") which will be sixty (60) days.

**5.3.2** In the event the Breaching Party fails to cure within the Cure Period, the Breaching Party will be in Default of this Agreement, and the non-Defaulting Party may terminate this Agreement in accordance with Article 6.2 of this Agreement or take whatever action at law or in equity as may appear necessary or desirable to enforce the performance or observance of any rights, remedies, obligations, agreement, or covenants under this Agreement.

**5.4 Rights in the Event of Default.** Notwithstanding the foregoing, upon the occurrence of a Default, the non-Defaulting Party will be entitled to exercise all rights and remedies it may have in equity or at law.

## ARTICLE 6
## TERMINATION OF AGREEMENT

**6.1 Expiration of Term.** Except as otherwise specified in this Article 6, the Parties' obligations under this Agreement will terminate at the conclusion of the term of this Agreement.

**6.2 Termination.** In addition to the termination provisions set forth in Article 2.2, a Party may terminate this Agreement upon the Default of the other Party in accordance with Article 5.2.2 of this Agreement. Subject to the limitations set forth in Article 6.3, in the event of a Default, the termination of this Agreement by the non-Defaulting Party will require a filing at FERC of a notice of termination, which filing must be accepted for filing by FERC.

**6.3 Disposition of Facilities Upon Termination of Agreement.**

**6.3.1 the Participating TO Obligations.** Upon termination of this Agreement, unless otherwise agreed to by the Parties in writing, the Participating TO:

(a) will, prior to the construction and installation of any portion of the Affected System Network Upgrade(s) and to the extent possible, cancel any pending orders of, or return, such equipment or material for such Affected System Network Upgrade(s);

(b) may keep in place any portion of the Affected System Network Upgrade(s) already constructed and installed; and,

(c) will perform such work as may be necessary to ensure the safety of persons and property and to preserve the integrity of the CAISO Controlled Grid (e.g., construction demobilization to return the system to its original state, wind-up work).

**6.3.2 Affected System Interconnection Customer Obligations.** Upon billing by the Participating TO, Affected System Interconnection Customer will reimburse the Participating TO for any costs incurred by the Participating TO in performance of the actions required or permitted by Article 6.3.1 and for the cost of any Affected System Network Upgrade(s) described in Appendix A. the Participating TO will use Reasonable Efforts to minimize costs and will offset the amounts owed by any salvage value of facilities, if applicable. Affected System Interconnection Customer will pay these costs pursuant to Article 4.3 of this Agreement.

**6.3.3 Pre-construction or Installation.** Upon termination of this Agreement and prior to the construction and installation of any portion of the Affected System Network Upgrade(s), the Participating TO may, at its option, retain any portion of such Affected System Network Upgrade(s) not cancelled or returned in accordance with Article 6.3.1(a), in which case the Participating TO will be responsible for all costs associated with procuring such Affected System Network Upgrade(s). To the extent that Affected System Interconnection Customer has already paid the Participating TO for any or all of such costs, the Participating TO will refund Affected System Interconnection Customer for those payments. If the Participating TO elects to not retain any portion of such facilities, the Participating TO will convey and make available to Affected System Interconnection Customer such facilities as soon as practicable after Affected System Interconnection Customer's payment for such facilities.

**6.4 Survival of Rights.** Termination or expiration of this Agreement will not relieve either Party of any of its liabilities and obligations arising hereunder prior to the date termination becomes effective, and each Party may take whatever judicial or administrative actions as appear necessary or desirable to enforce its rights hereunder. The applicable provisions of this Agreement will continue in effect after expiration, or early termination hereof to the extent necessary to provide for (1) final billings, billing adjustments, and other billing procedures set forth in this Agreement; (2) the determination and enforcement of liability and indemnification obligations arising from acts or events that occurred while this Agreement was in effect; and (3) the confidentiality provisions set forth in Article 8.

## ARTICLE 7
## SUBCONTRACTORS

**7.1 Subcontractors.** Nothing in this Agreement will prevent a Party from utilizing the services of subcontractors, as it deems appropriate, to perform its obligations under this Agreement; provided, however, that each Party will require its subcontractors to comply with all applicable terms and conditions of this Agreement in providing such services, and each Party will remain primarily liable to the other Party for the performance of such subcontractor.

**7.1.1 Responsibility of Principal.** The creation of any subcontract relationship will not relieve the hiring Party of any of its obligations under this Agreement. In accordance with the provisions of this Agreement, each Party will be fully responsible to the other Party for the acts or omissions of any subcontractor it hires as if no subcontract had been made. Any applicable obligation imposed by this Agreement upon a Party will be equally binding upon, and will be construed as having application to, any subcontractor of such Party.

**7.1.2 No Third-Party Beneficiary.** Except as may be specifically set forth to the contrary herein, no subcontractor or any other party is intended to be, nor will it be deemed to be, a third-party beneficiary of this Agreement.

**7.1.3 No Limitation by Insurance.** The obligations under this Article 7 will not be limited in any way by any limitation of any insurance policies or coverages, including any subcontractor's insurance.

## ARTICLE 8
## CONFIDENTIALITY

**8.1 Confidentiality.** Confidential Information will include, without limitation, all information relating to a Party's technology, research and development, business affairs, and pricing, and any information supplied to the other Party prior to the execution of this Agreement.

Information is Confidential Information only if it is clearly designated or marked in writing as confidential on the face of the document, or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Party receiving the information that the information is confidential. The Parties will maintain as confidential any information that is provided and identified by a Party as Critical Energy Infrastructure Information (CEII), as that term is defined in 18 CFR 388.113(c).

Such confidentiality will be maintained in accordance with this Article 8. If requested by the receiving Party, the disclosing Party will provide in writing, the basis for asserting that the information referred to in this Article warrants confidential treatment, and the requesting Party may disclose such writing to the appropriate Governmental Authority. Each Party will be responsible for the costs associated with affording confidential treatment to its information.

**8.1.1 Term.** During the term of this Agreement, and for a period of three (3) years after the expiration or termination of this Agreement, except as otherwise provided in this Article 8 or with regard to CEII, each Party will hold in confidence and will not disclose to any person Confidential Information. CEII will be treated in accordance with FERC policies and regulations.

**8.1.2 Scope.** Confidential Information will not include information that the receiving Party can demonstrate: (1) is generally available to the public other than as a result of a disclosure by the receiving Party; (2) was in the lawful possession of the receiving Party on a non-confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a non-Party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the disclosing Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the disclosing Party; (5) is, or becomes, publicly known, through no wrongful act or omission of the receiving Party or Breach of this Agreement; or (6) is required, in accordance with Article 8.1.6 of this Agreement, to be disclosed by any Governmental Authority or is otherwise required to be disclosed by law or subpoena, or is necessary in any legal proceeding establishing rights and obligations under this Agreement. Information designated as Confidential Information will no longer be deemed confidential if the Party that designated the information as confidential notifies the receiving Party that it no longer is confidential.

**8.1.3 Release of Confidential Information.** No Party will release or disclose Confidential Information to any other person, except to its Affiliates (limited by the Standards of Conduct requirements), subcontractors, employees, agents, consultants, or to non-Parties that may be or are considering providing financing to or equity participation with Affected System Interconnection Customer, or to potential purchasers or assignees of Affected System Interconnection Customer, on a need-to-know basis in connection with this Agreement, unless such person has first been advised of the confidentiality provisions of this Article 8 and has agreed to comply with such provisions. Notwithstanding the foregoing, a Party providing Confidential Information to any person will remain primarily responsible for any release of Confidential Information in contravention of this Article 8.

**8.1.4 Rights.** Each Party will retain all rights, title, and interest in the Confidential Information that it discloses to the receiving Party. The disclosure by a Party to the receiving Party of Confidential Information will not be deemed a waiver by the disclosing Party or any other person or entity of the right to protect the Confidential Information from public disclosure.

**8.1.5 Standard of Care.** Each Party will use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from unauthorized disclosure,

publication, or dissemination. Each Party may use Confidential Information solely to fulfill its obligations to the other Party under this Agreement or its regulatory requirements.

**8.1.6 Order of Disclosure.** If a court or a Government Authority or entity with the right, power, and apparent authority to do so requests or requires either Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party will provide the disclosing Party with prompt notice of such request(s) or requirement(s) so that the disclosing Party may seek an appropriate protective order or waive compliance with the terms of this Agreement. Notwithstanding the absence of a protective order or waiver, the Party may disclose such Confidential Information which, in the opinion of its counsel, the Party is legally compelled to disclose. Each Party will use Reasonable Efforts to obtain reliable assurance that confidential treatment will be accorded any Confidential Information so furnished.

**8.1.7 Termination of Agreement.** Upon termination of this Agreement for any reason, each Party will, within ten (10) Business Days of receipt of a written request from the other Party, use Reasonable Efforts to destroy, erase, or delete (with such destruction, erasure, and deletion certified in writing to the requesting Party) or return to the requesting Party any and all written or electronic Confidential Information received from the requesting Party, except that each Party may keep one copy for archival purposes, provided that the obligation to treat it as Confidential Information in accordance with this Article 8 will survive such termination.

**8.1.8 Remedies.** The Parties agree that monetary damages would be inadequate to compensate a Party for the other Party's Breach of its obligations under this Article 8. Each Party accordingly agrees that the disclosing Party will be entitled to equitable relief, by way of injunction or otherwise, if the receiving Party Breaches or threatens to Breach its obligations under this Article 8, which equitable relief will be granted without bond or proof of damages, and the breaching Party will not plead in defense that there would be an adequate remedy at law. Such remedy will not be deemed an exclusive remedy for the Breach of this Article 8, but it will be in addition to all other remedies available at law or in equity. The Parties further acknowledge and agree that the covenants contained herein are necessary for the protection of legitimate business interests and are reasonable in scope. Neither Party, however, will be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with this Article 8.

**8.1.9 Disclosure to FERC, its Staff, or a State Regulatory Body.** Notwithstanding anything in this Article 8 to the contrary, and pursuant to 18 CFR 1b.20, if FERC or its staff, during the course of an investigation or otherwise, requests information from a Party that is otherwise required to be maintained in confidence pursuant to this Agreement, the Party will provide the requested information to FERC or its staff, within the time provided for in the request for information. In providing the information to FERC or its staff, the Party must, consistent with 18 CFR 388.112, request that the information be treated as confidential and non-public by FERC and its staff and that the information be withheld from public disclosure. Parties are prohibited from notifying the other Party to this Agreement prior to the release of the Confidential Information to FERC or its staff. The Party will notify the other Party to the Agreement when it is notified by FERC or its staff that a request to release Confidential Information has been received by FERC, at which time either of the Parties may respond before such information would be made public, pursuant to 18 CFR 388.112. Requests from a state regulatory body conducting a confidential investigation will be treated in a similar manner if consistent with the applicable state rules and regulations.

**8.1.10** Subject to the exception in Article 8.1.9, any information that a disclosing Party claims is competitively sensitive, commercial, or financial information under this Agreement will not be disclosed by the receiving Party to any person not employed or retained by the receiving Party, except to the extent disclosure is (1) required by law; (2) reasonably deemed by the disclosing Party to be required to be disclosed in connection with a dispute between or among the Parties, or the defense of litigation or dispute; (3) otherwise permitted by consent of the disclosing Party, such consent not to be unreasonably withheld; or (4) necessary to fulfill its obligations under this Agreement or as the the Participating TO or a balancing authority, including disclosing the Confidential Information to a regional or national reliability

organization. The Party asserting confidentiality will notify the receiving Party in writing of the information that Party claims is confidential. Prior to any disclosures of that Party's Confidential Information under this subparagraph, or if any non-Party or Governmental Authority makes any request or demand for any of the information described in this subparagraph, the Party that received the Confidential Information from the disclosing Party agrees to promptly notify the disclosing Party in writing and agrees to assert confidentiality and cooperate with the disclosing Party in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order, or other reasonable measures.

## ARTICLE 9
## INFORMATION ACCESS AND AUDIT RIGHTS

**9.1 Information Access.** Each Party will make available to the other Party information necessary to verify the costs incurred by the other Party for which the requesting Party is responsible under this Agreement and carry out obligations and responsibilities under this Agreement, provided that the Parties will not use such information for purposes other than those set forth in this Article 9.1 and to enforce their rights under this Agreement.

**9.2 Audit Rights.** Subject to the requirements of confidentiality under Article 8 of this Agreement, the accounts and records related to the design, engineering, procurement, and construction of the Affected System Network Upgrade(s) will be subject to audit during the period of this Agreement and for a period of twenty-four (24) months following the Participating TO's issuance of a final invoice in accordance with Article 4.4. Affected System Interconnection Customer at its expense will have the right, during normal business hours, and upon prior reasonable notice to the Participating TO, to audit such accounts and records. Any audit authorized by this Article 9.2 will be performed at the offices where such accounts and records are maintained and will be limited to those portions of such accounts and records that relate to obligations under this Agreement.

## ARTICLE 10
## NOTICES

**10.1 General.** Any notice, demand, or request required or permitted to be given by a Party to the other Party, and any instrument required or permitted to be tendered or delivered by a Party in writing to another Party, may be so given, tendered, or delivered, as the case may be, by depositing the same with the United States Postal Service with postage prepaid, for transmission by certified or registered mail, addressed to the Parties, or personally delivered to the Parties, at the address set out below:

To the Participating TO:

To Affected System Interconnection Customer:

**10.2 Billings and Payments.** Billings and payments will be sent to the addresses shown in Article 10.1 unless otherwise agreed to by the Parties.

**10.3 Alternative Forms of Notice.** Any notice or request required or permitted to be given by a Party to the other Party and not required by this Agreement to be given in writing may be so given by telephone, facsimile or email to the telephone numbers and email addresses set out below:

To the Participating TO:

To Affected System Interconnection Customer:

**10.4 Execution and Filing.** Affected System Interconnection Customer will either: (i) execute two originals of this tendered Agreement and return them to the Participating TO; or (ii) request in writing that the Participating TO file with FERC this Agreement in unexecuted form. As soon as practicable, but not later than ten (10) Business Days after receiving either the two executed originals of this tendered Agreement (if it does not conform with a FERC-approved standard form of this Agreement) or the request to file this Agreement unexecuted, the Participating TO will file this Agreement with FERC, together with its explanation of any matters as to which Affected System Interconnection Customer and the Participating TO disagree and support for the costs that the Participating TO proposes to charge to Affected System Interconnection Customer under this Agreement. An unexecuted version of this Agreement should contain terms and conditions deemed appropriate by the Participating TO for the Affected System Interconnection Customer's generating facility. If the Parties agree to proceed with design, procurement, and construction of facilities and upgrades under the agreed-upon terms of the unexecuted version of this Agreement, they may proceed pending FERC action.

## ARTICLE 11
## MISCELLANEOUS

**11.1** This Agreement will include standard miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability and assignment, which reflect best practices in the electric industry, that are consistent with regional practices, Applicable Laws and Regulations and the organizational nature of each Party. All of these provisions, to the extent practicable, will be consistent with the provisions of this RIS.

[Signature Page to Follow]

**IN WITNESS WHEREOF,** the Parties have executed this Agreement in multiple originals, each of which will constitute and be an original Agreement among the Parties.

the Participating TO
**{the Participating TO}**
By: _____
Name: _____
Title: _____

Affected System Interconnection Customer
**{Affected System Interconnection Customer}**
By: _____
Name: _____
Title: _____

Project No. ____

**Attachment A to Appendix 13**
**Two-Party Affected System Facilities Construction Agreement**

**AFFECTED SYSTEM NETWORK UPGRADE(S), COST ESTIMATES AND RESPONSIBILITY, CONSTRUCTION SCHEDULE AND MONTHLY PAYMENT SCHEDULE**

This Appendix A is a part of the Affected System Facilities Construction Agreement between Affected System Interconnection Customer and the Participating TO.

**1.1 Affected System Network Upgrade(s) to be installed by the Participating TO.**

**{description}**

**1.2 First Equipment Order (including permitting).**

**{description}**

**1.2.1. Permitting and Land Rights – the Participating TO Affected System Network Upgrade(s)**

**{description}**

**1.3 Construction Schedule.** Where applicable, construction of the Affected System Network Upgrade(s) is scheduled as follows and will be periodically updated as necessary:

**Table 1: the Participating TO Construction Activities**

| MILESTONE NUMBER | DESCRIPTION | START DATE | END DATE |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Note: Construction schedule assumes that the Participating TO has obtained final authorizations and security from Affected System Interconnection Customer and all necessary permits from Governmental Authorities as necessary prerequisites to commence construction of any of the Affected System Network Upgrade(s).

**1.4 Payment Schedule.**

**1.4.1 Timing of and Adjustments to Affected System Interconnection Customer's Payments and Security.**

**{description}**

**1.4.2 Monthly Payment Schedule.** Affected System Interconnection Customer's payment schedule is as follows.

**{description}**

**Table 2: Affected System Interconnection Customer's Payment/Security Obligations for Affected System Network Upgrade(s).**

| MILESTONE NUMBER | DESCRIPTION | DATE |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Note: Affected System Interconnection Customer's payment or provision of security as provided in this Agreement operates as a condition precedent to the Participating TO's obligations to construct any Affected System Network Upgrade(s), and failure to meet this schedule will constitute a Breach pursuant to Article 5.1 of this Agreement.

**1.5 Permits, Licenses, and Authorizations.**

**{description}**

**Attachment B to Appendix 13**
**Two-Party Affected System Facilities Construction Agreement**

**NOTIFICATION OF COMPLETED CONSTRUCTION**

This Appendix B is a part of the Affected Systems Facilities Construction Agreement between Affected System Interconnection Customer and the Participating TO. Where applicable, when the Participating TO has completed construction of the Affected System Network Upgrade(s), the Participating TO will send notice to Affected System Interconnection Customer in substantially the form following:

{Date}

{Affected System Interconnection Customer Address}

Re: Completion of Affected System Network Upgrade(s)

Dear {Name or Title}:

This letter is sent pursuant to the Affected System Facilities Construction Agreement between {the Participating TO} and {Affected System Interconnection Customer}, dated _____, 20___.

On {Date}, the Participating TO completed to its satisfaction all work on the Affected System Network Upgrade(s) required to facilitate the safe and reliable interconnection and operation of Affected System Interconnection Customer's {description of generating facility}. the Participating TO confirms that the Affected System Network Upgrade(s) are in place.

Thank you.

{Signature}
{the Participating TO Representative}

**Attachment C to Appendix 13**
**Two-Party Affected System Facilities Construction Agreement**

**EXHIBITS**

This Appendix C is a part of the Affected System Facilities Construction Agreement between Affected System Interconnection Customer and the Participating TO.

**Exhibit A1**
**the Participating TO Site Map**

**Exhibit A2**
**Site Plan**

**Exhibit A3**
**Affected System Network Upgrade(s) Plan & Profile**

**Exhibit A4**
**Estimated Cost of Affected System Network Upgrade(s)**

| | Location | Facilities to Be Constructed by the Participating TO | Estimate in Dollars |
|---|---|---|---|
| | | | |
| | | Total: | |

**APPENDIX 14 TO RIS**
**MULTIPARTY AFFECTED SYSTEM FACILITIES CONSTRUCTION AGREEMENT**

**THIS AGREEMENT** is made and entered into this ____ day of _____, 20__, by and among _____, organized and existing under the laws of the State of _____ (Affected System Interconnection Customer); _____, a _____ organized and existing under the laws of the State of _____ (Affected System Interconnection Customer); and_____, an entity organized and existing under the laws of the State of _____ (the Participating TO). Affected System Interconnection Customers and the Participating TO each may be referred to as a "Party" or collectively as the "Parties." When it is not important to differentiate among them, Affected System Interconnection Customers each may be referred to as "Affected System Interconnection Customer" or collectively as "Affected System Interconnection Customers."

**RECITALS**

**WHEREAS,** Affected System Interconnection Customers are proposing to develop {description of generating facilities or generating capacity additions to an existing generating facility}, consistent with the interconnection requests submitted by Affected System Interconnection Customers to {name of host transmission provider}, dated _____, for which {name of host transmission provider} found impacts on the CAISO Controlled Grid; and

**WHEREAS,** Affected System Interconnection Customers desire to interconnect the {generating facilities} to {name of host transmission provider}'s transmission system; and

**WHEREAS,** additions, modifications, and upgrade(s) must be made to certain existing facilities of the CAISO Controlled Grid to accommodate such interconnection; and

**WHEREAS,** Affected System Interconnection Customers have requested, and the Participating TO has agreed, to enter into this Agreement for the purpose of facilitating the construction of necessary Affected System Network Upgrade(s);

**NOW, THEREFORE,** in consideration of and subject to the mutual covenants contained herein, the Parties agree as follows:

**ARTICLE 1**
**DEFINITIONS**

When used in this Agreement, with initial capitalization, the terms specified and not otherwise defined in this Agreement will have the meanings indicated in this RIS.

**ARTICLE 2**
**TERM OF AGREEMENT**

**2.1 Effective Date.** This Agreement will become effective upon execution by the Parties subject to acceptance by FERC (if applicable), or if filed unexecuted, upon the date specified by FERC.

**2.2 Term.**

**2.2.1 General.** This Agreement will become effective as provided in Article 2.1 and will continue in full force and effect until the earlier of (1) the final repayment, where applicable, by the Participating TO of the amount funded by Affected System Interconnection Customers for the Participating TO's design, procurement, construction, and installation of the Affected System Network Upgrade(s) provided in

Appendix A; (2) the Parties agree to mutually terminate this Agreement; (3) earlier termination is permitted or provided for under Appendix A of this Agreement; or (4) Affected System Interconnection Customers terminate this Agreement after providing the Participating TO with written notice at least sixty (60) days prior to the proposed termination date, provided that Affected System Interconnection Customers have no outstanding contractual obligations to the Participating TO under this Agreement. No termination of this Agreement will be effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination. The term of this Agreement may be adjusted upon mutual agreement of the Parties if the commercial operation date(s) for the {generating facilities} is adjusted in accordance with the rules and procedures established by {name of host transmission provider} or the in-service date for the Affected System Network Upgrade(s) is adjusted in accordance with the rules and procedures established by the Participating TO.

**2.2.2 Termination Upon Default.** Default will mean the failure of a Breaching Party to cure its Breach in accordance with Article 5 of this Agreement where Breach and Breaching Party are defined in Article 5. Defaulting Party will mean the Party that is in Default. In the event of a Default by a Party, each non-Defaulting Party will have the termination rights described in Articles 5 and 6; provided, however, the Participating TO may not terminate this Agreement if an Affected System Interconnection Customer is the Defaulting Party and compensates the Participating TO within thirty (30) days for the amount of damages billed to Affected System Interconnection Customer(s) by the Participating TO for any such damages, including costs and expenses incurred by the Participating TO as a result of such Default. Notwithstanding the foregoing, Default by one or more Affected System Interconnection Customers will not provide the other Affected System Interconnection Customer(s), either individually or in concert, with the right to terminate the entire Agreement. The non-Defaulting Party/Parties may, individually or in concert, initiate the removal of an Affected System Interconnection Customer that is a Defaulting Party from this Agreement. The Participating TO will not terminate this Agreement or the participation of any Affected System Interconnection Customer without provision being made for the Participating TO to be fully reimbursed for all of its costs incurred under this Agreement.

**2.2.3 Consequences of Termination.** In the event of a termination by a Party, other than a termination by Affected System Interconnection Customer(s) due to a Default by the Participating TO, each Affected System Interconnection Customer whose participation in this Agreement is terminated will be responsible for the payment to the Participating TO of all amounts then due and payable for construction and installation of the Affected System Network Upgrade(s) (including, without limitation, any equipment ordered related to such construction), plus all out-of-pocket expenses incurred by the Participating TO in connection with the construction and installation of the Affected System Network Upgrade(s), through the date of termination, and, in the event of the termination of the entire Agreement, any actual costs which the Participating TO reasonably incurs in (1) winding up work and construction demobilization and (2) ensuring the safety of persons and property and the integrity and safe and reliable operation of the CAISO Controlled Grid. The Participating TO will use Reasonable Efforts to minimize such costs. The cost responsibility of other Affected System Interconnection Customers will be adjusted, as necessary, based on the payments by an Affected System Interconnection Customer that is terminated from the Agreement.

**2.2.4 Reservation of Rights.** the Participating TO will have the right to make a unilateral filing with FERC to modify this Agreement with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation under section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder, and Affected System Interconnection Customers will have the right to make a unilateral filing with FERC to modify this Agreement pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party will have the right to protest any such filing by the other Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement will limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**2.3 Filing.** The Participating TO will file this Agreement (and any amendment hereto) with the appropriate Governmental Authority, if required. Affected System Interconnection Customers may request that any information so provided be subject to the confidentiality provisions of Article 8. Each Affected System Interconnection Customer that has executed this Agreement, or any amendment thereto, will reasonably cooperate with the Participating TO with respect to such filing and to provide any information reasonably requested by the Participating TO needed to comply with applicable regulatory requirements.

**2.4 Survival.** This Agreement will continue in effect after termination, to the extent necessary, to provide for final billings and payments and for costs incurred hereunder, including billings and payments pursuant to this Agreement; to permit the determination and enforcement of liability and indemnification obligations arising from acts or events that occurred while this Agreement was in effect; and to permit each Party to have access to the lands of the other Party pursuant to this Agreement or other applicable agreements, to disconnect, remove, or salvage its own facilities and equipment.

**2.5 Termination Obligations.** Upon any termination pursuant to this Agreement or termination of the participation in this Agreement of an Affected System Interconnection Customer, each Affected System Interconnection Customer will be responsible for the payment of its proportionate share of all costs or other contractual obligations incurred prior to the termination date, including previously incurred capital costs, penalties for early termination, and costs of removal and site restoration. The cost responsibility of the other Affected System Interconnection Customers will be adjusted as necessary.

## ARTICLE 3
## CONSTRUCTION OF AFFECTED SYSTEM NETWORK UPGRADE(S)

### 3.1 Construction.

**3.1.1 The Participating TO Obligations.** the Participating TO will (or will cause such action to) design, procure, construct, and install, and Affected System Interconnection Customers will pay, consistent with Article 3.2, the costs of all Affected System Network Upgrade(s) identified in Appendix A. All Affected System Network Upgrade(s) designed, procured, constructed, and installed by the Participating TO pursuant to this Agreement will satisfy all requirements of applicable safety and/or engineering codes and comply with Good Utility Practice, and further, will satisfy all Applicable Laws and Regulations. the Participating TO will not be required to undertake any action which is inconsistent with its standard safety practices, its material and equipment specifications, its design criteria and construction procedures, its labor agreements, or any Applicable Laws and Regulations.

### 3.1.2 Suspension of Work.

**3.1.2.1 Right to Suspend.** Affected System Interconnection Customers must jointly provide to the Participating TO written notice of their request for suspension. Only the milestones described in the Appendices of this Agreement are subject to suspension under this Article 3.1.2. Affected System Network Upgrade(s) will be constructed on the schedule described in the Appendices of this Agreement unless: (1) construction is prevented by the order of a Governmental Authority; (2) the Affected System Network Upgrade(s) are not needed by any other Interconnection Customer; or (3) the Participating TO determines that a Force Majeure event prevents construction. In the event of (1), (2), or (3), any security paid to the Participating TO under Article 4.1 of this Agreement will be released by the Participating TO upon the determination by the Participating TO that the Affected System Network Upgrade(s) will no longer be constructed. If suspension occurs, Affected System Interconnection Customers will be responsible for the costs which the Participating TO incurs (i) in accordance with this Agreement prior to the suspension; (ii) in suspending such work, including any costs incurred to perform such work as may be necessary to ensure the safety of persons and property and the integrity of the CAISO Controlled Grid and, if applicable, any costs incurred in connection with the cancellation of contracts and orders for material which the Participating TO cannot reasonably avoid; and (iii) reasonably incurs in winding up work and construction demobilization; provided, however, that, prior to canceling any such contracts or

orders, the Participating TO will obtain Affected System Interconnection Customers' authorization. Affected System Interconnection Customers will be responsible for all costs incurred in connection with Affected System Interconnection Customers' failure to authorize cancellation of such contracts or orders.

Interest on amounts paid by Affected System Interconnection Customers to the Participating TO for the design, procurement, construction, and installation of the Affected System Network Upgrade(s) will not accrue during periods in which Affected System Interconnection Customers have suspended construction under this Article 3.1.2.

The Participating TO will invoice Affected System Interconnection Customers pursuant to Article 4 and will use Reasonable Efforts to minimize its costs. In the event Affected System Interconnection Customers suspend work by Affected System the Participating TO required under this Agreement pursuant to this Article 3.1.2.1, and have not requested Affected System the Participating TO to recommence the work required under this Agreement on or before the expiration of three (3) years following commencement of such suspension, this Agreement will be deemed terminated. The three-year period will begin on the date the suspension is requested, or the date of the written notice to Affected System the Participating TO, whichever is earlier, if no effective date of suspension is specified.

**3.1.3 Construction Status.** The Participating TO will keep Affected System Interconnection Customers advised periodically as to the progress of its design, procurement, and construction efforts, as described in Appendix A. An Affected System Interconnection Customer may, at any time and reasonably, request a progress report from the Participating TO. If, at any time, an Affected System Interconnection Customer determines that the completion of the Affected System Network Upgrade(s) will not be required until after the specified in-service date, such Affected System Interconnection Customer will provide written notice to all other Parties of such later date for which the completion of the Affected System Network Upgrade(s) would be required. The Participating TO may delay the in-service date of the Affected System Network Upgrade(s) accordingly, but only if agreed to by all other Affected System Interconnection Customers.

**3.1.4 Timely Completion.** The Participating TO will use Reasonable Efforts to design, procure, construct, install, and test the Affected System Network Upgrade(s) in accordance with the schedule set forth in Appendix A, which schedule may be revised from time to time by mutual agreement of the Parties. If any event occurs that will affect the time or ability to complete the Affected System Network Upgrade(s), the Participating TO will promptly notify all other Parties. In such circumstances, the Participating TO will, within fifteen (15) days of such notice, convene a meeting with Affected System Interconnection Customers to evaluate the alternatives available to Affected System Interconnection Customers. the Participating TO will also make available to Affected System Interconnection Customers all studies and work papers related to the event and corresponding delay, including all information that is in the possession of the Participating TO that is reasonably needed by Affected System Interconnection Customers to evaluate alternatives, subject to confidentiality arrangements consistent with Article 8. the Participating TO will, at any Affected System Interconnection Customer's request and expense, use Reasonable Efforts to accelerate its work under this Agreement to meet the schedule set forth in Appendix A, provided that (1) Affected System Interconnection Customers jointly authorize such actions, such authorizations to be withheld, conditioned, or delayed by a given Affected System Interconnection Customer only if it can demonstrate that the acceleration would have a material adverse effect on it; and (2) the requesting Affected System Interconnection Customer(s) funds the costs associated therewith in advance, or all Affected System Interconnection Customers agree in advance to fund such costs based on such other allocation method as they may adopt.

**3.2 Interconnection Costs.**

**3.2.1 Costs.** Affected System Interconnection Customers will pay to the Participating TO costs (including taxes and financing costs) associated with seeking and obtaining all necessary approvals and of designing, engineering, constructing, and testing the Affected System Network Upgrade(s), as identified in Appendix A, in accordance with the cost recovery method provided herein. Except as expressly otherwise agreed, Affected System Interconnection Customers will be collectively responsible

for these costs, based on their proportionate share of cost responsibility, as provided in Appendix A. Unless the Participating TO elects to fund the Affected System Network Upgrade(s), they will be initially funded by the applicable Affected System Interconnection Customer.

**3.2.1.1 Lands of Other Property Owners.** If any part of the Affected System Network Upgrade(s) is to be installed on property owned by persons other than Affected System Interconnection Customers or the Participating TO, the Participating TO will, at Affected System Interconnection Customers' expense, use efforts similar in nature and extent to those that it typically undertakes on its own behalf or on behalf of its Affiliates, including use of its eminent domain authority to the extent permitted and consistent with Applicable Laws and Regulations and, to the extent consistent with such Applicable Laws and Regulations, to procure from such persons any rights of use, licenses, rights-of-way, and easements that are necessary to construct, operate, maintain, test, inspect, replace, or remove the Affected System Network Upgrade(s) upon such property.

**3.2.2 Repayment.**

**3.2.2.1 Repayment.** Consistent with articles 11.4.1 and 11.4.2 of the CAISO's pro forma LGIA, each Affected System Interconnection Customer will be entitled to a cash repayment by the Participating TO of the amount each Affected System Interconnection Customer paid to the Participating TO, if any, for the Affected System Network Upgrade(s), including any tax gross-up or other tax-related payments associated with the Affected System Network Upgrade(s), and not refunded to Affected System Interconnection Customer pursuant to Article 3.3.1 or otherwise. The Parties may mutually agree to a repayment schedule, to be outlined in Appendix A, not to exceed twenty (20) years from the commercial operation date, for the complete repayment for all applicable costs associated with the Affected System Network Upgrade(s). Any repayment will include interest calculated in accordance with the methodology set forth in FERC's regulations at 18 CFR 35.19 a(a)(2)(iii) from the date of any payment for Affected System Network Upgrade(s) through the date on which Affected System Interconnection Customers receive a repayment of such payment pursuant to this subparagraph. Interest will not accrue during periods in which Affected System Interconnection Customers have suspended construction pursuant to Article 3.1.2.1. Affected System Interconnection Customers may assign such repayment rights to any person.

**3.2.2.2 Impact of Failure to Achieve Commercial Operation.** If an Affected System Interconnection Customer's generating facility fails to achieve commercial operation, but it or another generating facility is later constructed and makes use of the Affected System Network Upgrade(s), the Participating TO will at that time reimburse such Affected System Interconnection Customers for the portion of the Affected System Network Upgrade(s) it funded. Before any such reimbursement can occur, Affected System Interconnection Customer (or the entity that ultimately constructs the generating facility, if different), is responsible for identifying the entity to which the reimbursement must be made.

**3.3 Taxes.**

**3.3.1 Indemnification for Contributions in Aid of Construction.** With regard only to payments made by Affected System Interconnection Customers to the Participating TO for the installation of the Affected System Network Upgrade(s), the Participating TO will not include a gross-up for income taxes in the amounts it charges Affected System Interconnection Customers for the installation of the Affected System Network Upgrade(s) unless (1) the Participating TO has determined, in good faith, that the payments or property transfers made by Affected System Interconnection Customers to the Participating TO should be reported as income subject to taxation, or (2) any Governmental Authority directs the Participating TO to report payments or property as income subject to taxation. Affected System Interconnection Customers will reimburse the Participating TO for such costs on a fully grossed-up basis, in accordance with this Article, within thirty (30) days of receiving written notification from the Participating TO of the amount due, including detail about how the amount was calculated.

The indemnification obligation will terminate at the earlier of (1) the expiration of the ten (10)-year testing period and the applicable statute of limitation, as it may be extended by the Participating TO upon request

of the Internal Revenue Service, to keep these years open for audit or adjustment, or (2) the occurrence of a subsequent taxable event and the payment of any related indemnification obligations as contemplated by this Article. Notwithstanding the foregoing provisions of this Article 3.3.1, and to the extent permitted by law, to the extent that the receipt of such payments by the Participating TO is determined by any Governmental Authority to constitute income by the Participating TO subject to taxation, Affected System Interconnection Customers will protect, indemnify, and hold harmless the Participating TO and its Affiliates, from all claims by any such Governmental Authority for any tax, interest, and/or penalties associated with such determination. Upon receiving written notification of such determination from the Governmental Authority, the Participating TO will provide Affected System Interconnection Customers with written notification within thirty (30) days of such determination and notification. the Participating TO, upon the timely written request by any one or more Affected System Interconnection Customer(s) and at the expense of such Affected System Interconnection Customer(s), will appeal, protest, seek abatement of, or otherwise oppose such determination. the Participating TO reserves the right to make all decisions with regard to the prosecution of such appeal, protest, abatement or other contest, including the compromise or settlement of the claim; provided that the Participating TO will cooperate and consult in good faith with the requesting Affected System Interconnection Customer(s) regarding the conduct of such contest. Affected System Interconnection Customer(s) will not be required to pay the Participating TO for the tax, interest, and/or penalties prior to the seventh (7th) day before the date on which the Participating TO (1) is required to pay the tax, interest, and/or penalties or other amount in lieu thereof pursuant to a compromise or settlement of the appeal, protest, abatement, or other contest; (2) is required to pay the tax, interest, and/or penalties as the result of a final, non-appealable order by a Governmental Authority; or (3) is required to pay the tax, interest, and/or penalties as a prerequisite to an appeal, protest, abatement, or other contest. In the event such appeal, protest, abatement, or other contest results in a determination that the Participating TO is not liable for any portion of any tax, interest, and/or penalties for which any Affected System Interconnection Customer(s) has already made payment to the Participating TO, the Participating TO will promptly refund to such Affected System Interconnection Customer(s) any payment attributable to the amount determined to be non-taxable, plus any interest (calculated in accordance with 18 CFR 35.19a(a)(2)(iii)) or other payments the Participating TO receives or to which the Participating TO may be entitled with respect to such payment. Each Affected System Interconnection Customer will provide the Participating TO with credit assurances sufficient to meet each Affected System Interconnection Customer's estimated liability for reimbursement of the Participating TO for taxes, interest, and/or penalties under this Article 3.3.1. Such estimated liability will be stated in Appendix A.

To the extent that the Participating TO is a limited liability company and not a corporation, and has elected to be taxed as a partnership, then the following will apply: the Participating TO represents, and the Parties acknowledge, that the Participating TO is a limited liability company and is treated as a partnership for federal income tax purposes. Any payment made by Affected System Interconnection Customers to the Participating TO for Affected System Network Upgrade(s) is to be treated as an upfront payment. It is anticipated by the Parties that any amounts paid by each Affected System Interconnection Customer to the Participating TO for Affected System Network Upgrade(s) will be reimbursed to such Affected System Interconnection Customer in accordance with the terms of this Agreement, provided such Affected System Interconnection Customer fulfills its obligations under this Agreement.

**3.3.2 Private Letter Ruling.** At the request and expense of any Affected System Interconnection Customer(s), the Participating TO will file with the Internal Revenue Service a request for a private letter ruling as to whether any property transferred or sums paid, or to be paid, by such Affected System Interconnection Customer(s) to the Participating TO under this Agreement are subject to federal income taxation. Each Affected System Interconnection Customer desiring such a request will prepare the initial draft of the request for a private letter ruling and will certify under penalties of perjury that all facts represented in such request are true and accurate to the best of such Affected System Interconnection Customer's knowledge. the Participating TO and such Affected System Interconnection Customer(s) will cooperate in good faith with respect to the submission of such request.

**3.3.3 Other Taxes.** Upon the timely request by any one or more Affected System Interconnection Customer(s), and at such Affected System Interconnection Customer(s)' sole expense, the Participating

TO will appeal, protest, seek abatement of, or otherwise contest any tax (other than federal or state income tax) asserted or assessed against the Participating TO for which such Affected System Interconnection Customer(s) may be required to reimburse the Participating TO under the terms of this Agreement. Affected System Interconnection Customer(s) who requested the action will pay to the Participating TO on a periodic basis, as invoiced by the Participating TO, the Participating TO's documented reasonable costs of prosecuting such appeal, protest, abatement, or other contest. The requesting Affected System Interconnection Customer(s) and the Participating TO will cooperate in good faith with respect to any such contest. Unless the payment of such taxes is a prerequisite to an appeal or abatement or cannot be deferred, no amount will be payable by Affected System Interconnection Customer(s) to the Participating TO for such taxes until they are assessed by a final, non-appealable order by any court or agency of competent jurisdiction. In the event that a tax payment is withheld and ultimately due and payable after appeal, Affected System Interconnection Customer(s) will be responsible for all taxes, interest, and penalties, other than penalties attributable to any delay caused by the Participating TO. Each Party will cooperate with the other Party to maintain each Party's tax status. Nothing in this Agreement is intended to adversely affect any Party's tax-exempt status with respect to the issuance of bonds including, but not limited to, local furnishing bonds, as described in section 142(f) of the Internal Revenue Code.

## ARTICLE 4
## SECURITY, BILLING, AND PAYMENTS

**4.1 Provision of Security.** By the earlier of (1) thirty (30) days prior to the due date for each Affected System Interconnection Customer's first payment under the payment schedule specified in Appendix A, or (2) the first date specified in Appendix A for the ordering of equipment by the Participating TO for installing the Affected System Network Upgrade(s), each Affected System Interconnection Customer will provide the Participating TO, at each Affected System Interconnection Customer's option, a guarantee, a surety bond, letter of credit, or other form of security that is reasonably acceptable to the Participating TO. Such security for payment will be in an amount sufficient to cover the costs for constructing, procuring, and installing the applicable portion of Affected System Network Upgrade(s) and will be reduced on a dollar-for-dollar basis for payments made to the Participating TO for these purposes.

The guarantee must be made by an entity that meets the creditworthiness requirements of the Participating TO and contain terms and conditions that guarantee payment of any amount that may be due from such Affected System Interconnection Customer, up to an agreed-to maximum amount. The letter of credit must be issued by a financial institution reasonably acceptable to the Participating TO and must specify a reasonable expiration date. The surety bond must be issued by an insurer reasonably acceptable to the Participating TO and must specify a reasonable expiration date.

**4.2 Invoice.** Each Party will submit to the other Parties, on a monthly basis, invoices of amounts due, if any, for the preceding month. Each invoice will state the month to which the invoice applies and fully describe the services and equipment provided. The Parties may discharge mutual debts and payment obligations due and owing to each other on the same date through netting, in which case all amounts a Party owes to another Party under this Agreement, including interest payments, will be netted so that only the net amount remaining due will be paid by the owing Party.

**4.3 Payment.** Invoices will be rendered to the paying Party at the address specified by the Parties. The Party receiving the invoice will pay the invoice within thirty (30) days of receipt. All payments will be made in immediately available funds payable to the other Party, or by wire transfer to a bank named and account designated by the invoicing Party. Payment of invoices by a Party will not constitute a waiver of any rights or claims that Party may have under this Agreement.

**4.4 Final Invoice.** Within six (6) months after completion of the construction of the Affected System Network Upgrade(s) the Participating TO will provide an invoice of the final cost of the construction of the Affected System Network Upgrade(s) and will set forth such costs in sufficient detail to enable each Affected System Interconnection Customer to compare the actual costs with the estimates and to ascertain deviations, if any, from the cost estimates. the Participating TO will refund, with interest

(calculated in accordance with 18 CFR 35.19a(a)(2)(iii)), to each Affected System Interconnection Customer any amount by which the actual payment by Affected System Interconnection Customer for estimated costs exceeds the actual costs of construction within thirty (30) days of the issuance of such final construction invoice.

**4.5 Interest.** Interest on any unpaid amounts will be calculated in accordance with 18 CFR 35.19a(a)(2)(iii).

**4.6 Payment During Dispute.** In the event of a billing dispute among the Parties, the Participating TO will continue to construct the Affected System Network Upgrade(s) under this Agreement as long as each Affected System Interconnection Customer: (1) continues to make all payments not in dispute; and (2) pays to the Participating TO or into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If any Affected System Interconnection Customer fails to meet these two requirements, then the Participating TO may provide notice to such Affected System Interconnection Customer of a Default pursuant to Article 5. Within thirty (30) days after the resolution of the dispute, the Party that owes money to another Party will pay the amount due with interest calculated in accordance with the methodology set forth in 18 CFR 35.19a(a)(2)(iii).

## ARTICLE 5
## BREACH, CURE, AND DEFAULT

**5.1 Events of Breach.** A Breach of this Agreement will include the:

(a) Failure to pay any amount when due;

(b) Failure to comply with any material term or condition of this Agreement, including but not limited to any material Breach of a representation, warranty, or covenant made in this Agreement;

(c) Failure of a Party to provide such access rights, or a Party's attempt to revoke access or terminate such access rights, as provided under this Agreement; or

(d) Failure of a Party to provide information or data to another Party as required under this Agreement, provided the Party entitled to the information or data under this Agreement requires such information or data to satisfy its obligations under this Agreement.

**5.2 Definition.** Breaching Party will mean the Party that is in Breach.

**5.3 Notice of Breach, Cure, and Default.** Upon the occurrence of an event of Breach, any Party aggrieved by the Breach, when it becomes aware of the Breach, will give written notice of the Breach to the Breaching Party and to any other person representing a Party to this Agreement identified in writing to the other Party in advance. Such notice will set forth, in reasonable detail, the nature of the Breach, and where known and applicable, the steps necessary to cure such Breach.

**5.2.1** Upon receiving written notice of the Breach hereunder, the Breaching Party will have a period to cure such Breach (hereinafter referred to as the "Cure Period") which will be sixty (60) days. If an Affected System Interconnection Customer is the Breaching Party and the Breach results from a failure to provide payments or security under Article 4.1 of this Agreement, the other Affected System Interconnection Customers, either individually or in concert, may cure the Breach by paying the amounts owed or by providing adequate security, without waiver of contribution rights against the breaching Affected System Interconnection Customer. Such cure for the Breach of an Affected System Interconnection Customer is subject to the reasonable consent of the Participating TO. The Participating TO may also cure such Breach by funding the proportionate share of the Affected System Network Upgrade costs related to the Breach of Affected System Interconnection Customer. The Participating TO must notify all Parties that it will exercise this option within thirty (30) days of notification that an Affected System Interconnection Customer has failed to provide payments or security under Article 4.1.

**5.2.2** In the event the Breach is not cured within the Cure Period, the Breaching Party will be in Default of this Agreement, and the non-Defaulting Parties may (1) act in concert to amend the Agreement to remove an Affected System Interconnection Customer that is in Default from this Agreement for cause and to make other changes as necessary, or (2) either in concert or individually take whatever action at law or in equity as may appear necessary or desirable to enforce the performance or observance of any rights, remedies, obligations, agreement, or covenants under this Agreement.

**5.3 Rights in the Event of Default.** Notwithstanding the foregoing, upon the occurrence of Default, the non-Defaulting Parties will be entitled to exercise all rights and remedies it may have in equity or at law.

## ARTICLE 6
## TERMINATION OF AGREEMENT

**6.1 Expiration of Term.** Except as otherwise specified in this Article 6, the Parties' obligations under this Agreement will terminate at the conclusion of the term of this Agreement.

**6.2 Termination and Removal.** Subject to the limitations set forth in Article 6.3, in the event of a Default, termination of this Agreement, as to a given Affected System Interconnection Customer or in its entirety, will require a filing at FERC of a notice of termination, which filing must be accepted for filing by FERC.

**6.3 Disposition of Facilities Upon Termination of Agreement.**

**6.3.1 the Participating TO Obligations.** Upon termination of this Agreement, unless otherwise agreed to by the Parties in writing, the Participating TO:

(a) will, prior to the construction and installation of any portion of the Affected System Network Upgrade(s) and to the extent possible, cancel any pending orders of, or return, such equipment or material for such Affected System Network Upgrade(s);

(b) may keep in place any portion of the Affected System Network Upgrade(s) already constructed and installed; and,

(c) will perform such work as may be necessary to ensure the safety of persons and property and to preserve the integrity of the CAISO Controlled Grid (e.g., construction demobilization to return the system to its original state, wind-up work).

**6.3.2 Affected System Interconnection Customer Obligations.** Upon billing by the Participating TO, each Affected System Interconnection Customer will reimburse the Participating TO for its share of any costs incurred by the Participating TO in performance of the actions required or permitted by Article 6.3.1 and for its share of the cost of any Affected System Network Upgrade(s) described in Appendix A. The Participating TO will use Reasonable Efforts to minimize costs and will offset the amounts owed by any salvage value of facilities, if applicable. Each Affected System Interconnection Customer will pay these costs pursuant to Article 4.3 of this Agreement.

**6.3.3 Pre-construction or Installation.** Upon termination of this Agreement and prior to the construction and installation of any portion of the Affected System Network Upgrade(s), the Participating TO may, at its option, retain any portion of such Affected System Network Upgrade(s) not cancelled or returned in accordance with Article 6.3.1(a), in which case the Participating TO will be responsible for all costs associated with procuring such Affected System Network Upgrade(s). To the extent that an Affected System Interconnection Customer has already paid the Participating TO for any or all of such costs, the Participating TO will refund Affected System Interconnection Customer for those payments. If the Participating TO elects to not retain any portion of such facilities, and one or more of Affected System Interconnection Customers wish to purchase such facilities, the Participating TO will convey and make

available to the applicable Affected System Interconnection Customer(s) such facilities as soon as practicable after Affected System Interconnection Customer(s)' payment for such facilities.

**6.4 Survival of Rights.** Termination or expiration of this Agreement will not relieve any Party of any of its liabilities and obligations arising hereunder prior to the date termination becomes effective, and each Party may take whatever judicial or administrative actions as appear necessary or desirable to enforce its rights hereunder. The applicable provisions of this Agreement will continue in effect after expiration, or early termination hereof, to the extent necessary to provide for (1) final billings, billing adjustments, and other billing procedures set forth in this Agreement; (2) the determination and enforcement of liability and indemnification obligations arising from acts or events that occurred while this Agreement was in effect; and (3) the confidentiality provisions set forth in Article 8.

## ARTICLE 7
## SUBCONTRACTORS

**7.1 Subcontractors.** Nothing in this Agreement will prevent a Party from utilizing the services of subcontractors, as it deems appropriate, to perform its obligations under this Agreement; provided, however, that each Party will require its subcontractors to comply with all applicable terms and conditions of this Agreement in providing such services, and each Party will remain primarily liable to the other Parties for the performance of such subcontractor.

**7.1.1 Responsibility of Principal.** The creation of any subcontract relationship will not relieve the hiring Party of any of its obligations under this Agreement. In accordance with the provisions of this Agreement, each Party will be fully responsible to the other Parties for the acts or omissions of any subcontractor it hires as if no subcontract had been made. Any applicable obligation imposed by this Agreement upon a Party will be equally binding upon, and will be construed as having application to, any subcontractor of such Party.

**7.1.2 No Third-Party Beneficiary.** Except as may be specifically set forth to the contrary herein, no subcontractor or any other party is intended to be, nor will it be deemed to be, a third-party beneficiary of this Agreement.

**7.1.3 No Limitation by Insurance.** The obligations under this Article 7 will not be limited in any way by any limitation of any insurance policies or coverages, including any subcontractor's insurance.

## ARTICLE 8
## CONFIDENTIALITY

**8.1 Confidentiality.** Confidential Information will include, without limitation, all information relating to a Party's technology, research and development, business affairs, and pricing, and any information supplied to the other Parties prior to the execution of this Agreement.

Information is Confidential Information only if it is clearly designated or marked in writing as confidential on the face of the document, or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Party receiving the information that the information is confidential. The Parties will maintain as confidential any information that is provided and identified by a Party as Critical Energy Infrastructure Information (CEII), as that term is defined in 18 CFR 388.113(c).

Such confidentiality will be maintained in accordance with this Article 8. If requested by the receiving Party, the disclosing Party will provide in writing, the basis for asserting that the information referred to in this Article warrants confidential treatment, and the requesting Party may disclose such writing to the appropriate Governmental Authority. Each Party will be responsible for the costs associated with affording confidential treatment to its information.

**8.1.1 Term.** During the term of this Agreement, and for a period of three (3) years after the expiration or termination of this Agreement, except as otherwise provided in this Article 8 or with regard to CEII,

each Party will hold in confidence and will not disclose to any person Confidential Information. CEII will be treated in accordance with FERC policies and regulations.

**8.1.2 Scope.** Confidential Information will not include information that the receiving Party can demonstrate: (1) is generally available to the public other than as a result of a disclosure by the receiving Party; (2) was in the lawful possession of the receiving Party on a non-confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a non-Party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the disclosing Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the disclosing Party; (5) is, or becomes, publicly known, through no wrongful act or omission of the receiving Party or Breach of this Agreement; or (6) is required, in accordance with Article 8.1.6 of this Agreement, to be disclosed by any Governmental Authority or is otherwise required to be disclosed by law or subpoena, or is necessary in any legal proceeding establishing rights and obligations under this Agreement. Information designated as Confidential Information will no longer be deemed confidential if the Party that designated the information as confidential notifies the receiving Party that it no longer is confidential.

**8.1.3 Release of Confidential Information.** No Party will release or disclose Confidential Information to any other person, except to its Affiliates (limited by the Standards of Conduct requirements), subcontractors, employees, agents, consultants, or to non-Parties that may be or are considering providing financing to or equity participation with Affected System Interconnection Customer(s), or to potential purchasers or assignees of Affected System Interconnection Customer(s), on a need-to-know basis in connection with this Agreement, unless such person has first been advised of the confidentiality provisions of this Article 8 and has agreed to comply with such provisions. Notwithstanding the foregoing, a Party providing Confidential Information to any person will remain primarily responsible for any release of Confidential Information in contravention of this Article 8.

**8.1.4 Rights.** Each Party will retain all rights, title, and interest in the Confidential Information that it discloses to the receiving Party. The disclosure by a Party to the receiving Party of Confidential Information will not be deemed a waiver by the disclosing Party or any other person or entity of the right to protect the Confidential Information from public disclosure.

**8.1.5 Standard of Care.** Each Party will use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from unauthorized disclosure, publication, or dissemination. Each Party may use Confidential Information solely to fulfill its obligations to the other Party under this Agreement or its regulatory requirements.

**8.1.6 Order of Disclosure.** If a court or a Government Authority or entity with the right, power, and apparent authority to do so requests or requires any Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party will provide the disclosing Party with prompt notice of such request(s) or requirement(s) so that the disclosing Party may seek an appropriate protective order or waive compliance with the terms of this Agreement. Notwithstanding the absence of a protective order or waiver, the Party may disclose such Confidential Information which, in the opinion of its counsel, the Party is legally compelled to disclose. Each Party will use Reasonable Efforts to obtain reliable assurance that confidential treatment will be accorded any Confidential Information so furnished.

**8.1.7 Termination of Agreement.** Upon termination of this Agreement for any reason, each Party will, within ten (10) Business Days of receipt of a written request from the other Party, use Reasonable Efforts to destroy, erase, or delete (with such destruction, erasure, and deletion certified in writing to the requesting Party) or return to the requesting Party any and all written or electronic Confidential Information received from the requesting Party, except that each Party may keep one copy for archival purposes, provided that the obligation to treat it as Confidential Information in accordance with this Article 8 will survive such termination.

**8.1.8 Remedies.** The Parties agree that monetary damages would be inadequate to compensate a Party for another Party's Breach of its obligations under this Article 8. Each Party accordingly agrees that the disclosing Party will be entitled to equitable relief, by way of injunction or otherwise, if the receiving Party Breaches or threatens to Breach its obligations under this Article 8, which equitable relief will be granted without bond or proof of damages, and the Breaching Party will not plead in defense that there would be an adequate remedy at law. Such remedy will not be deemed an exclusive remedy for the Breach of this Article 8, but it will be in addition to all other remedies available at law or in equity. The Parties further acknowledge and agree that the covenants contained herein are necessary for the protection of legitimate business interests and are reasonable in scope. No Party, however, will be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with this Article 8.

**8.1.9 Disclosure to FERC, its Staff, or a State Regulatory Body.** Notwithstanding anything in this Article 8 to the contrary, and pursuant to 18 CFR 1b.20, if FERC or its staff, during the course of an investigation or otherwise, requests information from a Party that is otherwise required to be maintained in confidence pursuant to this Agreement, the Party will provide the requested information to FERC or its staff, within the time provided for in the request for information. In providing the information to FERC or its staff, the Party must, consistent with 18 CFR 388.112, request that the information be treated as confidential and non-public by FERC and its staff and that the information be withheld from public disclosure. Parties are prohibited from notifying the other Parties to this Agreement prior to the release of the Confidential Information to FERC or its staff. The Party will notify the other Parties to the Agreement when it is notified by FERC or its staff that a request to release Confidential Information has been received by FERC, at which time either of the Parties may respond before such information would be made public, pursuant to 18 CFR 388.112. Requests from a state regulatory body conducting a confidential investigation will be treated in a similar manner if consistent with the applicable state rules and regulations.

**8.1.10** Subject to the exception in Article 8.1.9, any information that a disclosing Party claims is competitively sensitive, commercial, or financial information under this Agreement will not be disclosed by the receiving Party to any person not employed or retained by the receiving Party, except to the extent disclosure is (1) required by law; (2) reasonably deemed by the disclosing Party to be required to be disclosed in connection with a dispute between or among the Parties, or the defense of litigation or dispute; (3) otherwise permitted by consent of the disclosing Party, such consent not to be unreasonably withheld; or (4) necessary to fulfill its obligations under this Agreement or as the Participating TO or a balancing authority, including disclosing the Confidential Information to a regional or national reliability organization. The Party asserting confidentiality will notify the receiving Party in writing of the information that Party claims is confidential. Prior to any disclosures of that Party's Confidential Information under this subparagraph, or if any non-Party or Governmental Authority makes any request or demand for any of the information described in this subparagraph, the Party that received the Confidential Information from the disclosing Party agrees to promptly notify the disclosing Party in writing and agrees to assert confidentiality and cooperate with the disclosing Party in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order, or other reasonable measures.

## ARTICLE 9
## INFORMATION ACCESS AND AUDIT RIGHTS

**9.1 Information Access.** Each Party will make available to the other Parties information necessary to verify the costs incurred by the other Parties for which the requesting Party is responsible under this Agreement and carry out obligations and responsibilities under this Agreement, provided that the Parties will not use such information for purposes other than those set forth in this Article 9.1 and to enforce their rights under this Agreement.

**9.2 Audit Rights.** Subject to the requirements of confidentiality under Article 8 of this Agreement, the accounts and records related to the design, engineering, procurement, and construction of the Affected System Network Upgrade(s) will be subject to audit during the period of this Agreement and for a period of twenty-four (24) months following the Participating TO's issuance of a final invoice in

accordance with Article 4.4. Affected System Interconnection Customers may, jointly or individually, at the expense of the requesting Party(ies), during normal business hours, and upon prior reasonable notice to the Participating TO, audit such accounts and records. Any audit authorized by this Article 9.2 will be performed at the offices where such accounts and records are maintained and will be limited to those portions of such accounts and records that relate to obligations under this Agreement.

## ARTICLE 10
## NOTICES

**10.1 General.** Any notice, demand, or request required or permitted to be given by a Party to the other Parties, and any instrument required or permitted to be tendered or delivered by a Party in writing to another Party, may be so given, tendered, or delivered, as the case may be, by depositing the same with the United States Postal Service with postage prepaid, for transmission by certified or registered mail, addressed to the Parties, or personally delivered to the Parties, at the address set out below:

To the Participating TO:

To Affected System Interconnection Customers:

**10.2 Billings and Payments.** Billings and payments will be sent to the addresses shown in Article 10.1 unless otherwise agreed to by the Parties.

**10.3 Alternative Forms of Notice.** Any notice or request required or permitted to be given by a Party to the other Parties and not required by this Agreement to be given in writing may be so given by telephone, facsimile, or email to the telephone numbers and email addresses set out below:

To the Participating TO:

To Affected System Interconnection Customers:

**10.4 Execution and Filing.** Affected System Interconnection Customers will either: (i) execute two originals of this tendered Agreement and return them to the Participating TO; or (ii) request in writing that the Participating TO file with FERC this Agreement in unexecuted form. As soon as practicable, but not later than ten (10) Business Days after receiving either the two executed originals of this tendered Agreement (if it does not conform with a FERC-approved standard form of this Agreement) or the request to file this Agreement unexecuted, the Participating TO will file this Agreement with FERC, together with its explanation of any matters as to which Affected System Interconnection Customers and the Participating TO disagree and support for the costs that the Participating TO proposes to charge to Affected System Interconnection Customers under this Agreement. An unexecuted version of this Agreement should contain terms and conditions deemed appropriate by the Participating TO for the Affected System Interconnection Customers' generating facilities. If the Parties agree to proceed with design, procurement, and construction of facilities and upgrades under the agreed-upon terms of the unexecuted version of this Agreement, they may proceed pending FERC action.

## ARTICLE 11
## MISCELLANEOUS

**11.1** This Agreement will include standard miscellaneous terms including, but not limited to, indemnities, representations, disclaimers, warranties, governing law, amendment, execution, waiver, enforceability, and assignment, which reflect best practices in the electric industry, that are consistent with regional practices, Applicable Laws and Regulations, and the organizational nature of each Party. All of these provisions, to the extent practicable, will be consistent with the provisions of this RIS.

[Signature Page to Follow]

**IN WITNESS WHEREOF,** the Parties have executed this Agreement in multiple originals, each of which will constitute and be an original Agreement among the Parties.

the Participating TO
**{the Participating TO}**
By: _____
Name: _____
Title: _____

Affected System Interconnection Customer
**{Affected System Interconnection Customer}**
By: _____
Name: _____
Title: _____

Project No. ____

Affected System Interconnection Customer
**{Affected System Interconnection Customer}**
By: _____
Name: _____
Title: _____

Project No. ____

**Attachment A to Appendix 14**
**Multiparty Affected System Facilities Construction Agreement**

**AFFECTED SYSTEM NETWORK UPGRADE(S), COST ESTIMATES AND RESPONSIBILITY, CONSTRUCTION SCHEDULE, AND MONTHLY PAYMENT SCHEDULE**

This Appendix A is a part of the Multiparty Affected System Facilities Construction Agreement among Affected System Interconnection Customers and the Participating TO.

**1.1 Affected System Network Upgrade(s) to be installed by the Participating TO.**

**{description}**

**1.2 First Equipment Order (including permitting).**

**{description}**

**1.2.1. Permitting and Land Rights – the Participating TO Affected System Network Upgrade(s)**

**{description}**

**1.3 Construction Schedule.** Where applicable, construction of the Affected System Network Upgrade(s) is scheduled as follows and will be periodically updated as necessary:

**Table 3: the Participating TO Construction Activities**

| MILESTONE NUMBER | DESCRIPTION | START DATE | END DATE |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

Note: Construction schedule assumes that the Participating TO has obtained final authorizations and security from Affected System Interconnection Customers and all necessary permits from Governmental Authorities as necessary prerequisites to commence construction of any of the Affected System Network Upgrade(s).

**1.4 Payment Schedule.**

**1.4.1 Timing of and Adjustments to Affected System Interconnection Customers' Payments and Security.**
**{description}**

**1.4.2 Monthly Payment Schedule.** Affected System Interconnection Customers' payment schedule is as follows.

**{description}**

**Table 4: Affected System Interconnection Customers' Payment/Security Obligations for Affected System Network Upgrade(s).**

| MILESTONE NUMBER | DESCRIPTION | DATE |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

* Affected System Interconnection Customers' proportionate responsibility for each payment is as follows:

Affected System Interconnection Customer 1 ___._%
Affected System Interconnection Customer 2 ___._%
Affected System Interconnection Customer N ___._%

Note: Affected System Interconnection Customers' payment or provision of security as provided in this Agreement operates as a condition precedent to the Participating TO's obligations to construct any Affected System Network Upgrade(s), and failure to meet this schedule will constitute a Breach pursuant to Article 5.1 of this Agreement.

**1.5 Permits, Licenses, and Authorizations.**

**{description}**

**Attachment B to Appendix 14**
**Multiparty Affected System Facilities Construction Agreement**

**NOTIFICATION OF COMPLETED CONSTRUCTION**

This Appendix B is a part of the Multiparty Affected System Facilities Construction Agreement among Affected System Interconnection Customers and the Participating TO. Where applicable, when the Participating TO has completed construction of the Affected System Network Upgrade(s), the Participating TO will send notice to Affected System Interconnection Customers in substantially the form following:

{Date}

{Affected System Interconnection Customers Addresses}

Re: Completion of Affected System Network Upgrade(s)

Dear {Name or Title}:

This letter is sent pursuant to the Multiparty Affected System Facilities Construction Agreement among {the Participating TO} and {Affected System Interconnection Customers}, dated _____, 20___.

On {Date}, the Participating TO completed to its satisfaction all work on the Affected System Network Upgrade(s) required to facilitate the safe and reliable interconnection and operation of Affected System Interconnection Customer's generating facilities. the Participating TO confirms that the Affected System Network Upgrade(s) are in place.

Thank you.

{Signature}
{the Participating TO Representative}

**Attachment C to Appendix 14**
**Multiparty Affected System Facilities Construction Agreement**

**EXHIBITS**

This Appendix C is a part of the Multiparty Affected System Facilities Construction Agreement among Affected System Interconnection Customers and the Participating TO.

**Exhibit A1**
**the Participating TO Site Map**

**Exhibit A2**
**Site Plan**

**Exhibit A3**
**Affected System Network Upgrade(s) Plan & Profile**

**Exhibit A4**
**Estimated Cost of Affected System Network Upgrade(s)**

| | Location | Facilities to Be Constructed by the Participating TO | Estimate in Dollars |
|---|---|---|---|
| | | | |
| | | Total: | |

**Appendix LL**

**Large Generator Interconnection Agreement**

**for Interconnection Requests Processed under the Resource Interconnection Standards**

**(Appendix KK to the CAISO Tariff)**

**Appendices**

Appendix A Interconnection Facilities, Network Upgrades and Distribution Upgrades

Appendix B Milestones

Appendix C Interconnection Details

Appendix D Security Arrangements Details

Appendix E Commercial Operation Date

Appendix F Addresses for Delivery of Notices and Billings

Appendix G Interconnection Customer's Share of Costs of Network Upgrades for Applicable Project Group

Appendix H Interconnection Requirements for an Asynchronous Generating Facility

Appendix I Operating Assumptions for Generating Facility

**LARGE GENERATOR INTERCONNECTION AGREEMENT**

**[INTERCONNECTION CUSTOMER]**

**[PARTICIPATING TO]**

**CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION**

**THIS LARGE GENERATOR INTERCONNECTION AGREEMENT** ("LGIA") is made and entered into this ____ day of _____ 20___, by and among _____, a _____ organized and existing under the laws of the State/Commonwealth of _____ ("Interconnection Customer" with a Large Generating Facility), _____, a corporation organized and existing under the laws of the State of California ("**Participating TO**"), and **California Independent System Operator Corporation**, a California nonprofit public benefit corporation organized and existing under the laws of the State of California ("CAISO"). Interconnection Customer, Participating TO, and CAISO each may be referred to as a "Party" or collectively as the "Parties."

**RECITALS**

**WHEREAS,** CAISO exercises Operational Control over the CAISO Controlled Grid; and

**WHEREAS,** the Participating TO owns, operates, and maintains the Participating TO's Transmission System; and

**WHEREAS,** Interconnection Customer intends to own, lease and/or control and operate the Generating Facility identified as a Large Generating Facility in Appendix C to this LGIA; and

**WHEREAS,** Interconnection Customer, Participating TO, and CAISO have agreed to enter into this LGIA for the purpose of interconnecting the Large Generating Facility with the Participating TO's Transmission System;

**NOW, THEREFORE,** in consideration of and subject to the mutual covenants contained herein, it is agreed:

When used in this LGIA, terms with initial capitalization that are not defined in Article 1 shall have the meanings specified in the Article in which they are used.

**Article 1. Definitions**

**ADNU** shall mean Area Delivery Network Upgrade.

**Adverse System Impact** shall mean the negative effects due to technical or operational limits on conductors or equipment being exceeded that may compromise the safety and reliability of the electric system.

**Affected System** shall mean an electric system other than the CAISO Controlled Grid that may be affected by the proposed interconnection, including the Participating TO's electric system that is not part of the CAISO Controlled Grid.

**Affiliate** shall mean, with respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

**Applicable Laws and Regulations** shall mean all duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or

administrative orders, permits and other duly authorized actions of any Governmental Authority.

**Applicable Reliability Standards** shall mean the requirements and guidelines of NERC, the Electric Reliability Organization, and the Balancing Authority Area of the Participating TO's Transmission System to which the Generating Facility is directly connected, including requirements adopted pursuant to Section 215 of the Federal Power Act.

**Area Deliverability Constraint** shall mean a previously identified transmission system operating limit, based on a CAISO interconnection study or transmission planning study and listed on the CAISO website, that would constrain the deliverability of a substantial number of generators if the CAISO were to assign full capacity or partial capacity deliverability status to additional generating facilities in one or more specified geographic or electrical areas of the CAISO Controlled Grid in a total amount that is greater than the TP Deliverability for those areas. May also be a transmission system operating limit that constrains all or most of the same generation already constrained by a previously identified Area Deliverability Constraint.

**Area Delivery Network Upgrade** shall mean a transmission upgrade or addition identified by the CAISO to relieve an Area Deliverability Constraint.

**Area Off-Peak Constraints** shall mean a transmission system operating limit that would cause excessive curtailment to a substantial number of Generating Facilities during Off-Peak Load conditions, as described in Section 6.3.2.2 of Appendix DD and the CAISO Off-Peak Deliverability Assessment posted on the CAISO Website.

**Area Off-Peak Network Upgrades (AOPNUs)** shall mean a transmission upgrade or addition the CAISO identifies in the Transmission Planning Process to relieve an Area Off-Peak Constraint.

**Assigned Network Upgrade (ANU)** shall mean Reliability Network Upgrades, Local Off-Peak Network Upgrades, and Local Delivery Network Upgrades currently assigned to the Interconnection Customer. Assigned Network Upgrades exclude Conditionally Assigned Network Upgrades unless they become Assigned Network Upgrades.

**Asynchronous Generating Facility** shall mean an induction, doubly-fed, or electronic power generating unit(s) that produces 60 Hz (nominal) alternating current.

**Balancing Authority** shall mean the responsible entity that integrates resource plans ahead of time, maintains load-interchange-generation balance within a Balancing Authority Area, and supports Interconnection frequency in real time.

**Balancing Authority Area** shall mean the collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.

**Base Case** shall mean the base case power flow, short circuit, and stability databases used for the Interconnection Studies.

**Breach** shall mean the failure of a Party to perform or observe any material term or condition of this LGIA.

**Breaching Party** shall mean a Party that is in Breach of this LGIA.

**Business Day** shall mean Monday through Friday, excluding federal holidays and the day after

Thanksgiving Day.

**CAISO Controlled Grid** shall mean the system of transmission lines and associated facilities of the parties to the Transmission Control Agreement that have been placed under the CAISO's Operational Control.

**CAISO Tariff** shall mean the CAISO's tariff, as filed with FERC, and as amended or supplemented from time to time, or any successor tariff.

**Calendar Day** shall mean any day including Saturday, Sunday or a federal holiday.

**Commercial Operation** shall mean the status of an Electric Generating Unit or project phase at a Generating Facility that has commenced generating electricity for sale, excluding electricity generated during Trial Operation.

**Commercial Operation Date** of an Electric Generating Unit or project phase shall mean the date on which the Electric Generating Unit or project phase at the Generating Facility commences Commercial Operation as agreed to by the applicable Participating TO, the CAISO, and the Interconnection Customer pursuant to Appendix E to this LGIA, and in accordance with the implementation plan agreed to by the Participating TO and the CAISO for multiple individual Electric Generating Units or project phases at a Generating Facility where an Interconnection Customer intends to establish separate Commercial Operation Dates for those Electric Generating Units or project phases.

**Commercial Readiness Deposit** shall mean a deposit paid as set forth in Sections 3.5.1, 7.5, and 8.1.1 of the RIS.

**Conditionally Assigned Network Upgrade (CANU)** shall mean Reliability Network Upgrades, Local Off-Peak Network Upgrades, and Local Delivery Network Upgrades currently assigned to an earlier Interconnection Customer, but which may be assigned to the Interconnection Customer.

**Confidential Information** shall mean any confidential, proprietary or trade secret information of a plan, specification, pattern, procedure, design, device, list, concept, policy or compilation relating to the present or planned business of a Party, which is designated as confidential by the Party supplying the information, whether conveyed orally, electronically, in writing, through inspection, or otherwise, subject to Article 22.1.2.

**Current Cost Responsibility (CCR)** shall mean the Interconnection Customer's current allocated costs for Assigned Network Upgrades, not to exceed the Maximum Cost Responsibility. This cost is used to calculate the Interconnection Customer's Commercial Readiness Deposit and GIA Deposit requirements, as applicable.

**Deliverability** shall mean (1) The annual Net Qualifying Capacity of a Generating Facility, as verified through a Deliverability Assessment and measured in MW, which specifies the amount of resource adequacy capacity the Generating Facility is eligible to provide. (2) The annual Maximum Import Capability of an Intertie which specifies the amount of resource adequacy capacity measured in MW, that load-serving entities collectively can procure from imports at that Intertie to meet their resource adequacy requirements.

**Default** shall mean the failure of a Breaching Party to cure its Breach in accordance with Article 17 of this LGIA.

**Distribution System** shall mean those non-CAISO-controlled transmission and distribution facilities owned by the Participating TO.

**Distribution Upgrades** shall mean the additions, modifications, and upgrades to the Participating TO's Distribution System. Distribution Upgrades do not include Interconnection Facilities.

**Effective Date** shall mean the date on which this LGIA becomes effective upon execution by all Parties subject to acceptance by FERC, or if filed unexecuted, upon the date specified by FERC.

**Electric Generating Unit** shall mean an individual electric generator and its associated plant and apparatus whose electrical output is capable of being separately identified and metered.

**Electric Reliability Organization** shall mean the North American Electric Reliability Corporation (NERC) and the Western Electricity Coordinating Council (WECC) or their successor organizations.

**Emergency Condition** shall mean a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; or (2) that, in the case of the CAISO, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the CAISO Controlled Grid or the electric systems of others to which the CAISO Controlled Grid is directly connected; (3) that, in the case of the Participating TO, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Participating TO's Transmission System, Participating TO's Interconnection Facilities, Distribution System, or the electric systems of others to which the Participating TO's electric system is directly connected; or (4) that, in the case of the Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Generating Facility or Interconnection Customer's Interconnection Facilities. System restoration and black start shall be considered Emergency Conditions; provided, that Interconnection Customer is not obligated by this LGIA to possess black start capability.

**Environmental Law** shall mean Applicable Laws or Regulations relating to pollution or protection of the environment or natural resources.

**Federal Power Act** shall mean the Federal Power Act, as amended, 16 U.S.C. §§ 791a et seq.

**FERC** shall mean the Federal Energy Regulatory Commission or its successor.

**Force Majeure** shall mean any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure event does not include acts of negligence or intentional wrongdoing by the Party claiming Force Majeure.

**General Reliability Network Upgrade (GRNU)** shall mean Reliability Network Upgrades that are not Interconnection Reliability Network Upgrades.

**Generating Facility** shall mean the Interconnection Customer's Electric Generating Unit(s) used for the production and/or storage for later injection of electricity identified in the Interconnection Customer's Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

**Generating Facility Capacity** shall mean the net capacity of the Generating Facility or the aggregate net capacity of the Generating Facility where it includes more than one Generating Unit for the production and/or storage for later injection of electricity.

**Generator Interconnection and Deliverability Allocation Procedures (GIDAP)** shall mean the CAISO protocol that sets forth the interconnection and allocation procedures applicable to an Interconnection Request pertaining to a Large Generating Facility that is included in CAISO Tariff

Appendix DD.

**Generator Interconnection Study Process Agreement (GISPA)** shall mean the pro forma agreement between the CAISO and the Interconnection Customer for conducting Interconnection Studies for a proposed Generating Facility under Appendixes Y and DD.

**GIA Deposit** shall mean the deposit Interconnection Customer submits when returning the executed GIA, or within ten (10) Business Days of requesting that the GIA be filed unexecuted at the Commission, in accordance with Section 11 of the RIS.

**Good Utility Practice** shall mean any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be any one of a number of the optimum practices, methods, or acts to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

**Governmental Authority** shall mean any federal, state, local or other governmental, regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the Interconnection Customer, CAISO, Participating TO, or any Affiliate thereof.

**Hazardous Substances** shall mean any chemicals, materials or substances defined as or included in the definition of "hazardous substances," "hazardous wastes," "hazardous materials," "hazardous constituents," "restricted hazardous materials," "extremely hazardous substances," "toxic substances," "radioactive substances," "contaminants," "pollutants," "toxic pollutants" or words of similar meaning and regulatory effect under any applicable Environmental Law, or any other chemical, material or substance, exposure to which is prohibited, limited or regulated by any applicable Environmental Law.

**Initial Synchronization Date** shall mean the date upon which an Electric Generating Unit is initially synchronized and upon which Trial Operation begins.

**In-Service Date** shall mean the date upon which the Interconnection Customer reasonably expects it will be ready to begin use of the Participating TO's Interconnection Facilities to obtain back feed power.

**Interconnection Customer's Interconnection Facilities** shall mean all facilities and equipment, as identified in Appendix A of this LGIA, that are located between the Generating Facility and the Point of Change of Ownership, including any modification, addition, or upgrades to such facilities and equipment necessary to physically and electrically interconnect the Generating Facility to the Participating TO's Transmission System. Interconnection Customer's Interconnection Facilities are sole use facilities.

**Interconnection Facilities** shall mean the Participating TO's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Generating Facility to the Participating TO's Transmission System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

**Interconnection Facilities Study** shall mean a study conducted by the Participating TO(s),

CAISO, or a third party consultant for the Interconnection Customer to determine a list of facilities (including the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades), as identified in the Cluster Study, the cost of those facilities, and the time required to interconnect the Generating Facility with the CAISO Controlled Grid. The scope of the study is defined in Section 8 of the RIS (Appendix KK).

**Interconnection Facilities Study Report** shall mean the report issued following completion of an Interconnection Facilities Study pursuant to Section 8 of the RIS.

**Interconnection Handbook** shall mean a handbook, developed by the Participating TO and posted on the Participating TO's web site or otherwise made available by the Participating TO, describing technical and operational requirements for wholesale generators and loads connected to the Participating TO's portion of the CAISO Controlled Grid, as such handbook may be modified or superseded from time to time. Participating TO's standards contained in the Interconnection Handbook shall be deemed consistent with Good Utility Practice and Applicable Reliability Standards. In the event of a conflict between the terms of this LGIA and the terms of the Participating TO's Interconnection Handbook, the terms in this LGIA shall apply.

**Interconnection Reliability Network Upgrades (IRNU)** shall mean Reliability Network Upgrades at the Point of Interconnection to accomplish the physical interconnection of the Generating Facility to the CAISO Controlled Grid. IRNUs are treated as Reliability Network Upgrades unless otherwise noted.

**Interconnection Request** shall mean an Interconnection Customer's request, in the form of Appendix 1 to Appendix KK, in accordance with Section 25.1 of the CAISO Tariff.

**Interconnection Service** shall mean the service provided by the Participating TO and CAISO associated with interconnecting the Interconnection Customer's Generating Facility to the Participating TO's Transmission System and enabling the CAISO Controlled Grid to receive electric energy and capacity from the Generating Facility at the Point of Interconnection, pursuant to the terms of this LGIA, the Participating TO's Transmission Owner Tariff, and the CAISO Tariff.

**Interconnection Study** shall mean any of the following studies: the Interconnection Feasibility Study, the Interconnection System Impact Study, the Interconnection Facilities Study, the Phase I Interconnection Study, the Phase II Interconnection Study, the Cluster Study, the Cluster Restudy, the Surplus Interconnection Service Study, the Affected System Study, or the reassessment of any of these.

**IRS** shall mean the Internal Revenue Service.

**Large Generating Facility** shall mean a Generating Facility having a Generating Facility Capacity of more than 20 MW.

**LDNU** shall mean Local Delivery Network Upgrades.

**Local Deliverability Constraint** shall mean a transmission system operating limit modeled in the study process that would be exceeded if the CAISO were to assign full capacity or partial capacity deliverability status to one or more additional generating facilities interconnecting to the CAISO Controlled Grid in a specific local area, and that is not an Area Deliverability Constraint.

**Local Delivery Network Upgrade** shall mean a transmission upgrade or addition identified by the CAISO in the study process to relieve a Local Deliverability Constraint.

**Local Off-Peak Constraints** shall mean a transmission system operating limit modeled in the generator interconnection study process that would be exceeded or lead to excessive curtailment, as

described in the Off-Peak Deliverability Assessment methodology, if the CAISO were to assign Off-Peak Deliverability Status to one or more Generating Facilities interconnecting to the CAISO Controlled Grid in a specific local area, and that is not an Area Off-Peak Constraint.

**Local Off-Peak Network Upgrades (LOPNUs)** shall mean a transmission upgrade or addition the CAISO identifies in the generator interconnection study process to relieve a Local Off-Peak Constraint.

**Loss** shall mean any and all damages, losses, and claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties.

**Material Modification** shall mean a modification that has a material impact on the cost or timing of any Interconnection Request or any other valid interconnection request with an equal or later Queue Position.

**Maximum Cost Exposure (MCE)** shall mean the sum of (1) the Interconnection Customer's Maximum Cost Responsibility and (2) the Conditionally Assigned Network Upgrades from its Interconnection Studies.

**Maximum Cost Responsibility (MCR)** shall mean the sum of the Interconnection Customer's (1) full cost of assigned Interconnection Reliability Network Upgrades and (2) allocated costs for all other Assigned Network Upgrades, from Interconnection Facilities Study, not to exceed the Maximum Cost Exposure.

**Merchant Network Upgrades** - Network Upgrades constructed and owned by an Interconnection Customer or a third party pursuant to Article 5.1.5 of this LGIA, Section 14.3 of the RIS, and Sections 24.4.6.1 and 36.11 of the CAISO Tariff.

**Metering Equipment** shall mean all metering equipment installed or to be installed for measuring the output of the Generating Facility pursuant to this LGIA at the metering points, including but not limited to instrument transformers, MWh-meters, data acquisition equipment, transducers, remote terminal unit, communications equipment, phone lines, and fiber optics.

**NERC** shall mean the North American Electric Reliability Corporation or its successor organization.

**Net Scheduled Generating Unit** shall mean an Electric Generating Unit identified in a Net Scheduled PGA operated as a single unit such that the energy bid or self-schedule with the CAISO is the net value of the aggregate electrical net output of the Electric Generating Unit and the self-provided load.

**Net Scheduled PGA** shall mean a Net Scheduled Participating Generator Agreement specifying the special provisions for the operating relationship between a Net Scheduled Generating Unit and the CAISO, a pro forma version of which is set forth in Appendix B.3 of the CAISO Tariff.

**Network Upgrades** shall be Participating TO's Delivery Network Upgrades and Participating TO's Reliability Network Upgrades.

**Off-Peak Deliverability Constraints** shall mean a transmission system operating limit that constrains Generating Facilities in an area, leading to the excessive curtailment of expected Energy.

**Off-Peak Network Upgrades** shall mean Network Upgrades needed to relieve Off-Peak Deliverability Constraints. Area Off-Peak Network Upgrades address Area Off-Peak Constraints. Local Off-Peak Network Upgrades address Local Off-Peak Constraints.

**Operational Control** shall mean the rights of the CAISO under the Transmission Control Agreement and the CAISO Tariff to direct the parties to the Transmission Control Agreement how to operate their transmission lines and facilities and other electric plant affecting the reliability of those lines and facilities for the purpose of affording comparable non-discriminatory transmission access and meeting applicable reliability criteria.

**Participating TO's Delivery Network Upgrades** shall mean the additions, modifications, and upgrades to the Participating TO's Transmission System at or beyond the Point of Interconnection, other than Reliability Network Upgrades, identified in the Interconnection Studies, as identified in Appendix A, to relieve constraints on the CAISO Controlled Grid. Participating TO Delivery Network Upgrades can be either ADNU or LDNU.

**Participating TO's Interconnection Facilities** shall mean all facilities and equipment owned, controlled or operated by the Participating TO from the Point of Change of Ownership to the Point of Interconnection as identified in Appendix A to this LGIA, including any modifications, additions or upgrades to such facilities and equipment. Participating TO's Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades, Stand Alone Network Upgrades or Network Upgrades.

**Participating TO's Reliability Network Upgrades** shall mean the additions, modifications, and upgrades to the Participating TO's Transmission System at or beyond the Point of Interconnection, identified in the Interconnection Studies, as identified in Appendix A, necessary to interconnect the Large Generating Facility safely and reliably to the Participating TO's Transmission System, which would not have been necessary but for the interconnection of the Large Generating Facility, including additions, modifications, and upgrades necessary to remedy short circuit or stability problems resulting from the interconnection of the Large Generating Facility to the Participating TO's Transmission System. Participating TO's Reliability Network Upgrades also include, consistent with Applicable Reliability Standards and Electric Reliability Organization practice, the Participating TO's facilities necessary to mitigate any adverse impact the Large Generating Facility's interconnection may have on a path's Electric Reliability Organization rating. Participating TO's Reliability Network Upgrades do not include any Participating TO's Delivery Network Upgrades.

**Participating TO's Transmission System** shall mean the facilities owned and operated by the Participating TO and that have been placed under the CAISO's Operational Control, which facilities form part of the CAISO Controlled Grid.

**Party** or **Parties** shall mean the Participating TO, CAISO, Interconnection Customer or the applicable combination of the above.

**Phased Generating Facility** shall mean a Generating Facility that is structured to be completed and to achieve Commercial Operation in two or more successive sequences that are specified in this LGIA, such that each sequence comprises a portion of the total megawatt generation capacity of the entire Generating Facility.

**Point of Change of Ownership** shall mean the point, as set forth in Appendix A to this LGIA, where the Interconnection Customer's Interconnection Facilities connect to the Participating TO's Interconnection Facilities.

**Point of Interconnection** shall mean the point, as set forth in Appendix A to this LGIA, where the Interconnection Facilities connect to the Participating TO's Transmission System.

**Precursor Network Upgrades (PNU)** shall mean Network Upgrades required for the Interconnection Customer consisting of (1) Network Upgrades assigned to an earlier Interconnection Customer in an earlier Queue Cluster, Independent Study Process, or Fast Track Process, that has executed its GIA; and (2) Network Upgrades in the approved CAISO Transmission Plan.

**Reasonable Efforts** shall mean, with respect to an action required to be attempted or taken by a Party under this LGIA, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

**RNU** shall mean Reliability Network Upgrades.

**Reliability Network Upgrades (RNU)** shall mean the transmission facilities at or beyond the Point of Interconnection identified in the Interconnection Studies as necessary to interconnect one or more Generating Facility(ies) safely and reliably to the CAISO Controlled Grid, which would not have been necessary but for the interconnection of one or more Generating Facility(ies), including Network Upgrades necessary to remedy short circuit or stability problems, or thermal overloads. Reliability Network Upgrades shall only be deemed necessary for system operating limits, occurring under any system condition, which cannot be adequately mitigated through Congestion Management or Operating Procedures based on the characteristics of the Generating Facilities included in the Interconnection Studies, limitations on market models, systems, or information, or other factors specifically identified in the Interconnection Studies. Reliability Network Upgrades also include, consistent with WECC practice, the facilities necessary to mitigate any adverse impact the Generating Facility's interconnection may have on a path's WECC rating. Reliability Network Upgrades include Interconnection Reliability Network Upgrades and General Reliability Network Upgrades.

**Resource Interconnection Standards (RIS)** shall mean Appendix KK to the CAISO Tariff.

**Scoping Meeting** shall mean the meeting among representatives of the Interconnection Customer, the applicable Participating TO(s), and the CAISO conducted for the purpose of discussing the proposed Interconnection Request and any alternative interconnection options, exchanging information including any transmission data and earlier study evaluations that would be reasonably expected to impact such interconnection options, refining information and models provided by Interconnection Customer(s), discussing the Cluster Study materials posted to OASIS pursuant to Section 3.5 of the RIS, and analyzing such information.

**Site Control** shall mean the exclusive land right to develop, construct, operate, and maintain the Generating Facility over the term of expected operation of the Generating Facility. Site Control may be demonstrated by documentation establishing: (1) ownership of, a leasehold interest in, or a right to develop a site of sufficient size to construct and operate the Generating Facility; (2) an option to purchase or acquire a leasehold site of sufficient size to construct and operate the Generating Facility; or (3) any other documentation that clearly demonstrates the right of Interconnection Customer to exclusively occupy a site of sufficient size to construct and operate the Generating Facility. The CAISO will maintain acreage requirements for each Generating Facility type on its Website.

**Stand Alone Network Upgrades** shall mean Network Upgrades that are not part of an Affected System that the Interconnection Customer may construct without affecting day-to-day operations of the CAISO Controlled Grid or Affected Systems during their construction. The Participating TO, the CAISO, and the Interconnection Customer must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to this LGIA. If the CAISO, the Participating TO, and the Interconnection Customer disagree about whether a particular Network Upgrade is a Stand Alone Network Upgrade, the CAISO or Participating TO must provide the Interconnection Customer a written technical explanation outlining why it does not consider the Network Upgrade to be a Stand Alone Network Upgrade within fifteen (15) days of its determination.

**Surplus Interconnection Service** shall mean any unneeded portion of Interconnection Service Capacity established herein, such that if Surplus Interconnection Service is utilized the total amount of Interconnection Service Capacity at the Point of Interconnection would remain the same.

**System Protection Facilities** shall mean the equipment, including necessary protection signal communications equipment, that protects (1) the Participating TO's Transmission System, Participating

TO's Interconnection Facilities, CAISO Controlled Grid, and Affected Systems from faults or other electrical disturbances occurring at the Generating Facility and (2) the Generating Facility from faults or other electrical system disturbances occurring on the CAISO Controlled Grid, Participating TO's Interconnection Facilities, and Affected Systems or on other delivery systems or other generating systems to which the CAISO Controlled Grid is directly connected.

**TP Deliverability** shall mean the capability, measured in MW, of the CAISO Controlled Grid as modified by transmission upgrades and additions identified in the annual Transmission Plan to support the interconnection with Full Capacity Deliverability Status or Partial Capacity Deliverability Status of additional Generating Facilities in a specified geographic or electrical area of the CAISO Controlled Grid.

**Transmission Control Agreement** shall mean CAISO FERC Electric Tariff No. 7.

**Trial Operation** shall mean the period during which the Interconnection Customer is engaged in on-site test operations and commissioning of an Electric Generating Unit prior to Commercial Operation.

**Variable Energy Resource** shall mean a device for the production of electricity that is characterized by an Energy source that: (1) is renewable; (2) cannot be stored by the facility owner or operator; and (3) has variability that is beyond the control of the facility owner or operator.

**Withdrawal Penalty** shall mean the penalty assessed by the CAISO to an Interconnection Customer that chooses to withdraw or is deemed withdrawn from the CAISO's interconnection queue or whose Generating Facility does not otherwise reach Commercial Operation. The calculation of the Withdrawal Penalty is set forth in Section 3.8.1 of the RIS.

## Article 2. Effective Date, Term and Termination

**2.1 Effective Date.** This LGIA shall become effective upon execution by all Parties subject to acceptance by FERC (if applicable), or if filed unexecuted, upon the date specified by FERC. The CAISO and Participating TO shall promptly file this LGIA with FERC upon execution in accordance with Article 3.1, if required.

**2.2 Term of Agreement.** Subject to the provisions of Article 2.3, this LGIA shall remain in effect for a period of ____ years from the Effective Date (Term Specified in Individual Agreements to be ten (10) years or such other longer period as the Interconnection Customer may request) and shall be automatically renewed for each successive one-year period thereafter.

**2.3 Termination Procedures.**

**2.3.1 Written Notice.** This LGIA may be terminated by the Interconnection Customer after giving the CAISO and the Participating TO ninety (90) Calendar Days advance written notice, or by the CAISO and the Participating TO notifying FERC after the Generating Facility permanently ceases Commercial Operation.

**2.3.2 Default.** A Party may terminate this LGIA in accordance with Article 17.

**2.3.3 Suspension of Work.** This LGIA may be deemed terminated in accordance with Article 5.16, if applicable.

**2.3.4** Notwithstanding Articles 2.3.1, 2.3.2, and 2.3.3, no termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination, including the filing with FERC of a notice of termination of this LGIA (if applicable), which notice has been accepted for filing by FERC, and the Interconnection Customer has fulfilled its termination cost obligations under Article 2.4.

**2.4 Termination Costs.** Immediately upon the other Parties' receipt of a notice of the termination of this LGIA pursuant to Article 2.3 above, the CAISO and the Participating TO will determine the total cost responsibility of the Interconnection Customer. If, as of the date of the other Parties' receipt of the notice of termination, the Interconnection Customer has not already paid its share of Network Upgrade costs, as set forth in Appendix G to this LGIA, the Participating TO will liquidate the Interconnection Customer's GIA Deposit associated with its cost responsibility for Network Upgrades, in accordance with Section 3.8 of the RIS.

The Interconnection Customer will also be responsible for all costs incurred or irrevocably committed to be incurred in association with the construction of the Participating TO's Interconnection Facilities (including any cancellation costs relating to orders or contracts for Interconnection Facilities and equipment) and other such expenses, including any Distribution Upgrades for which the Participating TO or CAISO has incurred expenses or has irrevocably committed to incur expenses and has not been reimbursed by the Interconnection Customer, as of the date of the other Parties' receipt of the notice of termination, subject to the limitations set forth in this Article 2.4. Nothing in this Article 2.4 shall limit the Parties' rights under Article 17. If, as of the date of the other Parties' receipt of the notice of termination, the Interconnection Customer has not already reimbursed the Participating TO and the CAISO for costs incurred to construct the Participating TO's Interconnection Facilities, the Participating TO will liquidate the Interconnection Customer's GIA Deposit associated with the construction of the Participating TO's Interconnection Facilities, in accordance with Section 3.8 of the RIS. If the amount of the GIA Deposit liquidated by the Participating TO under this Article 2.4 is insufficient to compensate the CAISO and the Participating TO for actual costs associated with the construction of the Participating TO's Interconnection Facilities contemplated in this Article, any additional amounts will be the responsibility of the Interconnection Customer, subject to the provisions of Section 3.8 of the RIS. Any such additional amounts due from the Interconnection Customer beyond the amounts covered by its GIA Deposit will be due to the Participating TO immediately upon termination of this LGIA in accordance with Section 3.8 of the RIS.

If the amount of the GIA Deposit exceeds the Interconnection Customer's cost responsibility under Section 3.8 of the RIS, any excess amount will be released to the Interconnection Customer in accordance with Section 3.8 of the RIS.

**2.4.1** Notwithstanding the foregoing, in the event of termination by a Party, all Parties shall use commercially Reasonable Efforts to mitigate the costs, damages, and charges arising as a consequence of termination. With respect to any portion of the Participating TO's Interconnection Facilities that have not yet been constructed or installed, the Participating TO shall to the extent possible and with the Interconnection Customer's authorization cancel any pending orders of, or return, any materials or equipment for, or contracts for construction of, such facilities; provided that in the event the Interconnection Customer elects not to authorize such cancellation, the Interconnection Customer shall assume all payment obligations with respect to such materials, equipment, and contracts, and the Participating TO shall deliver such material and equipment, and, if necessary, assign such contracts, to the Interconnection Customer as soon as practicable, at the Interconnection Customer's expense. To the extent that the Interconnection Customer has already paid the Participating TO for any or all such costs of materials or equipment not taken by the Interconnection Customer, the Participating TO shall promptly refund such amounts to the Interconnection Customer, less any costs, including penalties, incurred by the Participating TO to cancel any pending orders of or return such materials, equipment, or contracts.

**2.4.2** The Participating TO may, at its option, retain any portion of such materials, equipment, or facilities that the Interconnection Customer chooses not to accept delivery of, in which case the Participating TO shall be responsible for all costs associated with procuring such materials, equipment, or facilities.

**2.4.3** With respect to any portion of the Interconnection Facilities, and any other facilities already installed or constructed pursuant to the terms of this LGIA, Interconnection Customer shall be responsible for all costs associated with the removal, relocation or other disposition or retirement of such materials, equipment, or facilities.

**2.5 Disconnection.** Upon termination of this LGIA, the Parties will take all appropriate steps to disconnect the Large Generating Facility from the Participating TO's Transmission System. All costs required to effectuate such disconnection shall be borne by the terminating Party, unless such termination resulted from the non-terminating Party's Default of this LGIA or such non-terminating Party otherwise is responsible for these costs under this LGIA.

**2.6 Survival.** This LGIA shall continue in effect after termination to the extent necessary to provide for final billings and payments and for costs incurred hereunder, including billings and payments pursuant to this LGIA; to permit the determination and enforcement of liability and indemnification obligations arising from acts or events that occurred while this LGIA was in effect; and to permit each Party to have access to the lands of the other Parties pursuant to this LGIA or other applicable agreements, to disconnect, remove or salvage its own facilities and equipment.

## Article 3. Regulatory Filings and CAISO Tariff Compliance

**3.1 Filing.** The Participating TO and the CAISO shall file this LGIA (and any amendment hereto) with the appropriate Governmental Authority(ies), if required. The Interconnection Customer may request that any information so provided be subject to the confidentiality provisions of Article 22. If the Interconnection Customer has executed this LGIA, or any amendment thereto, the Interconnection Customer shall reasonably cooperate with the Participating TO and CAISO with respect to such filing and to provide any information reasonably requested by the Participating TO or CAISO needed to comply with applicable regulatory requirements.

**3.2 Agreement Subject to CAISO Tariff.** The Interconnection Customer will comply with all applicable provisions of the CAISO Tariff, including the RIS.

**3.3 Relationship Between this LGIA and the CAISO Tariff.** With regard to rights and obligations between the Participating TO and the Interconnection Customer, if and to the extent a matter is specifically addressed by a provision of this LGIA (including any appendices, schedules or other attachments to this LGIA), the provisions of this LGIA shall govern. If and to the extent a provision of this LGIA is inconsistent with the CAISO Tariff and dictates rights and obligations between the CAISO and the Participating TO or the CAISO and the Interconnection Customer, the CAISO Tariff shall govern.

**3.4 Relationship Between this LGIA and the Net Scheduled PGA.** With regard to the rights and obligations of a Net Scheduled Generating Unit that has entered into a Net Scheduled PGA with the CAISO and has entered into this LGIA, if and to the extent a matter is specifically addressed by a provision of the Net Scheduled PGA that is inconsistent with this LGIA, the terms of the Net Scheduled PGA shall govern.

## Article 4. Scope of Service

**4.1 Interconnection Service.** Interconnection Service allows the Interconnection Customer to connect the Large Generating Facility to the Participating TO's Transmission System and be eligible to deliver the Large Generating Facility's output using the available capacity of the CAISO Controlled Grid. To the extent the Interconnection Customer wants to receive Interconnection Service, the Participating TO shall construct facilities identified in Appendices A and C that the

Participating TO is responsible to construct.

Interconnection Service does not necessarily provide the Interconnection Customer with the capability to physically deliver the output of its Large Generating Facility to any particular load on the CAISO Controlled Grid without incurring congestion costs. In the event of transmission constraints on the CAISO Controlled Grid, the Interconnection Customer's Large Generating Facility shall be subject to the applicable congestion management procedures in the CAISO Tariff in the same manner as all other resources. Full Capacity Deliverability Status, Partial Capacity Deliverability Status, and Off-Peak Deliverability Status do not confer any priority over other Generating Facilities to deliver Energy; nor provide any warranty or guarantee to deliver any amount of Energy or avoid curtailment at any time.

**4.2 Provision of Service.** The Participating TO and the CAISO shall provide Interconnection Service for the Large Generating Facility.

**4.3 Performance Standards.** Each Party shall perform all of its obligations under this LGIA in accordance with Applicable Laws and Regulations, Applicable Reliability Standards, and Good Utility Practice, and to the extent a Party is required or prevented or limited in taking any action by such regulations and standards, such Party shall not be deemed to be in Breach of this LGIA for its compliance therewith. If such Party is the CAISO or Participating TO, then that Party shall amend the LGIA and submit the amendment to FERC for approval.

**4.4 No Transmission Service.** The execution of this LGIA does not constitute a request for, nor the provision of, any transmission service under the CAISO Tariff, and does not convey any right to deliver electricity to any specific customer or point of delivery.

**4.5 Interconnection Customer Provided Services.** The services provided by Interconnection Customer under this LGIA are set forth in Article 9.6 and Article 13.5.1. Interconnection Customer shall be paid for such services in accordance with Article 11.6.

**4.6 TP Deliverability.** To the extent that an Interconnection Customer is eligible for and has been allocated TP Deliverability, the Interconnection Customer's retention of such allocated TP Deliverability shall be contingent upon satisfying the obligations set forth in Section 8.9.3 of the RIS. In the event that the Interconnection does not retain allocated TP Deliverability with regard to any portion of the Generating Facility, such portion of the Generating Facility shall be deemed to receive Interconnection Service under this LGIA as Energy Only Deliverability Status.

## ARTICLE 5. INTERCONNECTION FACILITIES ENGINEERING, PROCUREMENT, AND CONSTRUCTION

Interconnection Facilities, Network Upgrades, and Distribution Upgrades shall be studied, designed, and constructed pursuant to Good Utility Practice. Such studies, design and construction shall be based on the assumed accuracy and completeness of all technical information received by the Participating TO and the CAISO from the Interconnection Customer associated with interconnecting the Large Generating Facility.

**5.1 Options.** Unless otherwise mutually agreed among the Parties, the Interconnection Customer shall select the In-Service Date, Initial Synchronization Date, and Commercial Operation Date; and either the Standard Option, Alternate Option, or, if eligible, Merchant Option, set forth below, Interconnection Facilities, Network Upgrades, and Distribution Upgrades, and such dates and selected option shall be set forth in Appendix B, Milestones. At the same time, the Interconnection Customer shall indicate whether it elects the Option to Build set forth in Article 5.1.3 below. If the dates designated by the Interconnection Customer are not acceptable to the CAISO and Participating TO, they shall so notify the Interconnection Customer within thirty (30) calendar days. Upon receipt of the notification that the Interconnection Customer's designated

dates are not acceptable to the CAISO and Participating TO, the Interconnection Customer shall notify the CAISO and Participating TO within thirty (30) calendar days whether it elects to exercise the Option to Build if it has not already elected to exercise the Option to Build.

**5.1.1 Standard Option.** The Participating TO shall design, procure, and construct the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades, using Reasonable Efforts to complete the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades by the dates set forth in Appendix B, Milestones. The Participating TO shall not be required to undertake any action which is inconsistent with its standard safety practices, its material and equipment specifications, its design criteria and construction procedures, its labor agreements, and Applicable Laws and Regulations. In the event the Participating TO reasonably expects that it will not be able to complete the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades by the specified dates, the Participating TO shall promptly provide written notice to the Interconnection Customer and the CAISO and shall undertake Reasonable Efforts to meet the earliest dates thereafter.

**5.1.2 Alternate Option.** If the dates designated by the Interconnection Customer are acceptable to the Participating TO, the Participating TO shall so notify the Interconnection Customer within thirty (30) Calendar Days, and shall assume responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities by the designated dates.

If the Participating TO subsequently fails to complete the Participating TO's Interconnection Facilities by the In-Service Date, to the extent necessary to provide back feed power; or fails to complete Network Upgrades by the Initial Synchronization Date to the extent necessary to allow for Trial Operation at full power output, unless other arrangements are made by the Parties for such Trial Operation; or fails to complete the Network Upgrades by the Commercial Operation Date, as such dates are reflected in Appendix B, Milestones; the Participating TO shall pay the Interconnection Customer liquidated damages in accordance with Article 5.3, Liquidated Damages, provided, however, the dates designated by the Interconnection Customer shall be extended day for day for each day that the CAISO refuses to grant clearances to install equipment.

**5.1.3 Option to Build.** Individual or Multiple Interconnection Customer(s) shall have the option to assume responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades if the requirements of this Article 5.1.3 are met. When multiple Interconnection Customers exercise this option, multiple Interconnection Customers may agree to exercise this option provided (1) all the Participating TO's Interconnection Facilities and Stand Alone Network upgrades constructed under this option are only required for Interconnection Customers in a single Cluster and (2) all impacted Interconnection Customers execute and provide to the CAISO and Participating TO an agreement regarding responsibilities and payment for the construction of Participating TO's Interconnection Facilities and Stand Alone Network Upgrades planned to be built under this option. The Participating TO, CAISO, and the Interconnection Customer or each of the multiple Interconnection Customers must agree as to what constitutes Stand Alone Network Upgrades and identify such Stand Alone Network Upgrades in Appendix A to this LGIA. Except for Stand Alone Network Upgrades, the Interconnection Customer shall have no right to construct Network Upgrades under this option.

**5.1.4 Negotiated Option.** If the dates designated by the Interconnection Customer are not acceptable to the CAISO and Participating TO, the Parties shall in good faith attempt to negotiate terms and conditions, including revision of the specified dates and liquidated damages, the provision of incentives, or the procurement and construction of all facilities

other than the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades if the Interconnection Customer elects to exercise the Option to Build under Article 5.1.3. If the Parties are unable to reach agreement on such terms and conditions, then, pursuant to Article 5.1.1 (Standard Option), the Participating TO shall assume responsibility for the design, procurement and construction of all facilities other than the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades if the Interconnection Customer elects to exercise the Option to Build.

**5.1.5 Merchant Option.** In addition to any Option to Build set forth in Article 5.1.3 of this LGIA, an Interconnection Customer under Section 4.2 of the RIS may elect to have a party other than the applicable Participating TO construct some or all of the LDNU and ADNU for which the Interconnection Customer has the obligation to fund and which are not subject to reimbursement. Such LDNU and ADNU will be constructed and incorporated into the CAISO Controlled Grid pursuant to the provisions for Merchant Transmission Facilities in CAISO Tariff Sections 24.4.6.1 and 36.11.

**5.2 General Conditions Applicable to Option to Build.** If the Interconnection Customer assumes responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, or assumes responsibility for any stand-alone task, such as telecommunications, environmental, or real-estate related work:

(1) within six (6) months of the execution of this LGIA, or at a later date agreed to by the Parties, the Interconnection Customer will submit to the CAISO and the Participating TO a milestone schedule for the design, procurement, and construction of the Stand Alone Network Upgrades, or any stand-alone task assumed by the Interconnection Customer. The milestone schedule will be required to support the Interconnection Customer's Commercial Operation Date, and any Appendix B Milestones will be amended to include the milestone schedule for the Stand Alone Network Upgrades;

(2) the Interconnection Customer shall engineer, procure equipment, and construct the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades (or portions thereof) using Good Utility Practice and using standards and specifications provided in advance by the Participating TO;

(3) The Interconnection Customer's engineering, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades shall comply with all requirements of law to which the Participating TO would be subject in the engineering, procurement or construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades;

(4) the Participating TO shall review, and the Interconnection Customer shall obtain the Participating TO's approval of, the engineering design, equipment acceptance tests, and the construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, which approval shall not be unreasonably withheld, and the CAISO may, at its option, review the engineering design, equipment acceptance tests, and the construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades;

(5) prior to commencement of construction, the Interconnection Customer shall provide to the Participating TO, with a copy to the CAISO for informational purposes, a schedule for construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, and shall promptly respond to requests for information from the Participating TO;

(6) at any time during construction, the Participating TO shall have the right to gain

unrestricted access to the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades and to conduct inspections of the same;

(7) at any time during construction, should any phase of the engineering, equipment procurement, or construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades not meet the standards and specifications provided by the Participating TO, the Interconnection Customer shall be obligated to remedy deficiencies in that portion of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades;

(8) the Interconnection Customer shall indemnify the CAISO and Participating TO for claims arising from the Interconnection Customer's construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades under the terms and procedures applicable to Article 18.1 Indemnity;

(9) The Interconnection Customer shall transfer control of the Participating TO's Interconnection Facilities to the Participating TO and shall transfer Operational Control of Stand Alone Network Upgrades to the CAISO;

(10) Unless the Parties otherwise agree, the Interconnection Customer shall transfer ownership of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades to the Participating TO. As soon as reasonably practicable, but within twelve months after completion of the construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades, the Interconnection Customer shall provide an invoice of the final cost of the construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades to the Participating TO, which invoice shall set forth such costs in sufficient detail to enable the Participating TO to reflect the proper costs of such facilities in its transmission rate base and to identify the investment upon which refunds will be provided;

(11) the Participating TO shall accept for operation and maintenance the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades to the extent engineered, procured, and constructed in accordance with this Article 5.2; and

(12) The Interconnection Customer's engineering, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades shall comply with all requirements of the "Option to Build" conditions set forth in Appendix C. Interconnection Customer shall deliver to the Participating TO "as-built" drawings, information, and any other documents that are reasonably required by the Participating TO to assure that the Interconnection Facilities and Stand-Alone Network Upgrades are built to the standards and specifications required by the Participating TO.

(13) If the Interconnection Customer exercises the Option to Build pursuant to Article 5.1.3, the Interconnection Customer shall pay the Participating TO the agreed upon amount of $_____ for Participating TO to execute the responsibilities enumerated to it under Article 5.2. The Participating TO will invoice the Interconnection Customer for this total amount to be divided on a monthly basis pursuant to Article 12.

**5.3 Liquidated Damages.** The actual damages to the Interconnection Customer, in the event the Participating TO's Interconnection Facilities or Network Upgrades are not completed by the dates designated by the Interconnection Customer and accepted by the Participating TO pursuant to subparagraphs 5.1.2 or 5.1.4, above, may include Interconnection Customer's fixed operation and maintenance costs and lost opportunity costs. Such actual damages are uncertain and impossible to determine at this time. Because of such uncertainty, any liquidated damages paid by the Participating TO to the Interconnection Customer in the event that the Participating TO

does not complete any portion of the Participating TO's Interconnection Facilities or Network Upgrades by the applicable dates, shall be an amount equal to ½ of 1 percent per day of the actual cost of the Participating TO's Interconnection Facilities and Network Upgrades, in the aggregate, for which the Participating TO has assumed responsibility to design, procure and construct.

However, in no event shall the total liquidated damages exceed 20 percent of the actual cost of the Participating TO's Interconnection Facilities and Network Upgrades for which the Participating TO has assumed responsibility to design, procure, and construct. The foregoing payments will be made by the Participating TO to the Interconnection Customer as just compensation for the damages caused to the Interconnection Customer, which actual damages are uncertain and impossible to determine at this time, and as reasonable liquidated damages, but not as a penalty or a method to secure performance of this LGIA. Liquidated damages, when the Parties agree to them, are the exclusive remedy for the Participating TO's failure to meet its schedule.

No liquidated damages shall be paid to the Interconnection Customer if: (1) the Interconnection Customer is not ready to commence use of the Participating TO's Interconnection Facilities or Network Upgrades to take the delivery of power for the Electric Generating Unit's Trial Operation or to export power from the Electric Generating Unit on the specified dates, unless the Interconnection Customer would have been able to commence use of the Participating TO's Interconnection Facilities or Network Upgrades to take the delivery of power for Electric Generating Unit's Trial Operation or to export power from the Electric Generating Unit, but for the Participating TO's delay; (2) the Participating TO's failure to meet the specified dates is the result of the action or inaction of the Interconnection Customer or any other interconnection customer who has entered into an interconnection agreement with the CAISO and/or Participating TO, action or inaction by the CAISO, or any cause beyond the Participating TO's reasonable control or reasonable ability to cure; (3) the Interconnection Customer has assumed responsibility for the design, procurement and construction of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades; or (4) the Parties have otherwise agreed.

In no event shall the CAISO have any responsibility or liability to the Interconnection Customer for liquidated damages pursuant to the provisions of this Article 5.3.

**5.4 Power System Stabilizers.** The Interconnection Customer shall procure, install, maintain and operate Power System Stabilizers in accordance with Applicable Reliability Standards, the guidelines and procedures established by the Electric Reliability Organization, and the provisions of Section 4.6.5.1 of the CAISO Tariff. The CAISO reserves the right to establish reasonable minimum acceptable settings for any installed Power System Stabilizers, subject to the design and operating limitations of the Large Generating Facility. If the Large Generating Facility's Power System Stabilizers are removed from service or not capable of automatic operation, the Interconnection Customer shall immediately notify the CAISO and the Participating TO and restore the Power System Stabilizers to operation as soon as possible. The CAISO shall have the right to order the reduction in output or disconnection of the Large Generating Facility if the reliability of the CAISO Controlled Grid would be adversely affected as a result of improperly tuned Power System Stabilizers. The requirements of this Article 5.4 shall apply to Asynchronous Generating Facilities in accordance with Appendix H.

**5.5 Equipment Procurement.** If responsibility for construction of the Participating TO's Interconnection Facilities or Network Upgrades is to be borne by the Participating TO, then the Participating TO shall commence design of the Participating TO's Interconnection Facilities or Network Upgrades and procure necessary equipment as soon as practicable after all of the following conditions are satisfied, unless the Parties otherwise agree in writing:

**5.5.1** The CAISO, in coordination with the applicable Participating TO(s), has completed the Interconnection Facilities Study pursuant to the applicable Generator Interconnection

Study Process Agreement or other applicable study process agreement;

**5.5.2** The Participating TO has received written authorization to proceed with design and procurement from the Interconnection Customer by the date specified in Appendix B, Milestones; and

**5.5.3** The Interconnection Customer has provided security to the Participating TO in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

**5.6 Construction Commencement.** The Participating TO shall commence construction of the Participating TO's Interconnection Facilities and Network Upgrades for which it is responsible as soon as practicable after the following additional conditions are satisfied:

**5.6.1** Approval of the appropriate Governmental Authority has been obtained for any facilities requiring regulatory approval;

**5.6.2** Necessary real property rights and rights-of-way have been obtained, to the extent required for the construction of a discrete aspect of the Participating TO's Interconnection Facilities and Network Upgrades;

**5.6.3** The Participating TO has received written authorization to proceed with construction from the Interconnection Customer by the date specified in Appendix B, Milestones; and

**5.6.4** The Interconnection Customer has provided payment and security to the Participating TO in accordance with Article 11.5 by the dates specified in Appendix B, Milestones.

**5.7 Work Progress.** The Parties will keep each other advised periodically as to the progress of their respective design, procurement and construction efforts. Any Party may, at any time, request a progress report from another Party. If, at any time, the Interconnection Customer determines that the completion of the Participating TO's Interconnection Facilities will not be required until after the specified In-Service Date, the Interconnection Customer will provide written notice to the Participating TO and CAISO of such later date upon which the completion of the Participating TO's Interconnection Facilities will be required.

**5.8 Information Exchange.** As soon as reasonably practicable after the Effective Date, the Parties shall exchange information regarding the design and compatibility of the Interconnection Customer's Interconnection Facilities and Participating TO's Interconnection Facilities and compatibility of the Interconnection Facilities with the Participating TO's Transmission System, and shall work diligently and in good faith to make any necessary design changes.

**5.9 Limited Operation.** If any of the Participating TO's Interconnection Facilities or Network Upgrades are not reasonably expected to be completed prior to the Commercial Operation Date of the Electric Generating Unit, the Participating TO and/or CAISO, as applicable, shall, upon the request and at the expense of the Interconnection Customer, perform operating studies on a timely basis to determine the extent to which the Electric Generating Unit and the Interconnection Customer's Interconnection Facilities may operate prior to the completion of the Participating TO's Interconnection Facilities or Network Upgrades consistent with Applicable Laws and Regulations, Applicable Reliability Standards, Good Utility Practice, and this LGIA. The Participating TO and CAISO shall permit Interconnection Customer to operate the Electric Generating Unit and the Interconnection Customer's Interconnection Facilities in accordance with the results of such studies.

**5.10 Interconnection Customer's Interconnection Facilities.** The Interconnection Customer shall, at its expense, design, procure, construct, own and install the Interconnection Customer's Interconnection Facilities, as set forth in Appendix A.

**5.10.1 Large Generating Facility and Interconnection Customer's Interconnection Facilities Specifications.** In addition to the Interconnection Customer's responsibility to submit technical data with its Interconnection Request, the Interconnection Customer shall submit all remaining necessary specifications for the Interconnection Customer's Interconnection Facilities and Large Generating Facility, including System Protection Facilities, to the Participating TO and the CAISO at least one hundred eighty (180) Calendar Days prior to the Initial Synchronization Date; and final specifications for review and comment at least ninety (90) Calendar Days prior to the Initial Synchronization Date. The Participating TO and the CAISO shall review such specifications pursuant to this LGIA and the RIS to ensure that the Interconnection Customer's Interconnection Facilities and Large Generating Facility are compatible with the technical specifications, operational control, safety requirements, and any other applicable requirements of the Participating TO and the CAISO and comment on such specifications within thirty (30) Calendar Days of the Interconnection Customer's submission. All specifications provided hereunder shall be deemed confidential.

**5.10.2 Participating TO's and CAISO's Review.** The Participating TO's and the CAISO's review of the Interconnection Customer's final specifications shall not be construed as confirming, endorsing, or providing a warranty as to the design, fitness, safety, durability or reliability of the Large Generating Facility, or the Interconnection Customer's Interconnection Facilities. Interconnection Customer shall make such changes to the Interconnection Customer's Interconnection Facilities as may reasonably be required by the Participating TO or the CAISO, in accordance with Good Utility Practice, to ensure that the Interconnection Customer's Interconnection Facilities are compatible with the technical specifications, Operational Control, and safety requirements of the Participating TO or the CAISO.

**5.10.3 Interconnection Customer's Interconnection Facilities Construction.** The Interconnection Customer's Interconnection Facilities shall be designed and constructed in accordance with Good Utility Practice. Within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Participating TO and Interconnection Customer agree on another mutually acceptable deadline, the Interconnection Customer shall deliver to the Participating TO and CAISO "as-built" drawings, information and documents for the Interconnection Customer's Interconnection Facilities and the Electric Generating Unit(s), such as: a one-line diagram, a site plan showing the Large Generating Facility and the Interconnection Customer's Interconnection Facilities, plan and elevation drawings showing the layout of the Interconnection Customer's Interconnection Facilities, a relay functional diagram, relaying AC and DC schematic wiring diagrams and relay settings for all facilities associated with the Interconnection Customer's step-up transformers, the facilities connecting the Large Generating Facility to the step-up transformers and the Interconnection Customer's Interconnection Facilities, and the impedances (determined by factory tests) for the associated step-up transformers and the Electric Generating Units. The Interconnection Customer shall provide the Participating TO and the CAISO specifications for the excitation system, automatic voltage regulator, Large Generating Facility control and protection settings, transformer tap settings, and communications, if applicable. Any deviations from the relay settings, machine specifications, and other specifications originally submitted by the Interconnection Customer shall be assessed by the Participating TO and the CAISO pursuant to the appropriate provisions of this LGIA and the RIS.

**5.10.4 Interconnection Customer to Meet Requirements of the Participating TO's Interconnection Handbook.** The Interconnection Customer shall comply with the Participating TO's Interconnection Handbook.

**5.11 Participating TO's Interconnection Facilities Construction.** The Participating TO's Interconnection Facilities shall be designed and constructed in accordance with Good Utility Practice. Upon request, within one hundred twenty (120) Calendar Days after the Commercial Operation Date, unless the Participating TO and Interconnection Customer agree on another mutually acceptable deadline, the Participating TO shall deliver to the Interconnection Customer and the CAISO the following "as-built" drawings, information and documents for the Participating TO's Interconnection Facilities [include appropriate drawings and relay diagrams].

The Participating TO will obtain control for operating and maintenance purposes of the Participating TO's Interconnection Facilities and Stand Alone Network Upgrades upon completion of such facilities. Pursuant to Article 5.2, the CAISO will obtain Operational Control of the Stand Alone Network Upgrades prior to the Commercial Operation Date.

**5.12 Access Rights.** Upon reasonable notice and supervision by a Party, and subject to any required or necessary regulatory approvals, a Party ("Granting Party") shall furnish at no cost to the other Party ("Access Party") any rights of use, licenses, rights of way and easements with respect to lands owned or controlled by the Granting Party, its agents (if allowed under the applicable agency agreement), or any Affiliate, that are necessary to enable the Access Party to obtain ingress and egress to construct, operate, maintain, repair, test (or witness testing), inspect, replace or remove facilities and equipment to: (i) interconnect the Large Generating Facility with the Participating TO's Transmission System; (ii) operate and maintain the Large Generating Facility, the Interconnection Facilities and the Participating TO's Transmission System; and (iii) disconnect or remove the Access Party's facilities and equipment upon termination of this LGIA. In exercising such licenses, rights of way and easements, the Access Party shall not unreasonably disrupt or interfere with normal operation of the Granting Party's business and shall adhere to the safety rules and procedures established in advance, as may be changed from time to time, by the Granting Party and provided to the Access Party.

**5.13 Lands of Other Property Owners.** If any part of the Participating TO's Interconnection Facilities and/or Network Upgrades are to be installed on property owned by persons other than the Interconnection Customer or Participating TO, the Participating TO shall at the Interconnection Customer's expense use efforts, similar in nature and extent to those that it typically undertakes on its own behalf or on behalf of its Affiliates, including use of its eminent domain authority, and to the extent consistent with state law, to procure from such persons any rights of use, licenses, rights of way and easements that are necessary to construct, operate, maintain, test, inspect, replace or remove the Participating TO's Interconnection Facilities and/or Network Upgrades upon such property.

**5.14 Permits.** Participating TO and Interconnection Customer shall cooperate with each other in good faith in obtaining all permits, licenses and authorization that are necessary to accomplish the interconnection in compliance with Applicable Laws and Regulations. With respect to this paragraph, the Participating TO shall provide permitting assistance to the Interconnection Customer comparable to that provided to the Participating TO's own, or an Affiliate's generation.

**5.15 Early Construction of Base Case Facilities.** The Interconnection Customer may request the Participating TO to construct, and the Participating TO shall construct, using Reasonable Efforts to accommodate Interconnection Customer's In-Service Date, all or any portion of any Network Upgrades required for Interconnection Customer to be interconnected to the Participating TO's Transmission System which are included in the Base Case of the Interconnection Studies for the Interconnection Customer, and which also are required to be constructed for another interconnection customer, but where such construction is not scheduled to be completed in time to achieve Interconnection Customer's In-Service Date.

**5.16 Suspension.** The Interconnection Customer may request to suspend at any time all work associated with the construction and installation of the Participating TO's Interconnection

Facilities, Network Upgrades, and/or Distribution Upgrades required under this LGIA, other than Network Upgrades identified in the Interconnection Facilities Study as common to multiple generating facilities. Interconnection Customers seeking to suspend construction will provide the CAISO and Participating TO a request for assessment pursuant to Section 6.7.2 of the RIS, a modification assessment deposit, and an anticipated end date of the suspension. Interconnection Customers may request a suspension for the maximum amount of time in lieu of providing an anticipated end date. The CAISO and Participating TO will approve suspension requests where:

(a) the Participating TO's electrical system and the CAISO Controlled Grid can be left in a safe and reliable condition in accordance with Good Utility Practice, the Participating TO's safety and reliability criteria, and Applicable Reliability Standards; and

(b) the CAISO and Participating TO determine the suspension will not result in a Material Modification.

For any suspension that will extend the Commercial Operation Date beyond seven (7) years from the date the Interconnection Request is received by the CAISO, the Interconnection Customer must satisfy the commercial viability criteria in Section 6.7.4 of the RIS.

During suspension, the Interconnection Customer may request to extend or shorten their suspension period, consistent with the maximum period provided in this Article. The CAISO and Participating TO will approve such requests where they meet criteria (a) and (b), above. Requests to extend or shorten extensions will require a new modification assessment request and deposit. The Interconnection Customer shall be responsible for all reasonable and necessary costs for suspension for which the Participating TO (i) has incurred pursuant to this LGIA prior to the suspension and (ii) incurs in suspending such work, including any costs incurred to perform such work as may be necessary to ensure the safety of persons and property and the integrity of the Participating TO's electric system during such suspension and, if applicable, any costs incurred in connection with the cancellation or suspension of material, equipment and labor contracts which the Participating TO cannot reasonably avoid; provided, however, that prior to canceling or suspending any such material, equipment or labor contract, the Participating TO shall obtain Interconnection Customer's authorization to do so.

Network Upgrades common to multiple generating facilities, and to which the Interconnection Customer's right of suspension shall not extend, consist of Network Upgrades identified for:

(i) generating facilities which are the subject of all Interconnection Requests made prior to the Interconnection Customer's Interconnection Request;
(ii) generating facilities which are the subject of Interconnection Requests within the Interconnection Customer's queue cluster; and
(iii) generating facilities that are the subject of Interconnection Requests that were made after the Interconnection Customer's Interconnection Request but no later than the date on which the Interconnection Customer's Interconnection Facilities Study Report is issued, and have been modeled in the Base Case at the time the Interconnection Customer seeks to exercise its suspension rights under this Article.

The Participating TO shall invoice the Interconnection Customer for such costs pursuant to Article 12 and shall use due diligence to minimize its costs. In the event Interconnection Customer suspends work required under this LGIA pursuant to this Article 5.16, and has not requested the Participating TO to recommence the work or has not itself recommenced work required under this LGIA in time to ensure that the new projected Commercial Operation Date for the full Generating Facility Capacity of the Large Generating Facility is no more than three (3) years from the Commercial Operation Date identified in Appendix B hereto, this LGIA shall be deemed terminated and the Interconnection Customer's responsibility for costs will be determined in

accordance with Article 2.4 of this LGIA. The suspension period shall begin on the date the Interconnection Customer provides in its request, if approved. Ninety (90) days before the anticipated end date of the suspension, the Participating TO and the CAISO will tender an amended draft LGIA with new construction milestones. The Parties agree to negotiate the amended draft LGIA in good faith such that it can be executed by the end of the suspension.

**5.17 Taxes.**

**5.17.1 Interconnection Customer Payments Not Taxable.** The Parties intend that all payments or property transfers made by the Interconnection Customer to the Participating TO for the installation of the Participating TO's Interconnection Facilities and the Network Upgrades shall be non-taxable, either as contributions to capital, or as a refundable advance, in accordance with the Internal Revenue Code and any applicable state income tax laws and shall not be taxable as contributions in aid of construction or otherwise under the Internal Revenue Code and any applicable state income tax laws.

**5.17.2 Representations And Covenants.** In accordance with IRS Notice 2001-82 and IRS Notice 88-129, the Interconnection Customer represents and covenants that (i) ownership of the electricity generated at the Large Generating Facility will pass to another party prior to the transmission of the electricity on the CAISO Controlled Grid, (ii) for income tax purposes, the amount of any payments and the cost of any property transferred to the Participating TO for the Participating TO's Interconnection Facilities will be capitalized by the Interconnection Customer as an intangible asset and recovered using the straight-line method over a useful life of twenty (20) years, and (iii) any portion of the Participating TO's Interconnection Facilities that is a "dual-use intertie," within the meaning of IRS Notice 88-129, is reasonably expected to carry only a de minimis amount of electricity in the direction of the Large Generating Facility. For this purpose, "de minimis amount" means no more than 5 percent of the total power flows in both directions, calculated in accordance with the "5 percent test" set forth in IRS Notice 88-129. This is not intended to be an exclusive list of the relevant conditions that must be met to conform to IRS requirements for non-taxable treatment.

At the Participating TO's request, the Interconnection Customer shall provide the Participating TO with a report from an independent engineer confirming its representation in clause (iii), above. The Participating TO represents and covenants that the cost of the Participating TO's Interconnection Facilities paid for by the Interconnection Customer without the possibility of refund or credit will have no net effect on the base upon which rates are determined.

**5.17.3 Indemnification for the Cost Consequence of Current Tax Liability Imposed Upon the Participating TO.** Notwithstanding Article 5.17.1, the Interconnection Customer shall protect, indemnify and hold harmless the Participating TO from the cost consequences of any current tax liability imposed against the Participating TO as the result of payments or property transfers made by the Interconnection Customer to the Participating TO under this LGIA for Interconnection Facilities, as well as any interest and penalties, other than interest and penalties attributable to any delay caused by the Participating TO. The Participating TO shall not include a gross-up for the cost consequences of any current tax liability in the amounts it charges the Interconnection Customer under this LGIA unless (i) the Participating TO has determined, in good faith, that the payments or property transfers made by the Interconnection Customer to the Participating TO should be reported as income subject to taxation or (ii) any Governmental Authority directs the Participating TO to report payments or property as income subject to taxation; provided, however, that the Participating TO may require the Interconnection Customer to provide

security for Interconnection Facilities, in a form reasonably acceptable to the Participating TO (such as a parental guarantee or a letter of credit), in an amount equal to the cost consequences of any current tax liability under this Article 5.17. The Interconnection Customer shall reimburse the Participating TO for such costs on a fully grossed-up basis, in accordance with Article 5.17.4, within thirty (30) Calendar Days of receiving written notification from the Participating TO of the amount due, including detail about how the amount was calculated.

The indemnification obligation shall terminate at the earlier of (1) the expiration of the ten year testing period and the applicable statute of limitation, as it may be extended by the Participating TO upon request of the IRS, to keep these years open for audit or adjustment, or (2) the occurrence of a subsequent taxable event and the payment of any related indemnification obligations as contemplated by this Article 5.17.

**5.17.4 Tax Gross-Up Amount.** The Interconnection Customer's liability for the cost consequences of any current tax liability under this Article 5.17 shall be calculated on a fully grossed-up basis. Except as may otherwise be agreed to by the parties, this means that the Interconnection Customer will pay the Participating TO, in addition to the amount paid for the Interconnection Facilities and Network Upgrades, an amount equal to (1) the current taxes imposed on the Participating TO ("Current Taxes") on the excess of (a) the gross income realized by the Participating TO as a result of payments or property transfers made by the Interconnection Customer to the Participating TO under this LGIA (without regard to any payments under this Article 5.17) (the "Gross Income Amount") over (b) the present value of future tax deductions for depreciation that will be available as a result of such payments or property transfers (the "Present Value Depreciation Amount"), plus (2) an additional amount sufficient to permit the Participating TO to receive and retain, after the payment of all Current Taxes, an amount equal to the net amount described in clause (1).

For this purpose, (i) Current Taxes shall be computed based on the Participating TO's composite federal and state tax rates at the time the payments or property transfers are received and the Participating TO will be treated as being subject to tax at the highest marginal rates in effect at that time (the "Current Tax Rate"), and (ii) the Present Value Depreciation Amount shall be computed by discounting the Participating TO's anticipated tax depreciation deductions as a result of such payments or property transfers by the Participating TO's current weighted average cost of capital. Thus, the formula for calculating the Interconnection Customer's liability to the Participating TO pursuant to this Article 5.17.4 can be expressed as follows: (Current Tax Rate x (Gross Income Amount – Present Value of Tax Depreciation))/(1-Current Tax Rate). Interconnection Customer's estimated tax liability in the event taxes are imposed shall be stated in Appendix A, Interconnection Facilities, Network Upgrades and Distribution Upgrades.

**5.17.5 Private Letter Ruling or Change or Clarification of Law.** At the Interconnection Customer's request and expense, the Participating TO shall file with the IRS a request for a private letter ruling as to whether any property transferred or sums paid, or to be paid, by the Interconnection Customer to the Participating TO under this LGIA are subject to federal income taxation. The Interconnection Customer will prepare the initial draft of the request for a private letter ruling, and will certify under penalties of perjury that all facts represented in such request are true and accurate to the best of the Interconnection Customer's knowledge. The Participating TO and Interconnection Customer shall cooperate in good faith with respect to the submission of such request, provided, however, the Interconnection Customer and the Participating TO explicitly acknowledge (and nothing herein is intended to alter) Participating TO's obligation under law to certify that the facts presented in the ruling request are true, correct and complete.

The Participating TO shall keep the Interconnection Customer fully informed of the status of such request for a private letter ruling and shall execute either a privacy act waiver or a limited power of attorney, in a form acceptable to the IRS, that authorizes the Interconnection Customer to participate in all discussions with the IRS regarding such request for a private letter ruling. The Participating TO shall allow the Interconnection Customer to attend all meetings with IRS officials about the request and shall permit the Interconnection Customer to prepare the initial drafts of any follow-up letters in connection with the request.

**5.17.6 Subsequent Taxable Events.** If, within 10 years from the date on which the relevant Participating TO's Interconnection Facilities are placed in service, (i) the Interconnection Customer Breaches the covenants contained in Article 5.17.2, (ii) a "disqualification event" occurs within the meaning of IRS Notice 88-129, or (iii) this LGIA terminates and the Participating TO retains ownership of the Interconnection Facilities and Network Upgrades, the Interconnection Customer shall pay a tax gross-up for the cost consequences of any current tax liability imposed on the Participating TO, calculated using the methodology described in Article 5.17.4 and in accordance with IRS Notice 90-60.

**5.17.7 Contests.** In the event any Governmental Authority determines that the Participating TO's receipt of payments or property constitutes income that is subject to taxation, the Participating TO shall notify the Interconnection Customer, in writing, within thirty (30) Calendar Days of receiving notification of such determination by a Governmental Authority. Upon the timely written request by the Interconnection Customer and at the Interconnection Customer's sole expense, the Participating TO may appeal, protest, seek abatement of, or otherwise oppose such determination. Upon the Interconnection Customer's written request and sole expense, the Participating TO may file a claim for refund with respect to any taxes paid under this Article 5.17, whether or not it has received such a determination. The Participating TO reserve the right to make all decisions with regard to the prosecution of such appeal, protest, abatement or other contest, including the selection of counsel and compromise or settlement of the claim, but the Participating TO shall keep the Interconnection Customer informed, shall consider in good faith suggestions from the Interconnection Customer about the conduct of the contest, and shall reasonably permit the Interconnection Customer or an Interconnection Customer representative to attend contest proceedings.

The Interconnection Customer shall pay to the Participating TO on a periodic basis, as invoiced by the Participating TO, the Participating TO's documented reasonable costs of prosecuting such appeal, protest, abatement or other contest, including any costs associated with obtaining the opinion of independent tax counsel described in this Article 5.17.7. The Participating TO may abandon any contest if the Interconnection Customer fails to provide payment to the Participating TO within thirty (30) Calendar Days of receiving such invoice.

At any time during the contest, the Participating TO may agree to a settlement either with the Interconnection Customer's consent or, if such consent is refused, after obtaining written advice from independent nationally-recognized tax counsel, selected by the Participating TO, but reasonably acceptable to the Interconnection Customer, that the proposed settlement represents a reasonable settlement given the hazards of litigation. The Interconnection Customer's obligation shall be based on the amount of the settlement agreed to by the Interconnection Customer, or if a higher amount, so much of the settlement that is supported by the written advice from nationally-recognized tax counsel selected under the terms of the preceding paragraph. The settlement amount shall be calculated on a fully grossed-up basis to cover any related cost consequences of the current tax liability. The Participating TO may also settle any tax controversy without

receiving the Interconnection Customer's consent or any such written advice; however, any such settlement will relieve the Interconnection Customer from any obligation to indemnify the Participating TO for the tax at issue in the contest (unless the failure to obtain written advice is attributable to the Interconnection Customer's unreasonable refusal to the appointment of independent tax counsel).

**5.17.8 Refund.** In the event that (a) a private letter ruling is issued to the Participating TO which holds that any amount paid or the value of any property transferred by the Interconnection Customer to the Participating TO under the terms of this LGIA is not subject to federal income taxation, (b) any legislative change or administrative announcement, notice, ruling or other determination makes it reasonably clear to the Participating TO in good faith that any amount paid or the value of any property transferred by the Interconnection Customer to the Participating TO under the terms of this LGIA is not taxable to the Participating TO, (c) any abatement, appeal, protest, or other contest results in a determination that any payments or transfers made by the Interconnection Customer to the Participating TO are not subject to federal income tax, or (d) if the Participating TO receives a refund from any taxing authority for any overpayment of tax attributable to any payment or property transfer made by the Interconnection Customer to the Participating TO pursuant to this LGIA, the Participating TO shall promptly refund to the Interconnection Customer the following:

(i) any payment made by Interconnection Customer under this Article 5.17 for taxes that is attributable to the amount determined to be non-taxable, together with interest thereon,

(ii) interest on any amounts paid by the Interconnection Customer to the Participating TO for such taxes which the Participating TO did not submit to the taxing authority, calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date payment was made by the Interconnection Customer to the date the Participating TO refunds such payment to the Interconnection Customer, and

(iii) with respect to any such taxes paid by the Participating TO, any refund or credit the Participating TO receives or to which it may be entitled from any Governmental Authority, interest (or that portion thereof attributable to the payment described in clause (i), above) owed to the Participating TO for such overpayment of taxes (including any reduction in interest otherwise payable by the Participating TO to any Governmental Authority resulting from an offset or credit); provided, however, that the Participating TO will remit such amount promptly to the Interconnection Customer only after and to the extent that the Participating TO has received a tax refund, credit or offset from any Governmental Authority for any applicable overpayment of income tax related to the Participating TO's Interconnection Facilities.

The intent of this provision is to leave the Parties, to the extent practicable, in the event that no taxes are due with respect to any payment for Interconnection Facilities and Network Upgrades hereunder, in the same position they would have been in had no such tax payments been made.

**5.17.9 Taxes Other Than Income Taxes.** Upon the timely request by the Interconnection Customer, and at the Interconnection Customer's sole expense, the CAISO or Participating TO may appeal, protest, seek abatement of, or otherwise contest any tax (other than federal or state income tax) asserted or assessed against the CAISO or

Participating TO for which the Interconnection Customer may be required to reimburse the CAISO or Participating TO under the terms of this LGIA. The Interconnection Customer shall pay to the Participating TO on a periodic basis, as invoiced by the Participating TO, the Participating TO's documented reasonable costs of prosecuting such appeal, protest, abatement, or other contest. The Interconnection Customer, the CAISO, and the Participating TO shall cooperate in good faith with respect to any such contest. Unless the payment of such taxes is a prerequisite to an appeal or abatement or cannot be deferred, no amount shall be payable by the Interconnection Customer to the CAISO or Participating TO for such taxes until they are assessed by a final, non-appealable order by any court or agency of competent jurisdiction. In the event that a tax payment is withheld and ultimately due and payable after appeal, the Interconnection Customer will be responsible for all taxes, interest and penalties, other than penalties attributable to any delay caused by the Participating TO.

**5.18 Tax Status.** Each Party shall cooperate with the others to maintain the other Parties' tax status. Nothing in this LGIA is intended to adversely affect the CAISO's or any Participating TO's tax exempt status with respect to the issuance of bonds including, but not limited to, Local Furnishing Bonds.

**5.19 Modification.**

**5.19.1 General.** The Interconnection Customer or the Participating TO may undertake modifications to its facilities, subject to Section 25.1(c) and Section 25 of the CAISO Tariff if the Interconnection Customer has achieved its Commercial Operation Date, and subject to Section 6.7.2 of Appendix KK if it has not.

If a Party plans to undertake a modification that reasonably may be expected to affect the other Parties' facilities, that Party shall provide to the other Parties sufficient information regarding such modification so that the other Parties may evaluate the potential impact of such modification prior to commencement of the work. Such information shall be deemed to be confidential hereunder and shall include information concerning the timing of such modifications and whether such modifications are expected to interrupt the flow of electricity from the Large Generating Facility. The Party desiring to perform such work shall provide the relevant drawings, plans, and specifications to the other Parties at least ninety (90) Calendar Days in advance of the commencement of the work or such shorter period upon which the Parties may agree, which agreement shall not unreasonably be withheld, conditioned or delayed.

**5.19.2 Standards.** Any additions, modifications, or replacements made to a Party's facilities shall be designed, constructed and operated in accordance with this LGIA and Good Utility Practice.

**5.19.3 Modification Costs.** The Interconnection Customer shall not be directly assigned the costs of any additions, modifications, or replacements that the Participating TO makes to the Participating TO's Interconnection Facilities or the Participating TO's Transmission System to facilitate the interconnection of a third party to the Participating TO's Interconnection Facilities or the Participating TO's Transmission System, or to provide transmission service to a third party under the CAISO Tariff. The Interconnection Customer shall be responsible for the costs of any additions, modifications, or replacements to the Interconnection Facilities that may be necessary to maintain or upgrade such Interconnection Facilities consistent with Applicable Laws and Regulations, Applicable Reliability Standards or Good Utility Practice.

**5.20 Annual Reassessment Process**. In accordance with Section 7 of the RIS, the CAISO will perform an annual reassessment, as part of a queue cluster interconnection study cycle, in which

it will update certain base case data. As set forth in Section 7, the CAISO may determine through this assessment that Delivery Network Upgrades and Off-Peak Network Upgrades already identified and included in executed generator interconnection agreements should be modified in order to reflect the current circumstances of interconnection customers in the queue, including any withdrawals therefrom, and any additions and upgrades approved in the CAISO's most recent TPP cycle. To the extent that this determination modifies the scope or characteristics of, or the cost responsibility for, any Delivery Network Upgrades and Off-Peak Network Upgrades set forth in Appendix A to this LGIA, such modification(s) will be reflected through an amendment to this LGIA.

## Article 6. Testing and Inspection

**6.1 Pre-Commercial Operation Date Testing and Modifications.** Prior to the Commercial Operation Date, the Participating TO shall test the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades and the Interconnection Customer shall test the Large Generating Facility and the Interconnection Customer's Interconnection Facilities to ensure their safe and reliable operation. Similar testing may be required after initial operation. Each Party shall make any modifications to its facilities that are found to be necessary as a result of such testing. The Interconnection Customer shall bear the cost of all such testing and modifications. The Interconnection Customer shall not commence initial parallel operation of an Electric Generating Unit with the Participating TO's Transmission System until the Participating TO provides prior written approval, which approval shall not be unreasonably withheld, for operation of such Electric Generating Unit. The Interconnection Customer shall generate test energy at the Large Generating Facility only if it has arranged for the delivery of such test energy.

**6.2 Post-Commercial Operation Date Testing and Modifications.** Each Party shall at its own expense perform routine inspection and testing of its facilities and equipment in accordance with Good Utility Practice as may be necessary to ensure the continued interconnection of the Large Generating Facility with the Participating TO's Transmission System in a safe and reliable manner. Each Party shall have the right, upon advance written notice, to require reasonable additional testing of the other Party's facilities, at the requesting Party's expense, as may be in accordance with Good Utility Practice.

**6.3 Right to Observe Testing.** Each Party shall notify the other Parties at least fourteen (14) Calendar Days in advance of its performance of tests of its Interconnection Facilities or Generating Facility. The other Parties have the right, at their own expense, to observe such testing.

**6.4 Right to Inspect.** Each Party shall have the right, but shall have no obligation to: (i) observe another Party's tests and/or inspection of any of its System Protection Facilities and other protective equipment, including Power System Stabilizers; (ii) review the settings of another Party's System Protection Facilities and other protective equipment; and (iii) review another Party's maintenance records relative to the Interconnection Facilities, the System Protection Facilities and other protective equipment. A Party may exercise these rights from time to time as it deems necessary upon reasonable notice to the other Party. The exercise or non-exercise by a Party of any such rights shall not be construed as an endorsement or confirmation of any element or condition of the Interconnection Facilities or the System Protection Facilities or other protective equipment or the operation thereof, or as a warranty as to the fitness, safety, desirability, or reliability of same. Any information that a Party obtains through the exercise of any of its rights under this Article 6.4 shall be deemed to be Confidential Information and treated pursuant to Article 22 of this LGIA.

## Article 7. Metering

**7.1 General.** Each Party shall comply with any Applicable Reliability Standards and the Electric Reliability Organization requirements. The Interconnection Customer and CAISO shall comply with the provisions of the CAISO Tariff regarding metering, including Section 10 of the CAISO

Tariff. Unless otherwise agreed by the Participating TO and the Interconnection Customer, the Participating TO may install additional Metering Equipment at the Point of Interconnection prior to any operation of any Electric Generating Unit and shall own, operate, test and maintain such Metering Equipment. Power flows to and from the Large Generating Facility shall be measured at or, at the CAISO's or Participating TO's option for its respective Metering Equipment, compensated to, the Point of Interconnection. The CAISO shall provide metering quantities to the Interconnection Customer upon request in accordance with the CAISO Tariff by directly polling the CAISO's meter data acquisition system. The Interconnection Customer shall bear all reasonable documented costs associated with the purchase, installation, operation, testing and maintenance of the Metering Equipment.

**7.2 Check Meters.** The Interconnection Customer, at its option and expense, may install and operate, on its premises and on its side of the Point of Interconnection, one or more check meters to check the CAISO-polled meters or the Participating TO's meters. Such check meters shall be for check purposes only and shall not be used for the measurement of power flows for purposes of this LGIA, except in the case that no other means are available on a temporary basis at the option of the CAISO or the Participating TO. The check meters shall be subject at all reasonable times to inspection and examination by the CAISO or Participating TO or their designees. The installation, operation and maintenance thereof shall be performed entirely by the Interconnection Customer in accordance with Good Utility Practice.

**7.3 Participating TO Retail Metering.** The Participating TO may install retail revenue quality meters and associated equipment, pursuant to the Participating TO's applicable retail tariffs.

## Article 8. Communications

**8.1 Interconnection Customer Obligations.** The Interconnection Customer shall maintain satisfactory operating communications with the CAISO in accordance with the provisions of the CAISO Tariff and with the Participating TO's dispatcher or representative designated by the Participating TO. The Interconnection Customer shall provide standard voice line, dedicated voice line and facsimile communications at its Large Generating Facility control room or central dispatch facility through use of either the public telephone system, or a voice communications system that does not rely on the public telephone system. The Interconnection Customer shall also provide the dedicated data circuit(s) necessary to provide Interconnection Customer data to the CAISO and Participating TO as set forth in Appendix D, Security Arrangements Details. The data circuit(s) shall extend from the Large Generating Facility to the location(s) specified by the CAISO and Participating TO. Any required maintenance of such communications equipment shall be performed by the Interconnection Customer. Operational communications shall be activated and maintained under, but not be limited to, the following events: system paralleling or separation, scheduled and unscheduled shutdowns, equipment clearances, and hourly and daily load data.

**8.2 Remote Terminal Unit.** Prior to the Initial Synchronization Date of each Electric Generating Unit, a Remote Terminal Unit, or equivalent data collection and transfer equipment acceptable to the Parties, shall be installed by the Interconnection Customer, or by the Participating TO at the Interconnection Customer's expense, to gather accumulated and instantaneous data to be telemetered to the location(s) designated by the CAISO and by the Participating TO through use of a dedicated point-to-point data circuit(s) as indicated in Article 8.1.

Telemetry to the CAISO shall be provided in accordance with the CAISO's technical standards for direct telemetry. For telemetry to the Participating TO, the communication protocol for the data circuit(s) shall be specified by the Participating TO. Instantaneous bi-directional real power and reactive power flow and any other required information must be telemetered directly to the location(s) specified by the Participating TO.

Each Party will promptly advise the other Parties if it detects or otherwise learns of any metering, telemetry or communications equipment errors or malfunctions that require the attention and/or correction by another Party. The Party owning such equipment shall correct such error or malfunction as soon as reasonably feasible.

**8.3 No Annexation.** Any and all equipment placed on the premises of a Party shall be and remain the property of the Party providing such equipment regardless of the mode and manner of annexation or attachment to real property, unless otherwise mutually agreed by the Parties.

**8.4 Provision of Data from a Variable Energy Resource.** The Interconnection Customer whose Generating Facility contains at least one Variable Energy Resource shall provide meteorological and forced outage data to the CAISO to the extent necessary for the CAISO's development and deployment of power production forecasts for that class of Variable Energy Resources. The Interconnection Customer with a Variable Energy Resource having wind as the energy source, at a minimum, will be required to provide the CAISO with site-specific meteorological data including: temperature, wind speed, wind direction, and atmospheric pressure. The Interconnection Customer with a Variable Energy Resource having solar as the energy source, at a minimum, will be required to provide the CAISO with site-specific meteorological data including: temperature, atmospheric pressure, and irradiance. The CAISO and Interconnection Customer whose Generating Facility contains a Variable Energy Resource shall mutually agree to any additional meteorological data that are required for the development and deployment of a power production forecast. The Interconnection Customer whose Generating Facility contains a Variable Energy Resource also shall submit data to the CAISO regarding all forced outages to the extent necessary for the CAISO's development and deployment of power production forecasts for that class of Variable Energy Resources. The exact specifications of the meteorological and forced outage data to be provided by the Interconnection Customer to the CAISO, including the frequency and timing of data submittals, shall be made taking into account the size and configuration of the Variable Energy Resource, its characteristics, location, and its importance in maintaining generation resource adequacy and transmission system reliability in its area. All requirements for meteorological and forced outage data must be commensurate with the power production forecasting employed by the CAISO. Such requirements for meteorological and forced outage data are set forth in Appendix C, Interconnection Details, of this LGIA, as they may change from time to time.

## Article 9. Operations

**9.1 General.** Each Party shall comply with Applicable Reliability Standards and the Electric Reliability Organization requirements. Each Party shall provide to the other Party all information that may reasonably be required by the other Party to comply with Applicable Laws and Regulations and Applicable Reliability Standards.

**9.2 Balancing Authority Area Notification.** At least three months before Initial Synchronization Date, the Interconnection Customer shall notify the CAISO and Participating TO in writing of the Balancing Authority Area in which the Large Generating Facility intends to be located. If the Interconnection Customer intends to locate the Large Generating Facility in a Balancing Authority Area other than the Balancing Authority Area within whose electrically metered boundaries the Large Generating Facility is located, and if permitted to do so by the relevant transmission tariffs, all necessary arrangements, including but not limited to those set forth in Article 7 and Article 8 of this LGIA, and remote Balancing Authority Area generator interchange agreements, if applicable, and the appropriate measures under such agreements, shall be executed and implemented prior to the placement of the Large Generating Facility in the other Balancing Authority Area.

**9.3 CAISO and Participating TO Obligations.** The CAISO and Participating TO shall cause the Participating TO's Transmission System to be operated and controlled in a safe and reliable manner and in accordance with this LGIA. The Participating TO at the Interconnection

Customer's expense shall cause the Participating TO's Interconnection Facilities to be operated, maintained and controlled in a safe and reliable manner and in accordance with this LGIA. The CAISO and Participating TO may provide operating instructions to the Interconnection Customer consistent with this LGIA and Participating TO and CAISO operating protocols and procedures as they may change from time to time. The Participating TO and CAISO will consider changes to their operating protocols and procedures proposed by the Interconnection Customer.

**9.4 Interconnection Customer Obligations.** The Interconnection Customer shall at its own expense operate, maintain and control the Large Generating Facility and the Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA. The Interconnection Customer shall operate the Large Generating Facility and the Interconnection Customer's Interconnection Facilities in accordance with all applicable requirements of the Balancing Authority Area of which it is part, including such requirements as set forth in Appendix C, Interconnection Details, of this LGIA. Appendix C, Interconnection Details, will be modified to reflect changes to the requirements as they may change from time to time. A Party may request that another Party provide copies of the requirements set forth in Appendix C, Interconnection Details, of this LGIA. The Interconnection Customer shall not commence Commercial Operation of an Electric Generating Unit with the Participating TO's Transmission System until the Participating TO provides prior written approval, which approval shall not be unreasonably withheld, for operation of such Electric Generating Unit.

**9.5 Start-Up and Synchronization.** Consistent with the Parties' mutually acceptable procedures, the Interconnection Customer is responsible for the proper synchronization of each Electric Generating Unit to the CAISO Controlled Grid.

**9.6 Reactive Power and Primary Frequency Response.**

**9.6.1 Power Factor Design Criteria.** For all Generating Facilities other than Asynchronous Generating Facilities, the Interconnection Customer shall design the Large Generating Facility to maintain a composite power delivery at continuous rated power output at the terminals of the Electric Generating Unit at a power factor within the range of 0.95 leading to 0.90 lagging, unless the CAISO has established different requirements that apply to all generators in the Balancing Authority Area on a comparable basis.

An Interconnection Customer for an Asynchronous Generating Facility will design the Large Generator Facility to maintain a composite power delivery at continuous rated power output at the high-side of the generator substation at a power factor within the range of 0.95 leading to 0.95 lagging, unless the CAISO has established a different power factor range that applies to all Asynchronous Generating Facilities on a comparable basis. This power factor range standard shall be dynamic and can be met using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors and reactors, or a combination of the two.

**9.6.2 Voltage Schedules.** Once the Interconnection Customer has synchronized an Electric Generating Unit with the CAISO Controlled Grid, the CAISO or Participating TO shall require the Interconnection Customer to maintain a voltage schedule by operating the Electric Generating Unit to produce or absorb reactive power within the design limitations of the Electric Generating Unit set forth in Article 9.6.1 (Power Factor Design Criteria). CAISO's voltage schedules shall treat all sources of reactive power in the Balancing Authority Area in an equitable and not unduly discriminatory manner. The Participating TO shall exercise Reasonable Efforts to provide the Interconnection Customer with such schedules at least one (1) day in advance, and the CAISO or Participating TO may make

changes to such schedules as necessary to maintain the reliability of the CAISO Controlled Grid or the Participating TO's electric system. The Interconnection Customer shall operate the Electric Generating Unit to maintain the specified output voltage or power factor within the design limitations of the Electric Generating Unit set forth in Article 9.6.1 (Power Factor Design Criteria), and as may be required by the CAISO to operate the Electric Generating Unit at a specific voltage schedule within the design limitations set forth in Article 9.6.1. If the Interconnection Customer is unable to maintain the specified voltage or power factor, it shall promptly notify the CAISO and the Participating TO.

**9.6.2.1 Voltage Regulators.** Whenever an Electric Generating Unit is operated in parallel with the CAISO Controlled Grid and voltage regulators are capable of operation, the Interconnection Customer shall operate the Electric Generating Unit with its voltage regulators in automatic operation. If the Electric Generating Unit's voltage regulators are not capable of such automatic operation, the Interconnection Customer shall immediately notify the CAISO and the Participating TO and ensure that the Electric Generating Unit operates as specified in Article 9.6.2 through manual operation and that such Electric Generating Unit's reactive power production or absorption (measured in MVARs) are within the design capability of the Electric Generating Unit(s) and steady state stability limits. The Interconnection Customer shall restore the speed governors and voltage regulators to automatic operation as soon as possible. If the Large Generating Facility's speed governors and voltage regulators are improperly tuned or malfunctioning, the CAISO shall have the right to order the reduction in output or disconnection of the Large Generating Facility if the reliability of the CAISO Controlled Grid would be adversely affected. The Interconnection Customer shall not cause its Large Generating Facility to disconnect automatically or instantaneously from the CAISO Controlled Grid or trip any Electric Generating Unit comprising the Large Generating Facility for an under or over frequency condition unless the abnormal frequency condition persists for a time period beyond the limits set forth in ANSI/IEEE Standard C37.106, or such other standard as applied to other generators in the Balancing Authority Area on a comparable basis.

**9.6.3 Payment for Reactive Power.** CAISO is required to pay the Interconnection Customer for reactive power that Interconnection Customer provides or absorbs from an Electric Generating Unit when the CAISO requests the Interconnection Customer to operate its Electric Generating Unit outside the range specified in Article 9.6.1, provided that if the CAISO pays other generators for reactive power service within the specified range, it must also pay the Interconnection Customer. Payments shall be pursuant to Article 11.6 or such other agreement to which the CAISO and Interconnection Customer have otherwise agreed.

**9.6.4 Primary Frequency Response.** Interconnection Customer shall ensure the primary frequency response capability of its Electric Generating Unit(s) by installing, maintaining, and operating a functioning governor or equivalent controls. The term "functioning governor or equivalent controls" as used herein shall mean the required hardware and/or software that provides frequency responsive real power control with the ability to sense changes in system frequency and autonomously adjust the Electric Generating Unit's real power output in accordance with the droop and deadband parameters and in the direction needed to correct frequency deviations. Interconnection Customer is required to install a governor or equivalent controls with the capability of operating: (1) with a maximum 5 percent droop and ±0.036 Hz deadband; or (2) in accordance with the relevant droop, deadband, and timely and sustained response settings from Applicable Reliability Standards providing for equivalent or more stringent parameters. The droop

characteristic shall be: (1) based on the nameplate capacity of the Electric Generating Unit(s), and shall be linear in the range of frequencies between 59 to 61 Hz that are outside of the deadband parameter; or (2) based on Applicable Reliability Standards providing for an equivalent or more stringent parameter. The deadband parameter shall be: the range of frequencies above and below nominal (60 Hz) in which the governor or equivalent controls is not expected to adjust the Electric Generating Units' real power output in response to frequency deviations. The deadband shall be implemented: (1) without a step to the droop curve, that is, once the frequency deviation exceeds the deadband parameter, the expected change in the Electric Generating Units' real power output in response to frequency deviations shall start from zero and then increase (for under-frequency deviations) or decrease (for over-frequency deviations) linearly in proportion to the magnitude of the frequency deviation; or (2) in accordance with Applicable Reliability Standards providing for an equivalent or more stringent parameter. Interconnection Customer shall notify the CAISO that the primary frequency response capability of the Electric Generating Unit(s) has been tested and confirmed during commissioning. Once Interconnection Customer has synchronized the Electric Generating Unit(s) with the CAISO Controlled Grid, Interconnection Customer shall operate the Electric Generating Unit(s) consistent with the provisions specified in articles 9.6.4.1 and 9.6.4.2 of this LGIA. The primary frequency response requirements contained herein shall apply to both synchronous and non-synchronous Large Generating Facilities.

**9.6.4.1 Governor or Equivalent Controls.** Whenever the Electric Generating Unit(s) is operated in parallel with the CAISO Controlled Grid, Interconnection Customer shall operate the Electric Generating Unit(s) with its governor or equivalent controls in service and responsive to frequency. Interconnection Customer shall, in coordination with the CAISO, set the deadband parameter to: (1) a maximum of ±0.036 Hz and set the droop parameter to a maximum of 5 percent; or (2) implement the relevant droop and deadband settings from Applicable Reliability Standards that provides for equivalent or more stringent parameters. Interconnection Customer shall be required to provide the status and settings of the governor or equivalent controls to the CAISO upon request. If Interconnection Customer needs to operate the Electric Generating Unit(s) with its governor or equivalent controls not in service, Interconnection Customer shall immediately notify the CAISO, and provide the following information: (1) the operating status of the governor or equivalent controls (i.e., whether it is currently out of service or when it will be taken out of service); (2) the reasons for removing the governor or equivalent controls from service; and (3) a reasonable estimate of when the governor or equivalent controls will be returned to service. Interconnection Customer shall make Reasonable Efforts to return its governor or equivalent controls into service as soon as practicable. Interconnection Customer shall make Reasonable Efforts to keep outages of the Electric Generating Units' governor or equivalent controls to a minimum whenever the Electric Generating Unit(s) is operated in parallel with the CAISO Controlled Grid.

**9.6.4.2 Timely and Sustained Response.** Interconnection Customer shall ensure that the Electric Generating Units' real power response to sustained frequency deviations outside of the deadband setting is automatically provided and shall begin immediately after frequency deviates outside of the deadband, and to the extent the Electric Generating Unit(s) has operating capability in the direction needed to correct the frequency deviation. Interconnection Customer shall not block or otherwise inhibit the ability of the governor or equivalent controls to respond and shall ensure that the response is not inhibited, except under certain operational constraints including, but not limited to, ambient temperature limitations, physical energy limitations, outages of mechanical equipment, or

regulatory requirements. The Electric Generating Unit(s) shall sustain the real power response at least until system frequency returns to a value within the deadband setting of the governor or equivalent controls. A FERC-approved Applicable Reliability Standard with equivalent or more stringent requirements shall supersede the above requirements.

**9.6.4.3 Exemptions.** Large Generating Facilities that are regulated by the Nuclear Regulatory Commission shall be exempt from articles 9.6.4, 9.6.4.1, and 9.6.4.2 of this LGIA. Large Generating Facilities that are behind-the-meter generation that is sized-to-load (i.e., the thermal load and the generation are near-balanced in real-time operation and the generation is primarily controlled to maintain the unique thermal, chemical, or mechanical output necessary for the operating requirements of its host facility) shall be required to install primary frequency response capability in accordance with the droop and deadband capability requirements specified in article 9.6.4, but shall be otherwise exempt from the operating requirements in articles 9.6.4, 9.6.4.1, 9.6.4.2, and 9.6.4.4 of this LGIA.

**9.6.4.4 Electric Storage Resources.** Interconnection Customer interconnecting a Generating Facility that contains an electric storage resource shall establish an operating range in Appendix C of this LGIA that specifies a minimum state of charge and a maximum state of charge between which the electric storage resource will be required to provide primary frequency response consistent with the conditions set forth in articles 9.6.4, 9.6.4.1, 9.6.4.2, and 9.6.4.3 of this LGIA. Appendix C shall specify whether the operating range is static or dynamic, and shall consider: (1) the expected magnitude of frequency deviations in the interconnection; (2) the expected duration that system frequency will remain outside of the deadband parameter in the interconnection; (3) the expected incidence of frequency deviations outside of the deadband parameter in the interconnection; (4) the physical capabilities of the electric storage resource; (5) operational limitations of the electric storage resource due to manufacturer specifications; and (6) any other relevant factors agreed to by the CAISO and Interconnection Customer, and in consultation with the relevant transmission owner or balancing authority as appropriate. If the operating range is dynamic, then Appendix C must establish how frequently the operating range will be reevaluated and the factors that may be considered during its reevaluation.

Interconnection Customer's electric storage resource is required to provide timely and sustained primary frequency response consistent with article 9.6.4.2 of this LGIA when it is online and dispatched to inject electricity to the CAISO Controlled Grid and/or receive electricity from the Participating TO's Transmission System or the CAISO Controlled Grid. This excludes circumstances when the electric storage resource is not dispatched to inject electricity to the CAISO Controlled Grid and/or dispatched to receive electricity from the Participating TO's Transmission system or the CAISO Controlled Grid. If Interconnection Customer's electric storage resource is charging at the time of a frequency deviation outside of its deadband parameter, it is to increase (for over-frequency deviations) or decrease (for under-frequency deviations) the rate at which it is charging in accordance with its droop parameter. Interconnection Customer's electric storage resource is not required to change from charging to discharging, or vice versa, unless the response necessitated by the droop and deadband settings requires it to do so and it is technically capable of making such a transition.

**9.7 Outages and Interruptions.**

**9.7.1 Outages.**

**9.7.1.1 Outage Authority and Coordination.** Each Party may in accordance with Good Utility Practice in coordination with the other Parties remove from service any of its respective Interconnection Facilities or Network Upgrades that may impact another Party's facilities as necessary to perform maintenance or testing or to install or replace equipment. Absent an Emergency Condition, the Party scheduling a removal of such facility(ies) from service will use Reasonable Efforts to schedule such removal on a date and time mutually acceptable to all Parties. In all circumstances any Party planning to remove such facility(ies) from service shall use Reasonable Efforts to minimize the effect on the other Parties of such removal.

**9.7.1.2 Outage Schedules.** The CAISO shall post scheduled outages of CAISO Controlled Grid facilities in accordance with the provisions of the CAISO Tariff. The Interconnection Customer shall submit its planned maintenance schedules for the Large Generating Facility to the CAISO in accordance with the CAISO Tariff. The Interconnection Customer shall update its planned maintenance schedules in accordance with the CAISO Tariff. The CAISO may request the Interconnection Customer to reschedule its maintenance as necessary to maintain the reliability of the CAISO Controlled Grid in accordance with the CAISO Tariff. Such planned maintenance schedules and updates and changes to such schedules shall be provided by the Interconnection Customer to the Participating TO concurrently with their submittal to the CAISO. The CAISO shall compensate the Interconnection Customer for any additional direct costs that the Interconnection Customer incurs as a result of having to reschedule maintenance in accordance with the CAISO Tariff. The Interconnection Customer will not be eligible to receive compensation, if during the twelve (12) months prior to the date of the scheduled maintenance, the Interconnection Customer had modified its schedule of maintenance activities.

**9.7.1.3 Outage Restoration.** If an outage on a Party's Interconnection Facilities or Network Upgrades adversely affects another Party's operations or facilities, the Party that owns or controls the facility that is out of service shall use Reasonable Efforts to promptly restore such facility(ies) to a normal operating condition consistent with the nature of the outage. The Party that owns or controls the facility that is out of service shall provide the other Parties, to the extent such information is known, information on the nature of the Emergency Condition, if the outage is caused by an Emergency Condition, an estimated time of restoration, and any corrective actions required. Initial verbal notice shall be followed up as soon as practicable with written notice explaining the nature of the outage, if requested by a Party, which may be provided by e-mail or facsimile.

**9.7.2 Interruption of Service.** If required by Good Utility Practice to do so, the CAISO or the Participating TO may require the Interconnection Customer to interrupt or reduce deliveries of electricity if such delivery of electricity could adversely affect the CAISO's or the Participating TO's ability to perform such activities as are necessary to safely and reliably operate and maintain the Participating TO's electric system or the CAISO Controlled Grid. The following provisions shall apply to any interruption or reduction permitted under this Article 9.7.2:

**9.7.2.1** The interruption or reduction shall continue only for so long as reasonably necessary under Good Utility Practice;

**9.7.2.2** Any such interruption or reduction shall be made on an equitable, non-discriminatory basis with respect to all generating facilities directly connected to the CAISO Controlled Grid, subject to any conditions specified in this LGIA;

**9.7.2.3** When the interruption or reduction must be made under circumstances which do not allow for advance notice, the CAISO or Participating TO, as applicable, shall notify the Interconnection Customer by telephone as soon as practicable of the reasons for the curtailment, interruption, or reduction, and, if known, its expected duration. Telephone notification shall be followed by written notification, if requested by the Interconnection Customer, as soon as practicable;

**9.7.2.4** Except during the existence of an Emergency Condition, the CAISO or Participating TO shall notify the Interconnection Customer in advance regarding the timing of such interruption or reduction and further notify the Interconnection Customer of the expected duration. The CAISO or Participating TO shall coordinate with the Interconnection Customer using Good Utility Practice to schedule the interruption or reduction during periods of least impact to the Interconnection Customer, the CAISO, and the Participating TO;

**9.7.2.5** The Parties shall cooperate and coordinate with each other to the extent necessary in order to restore the Large Generating Facility, Interconnection Facilities, the Participating TO's Transmission System, and the CAISO Controlled Grid to their normal operating state, consistent with system conditions and Good Utility Practice.

**9.7.3 Ride Through Capability and Performance.** The CAISO Controlled Grid is designed to automatically activate a load-shed program as required by Applicable Reliability Standards and the Electric Reliability Organization in the event of an under-frequency system disturbance. The Interconnection Customer shall implement under-frequency and over-frequency protection set points for the Large Generating Facility as required by Applicable Reliability Standards and the Electric Reliability Organization to ensure frequency "ride through" capability. Large Generating Facility response to frequency deviations of pre-determined magnitudes, both under-frequency and over-frequency deviations, shall be studied and coordinated with the Participating TO and CAISO in accordance with Good Utility Practice. The Interconnection Customer also will implement under-voltage and over-voltage relay set points, or equivalent electronic controls, as required by the Electric Reliability Organization to ensure voltage "ride through" capability of the CAISO Controlled Grid. The term "ride through" as used herein shall mean the ability of a Generating Facility to stay connected to and synchronized with the CAISO Controlled Grid during system disturbances within a range of under-frequency, over-frequency, under-voltage, and over-voltage conditions, in accordance with Good Utility Practice and consistent with any standards and guidelines that are applied to other Generating Facilities in the Balancing Authority Area on a comparable basis. For abnormal frequency conditions and voltage conditions within the "no trip zone" defined by Reliability Standard PRC-024-3 or successor mandatory ride through reliability standards, the non-synchronous Large Generating Facility must ensure that, within any physical limitations of the Large Generating Facility, its control and protection settings are configured or set to (1) continue active power production during disturbance and post disturbance periods at pre-disturbance levels, unless reactive power priority mode is enabled or unless providing primary frequency response; (2) minimize reductions in active power and remain within dynamic voltage and current limits, if reactive power priority mode is enabled, unless providing primary frequency response; (3) not artificially limit dynamic reactive power capability during disturbances; and (4) return to pre-disturbance active power levels without artificial ramp rate limits if active power is

reduced, unless providing primary frequency response. Asynchronous Generating Facilities shall be subject to frequency ride through capability requirements in accordance with Appendix H to this LGIA.

**9.7.4 System Protection and Other Control Requirements.**

**9.7.4.1 System Protection Facilities.** The Interconnection Customer shall, at its expense, install, operate and maintain System Protection Facilities as a part of the Large Generating Facility or the Interconnection Customer's Interconnection Facilities. The Participating TO shall install at the Interconnection Customer's expense any System Protection Facilities that may be required on the Participating TO's Interconnection Facilities or the Participating TO's Transmission System as a result of the interconnection of the Large Generating Facility and the Interconnection Customer's Interconnection Facilities.

**9.7.4.2** The Participating TO's and Interconnection Customer's protection facilities shall be designed and coordinated with other systems in accordance with Applicable Reliability Standards, Electric Reliability Organization criteria, and Good Utility Practice.

**9.7.4.3** The Participating TO and Interconnection Customer shall each be responsible for protection of its facilities consistent with Good Utility Practice.

**9.7.4.4** The Participating TO's and Interconnection Customer's protective relay design shall incorporate the necessary test switches to perform the tests required in Article 6. The required test switches will be placed such that they allow operation of lockout relays while preventing breaker failure schemes from operating and causing unnecessary breaker operations and/or the tripping of the Interconnection Customer's Electric Generating Units.

**9.7.4.5** The Participating TO and Interconnection Customer will test, operate and maintain System Protection Facilities in accordance with Good Utility Practice and, if applicable, the requirements of the Participating TO's Interconnection Handbook.

**9.7.4.6** Prior to the in-service date, and again prior to the Commercial Operation Date, the Participating TO and Interconnection Customer or their agents shall perform a complete calibration test and functional trip test of the System Protection Facilities. At intervals suggested by Good Utility Practice, the standards and procedures of the Participating TO, including, if applicable, the requirements of the Participating TO's Interconnection Handbook, and following any apparent malfunction of the System Protection Facilities, each Party shall perform both calibration and functional trip tests of its System Protection Facilities. These tests do not require the tripping of any in-service generation unit. These tests do, however, require that all protective relays and lockout contacts be activated.

**9.7.5 Requirements for Protection.** In compliance with Good Utility Practice and, if applicable, the requirements of the Participating TO's Interconnection Handbook, the Interconnection Customer shall provide, install, own, and maintain relays, circuit breakers and all other devices necessary to remove any fault contribution of the Large Generating Facility to any short circuit occurring on the Participating TO's Transmission System not otherwise isolated by the Participating TO's equipment, such that the removal of the fault contribution shall be coordinated with the protective requirements of the Participating

TO's Transmission System. Such protective equipment shall include, without limitation, a disconnecting device with fault current-interrupting capability located between the Large Generating Facility and the Participating TO's Transmission System at a site selected upon mutual agreement (not to be unreasonably withheld, conditioned or delayed) of the Parties. The Interconnection Customer shall be responsible for protection of the Large Generating Facility and the Interconnection Customer's other equipment from such conditions as negative sequence currents, over- or under-frequency, sudden load rejection, over- or under-voltage, and generator loss-of-field. The Interconnection Customer shall be solely responsible to disconnect the Large Generating Facility and the Interconnection Customer's other equipment if conditions on the CAISO Controlled Grid could adversely affect the Large Generating Facility.

**9.7.6 Power Quality.** Neither the Participating TO's nor the Interconnection Customer's facilities shall cause excessive voltage flicker nor introduce excessive distortion to the sinusoidal voltage or current waves as defined by ANSI Standard C84.1-1989, in accordance with IEEE Standard 519, any applicable superseding electric industry standard, or any alternative Applicable Reliability Standard or Electric Reliability Organization standard. In the event of a conflict among ANSI Standard C84.1-1989, any applicable superseding electric industry standard, or any alternative Applicable Reliability Standard or Electric Reliability Organization standard, the alternative Applicable Reliability Standard or Electric Reliability Organization standard shall control.

**9.8 Switching and Tagging Rules.** Each Party shall provide the other Parties a copy of its switching and tagging rules that are applicable to the other Parties' activities. Such switching and tagging rules shall be developed on a non-discriminatory basis. The Parties shall comply with applicable switching and tagging rules, as amended from time to time, in obtaining clearances for work or for switching operations on equipment.

**9.9 Use of Interconnection Facilities by Third Parties.**

**9.9.1 Purpose of Interconnection Facilities.** Except as may be required by Applicable Laws and Regulations, or as otherwise agreed to among the Parties, the Interconnection Facilities shall be constructed for the sole purpose of interconnecting the Large Generating Facility to the Participating TO's Transmission System and shall be used for no other purpose.

**9.9.2 Third Party Users.** If required by Applicable Laws and Regulations or if the Parties mutually agree, such agreement not to be unreasonably withheld, to allow one or more third parties to use the Participating TO's Interconnection Facilities, or any part thereof, the Interconnection Customer will be entitled to compensation for the capital expenses it incurred in connection with the Interconnection Facilities based upon the pro rata use of the Interconnection Facilities by the Participating TO, all third party users, and the Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually-agreed upon methodology. In addition, cost responsibility for ongoing costs, including operation and maintenance costs associated with the Interconnection Facilities, will be allocated between the Interconnection Customer and any third party users based upon the pro rata use of the Interconnection Facilities by the Participating TO, all third party users, and the Interconnection Customer, in accordance with Applicable Laws and Regulations or upon some other mutually agreed upon methodology. If the issue of such compensation or allocation cannot be resolved through such negotiations, it shall be submitted to FERC for resolution.

**9.10 Disturbance Analysis Data Exchange.** The Parties will cooperate with one another in the analysis of disturbances to either the Large Generating Facility or the CAISO Controlled Grid by

gathering and providing access to any information relating to any disturbance, including information from oscillography, protective relay targets, breaker operations and sequence of events records, and any disturbance information required by Good Utility Practice.

## Article 10. Maintenance

**10.1 Participating TO Obligations.** The Participating TO shall maintain the Participating TO's Transmission System and the Participating TO's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA.

**10.2 Interconnection Customer Obligations.** The Interconnection Customer shall maintain the Large Generating Facility and the Interconnection Customer's Interconnection Facilities in a safe and reliable manner and in accordance with this LGIA.

**10.3 Coordination.** The Parties shall confer regularly to coordinate the planning, scheduling and performance of preventive and corrective maintenance on the Large Generating Facility and the Interconnection Facilities.

**10.4 Secondary Systems.** The Participating TO and Interconnection Customer shall cooperate with the other Parties in the inspection, maintenance, and testing of control or power circuits that operate below 600 volts, AC or DC, including, but not limited to, any hardware, control or protective devices, cables, conductors, electric raceways, secondary equipment panels, transducers, batteries, chargers, and voltage and current transformers that directly affect the operation of a Party's facilities and equipment which may reasonably be expected to impact the other Parties. Each Party shall provide advance notice to the other Parties before undertaking any work on such circuits, especially on electrical circuits involving circuit breaker trip and close contacts, current transformers, or potential transformers.

**10.5 Operating and Maintenance Expenses.** Subject to the provisions herein addressing the use of facilities by others, and except for operations and maintenance expenses associated with modifications made for providing interconnection or transmission service to a third party and such third party pays for such expenses, the Interconnection Customer shall be responsible for all reasonable expenses including overheads, associated with: (1) owning, operating, maintaining, repairing, and replacing the Interconnection Customer's Interconnection Facilities; and (2) operation, maintenance, repair and replacement of the Participating TO's Interconnection Facilities.

## Article 11. Performance Obligation

**11.1 Interconnection Customer's Interconnection Facilities.** The Interconnection Customer shall design, procure, construct, install, own and/or control the Interconnection Customer's Interconnection Facilities described in Appendix A at its sole expense.

**11.2 Participating TO's Interconnection Facilities.** The Participating TO shall design, procure, construct, install, own and/or control the Participating TO's Interconnection Facilities described in Appendix A at the sole expense of the Interconnection Customer. Unless the Participating TO elects to fund the capital for the Participating TO's Interconnection Facilities, they shall be solely funded by the Interconnection Customer.

**11.3 Network Upgrades and Distribution Upgrades.** The Participating TO shall design, procure, construct, install, and own the Network Upgrades and Distribution Upgrades described in Appendix A, except for Stand Alone Network Upgrades, which will be constructed, and if agreed to by the Parties owned by the Interconnection Customer, and Merchant Network Upgrades. The Interconnection Customer shall be responsible for all costs related to Distribution Upgrades.

Network Upgrades shall be funded by the Interconnection Customer, which for Interconnection Customers processed under Section 6 of the RIS (in Queue Clusters) shall be in an amount determined pursuant to the methodology set forth in Section 6.3 of the RIS. This specific amount is set forth in Appendix G to this LGIA. For costs associated with Area Delivery Network Upgrades, any amounts set forth in Appendix G will be advisory estimates only, and will not operate to establishing any cap or Maximum Cost Exposure on the cost responsibility of the Interconnection Customer for Area Delivery Network Upgrades.

**11.4 Transmission Credits.** No later than thirty (30) Calendar Days prior to the Commercial Operation Date, the Interconnection Customer may make a one-time election by written notice to the CAISO and the Participating TO to (a) receive Congestion Revenue Rights as defined in and as available under the CAISO Tariff at the time of the election in accordance with the CAISO Tariff, in lieu of a repayment of the cost of Network Upgrades in accordance with Article 11.4.1, and/or (b) decline all or part of a refund of the cost of Network Upgrades entitled to the Interconnection Customer in accordance with Article 11.4.1.

**11.4.1 Repayment of Amounts Advanced for Network Upgrades.**

**11.4.1.1 Repayment of Amounts Advanced Regarding Non-Phased Generating Facilities**

An Interconnection Customer with a non-Phased Generating Facility shall be entitled to repayment for the Interconnection Customer's contribution to the cost of Network Upgrades placed in service on or before the Commercial Operation Date of its Generating Facility, commencing upon the Commercial Operation Date of the Generating Facility. Repayment for the Interconnection Customer's contribution to the cost of Network Upgrades placed into service after the Commercial Operation Date of its Generating Facility shall, for each of these Network Upgrades, commence no later than the later of: (i) the first month of the calendar year following the year in which the Network Upgrade is placed into service or (ii) 90 days after the Network Upgrade is placed into service.

Unless an Interconnection Customer has provided written notice to the CAISO that it is declining all or part of such repayment, such amounts shall include any tax gross-up or other tax-related payments associated with Network Upgrades not refunded to the Interconnection Customer pursuant to Article 5.17.8 or otherwise, and shall be paid to the Interconnection Customer by the Participating TO on a dollar-for-dollar basis either through (1) direct payments made on a levelized basis over the five-year period commencing on the applicable date as provided for in this Article 11.4.1.1; or (2) any alternative payment schedule that is mutually agreeable to the Interconnection Customer and Participating TO, provided that such amount is paid within five (5) years of the applicable commencement date. Notwithstanding the foregoing, if this LGIA terminates within five (5) years of the applicable commencement date, the Participating TO's obligation to pay refunds to the Interconnection Customer shall cease as of the date of termination.

Where the Interconnection Customer finances the construction of Network Upgrades for more than one Participating TO, the cost allocation, GIA Deposit, and repayment will be conducted pursuant to Section 14.4.1 of the RIS, and set forth in Appendix G.

An Interconnection Customer subject to this Article 11.4.1.1 shall be entitled to repayment for its contribution to the cost of Network Upgrades as follows:

(a) For Reliability Network Upgrades, the Interconnection Customer shall be entitled to a repayment of the amount paid by the Interconnection Customer for Reliability Network Upgrades as set forth in Appendix G, up to a maximum amount established in Section 14.3.2.1 of the RIS. Interconnection Customers interconnecting pursuant to Section 4.4 of the RIS are ineligible for cash repayment. For purposes of this determination, generating capacity will be based on the capacity of the Interconnection Customer's Generating Facility at the time it achieves Commercial Operation. To the extent that such repayment does not cover all of the costs of Interconnection Customer's Reliability Network Upgrades, including for Interconnection Customers interconnecting pursuant to Section 4.4 of the RIS, the Interconnection Customer shall receive Merchant Transmission CRRs for that portion of its Reliability Network Upgrades that are not covered by cash repayment.

(b) For Local Delivery Network Upgrades, the Interconnection Customer shall be entitled to repayment of a portion of the total amount paid to the Participating TO for the costs of Local Delivery Network Upgrades for which it is responsible, as set forth in Appendix G. The repayment amount shall be determined by dividing the amount of TP Deliverability received by the amount of deliverability requested by the Interconnection Customer, and multiplying that percentage by the total amount paid to the Participating TO by the Interconnection Customer for Local Delivery Network Upgrades.

(c) For Area Delivery Network Upgrades, the Interconnection Customer shall not be entitled to repayment for the costs of Area Delivery Network Upgrades. An Interconnection Customer interconnecting pursuant to Section 4.2 of the RIS that financed Area Delivery Network Upgrades will be eligible for Merchant Transmission CRRs pursuant to Section 36.11 of the CAISO Tariff.

(d) If an Interconnection Customer constructs and owns Network Upgrades pursuant to the Merchant Option set forth in Article 5.15 of this LGIA, then the Interconnection Customer shall not be entitled to any repayment pursuant to this LGIA.

**11.4.1.2 Repayment of Amounts Advanced Regarding Phased Generating Facilities**

Upon the Commercial Operation Date of each phase of a Phased Generating Facility, the Interconnection Customer shall be entitled to a repayment equal to the Interconnection Customer's contribution to the cost of Network Upgrades for that completed phase for which the Interconnection Customer is responsible, as set forth in Appendix G, subject to the limitations specified in Article 11.4.1.1, if the following conditions are satisfied as described below:

(a) The Generating Facility is capable of being constructed in phases;

(b) The Generating Facility is specified in the LGIA as being constructed in phases;

(c) The completed phase corresponds to one of the phases specified in the

LGIA;

(d) The phase has achieved Commercial Operation and the Interconnection Customer has tendered notice of the same pursuant to this LGIA;

(e) All Parties to the LGIA have confirmed that the completed phase meets the requirements set forth in this LGIA and any other operating, metering, and interconnection requirements to permit generation output of the entire capacity of the completed phase as specified in this LGIA;

(f) The Network Upgrades necessary for the completed phase to meet the desired level of deliverability are in service; and

(g) The Interconnection Customer has posted one hundred (100) percent of the security required for the Network Upgrades for all the phases of the Generating Facility (or if less than one hundred (100) percent has been posted, then all required Financial Security Instruments to the date of commencement of repayment).

Following satisfaction of these conditions (a) through (e) and (g), an Interconnection Customer shall be entitled to receive a repayment of its financed cost responsibility for the Network Upgrades associated with the completed phase that have been placed in service. The Interconnection Customer shall be entitled to repayment in this manner for each completed phase until the entire Generating Facility is completed. With respect to any Network Upgrades necessary for a completed phase to meet its desired level of deliverability that are not in service by the time the phase achieves Commercial Operation, repayment for each such Network Upgrade will commence no later than the later of: (i) the first month of the calendar year following the year in which the Network Upgrade is placed into service or (ii) 90 days after the Network Upgrade is placed into service.

A reduction in the electrical output (MW capacity) of the Generating Facility pursuant to the CAISO Tariff shall not diminish the Interconnection Customer's right to repayment pursuant to this LGIA Article 11.4.1.2. If the LGIA includes a partial termination provision and the partial termination right has been exercised with regard to a phase that has not been built, then the Interconnection Customer's eligibility for repayment under this Article 11.4.1.2 as to the remaining phases shall not be diminished. If the Interconnection Customer completes one or more phases and then breaches the LGIA, the Participating TO and the CAISO shall be entitled to offset any losses or damages resulting from the Breach against any repayments made for Network Upgrades related to the completed phases.

Any repayment amount provided pursuant to this Article 11.4.1.2 shall include any tax gross-up or other tax-related payments associated with Network Upgrades not refunded to the Interconnection Customer pursuant to Article 5.17.8 or otherwise, and shall be paid to the Interconnection Customer by the Participating TO on a dollar-for-dollar basis either through (1) direct payments made on a levelized basis over the five-year period commencing on the applicable as provided for in this Article 11.4.1.2; or (2) any alternative payment schedule that is mutually agreeable to the Interconnection Customer and Participating TO, provided that such amount is paid within five (5) years of the applicable commencement date. Notwithstanding the foregoing, if this LGIA

terminates within five (5) years of the applicable commencement date, the Participating TO's obligation to pay refunds to the Interconnection Customer shall cease as of the date of termination.

**11.4.1.3 Interest Payments and Assignment Rights**

Any phased or non-phased repayment shall include interest calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date of any payment for Network Upgrades through the date on which the Interconnection Customer receives a repayment of such payment. Interest shall continue to accrue on the repayment obligation so long as this LGIA is in effect. The Interconnection Customer may assign such repayment rights to any entity.

**11.4.1.4 Failure to Achieve Commercial Operation**

If the Large Generating Facility fails to achieve Commercial Operation, but it or another generating facility is later constructed and makes use of the Network Upgrades, the Participating TO shall at that time reimburse Interconnection Customer for the amounts advanced for the Network Upgrades. Before any such reimbursement can occur, the Interconnection Customer, or the entity that ultimately constructs the generating facility, if different, is responsible for identifying and demonstrating to the Participating TO the appropriate entity to which reimbursement must be made in order to implement the intent of this reimbursement obligation.

**11.4.2** Special Provisions for Affected Systems. The Interconnection Customer shall enter into an agreement with the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid, as applicable, in accordance with the RIS. Such agreement shall specify the terms governing payments to be made by the Interconnection Customer to the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid as well as the repayment by the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid. In no event shall the Participating TO be responsible for the repayment for any facilities that are not part of the Participating TO's Transmission System. In the event the Participating TO is a joint owner with an Affected System or with any other co-owner of a facility affected by the Large Generating Facility, the Participating TO's obligation to reimburse the Interconnection Customer for payments made to address the impacts of the Large Generating Facility on the system shall not exceed the proportionate amount of the cost of any upgrades attributable to the proportion of the jointly-owned facility owned by the Participating TO.

**11.4.3** Notwithstanding any other provision of this LGIA, nothing herein shall be construed as relinquishing or foreclosing any rights, including but not limited to firm transmission rights, capacity rights, Congestion Revenue Rights, or transmission credits, that the Interconnection Customer shall be entitled to, now or in the future under any other agreement or tariff as a result of, or otherwise associated with, the transmission capacity, if any, created by the Network Upgrades, including the right to obtain cash reimbursements, merchant transmission Congestion Revenue Rights in accordance with Section 36.11 of the CAISO Tariff, or transmission credits for transmission service that is not associated with the Large Generating Facility.

**11.5 Provision of Security.** At least thirty (30) Calendar Days prior to the commencement of the procurement, installation, or construction of a discrete portion of the Participating TO's Interconnection Facilities, Network Upgrades, or Distribution Upgrades, the Interconnection

Customer will provide the Participating TO, at the Interconnection Customer's option, a guarantee, a surety bond, letter of credit or other form of security that is reasonably acceptable to the Participating TO and is consistent with the Uniform Commercial Code of the jurisdiction identified in Article 14.2.1. Such security for payment, as specified in Appendix B of this LGIA, will be in an amount sufficient to cover the costs for constructing, procuring and installing the applicable portion of the CAISO's Interconnection Facilities, Network Upgrades, or Distribution Upgrades and will be reduced on a dollar-for-dollar basis for payments made to the Participating TO for these purposes. The Participating TO must use the GIA Deposit required in Section 13.3 of the RIS before requiring Interconnection Customer to submit security in addition to that GIA Deposit. The Participating TO must specify, in Appendix B of this LGIA, the dates for which Interconnection Customer must provide additional security for construction of each discrete portion of the Participating TO's Interconnection Facilities, Network Upgrades, or Distribution Upgrades and Interconnection Customer must provide such additional security.

**11.5.1** Notwithstanding any other provision of this Agreement for notice of Default and opportunity to cure such Default, the CAISO or the Participating TO shall provide the Interconnection Customer with written notice of any Default due to timely failure to post security, and the Interconnection Customer shall have five (5) Business Days from the date of such notice to cure such Default by posting the required security. If the Interconnection Customer fails to cure the Default, then this Agreement shall be deemed terminated.

**11.6 Interconnection Customer Compensation.** If the CAISO requests or directs the Interconnection Customer to provide a service pursuant to Articles 9.6.3 (Payment for Reactive Power) or 13.5.1 of this LGIA, the CAISO shall compensate the Interconnection Customer in accordance with the CAISO Tariff.

**11.6.1** Interconnection Customer Compensation for Actions During Emergency Condition. The CAISO shall compensate the Interconnection Customer in accordance with the CAISO Tariff for its provision of real and reactive power and other Emergency Condition services that the Interconnection Customer provides to support the CAISO Controlled Grid during an Emergency Condition in accordance with Article 11.6.

## Article 12. Invoice

**12.1 General.** The Participating TO shall submit to the Interconnection Customer, on a monthly basis, invoices of amounts due pursuant to this LGIA for the preceding month. Each invoice shall state the month to which the invoice applies and fully describe the services and equipment provided. The Parties may discharge mutual debts and payment obligations due and owing to each other on the same date through netting, in which case all amounts a Party owes to the other Party under this LGIA, including interest payments or credits, shall be netted so that only the net amount remaining due shall be paid by the owing Party. Notwithstanding the foregoing, any invoices between the CAISO and another Party shall be submitted and paid in accordance with the CAISO Tariff.

**12.2 Final Invoice.** As soon as reasonably practicable, but within twelve months after completion of the construction of the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades, the Participating TO shall provide an invoice of the final cost of the construction of the Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades, and shall set forth such costs in sufficient detail to enable the Interconnection Customer to compare the actual costs with the estimates and to ascertain deviations, if any, from the cost estimates. With respect to costs associated with the Participating TO's Interconnection Facilities and Distribution Upgrades, the Participating TO shall refund to the Interconnection Customer any amount by which the actual payment by the Interconnection

Customer for estimated costs exceeds the actual costs of construction within thirty (30) Calendar Days of the issuance of such final construction invoice; or, in the event the actual costs of construction exceed the Interconnection Customer's actual payment for estimated costs, then the Interconnection Customer shall pay to the Participating TO any amount by which the actual costs of construction exceed the actual payment by the Interconnection Customer for estimated costs within thirty (30) Calendar Days of the issuance of such final construction invoice. With respect to costs associated with Network Upgrades, the Participating TO shall refund to the Interconnection Customer any amount by which the actual payment by the Interconnection Customer for estimated costs exceeds the actual costs of construction multiplied by the Interconnection Customer's percentage share of those costs, as set forth in Appendix G to this LGIA within thirty (30) Calendar Days of the issuance of such final construction invoice. In the event the actual costs of construction multiplied by the Interconnection Customer's percentage share of those costs exceed the Interconnection Customer's actual payment for estimated costs, then the Participating TO shall recover such difference through its transmission service rates.

**12.3 Payment.** Invoices shall be rendered to the Interconnection Customer at the address specified in Appendix F. The Interconnection Customer shall pay, or Participating TO shall refund, the amounts due within thirty (30) Calendar Days of the Interconnection Customer's receipt of the invoice. All payments shall be made in immediately available funds payable to the Interconnection Customer or Participating TO, or by wire transfer to a bank named and account designated by the invoicing Interconnection Customer or Participating TO. Payment of invoices by any Party will not constitute a waiver of any rights or claims any Party may have under this LGIA.

**12.4 Disputes.** In the event of a billing dispute between the Interconnection Customer and the Participating TO, the Participating TO and the CAISO shall continue to provide Interconnection Service under this LGIA as long as the Interconnection Customer: (i) continues to make all payments not in dispute; and (ii) pays to the Participating TO or into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If the Interconnection Customer fails to meet these two requirements for continuation of service, then the Participating TO may provide notice to the Interconnection Customer of a Default pursuant to Article 17. Within thirty (30) Calendar Days after the resolution of the dispute, the Party that owes money to the other Party shall pay the amount due with interest calculated in accordance with the methodology set forth in FERC's Regulations at 18 C.F.R. § 35.19a(a)(2)(iii). Notwithstanding the foregoing, any billing dispute between the CAISO and another Party shall be resolved in accordance with the provisions of Article 27 of this LGIA.

## Article 13. Emergencies

**13.1 [Reserved]**

**13.2 Obligations.** Each Party shall comply with the Emergency Condition procedures of the CAISO, NERC, the Electric Reliability Organization, Applicable Reliability Standards, Applicable Laws and Regulations, and any emergency procedures set forth in this LGIA.

**13.3 Notice.** The Participating TO or the CAISO shall notify the Interconnection Customer promptly when it becomes aware of an Emergency Condition that affects the Participating TO's Interconnection Facilities or Distribution System or the CAISO Controlled Grid, respectively, that may reasonably be expected to affect the Interconnection Customer's operation of the Large Generating Facility or the Interconnection Customer's Interconnection Facilities. The Interconnection Customer shall notify the Participating TO and the CAISO promptly when it becomes aware of an Emergency Condition that affects the Large Generating Facility or the Interconnection Customer's Interconnection Facilities that may reasonably be expected to affect the CAISO Controlled Grid or the Participating TO's Interconnection Facilities. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of the Interconnection Customer's or

Participating TO's facilities and operations, its anticipated duration and the corrective action taken and/or to be taken. The initial notice shall be followed as soon as practicable with written notice, if requested by a Party, which may be provided by electronic mail or facsimile, or in the case of the CAISO may be publicly posted on the CAISO's internet web site.

**13.4 Immediate Action.** Unless, in the Interconnection Customer's reasonable judgment, immediate action is required, the Interconnection Customer shall obtain the consent of the CAISO and the Participating TO, such consent to not be unreasonably withheld, prior to performing any manual switching operations at the Large Generating Facility or the Interconnection Customer's Interconnection Facilities in response to an Emergency Condition declared by the Participating TO or CAISO or in response to any other emergency condition.

**13.5 CAISO and Participating TO Authority.**

**13.5.1 General.** The CAISO and Participating TO may take whatever actions or inactions, including issuance of dispatch instructions, with regard to the CAISO Controlled Grid or the Participating TO's Interconnection Facilities or Distribution System they deem necessary during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the CAISO Controlled Grid or the Participating TO's Interconnection Facilities or Distribution System, (iii) limit or prevent damage, and (iv) expedite restoration of service.

The Participating TO and the CAISO shall use Reasonable Efforts to minimize the effect of such actions or inactions on the Large Generating Facility or the Interconnection Customer's Interconnection Facilities. The Participating TO or the CAISO may, on the basis of technical considerations, require the Large Generating Facility to mitigate an Emergency Condition by taking actions necessary and limited in scope to remedy the Emergency Condition, including, but not limited to, directing the Interconnection Customer to shut-down, start-up, increase or decrease the real or reactive power output of the Large Generating Facility; implementing a reduction or disconnection pursuant to Article 13.5.2; directing the Interconnection Customer to assist with black start (if available) or restoration efforts; or altering the outage schedules of the Large Generating Facility and the Interconnection Customer's Interconnection Facilities. Interconnection Customer shall comply with all of the CAISO's Dispatch Instructions and Operating Instructions and Participating TO's dispatch instructions or Operating Instructions concerning Large Generating Facility real power and reactive power output within the manufacturer's design limitations of the Large Generating Facility's equipment that is in service and physically available for operation at the time, in compliance with Applicable Laws and Regulations.

**13.5.2 Reduction and Disconnection.** The Participating TO or the CAISO may reduce Interconnection Service or disconnect the Large Generating Facility or the Interconnection Customer's Interconnection Facilities when such reduction or disconnection is necessary under Good Utility Practice due to Emergency Conditions. These rights are separate and distinct from any right of curtailment of the CAISO pursuant to the CAISO Tariff. When the CAISO or Participating TO can schedule the reduction or disconnection in advance, the CAISO or Participating TO shall notify the Interconnection Customer of the reasons, timing and expected duration of the reduction or disconnection. The CAISO or Participating TO shall coordinate with the Interconnection Customer using Good Utility Practice to schedule the reduction or disconnection during periods of least impact to the Interconnection Customer and the CAISO and Participating TO. Any reduction or disconnection shall continue only for so long as reasonably necessary under Good Utility Practice. The Parties shall cooperate with each other to restore the Large Generating Facility, the Interconnection Facilities, and the CAISO Controlled Grid to their normal operating state as soon as practicable

consistent with Good Utility Practice.

**13.6 Interconnection Customer Authority.** Consistent with Good Utility Practice, this LGIA, and the CAISO Tariff, the Interconnection Customer may take actions or inactions with regard to the Large Generating Facility or the Interconnection Customer's Interconnection Facilities during an Emergency Condition in order to (i) preserve public health and safety, (ii) preserve the reliability of the Large Generating Facility or the Interconnection Customer's Interconnection Facilities, (iii) limit or prevent damage, and (iv) expedite restoration of service. Interconnection Customer shall use Reasonable Efforts to minimize the effect of such actions or inactions on the CAISO Controlled Grid and the Participating TO's Interconnection Facilities. The CAISO and Participating TO shall use Reasonable Efforts to assist Interconnection Customer in such actions.

**13.7 Limited Liability.** Except as otherwise provided in Article 11.6.1 of this LGIA, no Party shall be liable to any other Party for any action it takes in responding to an Emergency Condition so long as such action is made in good faith and is consistent with Good Utility Practice.

## Article 14. Regulatory Requirements and Governing Laws

**14.1 Regulatory Requirements.** Each Party's obligations under this LGIA shall be subject to its receipt of any required approval or certificate from one or more Governmental Authorities in the form and substance satisfactory to the applying Party, or the Party making any required filings with, or providing notice to, such Governmental Authorities, and the expiration of any time period associated therewith. Each Party shall in good faith seek and use its Reasonable Efforts to obtain such other approvals. Nothing in this LGIA shall require the Interconnection Customer to take any action that could result in its inability to obtain, or its loss of, status or exemption under the Federal Power Act or the Public Utility Holding Company Act of 1935, as amended, or the Public Utility Regulatory Policies Act of 1978, or the Energy Policy Act of 2005.

**14.2 Governing Law.**

**14.2.1** The validity, interpretation and performance of this LGIA and each of its provisions shall be governed by the laws of the state where the Point of Interconnection is located, without regard to its conflicts of law principles.

**14.2.2** This LGIA is subject to all Applicable Laws and Regulations.

**14.2.3** Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, rules, or regulations of a Governmental Authority.

## Article 15. Notices

**15.1 General.** Unless otherwise provided in this LGIA, any notice, demand or request required or permitted to be given by a Party to another and any instrument required or permitted to be tendered or delivered by a Party in writing to another shall be effective when delivered and may be so given, tendered or delivered, by recognized national courier, or by depositing the same with the United States Postal Service with postage prepaid, for delivery by certified or registered mail, addressed to the Party, or personally delivered to the Party, at the address set out in Appendix F, Addresses for Delivery of Notices and Billings.

A Party must update the information in Appendix F as information changes. A Party may change the notice information in this LGIA by giving five (5) Business Days written notice prior to the effective date of the change. Such changes shall not constitute an amendment to this LGIA.

**15.2 Billings and Payments.** Billings and payments shall be sent to the addresses set out in Appendix F.

**15.3 Alternative Forms of Notice.** Any notice or request required or permitted to be given by a Party to another and not required by this LGIA to be given in writing may be so given by telephone, facsimile or e-mail to the telephone numbers and e-mail addresses set out in Appendix F.

**15.4 Operations and Maintenance Notice.** Each Party shall notify the other Parties in writing of the identity of the person(s) that it designates as the point(s) of contact with respect to the implementation of Articles 9 and 10.

## Article 16. Force Majeure

**16.1 Force Majeure.**

**16.1.1** Economic hardship is not considered a Force Majeure event.

**16.1.2** No Party shall be considered to be in Default with respect to any obligation hereunder, (including obligations under Article 4), other than the obligation to pay money when due, if prevented from fulfilling such obligation by Force Majeure. A Party unable to fulfill any obligation hereunder (other than an obligation to pay money when due) by reason of Force Majeure shall give notice and the full particulars of such Force Majeure to the other Party in writing or by telephone as soon as reasonably possible after the occurrence of the cause relied upon. Telephone notices given pursuant to this Article shall be confirmed in writing as soon as reasonably possible and shall specifically state full particulars of the Force Majeure, the time and date when the Force Majeure occurred and when the Force Majeure is reasonably expected to cease. The Party affected shall exercise due diligence to remove such disability with reasonable dispatch, but shall not be required to accede or agree to any provision not satisfactory to it in order to settle and terminate a strike or other labor disturbance.

## Article 17. Default

**17.1 Default.**

**17.1.1 General.** No Default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of Force Majeure as defined in this LGIA or the result of an act or omission of the other Party. Upon a Breach, the affected non-Breaching Party(ies) shall give written notice of such Breach to the Breaching Party. Except as provided in Articles 11.5.1 and 17.1.2, the Breaching Party shall have thirty (30) Calendar Days from receipt of the Default notice within which to cure such Breach; provided however, if such Breach is not capable of cure within thirty (30) Calendar Days, the Breaching Party shall commence such cure within thirty (30) Calendar Days after notice and continuously and diligently complete such cure within ninety (90) Calendar Days from receipt of the Default notice; and, if cured within such time, the Breach specified in such notice shall cease to exist.

**17.1.2 Right to Terminate.** If a Breach is not cured as provided in this Article, or if a Breach is not capable of being cured within the period provided for herein, the affected non-Breaching Party(ies) shall have the right to declare a Default and terminate this LGIA by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not such Party(ies) terminates this LGIA, to recover from the Breaching Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this Article will survive termination of this LGIA.

**17.2 Violation of Operating Assumptions for Generating Facilities.** If the CAISO and Participating TO require the Interconnection Customer to memorialize the operating assumptions for the charging behavior of a Generating Facility that includes at least one electric storage resource in Appendix I of this LGIA, the CAISO may consider Interconnection Customer to be in Breach of

the LGIA if Interconnection Customer fails to operate the Generating Facility in accordance with those operating assumptions for charging behavior. However, if Interconnection Customer operates contrary to the operating assumptions for charging behavior specified in Appendix I of this LGIA at the direction of the CAISO, the CAISO will not consider Interconnection Customer in Breach of this LGIA.

**Article 18. Indemnity, Consequential Damages, and Insurance**

**18.1 Indemnity.** Each Party shall at all times indemnify, defend, and hold the other Parties harmless from, any and all Losses arising out of or resulting from another Party's action or inactions of its obligations under this LGIA on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the Indemnified Party.

**18.1.1 Indemnified Party.** If an Indemnified Party is entitled to indemnification under this Article 18 as a result of a claim by a third party, and the Indemnifying Party fails, after notice and reasonable opportunity to proceed under Article 18.1, to assume the defense of such claim, such Indemnified Party may at the expense of the Indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

**18.1.2 Indemnifying Party.** If an Indemnifying Party is obligated to indemnify and hold any Indemnified Party harmless under this Article 18, the amount owing to the Indemnified Party shall be the amount of such Indemnified Party's actual Loss, net of any insurance or other recovery.

**18.1.3 Indemnity Procedures.** Promptly after receipt by an Indemnified Party of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in Article 18.1 may apply, the Indemnified Party shall notify the Indemnifying Party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying Party.

The Indemnifying Party shall have the right to assume the defense thereof with counsel designated by such Indemnifying Party and reasonably satisfactory to the Indemnified Party. If the defendants in any such action include one or more Indemnified Parties and the Indemnifying Party and if the Indemnified Party reasonably concludes that there may be legal defenses available to it and/or other Indemnified Parties which are different from or additional to those available to the Indemnifying Party, the Indemnified Party shall have the right to select separate counsel to assert such legal defenses and to otherwise participate in the defense of such action on its own behalf. In such instances, the Indemnifying Party shall only be required to pay the fees and expenses of one additional attorney to represent an Indemnified Party or Indemnified Parties having such differing or additional legal defenses.

The Indemnified Party shall be entitled, at its expense, to participate in any such action, suit or proceeding, the defense of which has been assumed by the Indemnifying Party. Notwithstanding the foregoing, the Indemnifying Party (i) shall not be entitled to assume and control the defense of any such action, suit or proceedings if and to the extent that, in the opinion of the Indemnified Party and its counsel, such action, suit or proceeding involves the potential imposition of criminal liability on the Indemnified Party, or there exists a conflict or adversity of interest between the Indemnified Party and the Indemnifying Party, in such event the Indemnifying Party shall pay the reasonable expenses of the Indemnified Party, and (ii) shall not settle or consent to the entry of any judgment in any action, suit or proceeding without the consent of the Indemnified Party, which shall not be unreasonably withheld, conditioned or delayed.

**18.2 Consequential Damages.** Other than the liquidated damages heretofore described in Article 5.3, in no event shall any Party be liable under any provision of this LGIA for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to another Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

**18.3 Insurance.** As indicated below, the designated Party shall, at its own expense, maintain in force throughout the periods noted in this LGIA, and until released by the other Parties, the following minimum insurance coverages, with insurers rated no less than A- (with a minimum size rating of VII) by Bests' Insurance Guide and Key Ratings and authorized to do business in the state where the Point of Interconnection is located, except in the case of any insurance required to be carried by the CAISO, the State of California:

**18.3.1 Workers' Compensation Insurance and Employers' Liability.** The Participating TO and the Interconnection Customer shall maintain such coverage from the commencement of any Construction Activities providing statutory benefits for Workers Compensation coverage and coverage amounts of no less than One Million Dollars ($1,000,000) for employer's liability for each employee for bodily injury by accident and One Million Dollars ($1,000,000) for each employee for bodily injury by disease in accordance with the laws and regulations of the state in which the Point of Interconnection is located. The Participating TO shall provide the Interconnection Customer with evidence of such insurance coverage within thirty (30) Calendar Days of any request by the Interconnection Customer. The Interconnection Customer shall provide evidence of such insurance thirty (30) Calendar Days prior to entry by any employee or contractor or other person acting on the Interconnection Customer's behalf onto any construction site to perform any work related to the Interconnection Facilities or Generating Facility.

**18.3.2 Commercial General Liability Insurance**. The Participating TO and the Interconnection Customer shall maintain commercial general liability insurance coverage commencing within thirty (30) Calendar Days of the Effective Date of this LGIA, including coverage for premises and operations, bodily injury (including death), personal injury, property damage, products and completed operations coverage, coverage for explosion, collapse and underground hazards, independent contractors coverage, and (i) liability of Participating TO and the Interconnection Customer that would be imposed without the LGIA, or (ii) liability assumed by the Participating TO and the Interconnection Customer in a contract or agreement that is an "insured contract" under commercial general liability insurance policy. Such insurance shall include no cross liability exclusions or separation of insured clause endorsement exclusions, with minimum limits of One Million Dollars ($1,000,000) per occurrence/One Million Dollars ($1,000,000) aggregate. If the activities of the Interconnection Customer are being conducted through the actions of an Affiliate, then the Interconnection Customer may satisfy the insurance requirements of this Section 18.3.2 by providing evidence of insurance coverage carried by such Affiliate and showing the Participating TO and the CAISO as an additional insured only with respect to the LGIA, together with the Interconnection Customer's written representation to the Participating TO and the CAISO that the insured Affiliate is conducting all of the necessary pre-construction work. Within thirty (30) Calendar Days prior to the entry of any person on behalf of the Interconnection Customer onto any construction site to perform work related to the Interconnection Facilities or Generating Facility, the Interconnection Customer shall replace any evidence of Affiliate Insurance with evidence of such insurance carried by

the Interconnection Customer, naming the Participating TO and CAISO as additional insured only with respect to the LGIA.

**18.3.3** **Business Automobile Liability Insurance**. Prior to the entry of any such vehicles on any construction site in connection with work done by or on behalf of the Interconnection Customer, the Interconnection Customer shall provide evidence of coverage of owned and non-owned and hired vehicles, trailers or semi-trailers designed for travel on public roads, with a minimum, combined single limit of One Million Dollars ($1,000,000) per occurrence for bodily injury, including death, and property damage. The Interconnection Customer shall include the Participating TO and the CAISO as additional insured with respect to the LGIA on any such policies.

**18.3.4** **Excess Liability Insurance**. Commencing at the time of entry of any person on its behalf upon any construction site for the Network Upgrades, Interconnection Facilities, or Generating Facility, the Participating TO and the Interconnection Customer shall maintain Excess Liability insurance over and above the Employer's Liability Commercial General Liability and Business Automobile Liability Insurance coverage, with a minimum limit of Twenty Million Dollars ($20,000,000) per occurrence/Twenty Million Dollars ($20,000,000) aggregate. Such insurance carried by the Participating TO shall include the Interconnection Customer and CAISO as additional insured with respect to the LGIA, and such insurance carried by the Interconnection Customer shall include the Participating TO and CAISO as an additional insured with respect to the LGIA. The requirements of Section 18.3.2 and 18.3.4 may be met by any combination of general and excess liability insurance.

**18.3.5** The Commercial General Liability Insurance, Business Automobile Insurance and Excess Liability Insurance policies shall include the other Parties identified in the sections above, their parents, their subsidiaries, respective directors, officers, agents, servants and employees ("Other Party Group") and the CAISO as additional insured. All policies shall contain provisions whereby the insurers waive all rights of subrogation in accordance with the provisions of this LGIA against the Other Party Group. If any Party can reasonably demonstrate that coverage policies containing provisions for insurer waiver of subrogation rights, or advance notice are not commercially available, then the Parties shall meet and confer and mutually determine to (i) establish replacement or equivalent terms in lieu of subrogation or notice or (ii) waive the requirements that coverage(s) include such subrogation provision or require advance written notice from such insurers.

**18.3.6** The Commercial General Liability Insurance, Business Automobile Liability Insurance and Excess Liability Insurance policies shall contain provisions that specify that the policies are primary and non-contributory. Each Party shall be responsible for its respective deductibles or self-insured retentions.

**18.3.7** The Commercial General Liability Insurance, Business Automobile Liability Insurance and Excess Liability Insurance policies, if written on a Claims First Made Basis, shall be maintained in full force and effect for two (2) years after termination of this LGIA, which coverage may be in the form of extended reporting period coverage if agreed by the Parties.

**18.3.8** [Not Used.]

**18.3.9** Thirty (30) Calendar Days prior to the start of any work at the construction site related to Interconnection Facilities or Generating Facility under this LGIA, and as soon as practicable after the end of each fiscal year or at the renewal of the insurance policy and in any event within ninety (90) Calendar Days thereafter, the Participating TO and

the Interconnection Customer shall provide a certificate of insurance for all insurance required in this LGIA, executed by each insurer or by an authorized representative of each insurer.

**18.3.10** Notwithstanding the foregoing, each Party may self-insure

a) to meet the minimum insurance requirements of Article 18.3.1, to the extent that it maintains a self-insurance program that is a qualified self insurer within the state in which the Point of Interconnection is located, under the laws and regulations of such state; and

b) to meet the minimum insurance requirements of Articles 18.3.2 through 18.3.8 to the extent it maintains a self-insurance program; provided that, such Party's senior unsecured debt or issuer rating is BBB-, or better, as rated by Standard & Poor's and that its self-insurance program meets the minimum insurance requirements of Articles 18.3.2 through 18.3.8. For any period of time that a Party's senior unsecured debt rating and issuer rating are both unrated by Standard & Poor's or are both rated at less than BBB- by Standard & Poor's, such Party shall comply with the insurance requirements applicable to it under Articles 18.3.2 through 18.3.9.
c) in the event that a Party is permitted to self-insure pursuant to this Article 18.3.10, it shall notify the other Parties that it meets the requirements to self-insure and that its self-insurance program meets the minimum insurance requirements in a manner consistent with that specified in Article 18.3.9.

**18.3.11** The Parties agree to report to each other in writing as soon as practical all accidents or occurrences resulting in injuries to any person, including death, and any property damage greater than $25,000, including within the scope of coverage of such insurance whether or not such coverage is sought.

## Article 19. Assignment

**19.1** **Assignment.** This LGIA may be assigned by a Party only with the written consent of the other Parties; provided that a Party may assign this LGIA without the consent of the other Parties to any Affiliate of the assigning Party with an equal or greater credit rating and with the legal authority and operational ability to satisfy the obligations of the assigning Party under this LGIA; and provided further that the Interconnection Customer shall have the right to assign this LGIA, without the consent of the CAISO or Participating TO, for collateral security purposes to aid in providing financing for the Large Generating Facility, provided that the Interconnection Customer will promptly notify the CAISO and Participating TO of any such assignment. Any financing arrangement entered into by the Interconnection Customer pursuant to this Article will provide that prior to or upon the exercise of the secured party's, trustee's or mortgagee's assignment rights pursuant to said arrangement, the secured creditor, the trustee or mortgagee will notify the CAISO and Participating TO of the date and particulars of any such exercise of assignment right(s), including providing the CAISO and Participating TO with proof that it meets the requirements of Articles 11.5 and 18.3. Any attempted assignment that violates this Article is void and ineffective. Any assignment under this LGIA shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

The Interconnection Customer may assign Surplus Interconnection Service pursuant to Section 3.4 of the RIS. The CAISO, Participating TO, and original Interconnection Customer will work in good faith to amend this GIA to reflect the transfer of Surplus Interconnection Service before the execution of the assignee's GIA. The assignee must execute a separate GIA with the CAISO and Participating TO to memorialize its Interconnection Service.

## Article 20. Severability

**20.1 Severability.** If any provision in this LGIA is finally determined to be invalid, void or unenforceable by any court or other Governmental Authority having jurisdiction, such determination shall not invalidate, void or make unenforceable any other provision, agreement or covenant of this LGIA; provided that if the Interconnection Customer (or any third party, but only if such third party is not acting at the direction of the Participating TO or CAISO) seeks and obtains such a final determination with respect to any provision of the Alternate Option (Article 5.1.2), or the Negotiated Option (Article 5.1.4), then none of the provisions of Article 5.1.2 or 5.1.4 shall thereafter have any force or effect and the Parties' rights and obligations shall be governed solely by the Standard Option (Article 5.1.1).

## Article 21. Comparability

**21.1 Comparability.** The Parties will comply with all applicable comparability and code of conduct laws, rules and regulations, as amended from time to time.

## Article 22. Confidentiality

**22.1 Confidentiality.** Confidential Information shall include, without limitation, all information relating to a Party's technology, research and development, business affairs, and pricing, and any information supplied by any of the Parties to the other Parties prior to the execution of this LGIA.

Information is Confidential Information only if it is clearly designated or marked in writing as confidential on the face of the document, or, if the information is conveyed orally or by inspection, if the Party providing the information orally informs the Parties receiving the information that the information is confidential.

If requested by any Party, the other Parties shall provide in writing, the basis for asserting that the information referred to in this Article 22 warrants confidential treatment, and the requesting Party may disclose such writing to the appropriate Governmental Authority. Each Party shall be responsible for the costs associated with affording confidential treatment to its information.

**22.1.1 Term.** During the term of this LGIA, and for a period of three (3) years after the expiration or termination of this LGIA, except as otherwise provided in this Article 22, each Party shall hold in confidence and shall not disclose to any person Confidential Information.

**22.1.2 Scope.** Confidential Information shall not include information that the receiving Party can demonstrate: (1) is generally available to the public other than as a result of a disclosure by the receiving Party; (2) was in the lawful possession of the receiving Party on a non-confidential basis before receiving it from the disclosing Party; (3) was supplied to the receiving Party without restriction by a third party, who, to the knowledge of the receiving Party after due inquiry, was under no obligation to the disclosing Party to keep such information confidential; (4) was independently developed by the receiving Party without reference to Confidential Information of the disclosing Party; (5) is, or becomes, publicly known, through no wrongful act or omission of the receiving Party or Breach of this LGIA; or (6) is required, in accordance with Article 22.1.7 of this LGIA, Order of Disclosure, to be disclosed by any Governmental Authority or is otherwise required to be disclosed by law or subpoena, or is necessary in any legal proceeding establishing rights and obligations under this LGIA. Information designated as Confidential Information will no longer be deemed confidential if the Party that designated the information as confidential notifies the other Parties that it no longer is confidential.

**22.1.3 Release of Confidential Information.** No Party shall release or disclose Confidential

Information to any other person, except to its employees, consultants, Affiliates (limited by the Standards of Conduct requirements set forth in Part 358 of FERC's Regulations, 18 C.F.R. 358), subcontractors, or to parties who may be or considering providing financing to or equity participation with the Interconnection Customer, or to potential purchasers or assignees of the Interconnection Customer, on a need-to-know basis in connection with this LGIA, unless such person has first been advised of the confidentiality provisions of this Article 22 and has agreed to comply with such provisions. Notwithstanding the foregoing, a Party providing Confidential Information to any person shall remain primarily responsible for any release of Confidential Information in contravention of this Article 22.

**22.1.4 Rights.** Each Party retains all rights, title, and interest in the Confidential Information that each Party discloses to the other Parties. The disclosure by each Party to the other Parties of Confidential Information shall not be deemed a waiver by a Party or any other person or entity of the right to protect the Confidential Information from public disclosure.

**22.1.5 No Warranties.** The mere fact that a Party has provided Confidential Information does not constitute a warranty or representation as to its accuracy or completeness. In addition, by supplying Confidential Information, no Party obligates itself to provide any particular information or Confidential Information to the other Parties nor to enter into any further agreements or proceed with any other relationship or joint venture.

**22.1.6 Standard of Care.** Each Party shall use at least the same standard of care to protect Confidential Information it receives as it uses to protect its own Confidential Information from unauthorized disclosure, publication or dissemination. Each Party may use Confidential Information solely to fulfill its obligations to the other Parties under this LGIA or its regulatory requirements.

**22.1.7 Order of Disclosure.** If a court or a Government Authority or entity with the right, power, and apparent authority to do so requests or requires any Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Party shall provide the other Parties with prompt notice of such request(s) or requirement(s) so that the other Parties may seek an appropriate protective order or waive compliance with the terms of this LGIA. Notwithstanding the absence of a protective order or waiver, the Party may disclose such Confidential Information which, in the opinion of its counsel, the Party is legally compelled to disclose. Each Party will use Reasonable Efforts to obtain reliable assurance that confidential treatment will be accorded any Confidential Information so furnished.

**22.1.8 Termination of Agreement.** Upon termination of this LGIA for any reason, each Party shall, within ten (10) Calendar Days of receipt of a written request from another Party, use Reasonable Efforts to destroy, erase, or delete (with such destruction, erasure, and deletion certified in writing to the other Party) or return to the other Party, without retaining copies thereof, any and all written or electronic Confidential Information received from the other Party.

**22.1.9 Remedies.** The Parties agree that monetary damages would be inadequate to compensate a Party for another Party's Breach of its obligations under this Article 22. Each Party accordingly agrees that the other Parties shall be entitled to equitable relief, by way of injunction or otherwise, if the first Party Breaches or threatens to Breach its obligations under this Article 22, which equitable relief shall be granted without bond or proof of damages, and the receiving Party shall not plead in defense that there would be an adequate remedy at law. Such remedy shall not be deemed an exclusive remedy for the Breach of this Article 22, but shall be in addition to all other remedies available at law

or in equity. The Parties further acknowledge and agree that the covenants contained herein are necessary for the protection of legitimate business interests and are reasonable in scope. No Party, however, shall be liable for indirect, incidental, or consequential or punitive damages of any nature or kind resulting from or arising in connection with this Article 22.

**22.1.10 Disclosure to FERC, its Staff, or a State.** Notwithstanding anything in this Article 22 to the contrary, and pursuant to 18 C.F.R. section 1b.20, if FERC or its staff, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to this LGIA, the Party shall provide the requested information to FERC or its staff, within the time provided for in the request for information. In providing the information to FERC or its staff, the Party must, consistent with 18 C.F.R. section 388.112, request that the information be treated as confidential and non-public by FERC and its staff and that the information be withheld from public disclosure. Parties are prohibited from notifying the other Parties to this LGIA prior to the release of the Confidential Information to FERC or its staff. The Party shall notify the other Parties to the LGIA when it is notified by FERC or its staff that a request to release Confidential Information has been received by FERC, at which time any of the Parties may respond before such information would be made public, pursuant to 18 C.F.R. section 388.112. Requests from a state regulatory body conducting a confidential investigation shall be treated in a similar manner if consistent with the applicable state rules and regulations.

**22.1.11** Subject to the exception in Article 22.1.10, Confidential Information shall not be disclosed by the other Parties to any person not employed or retained by the other Parties, except to the extent disclosure is (i) required by law; (ii) reasonably deemed by the disclosing Party to be required to be disclosed in connection with a dispute between or among the Parties, or the defense of litigation or dispute; (iii) otherwise permitted by consent of the other Parties, such consent not to be unreasonably withheld; or (iv) necessary to fulfill its obligations under this LGIA or as a transmission service provider or a Balancing Authority including disclosing the Confidential Information to an RTO or ISO or to a regional or national reliability organization. The Party asserting confidentiality shall notify the other Parties in writing of the information it claims is confidential. Prior to any disclosures of another Party's Confidential Information under this subparagraph, or if any third party or Governmental Authority makes any request or demand for any of the information described in this subparagraph, the disclosing Party agrees to promptly notify the other Party in writing and agrees to assert confidentiality and cooperate with the other Party in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order or other reasonable measures.

## Article 23. Environmental Releases

**23.1** Each Party shall notify the other Parties, first orally and then in writing, of the release of any Hazardous Substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Large Generating Facility or the Interconnection Facilities, each of which may reasonably be expected to affect the other Parties. The notifying Party shall: (i) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than twenty-four hours after such Party becomes aware of the occurrence; and (ii) promptly furnish to the other Parties copies of any publicly available reports filed with any Governmental Authorities addressing such events.

## Article 24. Information Requirements

**24.1 Information Acquisition.** The Participating TO and the Interconnection Customer shall submit specific information regarding the electrical characteristics of their respective facilities to each other as described below and in accordance with Applicable Reliability Standards.

**24.2 Information Submission by Participating TO.** The initial information submission by the Participating TO shall occur no later than one hundred eighty (180) Calendar Days prior to Trial Operation and shall include the Participating TO's Transmission System information necessary to allow the Interconnection Customer to select equipment and meet any system protection and stability requirements, unless otherwise agreed to by the Participating TO and the Interconnection Customer. On a monthly basis the Participating TO shall provide the Interconnection Customer and the CAISO a status report on the construction and installation of the Participating TO's Interconnection Facilities and Network Upgrades, including, but not limited to, the following information: (1) progress to date; (2) a description of the activities since the last report; (3) a description of the action items for the next period; and (4) the delivery status of equipment ordered.

**24.3 Updated Information Submission by Interconnection Customer.** The updated information submission by the Interconnection Customer, including manufacturer information, shall occur no later than one hundred eighty (180) Calendar Days prior to the Trial Operation. The Interconnection Customer shall submit a completed copy of the Electric Generating Unit data requirements contained in Appendix 1 to the RIS. It shall also include any additional information provided to the Participating TO and the CAISO for the Interconnection Studies. Information in this submission shall be the most current Electric Generating Unit design or expected performance data. Information submitted for stability models shall be compatible with the Participating TO and CAISO standard models. If there is no compatible model, the Interconnection Customer will work with a consultant mutually agreed to by the Parties to develop and supply a standard model and associated information.

If the Interconnection Customer's data is materially different from what was originally provided to the Participating TO and the CAISO for the Interconnection Studies, then the Participating TO and the CAISO will conduct appropriate studies pursuant to the RIS to determine the impact on the Participating TO's Transmission System and affected portions of the CAISO Controlled Grid based on the actual data submitted pursuant to this Article 24.3. The Interconnection Customer shall not begin Trial Operation until such studies are completed and all other requirements of this LGIA are satisfied.

**24.4 Information Supplementation.** Prior to the Trial Operation date, the Parties shall supplement their information submissions described above in this Article 24 with any and all "as-built" Electric Generating Unit information or "as-tested" performance information that differs from the initial submissions or, alternatively, written confirmation that no such differences exist. The Interconnection Customer shall conduct tests on the Electric Generating Unit as required by Good Utility Practice such as an open circuit "step voltage" test on the Electric Generating Unit to verify proper operation of the Electric Generating Unit's automatic voltage regulator.

Unless otherwise agreed, the test conditions shall include: (1) Electric Generating Unit at synchronous speed; (2) automatic voltage regulator on and in voltage control mode; and (3) a five percent (5 percent) change in Electric Generating Unit terminal voltage initiated by a change in the voltage regulators reference voltage. The Interconnection Customer shall provide validated test recordings showing the responses of Electric Generating Unit terminal and field voltages. In the event that direct recordings of these voltages is impractical, recordings of other voltages or currents that mirror the response of the Electric Generating Unit's terminal or field voltage are acceptable if information necessary to translate these alternate quantities to actual Electric Generating Unit terminal or field voltages is provided. Electric Generating Unit testing shall be conducted and results provided to the Participating TO and the CAISO for each individual Electric Generating Unit in a station.

Subsequent to the Commercial Operation Date, the Interconnection Customer shall provide the Participating TO and the CAISO any information changes due to equipment replacement, repair,

or adjustment. The Participating TO shall provide the Interconnection Customer any information changes due to equipment replacement, repair or adjustment in the directly connected substation or any adjacent Participating TO-owned substation that may affect the Interconnection Customer's Interconnection Facilities equipment ratings, protection or operating requirements. The Parties shall provide such information pursuant to Article 5.19.

## Article 25. Information Access and Audit Rights

**25.1 Information Access.** Each Party (the "disclosing Party") shall make available to the other Party information that is in the possession of the disclosing Party and is necessary in order for the other Party to: (i) verify the costs incurred by the disclosing Party for which the other Party is responsible under this LGIA; and (ii) carry out its obligations and responsibilities under this LGIA. The Parties shall not use such information for purposes other than those set forth in this Article 25.1 and to enforce their rights under this LGIA. Nothing in this Article 25 shall obligate the CAISO to make available to a Party any third party information in its possession or control if making such third party information available would violate a CAISO Tariff restriction on the use or disclosure of such third party information.

**25.2 Reporting of Non-Force Majeure Events.** Each Party (the "notifying Party") shall notify the other Parties when the notifying Party becomes aware of its inability to comply with the provisions of this LGIA for a reason other than a Force Majeure event. The Parties agree to cooperate with each other and provide necessary information regarding such inability to comply, including the date, duration, reason for the inability to comply, and corrective actions taken or planned to be taken with respect to such inability to comply. Notwithstanding the foregoing, notification, cooperation or information provided under this Article shall not entitle the Party receiving such notification to allege a cause for anticipatory breach of this LGIA.

**25.3 Audit Rights.** Subject to the requirements of confidentiality under Article 22 of this LGIA, the Parties' audit rights shall include audits of a Party's costs pertaining to such Party's performance or satisfaction of obligations owed to the other Party under this LGIA, calculation of invoiced amounts, the CAISO's efforts to allocate responsibility for the provision of reactive support to the CAISO Controlled Grid, the CAISO's efforts to allocate responsibility for interruption or reduction of generation on the CAISO Controlled Grid, and each such Party's actions in an Emergency Condition.

**25.3.1** The Interconnection Customer and the Participating TO shall each have the right, during normal business hours, and upon prior reasonable notice to the other Party, to audit at its own expense the other Party's accounts and records pertaining to either such Party's performance or either such Party's satisfaction of obligations owed to the other Party under this LGIA. Subject to Article 25.3.2, any audit authorized by this Article shall be performed at the offices where such accounts and records are maintained and shall be limited to those portions of such accounts and records that relate to each such Party's performance and satisfaction of obligations under this LGIA. Each such Party shall keep such accounts and records for a period equivalent to the audit rights periods described in Article 25.4.

**25.3.2** Notwithstanding anything to the contrary in Article 25.3, each Party's rights to audit the CAISO's accounts and records shall be as set forth in Section 22.1 of the CAISO Tariff.

**25.4 Audit Rights Periods.**

**25.4.1 Audit Rights Period for Construction-Related Accounts and Records.** Accounts and records related to the design, engineering, procurement, and construction of Participating TO's Interconnection Facilities, Network Upgrades, and Distribution Upgrades constructed by the Participating TO shall be subject to audit for a period of twenty-four

months following the Participating TO's issuance of a final invoice in accordance with Article 12.2. Accounts and records related to the design, engineering, procurement, and construction of Participating TO's Interconnection Facilities and/or Stand Alone Network Upgrades constructed by the Interconnection Customer shall be subject to audit and verification by the Participating TO and the CAISO for a period of twenty-four months following the Interconnection Customer's issuance of a final invoice in accordance with Article 5.2(8).

**25.4.2 Audit Rights Period for All Other Accounts and Records.** Accounts and records related to a Party's performance or satisfaction of all obligations under this LGIA other than those described in Article 25.4.1 shall be subject to audit as follows: (i) for an audit relating to cost obligations, the applicable audit rights period shall be twenty-four months after the auditing Party's receipt of an invoice giving rise to such cost obligations; and (ii) for an audit relating to all other obligations, the applicable audit rights period shall be twenty-four months after the event for which the audit is sought; provided that each Party's rights to audit the CAISO's accounts and records shall be as set forth in Section 22.1 of the CAISO Tariff.

**25.5 Audit Results.** If an audit by the Interconnection Customer or the Participating TO determines that an overpayment or an underpayment has occurred with respect to the other Party, a notice of such overpayment or underpayment shall be given to the other Party together with those records from the audit which supports such determination. The Party that is owed payment shall render an invoice to the other Party and such invoice shall be paid pursuant to Article 12 hereof.

**25.5.1** Notwithstanding anything to the contrary in Article 25.5, the Interconnection Customer's and Participating TO's rights to audit the CAISO's accounts and records shall be as set forth in Section 22.1 of the CAISO Tariff, and the CAISO's process for remedying an overpayment or underpayment shall be as set forth in the CAISO Tariff.

## Article 26. Subcontractors

**26.1 General.** Nothing in this LGIA shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this LGIA; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this LGIA in providing such services and each Party shall remain primarily liable to the other Party for the performance of such subcontractor.

**26.2 Responsibility of Principal.** The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this LGIA. The hiring Party shall be fully responsible to the other Parties for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall the CAISO or Participating TO be liable for the actions or inactions of the Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under Article 5 of this LGIA. Any applicable obligation imposed by this LGIA upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

**26.3 No Limitation by Insurance.** The obligations under this Article 26 will not be limited in any way by any limitation of subcontractor's insurance.

## Article 27. Disputes

All disputes arising out of or in connection with this LGIA whereby relief is sought by or from the CAISO shall be settled in accordance with the provisions of Article 13 of the CAISO Tariff, except that references to the CAISO Tariff in such Article 13 of the CAISO Tariff shall be read as references to this LGIA. Disputes arising out of or in connection with this LGIA not subject to provisions of Article 13 of the CAISO

Tariff shall be resolved as follows:

**27.1 Submission.** In the event either Party has a dispute, or asserts a claim, that arises out of or in connection with this LGIA or its performance, such Party (the "disputing Party") shall provide the other Party with written notice of the dispute or claim ("Notice of Dispute"). Such dispute or claim shall be referred to a designated senior representative of each Party for resolution on an informal basis as promptly as practicable after receipt of the Notice of Dispute by the other Party. In the event the designated representatives are unable to resolve the claim or dispute through unassisted or assisted negotiations within thirty (30) Calendar Days of the other Party's receipt of the Notice of Dispute, such claim or dispute may, upon mutual agreement of the Parties, be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below. In the event the Parties do not agree to submit such claim or dispute to arbitration, each Party may exercise whatever rights and remedies it may have in equity or at law consistent with the terms of this LGIA.

**27.2 External Arbitration Procedures.** Any arbitration initiated under this LGIA shall be conducted before a single neutral arbitrator appointed by the Parties. If the Parties fail to agree upon a single arbitrator within ten (10) Calendar Days of the submission of the dispute to arbitration, each Party shall choose one arbitrator who shall sit on a three-member arbitration panel. The two arbitrators so chosen shall within twenty (20) Calendar Days select a third arbitrator to chair the arbitration panel. In either case, the arbitrators shall be knowledgeable in electric utility matters, including electric transmission and bulk power issues, and shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the Parties an opportunity to be heard and, except as otherwise provided herein, shall conduct the arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association ("Arbitration Rules") and any applicable FERC regulations; provided, however, in the event of a conflict between the Arbitration Rules and the terms of this Article 27, the terms of this Article 27 shall prevail.

**27.3 Arbitration Decisions.** Unless otherwise agreed by the Parties, the arbitrator(s) shall render a decision within ninety (90) Calendar Days of appointment and shall notify the Parties in writing of such decision and the reasons therefor. The arbitrator(s) shall be authorized only to interpret and apply the provisions of this LGIA and shall have no power to modify or change any provision of this Agreement in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court having jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in the Federal Arbitration Act or the Administrative Dispute Resolution Act. The final decision of the arbitrator(s) must also be filed with FERC if it affects jurisdictional rates, terms and conditions of service, Interconnection Facilities, or Network Upgrades.

**27.4 Costs.** Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable: (1) the cost of the arbitrator chosen by the Party to sit on the three member panel and one half of the cost of the third arbitrator chosen; or (2) one half the cost of the single arbitrator jointly chosen by the Parties.

## Article 28. Representations, Warranties and Covenants

**28.1 General.** Each Party makes the following representations, warranties and covenants:

**28.1.1 Good Standing.** Such Party is duly organized, validly existing and in good standing under the laws of the state in which it is organized, formed, or incorporated, as applicable; that it is qualified to do business in the state or states in which the Large Generating Facility, Interconnection Facilities and Network Upgrades owned by such Party, as applicable, are located; and that it has the corporate power and authority to

own its properties, to carry on its business as now being conducted and to enter into this LGIA and carry out the transactions contemplated hereby and perform and carry out all covenants and obligations on its part to be performed under and pursuant to this LGIA.

**28.1.2 Authority.** Such Party has the right, power and authority to enter into this LGIA, to become a Party hereto and to perform its obligations hereunder. This LGIA is a legal, valid and binding obligation of such Party, enforceable against such Party in accordance with its terms, except as the enforceability thereof may be limited by applicable bankruptcy, insolvency, reorganization or other similar laws affecting creditors' rights generally and by general equitable principles (regardless of whether enforceability is sought in a proceeding in equity or at law).

**28.1.3 No Conflict.** The execution, delivery and performance of this LGIA does not violate or conflict with the organizational or formation documents, or bylaws or operating agreement, of such Party, or any judgment, license, permit, order, material agreement or instrument applicable to or binding upon such Party or any of its assets.

**28.1.4 Consent and Approval.** Such Party has sought or obtained, or, in accordance with this LGIA will seek or obtain, each consent, approval, authorization, order, or acceptance by any Governmental Authority in connection with the execution, delivery and performance of this LGIA, and it will provide to any Governmental Authority notice of any actions under this LGIA that are required by Applicable Laws and Regulations.

## Article 29. [Reserved]

## Article 30. Miscellaneous

**30.1 Binding Effect.** This LGIA and the rights and obligations hereof, shall be binding upon and shall inure to the benefit of the successors and assigns of the Parties hereto.

**30.2 Conflicts.** In the event of a conflict between the body of this LGIA and any attachment, appendices or exhibits hereto, the terms and provisions of the body of this LGIA shall prevail and be deemed the final intent of the Parties.

**30.3 Rules of Interpretation.** This LGIA, unless a clear contrary intention appears, shall be construed and interpreted as follows: (1) the singular number includes the plural number and vice versa; (2) reference to any person includes such person's successors and assigns but, in the case of a Party, only if such successors and assigns are permitted by this LGIA, and reference to a person in a particular capacity excludes such person in any other capacity or individually; (3) reference to any agreement (including this LGIA), document, instrument or tariff means such agreement, document, instrument, or tariff as amended or modified and in effect from time to time in accordance with the terms thereof and, if applicable, the terms hereof; (4) reference to any Applicable Laws and Regulations means such Applicable Laws and Regulations as amended, modified, codified, or reenacted, in whole or in part, and in effect from time to time, including, if applicable, rules and regulations promulgated thereunder; (5) unless expressly stated otherwise, reference to any Article, Section or Appendix means such Article of this LGIA or such Appendix to this LGIA, or such Section to the RIS or such Appendix to the RIS, as the case may be; (6) "hereunder", "hereof", "herein", "hereto" and words of similar import shall be deemed references to this LGIA as a whole and not to any particular Article or other provision hereof or thereof; (7) "including" (and with correlative meaning "include") means including without limiting the generality of any description preceding such term; and (8) relative to the determination of any period of time, "from" means "from and including", "to" means "to but excluding" and "through" means "through and including".

**30.4 Entire Agreement.** This LGIA, including all Appendices and Schedules attached hereto, constitutes the entire agreement among the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between or among the Parties with respect to the subject matter of this LGIA. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this LGIA.

**30.5 No Third Party Beneficiaries.** This LGIA is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and, where permitted, their assigns.

**30.6 Waiver.** The failure of a Party to this LGIA to insist, on any occasion, upon strict performance of any provision of this LGIA will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

Any waiver at any time by either Party of its rights with respect to this LGIA shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this LGIA. Termination or Default of this LGIA for any reason by the Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Participating TO. Any waiver of this LGIA shall, if requested, be provided in writing.

**30.7 Headings.** The descriptive headings of the various Articles of this LGIA have been inserted for convenience of reference only and are of no significance in the interpretation or construction of this LGIA.

**30.8 Multiple Counterparts.** This LGIA may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

**30.9 Amendment.** The Parties may by mutual agreement amend this LGIA by a written instrument duly executed by all of the Parties. Such amendment shall become effective and a part of this LGIA upon satisfaction of all Applicable Laws and Regulations.

**30.10 Modification by the Parties.** The Parties may by mutual agreement amend the Appendices to this LGIA by a written instrument duly executed by all of the Parties. Such amendment shall become effective and a part of this LGIA upon satisfaction of all Applicable Laws and Regulations.

**30.11 Reservation of Rights.** The CAISO and Participating TO shall each have the right to make a unilateral filing with FERC to modify this LGIA pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following Articles and Appendices of this LGIA and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these Articles and Appendices:

> Recitals, 1, 2.1, 2.2, 2.3, 2.4, 2.6, 3.1, 3.3, 4.1, 4.2, 4.3, 4.4, 5 preamble, 5.4, 5.7, 5.8, 5.9, 5.12, 5.13, 5.18, 5.19.1, 7.1, 7.2, 8, 9.1, 9.2, 9.3, 9.5, 9.6, 9.7, 9.8, 9.10, 10.3, 11.4, 12.1, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24.3, 24.4, 25.1, 25.2, 25.3 (excluding subparts), 25.4.2, 26, 28, 29, 30, Appendix D, Appendix F, Appendix G, and any other Article not reserved exclusively to the Participating TO or the CAISO below.

The Participating TO shall have the exclusive right to make a unilateral filing with FERC to modify this LGIA pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following Articles and Appendices of

this LGIA and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these Articles and Appendices:

2.5, 5.1, 5.2, 5.3, 5.5, 5.6, 5.10, 5.11, 5.14, 5.15, 5.16, 5.17, 5.19 (excluding 5.19.1), 6, 7.3, 9.4, 9.9, 10.1, 10.2, 10.4, 10.5, 11.1, 11.2, 11.3, 11.5, 12.2, 12.3, 12.4, 24.1, 24.2, 25.3.1, 25.4.1, 25.5 (excluding 25.5.1), 27 (excluding preamble), Appendix A, Appendix B, Appendix C, and Appendix E.

The CAISO shall have the exclusive right to make a unilateral filing with FERC to modify this LGIA pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following Articles of this LGIA and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these Articles:

3.2, 4.5, 11.6, 25.3.2, 25.5.1, and 27 preamble.

The Interconnection Customer, the CAISO, and the Participating TO shall have the right to make a unilateral filing with FERC to modify this LGIA pursuant to section 206 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder; provided that each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this LGIA shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations thereunder, except to the extent that the Parties otherwise mutually agree as provided herein.

**30.12 No Partnership.** This LGIA shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership among the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

**30.13 Joint and Several Obligations.** Except as otherwise provided in this LGIA, the obligations of the CAISO, the Participating TO, and the Interconnection Customer are several, and are neither joint nor joint and several.

**IN WITNESS WHEREOF,** the Parties have executed this LGIA in multiple originals, each of which shall constitute and be an original effective agreement among the Parties.

**[Insert name of Interconnection Customer]**

By: _____

Name: _____

Title: _____

Date: _____

**[Insert name of Participating TO]**

By: _____

Name: _____

Title: _____

Date: _____

**California Independent System Operator Corporation**

By: _____

Name: _____

Title: _____

Date: _____

**Appendices to LGIA**

Appendix A Interconnection Facilities, Network Upgrades and Distribution Upgrades

Appendix B Milestones

Appendix C Interconnection Details

Appendix D Security Arrangements Details

Appendix E Commercial Operation Date

Appendix F Addresses for Delivery of Notices and Billings

Appendix G Interconnection Customer's Share of Costs of Network Upgrades for Applicable Project Group

Appendix H Interconnection Requirements for an Asynchronous Generating Facility

Appendix I Operating Assumptions for Generating Facility

**Appendix A**

**Interconnection Facilities, Network Upgrades and Distribution Upgrades**

**1. Interconnection Facilities:**

**(a) [insert Interconnection Customer's Interconnection Facilities]:**

**(b) [insert Participating TO's Interconnection Facilities]:**

**2. Network Upgrades:**

**(a) [insert Stand Alone Network Upgrades]:**

**(b) [insert Other Network Upgrades]:**

**(i) [insert Participating TO's Reliability Network Upgrades]**

**(ii) [insert Participating TO's Delivery Network Upgrades]**

**3. Distribution Upgrades:**

**Appendix B**

**Milestones**

**Site Control**

Interconnection Customer with qualifying regulatory limitations must demonstrate 100% Site Control by {insert date one hundred eighty (180) days from the effective date of this LGIA} or the LGIA may be terminated per Article 17 (Default) of this LGIA and the Interconnection Customer may be subject to Withdrawal Penalties per Section 3.8 of Appendix KK to the CAISO Tariff (Withdrawal Penalties).]

**Appendix C**

**Interconnection Details**

**Appendix D**

**Security Arrangements Details**

Infrastructure security of CAISO Controlled Grid equipment and operations and control hardware and software is essential to ensure day-to-day CAISO Controlled Grid reliability and operational security. FERC will expect the CAISO, all Participating TOs, market participants, and Interconnection Customers interconnected to the CAISO Controlled Grid to comply with Applicable Reliability Criteria. All public utilities will be expected to meet basic standards for system infrastructure and operational security, including physical, operational, and cyber-security practices.

The Interconnection Customer shall meet the requirements for security implemented pursuant to the CAISO Tariff, including the CAISO's standards for information security posted on the CAISO's internet web site at the following internet address: http://www.caiso.com/pubinfo/info-security/index.html.

## Appendix E

[This Appendix E sets forth a form of letter to be provided by the Interconnection Customer to the CAISO and Participating TO to provide formal notice of the Commercial Operation of an Electric Generating Unit.]

**[Date]**

**[CAISO Address]**

**[Participating TO Address]**

Re: _____ Electric Generating Unit

Dear _____:

On **[Date] [Interconnection Customer]** has completed Trial Operation of Unit No. ___. This letter confirms that [Interconnection Customer] commenced Commercial Operation of Unit No. ___ at the Electric Generating Unit, effective as of **[Date plus one day]** and that [Interconnection Customer] provided the CAISO's operations personnel advance notice of its intended Commercial Operation Date no less than five Business Days prior to that date.

Thank you.

**[Signature]**

**[Interconnection Customer Representative]**

## Appendix F

**Addresses for Delivery of Notices and Billings**

**Notices:**

Participating TO:

[To be supplied.]

Interconnection Customer:

[To be supplied.]

CAISO:

[To be supplied.]

**Billings and Payments:**

Participating TO:

[To be supplied.]

Interconnection Customer:

[To be supplied.]

CAISO:

[To be supplied.]

**Alternative Forms of Delivery of Notices (telephone, facsimile or e-mail):**

Participating TO:

[To be supplied.]

Interconnection Customer:

[To be supplied.]

CAISO:

[To be supplied.]

**Appendix G**

**Interconnection Customer's Share of Costs of Network Upgrades for Applicable Project Group**

## Appendix H

## INTERCONNECTION REQUIREMENTS FOR AN ASYNCHRONOUS GENERATING FACILITY

Appendix H sets forth interconnection requirements specific to all Asynchronous Generating Facilities. Except as provided in Section 25.4.2 of the CAISO tariff, existing individual generating units of an Asynchronous Generating Facility that are, or have been, interconnected to the CAISO Controlled Grid at the same location are exempt from the requirements of this Appendix H for the remaining life of the existing generating unit.

### A. Technical Requirements Applicable to Asynchronous Generating Facilities

#### i. Voltage Ride-Through Capability

An Asynchronous Generating Facility shall be able to remain online during voltage disturbances up to the time periods and associated voltage levels set forth in the requirements below.

1. An Asynchronous Generating Facility shall remain online for the voltage disturbance caused by any fault on the transmission grid, or within the Asynchronous Generating Facility between the Point of Interconnection and the high voltage terminals of the Asynchronous Generating Facility's step up transformer, having a duration equal to the lesser of the normal three-phase fault clearing time (4-9 cycles) or one-hundred fifty (150) milliseconds, plus any subsequent post-fault voltage recovery to the final steady-state post-fault voltage unless clearing the fault effectively disconnects the generator from the system. Clearing time shall be based on the maximum normal clearing time associated with any three-phase fault location that reduces the voltage at the Asynchronous Generating Facility's Point of Interconnection to 0.2 per-unit of nominal voltage or less, independent of any fault current contribution from the Asynchronous Generating Facility.

2. An Asynchronous Generating Facility shall remain online for any voltage disturbance caused by a single-phase fault on the transmission grid, or within the Asynchronous Generating Facility between the Point of Interconnection and the high voltage terminals of the Asynchronous Generating Facility's step up transformer, with delayed clearing, plus any subsequent post-fault voltage recovery to the final steady-state post-fault voltage unless clearing the fault effectively disconnects the generator from the system. Clearing time shall be based on the maximum backup clearing time associated with a single point of failure (protection or breaker failure) for any single-phase fault location that reduces any phase-to-ground or phase-to-phase voltage at the Asynchronous Generating Facility's Point of Interconnection to 0.2 per-unit of nominal voltage or less, independent of any fault current contribution from the Asynchronous Generating Facility.

3. Remaining on-line shall be defined as continuous connection between the Point of Interconnection and the Asynchronous Generating Facility's units, without any mechanical isolation. Momentary cessation (namely, ceasing to inject current during a fault without mechanical isolation) is prohibited unless transient high voltage conditions rise to 1.20 per unit or more. For transient low voltage conditions, the Asynchronous Generating Facility's inverters will inject reactive current. The level of this reactive current must be directionally proportional to the decrease in per unit voltage at the inverter AC terminals. The inverter must produce full reactive current capability when the AC voltage at the inverter terminals drops to a level of 0.50 per unit or below. The Asynchronous Generating Facility must continue to operate and absorb reactive current for transient voltage conditions between 1.10 and 1.20 per unit.

   Upon the cessation of transient voltage conditions and the return of the grid to normal operating voltage ($0.90 < V < 1.10$ per unit), the Asynchronous Generating Facility's inverters automatically must transition to normal active (real power) current injection. The Asynchronous Generating Facility's inverters must ramp up to inject active (real power) current with a minimum ramping rate

of at least 100% per second (from no output to full available output). The total time to complete the transition from reactive current injection or absorption to normal active (real power) current injection must be one second or less. The total time to return from momentary cessation, if used, during transient high voltage conditions over 1.20 per unit or more must be one second or less.

4. The Asynchronous Generating Facility's inverter will be considered to have tripped where its AC circuit breaker is open or otherwise has electrically isolated the inverter from the grid. Following an inverter trip, the inverter must make at least one attempt to resynchronize and connect back to the grid unless the trip resulted from a fatal fault code, as defined by the inverter manufacturer. This attempt must take place within 2.5 minutes from the inverter trip. An attempt to resynchronize and connect back to the grid is not required if the trip was initiated due to a fatal fault code, as determined by the original equipment manufacturer.

5. The Asynchronous Generating Facility is not required to remain on line during multi-phased faults exceeding the duration described in Section A.i.1 of this Appendix H or single-phase faults exceeding the duration described in Section A.i.2 of this Appendix H.

6. The requirements of this Section A.i of this Appendix H do not apply to faults that occur between the Asynchronous Generating Facility's terminals and the high side of the step-up transformer to the high-voltage transmission system.

7. Asynchronous Generating Facilities may be tripped after the fault period if this action is intended as part of a special protection system.

8. Asynchronous Generating Facilities may meet the requirements of this Section A.i of this Appendix H through the performance of the generating units or by installing additional equipment within the Asynchronous Generating Facility, or by a combination of generating unit performance and additional equipment.

9. The provisions of this Section A.i of this Appendix H apply only if the voltage at the Point of Interconnection has remained within the range of 0.9 and 1.10 per-unit of nominal voltage for the preceding two seconds, excluding any sub-cycle transient deviations.

10. Asynchronous Generating Facility inverters may not trip or cease to inject current for momentary loss of synchronism. As a minimum, the Asynchronous Generating Facility's inverter controls may lock the phase lock loop to the last synchronized point and continue to inject current into the grid at that last calculated phase prior to the loss of synchronism until the phase lock loop can regain synchronism. The current injection may be limited to protect the inverter. Any inverter may trip if the phase lock loop is unable to regain synchronism 150 milliseconds after loss of synchronism.

11. Inverter restoration following transient voltage conditions must not be impeded by plant level controllers. If the Asynchronous Generating Facility uses a plant level controller, it must be programmed to allow the inverters to automatically re-synchronize rapidly and ramp up to active current injection (without delayed ramping) following transient voltage recovery, before resuming overall control of the individual plant inverters.

**ii. Frequency Disturbance Ride-Through Capability**

An Asynchronous Generating Facility shall comply with the off nominal frequency requirements set forth in the NERC Reliability Standard for Generator Frequency and Voltage Protective Relay Settings, or successor requirements as they may be amended from time to time.

### iii. Power Factor Design Criteria (Reactive Power)

An Asynchronous Generating Facility shall operate within a power factor within the range of 0.95 leading to 0.95 lagging, measured at the high voltage side of the substation transformer, as defined in this LGIA in order to maintain a specified voltage schedule, if the Cluster Study or Interconnection Facilities Study shows that such a requirement is necessary to ensure safety or reliability. The power factor range standards set forth in this section can be met by using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors, or a combination of the two, if agreed to by the Participating TO and CAISO. The Interconnection Customer shall not disable power factor equipment while the Asynchronous Generating Facility is in operation. Asynchronous Generating Facilities shall also be able to provide sufficient dynamic voltage support in lieu of the power system stabilizer and automatic voltage regulation at the generator excitation system if the Cluster Study or Interconnection Facilities Study shows this to be required for system safety or reliability.

### iv. Supervisory Control and Data Acquisition (SCADA) Capability

An Asynchronous Generating Facility shall provide SCADA capability to transmit data and receive instructions from the Participating TO and CAISO to protect system reliability. The Participating TO and CAISO and the Asynchronous Generating Facility Interconnection Customer shall determine what SCADA information is essential for the proposed Asynchronous Generating Facility, taking into account the size of the plant and its characteristics, location, and importance in maintaining generation resource adequacy and transmission system reliability.

### v. Power System Stabilizers (PSS)

Power system stabilizers are not required for Asynchronous Generating Facilities.

### vi. Transient Data Recording Equipment for Facilities

Asynchronous Generating Facilities must monitor and record data for all frequency ride-through events, transient low voltage disturbances that initiated reactive current injection, reactive current injection or momentary cessation for transient high voltage disturbances, and inverter trips. The data may be recorded and stored in a central plant control system. The following data must be recorded:

**Plant Level:**

(1) Plant three phase voltage and current
(2) Status of ancillary reactive devices
(3) Status of all plant circuit breakers
(4) Status of plant controller
(5) Plant control set points
(6) Position of main plant transformer no-load taps
(7) Position of main plant transformer tap changer (if extant)
(8) Protective relay trips or relay target data

**Inverter Level:**

(1) Frequency, current, and voltage during frequency ride-through events
(2) Voltage and current during momentary cessation for transient high voltage events (when used)
(3) Voltage and current during reactive current injection for transient low or high voltage events

(4) Inverter alarm and fault codes
(5) DC current
(6) DC voltage

The data must be time synchronized, using a GPS clock or similar device, to a one millisecond level of resolution. All data except phase angle measuring unit data must be sampled at least every ten (10) milliseconds. Data recording must be triggered upon detecting a frequency ride-through event, a transient low voltage disturbance that initiated reactive current injection, momentary cessation or reactive current injection for a transient high voltage disturbance, or an inverter trip. Each recording will include as a minimum one hundred fifty (150) milliseconds of data prior to the triggering event, and 1000 milliseconds of data after the event trigger. The Asynchronous Generating Facility must store this data for a minimum of thirty (30) days. The Asynchronous Generating Facility will provide all data within ten (10) calendar days of a request from the CAISO or the Participating TO.

The Asynchronous Generating Facility must install and maintain a phase angle measuring unit or functional equivalent at the entrance to the facility or at the Generating Facility's main substation transformer. The phase angle measuring unit must have a resolution of at least 16 samples per cycle. The Asynchronous Generating Facility will store this data for a minimum of thirty (30) days. The Asynchronous Generating Facility will provide all phase angle measuring unit data within ten (10) calendar days of a request from the CAISO or the Participating TO.

## Appendix I to LGIA

## Operating Assumptions for Generating Facility

Check box if applicable[ ]

**Operating Assumptions:**

**{insert operating assumptions that reflect the charging behavior of the Generating Facility that includes at least one electric storage resource}**

**Appendix MM**

**Small Generator Interconnection Agreement for Interconnection Requests Processed Under the Resource Interconnection Standards (Appendix KK to the CAISO Tariff)**

This Small Generator Interconnection Agreement ("Agreement") is made and entered into this _____ day of _____, 20___, by _____ ("Participating TO"), the California Independent System Operator Corporation, a California nonprofit public benefit corporation organized and existing under the laws of the State of California ("CAISO") and _____ ("Interconnection Customer") each hereinafter sometimes referred to individually as "Party" or referred to collectively as the "Parties."

**Participating TO Information**

Participating TO: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

E-mail Address: _____

**CAISO Information**

Attention: _____

250 Outcropping Way

Folsom, CA 95630

Phone: _____ Fax: _____

E-mail: _____@caiso.com

**Interconnection Customer Information**

Interconnection Customer: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

E-mail Address: _____

Interconnection Customer Queue Position No: _____

In consideration of the mutual covenants set forth herein, the Parties agree as follows:

**Article 1. Scope and Limitations of Agreement**

**1.1 Applicability**

This Agreement shall be used for all Small Generating Facility Interconnection Requests submitted under the Resource Interconnection Standards (RIS) set forth in Appendix KK except for those submitted under the 10 kW Inverter Process contained in RIS Appendix 7. For those Interconnection Requests, RIS Appendix 7 contains the terms and conditions which serve as the Interconnection Agreement.

**1.2 Purpose**

This Agreement governs the terms and conditions under which the Interconnection Customer's Small Generating Facility will interconnect with, and operate in parallel with, the Participating TO's Transmission System.

**1.3 No Agreement to Purchase or Deliver Power**

This Agreement does not constitute an agreement to purchase or deliver the Interconnection Customer's power. The purchase or delivery of power and other services that the Interconnection Customer may require will be covered under separate agreements, if any. The Interconnection Customer will be responsible for separately making all necessary arrangements (including scheduling) for delivery of electricity in accordance with the CAISO Tariff. Full Capacity Deliverability Status, Partial Capacity Deliverability Status, and Off-Peak Deliverability Status do not confer any priority over other Generating Facilities to deliver Energy; nor provide any warranty or guarantee to deliver any amount of Energy or avoid curtailment at any time.

**1.4 Limitations**

Nothing in this Agreement is intended to affect any other agreement between or among the Parties.

**1.5 Responsibilities of the Parties**

**1.5.1** The Parties shall perform all obligations of this Agreement in accordance with all Applicable Laws and Regulations, Operating Requirements, and Good Utility Practice. The Parties shall use the Large Generator Interconnection Agreement (CAISO Tariff Appendix CC) to interpret the responsibilities of the Parties under this Agreement.

**1.5.2** The Interconnection Customer shall construct, interconnect, operate and maintain its Small Generating Facility and construct, operate, and maintain its Interconnection Facilities in accordance with the applicable manufacturer's recommended maintenance schedule, and in accordance with this Agreement, and with Good Utility Practice.

**1.5.3** The Participating TO shall construct, operate, and maintain its Interconnection Facilities and Upgrades in accordance with this Agreement, and with Good Utility Practice. The CAISO and the Participating TO shall cause the Participating TO's Transmission System to be operated and controlled in a safe and reliable manner and in accordance with this Agreement.

**1.5.4** The Interconnection Customer agrees to construct its facilities or systems in accordance with applicable specifications that meet or exceed those provided by the National Electrical Safety Code, the American National Standards Institute, IEEE, Underwriter's

Laboratory, and Operating Requirements in effect at the time of construction and other applicable national and state codes and standards. The Interconnection Customer agrees to design, install, maintain, and operate its Small Generating Facility so as to reasonably minimize the likelihood of a disturbance adversely affecting or impairing the system or equipment of the Participating TO and any Affected Systems. The Interconnection Customer shall comply with the Participating TO's Interconnection Handbook. In the event of a conflict between the terms of this Agreement and the terms of the Participating TO's Interconnection Handbook, the terms in this Agreement shall govern.

**1.5.5** Each Party shall operate, maintain, repair, and inspect, and shall be fully responsible for the facilities that it now or subsequently may own unless otherwise specified in the Attachments to this Agreement. Each Party shall be responsible for the safe installation, maintenance, repair and condition of their respective lines and appurtenances on their respective sides of the Point of Change of Ownership. The Participating TO and the Interconnection Customer, as appropriate, shall provide Interconnection Facilities that adequately protect the CAISO Controlled Grid, the Participating TO's electric system, the Participating TO's personnel, and other persons from damage and injury. The allocation of responsibility for the design, installation, operation, maintenance and ownership of Interconnection Facilities shall be delineated in the Attachments to this Agreement.

**1.5.6** The Participating TO and the CAISO shall coordinate with Affected Systems to support the interconnection.

**1.5.7** The Interconnection Customer shall ensure "frequency ride-through" capability and "voltage ride-through" capability of its Small Generating Facility. For abnormal frequency conditions and voltage conditions within the "no trip zone" defined by Reliability Standard PRC-024-3 or successor mandatory ride through Applicable Reliability Standards, the non-synchronous Small Generating Facility must ensure that, within any physical limitations of the Small Generating Facility, its control and protection settings are configured or set to (1) continue active power production during disturbance and post disturbance periods at pre-disturbance levels unless reactive power priority is enabled or unless providing primary frequency response; (2) minimize reductions in active power and remain within dynamic voltage and current limits, if reactive power priority mode is enabled, unless providing primary frequency response; (3) not artificially limit dynamic reactive power capability during disturbances; and (4) return to pre-disturbance active power levels without artificial ramp rate limits if active power is reduced, unless providing primary frequency response.

**Frequency Conditions.** The CAISO Controlled Grid is designed to automatically activate a load-shed program as required by the Applicable Reliability Standards and the Electric Reliability Organization in the event of an under-frequency system disturbance. The Interconnection Customer shall implement under-frequency and over-frequency protection set points for the Small Generating Facility as required by Applicable Reliability Standards and the Electric Reliability Organization to ensure "ride-through" capability. Small Generating Facility response to frequency deviations of pre-determined magnitudes, both under-frequency and over-frequency deviations, shall be studied and coordinated with the Participating TO and CAISO in accordance with Good Utility Practice. The term "ride-through" as used herein shall mean the ability of a Generating Facility to stay connected to and synchronized with the CAISO Controlled Grid during system disturbances within a range of under-frequency and over-frequency conditions, in accordance with Good Utility Practice. Asynchronous Generating Facilities are subject to the frequency ride-through requirements set forth in Attachment 7.

**Voltage Conditions.** The Interconnection Customer shall ensure "voltage ride-through" capability of its Small Generating Facility. The Interconnection Customer shall enable

these capabilities such that its Small Generating Facility shall not disconnect automatically or instantaneously from the system or equipment of the CAISO and any Affected Systems for an under-voltage or over-voltage condition, as tested pursuant to section 2.1 of this Agreement. The defined conditions shall be in accordance with Good Utility Practice and consistent with any standards and guidelines that are applied to other generating facilities in the Balancing Authority Area on a comparable basis. Asynchronous Generating Facilities are subject to the voltage ride-through requirements set forth in Attachment 7.

**1.6 Parallel Operation Obligations**

Once the Small Generating Facility has been authorized to commence parallel operation, the Interconnection Customer shall abide by all rules and procedures pertaining to the parallel operation of the Small Generating Facility in the CAISO Balancing Authority Area, including, but not limited to; 1) the rules and procedures concerning the operation of generation set forth in the CAISO Tariff for the CAISO Controlled Grid and; 2) the Operating Requirements set forth in Attachment 5 of this Agreement.

**1.7 Metering**

The Interconnection Customer shall be responsible for the reasonable and necessary cost for the purchase, installation, operation, maintenance, testing, repair, and replacement of metering and data acquisition equipment specified in Attachments 2 and 3 of this Agreement. The Interconnection Customer's metering (and data acquisition, as required) equipment shall conform to applicable industry rules and Operating Requirements.

**1.8 Reactive Power and Primary Frequency Response**

**1.8.1** For synchronous Generating Facilities, the Interconnection Customer shall design its Small Generating Facility to maintain a composite power delivery at continuous rated power output at the terminals of each generating unit at a power factor within the range of 0.95 leading to 0.90 lagging, unless the CAISO has established different requirements that apply to all similarly situated generators in the CAISO Balancing Authority Area on a comparable basis. The requirements of this paragraph shall not apply to Asynchronous Generating Facilities and the requirements of Attachment 7 shall apply instead.

For an Asynchronous Generating Facility, the Interconnection Customer will design the Small Generating Facility to maintain a composite power delivery at continuous rated power output at the high-side of the generator substation at a power factor within the range of 0.95 leading to 0.95 lagging, unless the CAISO has established a different power factor range that applies to all Asynchronous Generating Facilities on a comparable basis. This power factor range standard shall be dynamic and can be met using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors and reactors, or a combination of the two.

**1.8.2** Payment to the Interconnection Customer for reactive power that the Small Generating Facility provides or absorbs when the CAISO requests the Interconnection Customer to operate its Small Generating Facility outside the range specified in Article 1.8.1 will be made by the CAISO in accordance with the applicable provisions of the CAISO Tariff.

**1.8.3 Primary Frequency Response.** Interconnection Customer shall ensure the primary frequency response capability of its Small Generating Facility by installing, maintaining, and operating a functioning governor or equivalent controls. The term “functioning

governor or equivalent controls" as used herein shall mean the required hardware and/or software that provides frequency responsive real power control with the ability to sense changes in system frequency and autonomously adjust the Small Generating Facility's real power output in accordance with the droop and deadband parameters and in the direction needed to correct frequency deviations. Interconnection Customer is required to install a governor or equivalent controls with the capability of operating: (1) with a maximum 5 percent droop and ±0.036 Hz deadband; or (2) in accordance with the relevant droop, deadband, and timely and sustained response settings from Applicable Reliability Standards providing for equivalent or more stringent parameters. The droop characteristic shall be: (1) based on the nameplate capacity of the Small Generating Facility, and shall be linear in the range of frequencies between 59 to 61 Hz that are outside of the deadband parameter; or (2) based on Applicable Reliability Standards providing for an equivalent or more stringent parameter. The deadband parameter shall be: the range of frequencies above and below nominal (60 Hz) in which the governor or equivalent controls is not expected to adjust the Small Generating Facility's real power output in response to frequency deviations. The deadband shall be implemented: (1) without a step to the droop curve, that is, once the frequency deviation exceeds the deadband parameter, the expected change in the Small Generating Facility's real power output in response to frequency deviations shall start from zero and then increase (for under-frequency deviations) or decrease (for over-frequency deviations) linearly in proportion to the magnitude of the frequency deviation; or (2) in accordance with Applicable Reliability Standards providing for an equivalent or more stringent parameter. Interconnection Customer shall notify the CAISO that the primary frequency response capability of the Small Generating Facility has been tested and confirmed during commissioning. Once Interconnection Customer has synchronized the Small Generating Facility with the CAISO Controlled Grid, Interconnection Customer shall operate the Small Generating Facility consistent with the provisions specified in Sections 1.8.3.1 and 1.8.3.2 of this SGIA. The primary frequency response requirements contained herein shall apply to both synchronous and non-synchronous Small Generating Facilities.

**1.8.3.1 Governor or Equivalent Controls.** Whenever the Small Generating Facility is operated in parallel with the CAISO Controlled Grid, Interconnection Customer shall operate the Small Generating Facility with its governor or equivalent controls in service and responsive to frequency. Interconnection Customer shall, in coordination with the CAISO, set the deadband parameter to: (1) a maximum of ±0.036 Hz and set the droop parameter to a maximum of 5 percent; or (2) implement the relevant droop and deadband settings from Applicable Reliability Standards that provides for equivalent or more stringent parameters. Interconnection Customer shall be required to provide the status and settings of the governor or equivalent controls to the CAISO upon request. If Interconnection Customer needs to operate the Small Generating Facility with its governor or equivalent controls not in service, Interconnection Customer shall immediately notify the CAISO, and provide the following information: (1) the operating status of the governor or equivalent controls (i.e., whether it is currently out of service or when it will be taken out of service); (2) the reasons for removing the governor or equivalent controls from service; and (3) a reasonable estimate of when the governor or equivalent controls will be returned to service. Interconnection Customer shall make Reasonable Efforts to return its governor or equivalent controls into service as soon as practicable. Interconnection Customer shall make Reasonable Efforts to keep outages of the Small Generating Facility's governor or equivalent controls to a minimum whenever the Small Generating Facility is operated in parallel with the CAISO Controlled Grid.

**1.8.3.2 Timely and Sustained Response.** Interconnection Customer shall ensure that the Small Generating Facility's real power response to sustained frequency deviations outside of the deadband setting is automatically provided and shall

begin immediately after frequency deviates outside of the deadband, and to the extent the Small Generating Facility has operating capability in the direction needed to correct the frequency deviation. Interconnection Customer shall not block or otherwise inhibit the ability of the governor or equivalent controls to respond and shall ensure that the response is not inhibited, except under certain operational constraints including, but not limited to, ambient temperature limitations, physical energy limitations, outages of mechanical equipment, or regulatory requirements. The Small Generating Facility shall sustain the real power response at least until system frequency returns to a value within the deadband setting of the governor or equivalent controls. A FERC-approved Applicable Reliability Standard with equivalent or more stringent requirements shall supersede the above requirements.

**1.8.3.3 Exemptions.** Small Generating Facilities that are regulated by the Nuclear Regulatory Commission shall be exempt from Sections 1.8.3, 1.8.3.1, and 1.8.3.2 of this SGIA. Small Generating Facilities that are behind-the-meter generation that is sized-to-load (i.e., the thermal load and the generation are near-balanced in real-time operation and the generation is primarily controlled to maintain the unique thermal, chemical, or mechanical output necessary for the operating requirements of its host facility) shall be required to install primary frequency response capability in accordance with the droop and deadband capability requirements specified in Section 1.8.3, but shall be otherwise exempt from the operating requirements in Sections 1.8.3, 1.8.3.1, 1.8.3.2, and 1.8.3.4 of this SGIA.

**1.8.3.4 Electric Storage Resources.** Interconnection Customer interconnecting an electric storage resource shall establish an operating range in Attachment 5 of this SGIA that specifies a minimum state of charge and a maximum state of charge between which the electric storage resource will be required to provide primary frequency response consistent with the conditions set forth in Sections 1.8.3, 1.8.3.1, 1.8.3.2, and 1.8.3.3 of this SGIA. Attachment 5 shall specify whether the operating range is static or dynamic, and shall consider: (1) the expected magnitude of frequency deviations in the interconnection; (2) the expected duration that system frequency will remain outside of the deadband parameter in the interconnection; (3) the expected incidence of frequency deviations outside of the deadband parameter in the interconnection; (4) the physical capabilities of the electric storage resource; (5) operational limitations of the electric storage resource due to manufacturer specifications; and (6) any other relevant factors agreed to by the CAISO and Interconnection Customer, and in consultation with the relevant transmission owner or balancing authority as appropriate. If the operating range is dynamic, then Attachment 5 must establish how frequently the operating range will be reevaluated and the factors that may be considered during its reevaluation.

Interconnection Customer's electric storage resource is required to provide timely and sustained primary frequency response consistent with Section 1.8.3.2 of this SGIA when it is online and dispatched to inject electricity to the CAISO Controlled Grid and/or receive electricity from the Participating TO's Transmission System or the CAISO Controlled Grid. This excludes circumstances when the electric storage resource is not dispatched to inject electricity to the CAISO Controlled Grid and/or dispatched to receive electricity from the Participating TO's Transmission System or the CAISO Controlled Grid. If Interconnection Customer's electric storage resource is charging at the time of a frequency deviation outside of its deadband parameter, it is to increase (for over-frequency deviations) or decrease (for under-frequency deviations) the rate at which it is charging in accordance with its droop parameter. Interconnection

Customer's electric storage resource is not required to change from charging to discharging, or vice versa, unless the response necessitated by the droop and deadband settings requires it to do so and it is technically capable of making such a transition.

**1.9** Capitalized terms used herein shall have the meanings specified in the Glossary of Terms in Attachment 1 or the body of this Agreement.

**1.10 TP Deliverability**

To the extent that an Interconnection Customer is eligible for and has been allocated TP Deliverability pursuant to Section 8.9 of the RIS, the Interconnection Customer's right to retain such allocated TP Deliverability shall be contingent upon satisfying the obligations set forth in Section 8.9.3 of the RIS.

**Article 2. Inspection, Testing, Authorization, and Right of Access**

**2.1 Equipment Testing and Inspection**

**2.1.1** The Interconnection Customer shall test and inspect its Small Generating Facility and Interconnection Facilities prior to interconnection. The Interconnection Customer shall notify the Participating TO and the CAISO of such activities no fewer than five (5) Business Days (or as may be agreed to by the Parties) prior to such testing and inspection. Testing and inspection shall occur on a Business Day. The Participating TO and the CAISO may, at their own expense, send qualified personnel to the Small Generating Facility site to inspect the interconnection and observe the testing. The Interconnection Customer shall provide the Participating TO and the CAISO a written test report when such testing and inspection is completed.

**2.1.2** The Participating TO and the CAISO shall provide the Interconnection Customer written acknowledgment that they have received the Interconnection Customer's written test report. Such written acknowledgment shall not be deemed to be or construed as any representation, assurance, guarantee, or warranty by the Participating TO or the CAISO of the safety, durability, suitability, or reliability of the Small Generating Facility or any associated control, protective, and safety devices owned or controlled by the Interconnection Customer or the quality of power produced by the Small Generating Facility.

**2.2 Authorization Required Prior to Parallel Operation**

**2.2.1** The Participating TO and the CAISO shall use Reasonable Efforts to list applicable parallel operation requirements in Attachment 5 of this Agreement. Additionally, the Participating TO and the CAISO shall notify the Interconnection Customer of any changes to these requirements as soon as they are known. The Participating TO and the CAISO shall make Reasonable Efforts to cooperate with the Interconnection Customer in meeting requirements necessary for the Interconnection Customer to commence parallel operations by the in-service date.

**2.2.2** The Interconnection Customer shall not operate its Small Generating Facility in parallel with the Participating TO's Transmission System without prior written authorization of the Participating TO. The Participating TO will provide such authorization to the Interconnection Customer and the CAISO once the Participating TO receives notification that the Interconnection Customer has complied with all applicable parallel operation requirements. Such authorization shall not be unreasonably withheld, conditioned, or delayed.

### 2.3 Right of Access to Premises

**2.3.1** Upon reasonable notice, the Participating TO and the CAISO may send a qualified person to the premises of the Interconnection Customer at or immediately before the time the Small Generating Facility first produces energy to inspect the interconnection, and observe the commissioning of the Small Generating Facility (including any required testing), startup, and operation for a period of up to three (3) Business Days after initial start-up of the unit. In addition, the Interconnection Customer shall notify the Participating TO and the CAISO at least five (5) Business Days prior to conducting any on-site verification testing of the Small Generating Facility.

**2.3.2** Following the initial inspection process described above, at reasonable hours, and upon reasonable notice, or at any time without notice in the event of an emergency or hazardous condition, the Participating TO and the CAISO shall have access to the Interconnection Customer's premises for any reasonable purpose in connection with the performance of the obligations imposed on it by this Agreement or if necessary to meet its legal obligation to provide service to its customers.

**2.3.3** Each Party shall be responsible for its own costs associated with following this article.

## Article 3. Effective Date, Term, Termination, and Disconnection

### 3.1 Effective Date

This Agreement shall become effective upon execution by the Parties subject to acceptance by FERC (if applicable), or if filed unexecuted, upon the date specified by the FERC. The Participating TO and the CAISO shall promptly file this Agreement with the FERC upon execution, if required.

### 3.2 Term of Agreement

This Agreement shall become effective on the Effective Date and shall remain in effect for a period of ____ years from the Effective Date (term specified in individual agreements to be ten (10) years or such other longer period as the Interconnection Customer may request) and shall be automatically renewed for each successive one-year period thereafter, unless terminated earlier in accordance with Article 3.3 of this Agreement.

### 3.3 Termination

No termination shall become effective until the Parties have complied with all Applicable Laws and Regulations applicable to such termination, including the filing with FERC of a notice of termination of this Agreement (if required), which notice has been accepted for filing by FERC.

**3.3.1** The Interconnection Customer may terminate this Agreement at any time by giving the Participating TO and the CAISO twenty (20) Business Days written notice.

**3.3.2** Any Party may terminate this Agreement after Default pursuant to Article 7.6.

**3.3.3** Upon termination of this Agreement, the Small Generating Facility will be disconnected from the CAISO Controlled Grid. All costs required to effectuate such disconnection shall be borne by the terminating Party, unless such termination resulted from the non-terminating Party's Default of this Agreement or such non-terminating Party otherwise is responsible for these costs under this Agreement.

**3.3.4** The termination of this Agreement shall not relieve any Party of its liabilities and

obligations, owed or continuing at the time of termination.

**3.3.5** The provisions of this article shall survive termination or expiration of this Agreement.

## 3.4 Temporary Disconnection

Temporary disconnection of the Small Generating Facility or associated Interconnection Facilities shall continue only for so long as reasonably necessary under Good Utility Practice.

### 3.4.1 Emergency Conditions

**"Emergency Condition"** shall mean a condition or situation: (1) that in the judgment of the Party making the claim is imminently likely to endanger life or property; (2) that, in the case of the CAISO, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the CAISO Controlled Grid or the electric systems of others to which the CAISO Controlled Grid is directly connected; (3) that, in the case of the Participating TO, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Participating TO's Transmission System, the Participating TO's Interconnection Facilities, Distribution System, or the electric systems of others to which the Participating TO's electric system is directly connected; or (4) that, in the case of the Interconnection Customer, is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Small Generating Facility or the Interconnection Customer's Interconnection Facilities. Under Emergency Conditions, the CAISO or the Participating TO may immediately suspend interconnection service and temporarily disconnect the Small Generating Facility. The Participating TO or the CAISO shall notify the Interconnection Customer promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the Interconnection Customer's operation of the Small Generating Facility or the Interconnection Customer's Interconnection Facilities. The Interconnection Customer shall notify the Participating TO and the CAISO promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect the CAISO Controlled Grid, the Participating TO's Interconnection Facilities, or any Affected Systems. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the operation of the Interconnection Customer's or Participating TO's facilities and operations, its anticipated duration, and the necessary corrective action.

### 3.4.2 Routine Maintenance, Construction, and Repair

The Participating TO or the CAISO may interrupt interconnection service or curtail the output of the Small Generating Facility and temporarily disconnect the Small Generating Facility from the CAISO Controlled Grid when necessary for routine maintenance, construction, and repairs on the CAISO Controlled Grid or the Participating TO's electric system. The Party scheduling the interruption shall provide the Interconnection Customer with (5) five Business Days notice prior to such interruption. The Party scheduling the interruption shall use Reasonable Efforts to coordinate such reduction or temporary disconnection with the Interconnection Customer.

The Interconnection Customer shall update its planned maintenance schedules in accordance with the CAISO Tariff. The CAISO may request the Interconnection Customer to reschedule its maintenance as necessary to maintain the reliability of the CAISO Controlled Grid in accordance with the CAISO Tariff. Such planned maintenance schedules and updates and changes to such schedules shall be provided by the

Interconnection Customer to the Participating TO concurrently with their submittal to the CAISO.

### 3.4.3 Forced Outages

During any forced outage, the Participating TO or the CAISO may suspend interconnection service to effect immediate repairs on the CAISO Controlled Grid or the Participating TO's electric system. The Participating TO or the CAISO shall use Reasonable Efforts to provide the Interconnection Customer with prior notice. If prior notice is not given, the Participating TO or the CAISO shall, upon request, provide the Interconnection Customer written documentation after the fact explaining the circumstances of the disconnection. The Interconnection Customer shall notify CAISO, as soon as practicable, of all forced outages or reductions of the Small Generating Facility in accordance with the CAISO Tariff.

### 3.4.4 Adverse Operating Effects

The Participating TO or the CAISO shall notify the Interconnection Customer as soon as practicable if, based on Good Utility Practice, operation of the Small Generating Facility may cause disruption or deterioration of service to other customers served from the same electric system, or if operating the Small Generating Facility could cause damage to the CAISO Controlled Grid, the Participating TO's Transmission System or Affected Systems. Supporting documentation used to reach the decision to disconnect shall be provided to the Interconnection Customer upon request. If, after notice, the Interconnection Customer fails to remedy the adverse operating effect within a reasonable time, the Participating TO or the CAISO may disconnect the Small Generating Facility. The Participating TO or the CAISO shall provide the Interconnection Customer with (5) five Business Day notice of such disconnection, unless the provisions of Article 3.4.1 apply.

### 3.4.5 Modification of the Small Generating Facility

Prior to making any modifications to the Small Generating Facility before it has achieved its Commercial Operation Date, the Interconnection Customer must first request that the CAISO evaluate whether such modification is a Material Modification and receive written authorization from the Participating TO and the CAISO. Such authorization shall not be unreasonably withheld. Modifications shall be done in accordance with Good Utility Practice. The CAISO may engage the services of the applicable Participating TO to assess the modification. Costs incurred by the Participating TO and CAISO (if any) shall be borne by the party making the request under Section 6.7.2 of Appendix KK, and such costs shall be included in any CAISO invoice for modification assessment activities. If the Interconnection Customer has achieved its Commercial Operation Date, the CAISO and Participating TO(s) will review the requested modification pursuant to Sections 25 and 25.1(c) of the CAISO Tariff. If the Interconnection Customer makes modifications without the Participating TO's and the CAISO's prior written authorization, the Participating TO or the CAISO shall have the right to temporarily disconnect the Small Generating Facility. Any change to the Point of Interconnection, except those deemed acceptable under this article of the SGIA or so allowed elsewhere, shall constitute a Material Modification. The Interconnection Customer may then withdraw the proposed modification or proceed with a new Interconnection Request for such modification.

### 3.4.6 Reconnection

The Parties shall cooperate with each other to restore the Small Generating Facility, Interconnection Facilities, the Participating TO's electric system, and the CAISO Controlled Grid to their normal operating state as soon as reasonably practicable following a temporary disconnection.

## Article 4. Costs for Interconnection Facilities, and Distribution Upgrades

### 4.1 Interconnection Facilities

**4.1.1** The Interconnection Customer shall pay for the cost of the Interconnection Facilities itemized in Attachment 2 of this Agreement. The Participating TO shall provide a best estimate cost, including overheads, for the purchase and construction of its Interconnection Facilities and provide a detailed itemization of such costs. Costs associated with Interconnection Facilities may be shared with other entities that may benefit from such facilities by agreement of the Interconnection Customer, such other entities, the CAISO, and the Participating TO.

**4.1.2** The Interconnection Customer shall be responsible for its share of all reasonable expenses, including overheads, associated with (1) owning, operating, maintaining, repairing, and replacing its own Interconnection Facilities, and (2) operating, maintaining, repairing, and replacing the Participating TO's Interconnection Facilities.

### 4.2 Distribution Upgrades

The Participating TO shall design, procure, construct, install, and own the Distribution Upgrades described in Attachment 6 of this Agreement. If the Participating TO and the Interconnection Customer agree, the Interconnection Customer may construct Distribution Upgrades that are located on land owned by the Interconnection Customer. The actual cost of the Distribution Upgrades, including overheads, shall be directly assigned to the Interconnection Customer.

## Article 5. Cost Responsibility For Network Upgrades

### 5.1 Applicability

No portion of this Article 5 shall apply unless the interconnection of the Small Generating Facility requires Network Upgrades.

### 5.2 Network Upgrades

The Participating TO shall design, procure, construct, install, and own the Network Upgrades described in Attachment 6 of this Agreement, except for Merchant Network Upgrades. If the Participating TO and the Interconnection Customer agree, the Interconnection Customer may construct Network Upgrades that are located on land owned by the Interconnection Customer. The actual cost of the Network Upgrades, including overheads, shall be borne initially by the Interconnection Customer. For costs associated with Area Delivery Network Upgrades and Area Off-Peak Network Upgrades, any cost estimates will be advisory in nature and will not be considered as definitive or as establishing a cap on the Maximum Cost Exposure of the Interconnection Customer.

#### 5.2.1 Merchant Network Upgrades

If the Interconnection Customer is an Option (B) Interconnection Customer, the Interconnection Customer may elect to have a party other than the applicable Participating TO construct some or all of the LDNU and ADNU that the Interconnection Customer has the obligation to fund and that are not subject to reimbursement. Such LDNU and ADNU will be constructed and incorporated into the CAISO Controlled Grid pursuant to the provisions for Merchant Transmission Facilities in CAISO Tariff Sections 24.4.6.1 and 36.11.

## 5.3 Transmission Credits

No later than thirty (30) calendar days prior to the Commercial Operation Date, the Interconnection Customer may make a one-time election by written notice to the CAISO and the Participating TO to (a) receive Congestion Revenue Rights as defined in and as available under the CAISO Tariff at the time of the election in accordance with the CAISO Tariff, in lieu of a repayment of the cost of Network Upgrades in accordance with Article 5.3.1, and/or (b ) decline all or a part of a refund of the cost of Network Upgrades entitled to the Interconnection Customer in accordance with Article 5.3.1.

### 5.3.1 Repayment of Amounts Advanced for Network Upgrades

#### 5.3.1.1 Repayment of Amounts Advanced Regarding Non-Phased Generating Facilities

An Interconnection Customer with a non-Phased Generating Facility will be entitled to repayment for the Interconnection Customer's contribution to the cost of Network Upgrades placed in service on or before the Commercial Operation Date of its Small Generating Facility, commencing upon the Commercial Operation Date of the Small Generating Facility. Repayment for the Interconnection Customer's contribution to the cost of Network Upgrades placed into service after the Commercial Operation Date of its Small Generating Facility shall, for each of these Network Upgrades, commence no later than the later of: (i) the first month of the calendar year following the year in which the Network Upgrade is placed into service or (ii) 90 days after the Network Upgrade is placed into service.

An Interconnection Customer subject to this Article 5.3.1.1 shall be entitled to repayment for its contribution to the cost of Network Upgrades as follows:

(a) For Reliability Network Upgrades, the Interconnection Customer shall be entitled to a repayment of the amount paid by the Interconnection Customer for Reliability Network Upgrades up to a maximum amount established in Section 14.3.2.1 of the RIS. For purposes of this determination, generating capacity will be based on the capacity of the Interconnection Customer's Generating Facility at the time it achieves Commercial Operation. To the extent that such repayment does not cover all of the costs of the Interconnection Customer's Reliability Network Upgrades, the Interconnection Customer shall receive Merchant Transmission CRRs for that portion of its Reliability Network Upgrades that are not covered by cash repayment.

(b) For Local Delivery Network Upgrades:

i. If the Interconnection Customer is an Option (B) Interconnection Customer and has been allocated and continues to be eligible to receive TP Deliverability pursuant to the RIS, the Interconnection Customer shall be entitled to repayment of a portion of the total amount paid to the Participating TO for the cost of Local Delivery Network Upgrades for which it is responsible. The repayment amount shall be determined by dividing the amount of TP Deliverability received by the amount of deliverability requested by the Interconnection Customer, and multiplying that percentage by the total amount paid to the Participating TO by

the Interconnection Customer for Local Delivery Network Upgrades.

ii. If the Interconnection Customer is an Option (B) Interconnection Customer and has not been allocated any TP Deliverability, the Interconnection Customer shall not be entitled to repayment for the cost of Local Delivery Network Upgrades.

iii. If the Interconnection Customer is an Option (A) Interconnection Customer, the Interconnection Customer shall be entitled to a repayment equal to the total amount paid to the Participating TO for the costs of Local Delivery Network Upgrades for which it is responsible.

(c) For Area Delivery Network Upgrades, the Interconnection Customer shall not be entitled to repayment for the costs of Area Delivery Network Upgrades.

(d) If an Option (B) Interconnection Customer elects and is eligible to construct and own Merchant Network Upgrades as set forth in Article 5.2.1 of this SGIA, then the Interconnection Customer shall not be entitled to any repayment pursuant to this SGIA.

Unless an Interconnection Customer has provided written notice to the CAISO that it is declining all or part of such repayment, such amounts shall include any tax gross-up or other tax-related payments associated with Network Upgrades not refunded to the Interconnection Customer, and shall be paid to the Interconnection Customer by the Participating TO on a dollar-for-dollar basis either through (1) direct payments made on a levelized basis over the five-year period commencing on the applicable date as provided for in this Article 5.3.1.1; or (2) any alternative payment schedule that is mutually agreeable to the Interconnection Customer and Participating TO, provided that such amount is paid within five (5) years of the applicable commencement date. Notwithstanding the foregoing, if this Agreement terminates within five (5) years of the applicable commencement date, the Participating TO's obligation to pay refunds to the Interconnection Customer shall cease as of the date of termination.

(e) Where the Interconnection Customer finances the construction of Network Upgrades for more than one Participating TO, the cost allocation, Commercial Readiness Deposit, GIA Deposit, and repayment will be conducted pursuant to Section 14.4.1 of the RIS, and set forth in this SGIA,

(f) For Local Off-Peak Network Upgrades, the Interconnection Customer will be entitled to a repayment equal to the total amount paid to the Participating TO for the costs of Local Delivery Network Upgrades for which it is responsible.

**5.3.1.2 Repayment of Amounts Advanced Regarding Phased Generating Facilities**

Upon the Commercial Operation Date of each phase of a Phased Generating Facility, the Interconnection Customer shall be entitled to a repayment equal to the amount paid to the Participating TO for the cost of Network Upgrades for that

completed phase for which the Interconnection Customer is responsible, subject to the limitations specified in Article 5.3.1.1, if the following conditions are satisfied as described below:

(a) The Small Generating Facility is capable of being constructed in phases;

(b) The Small Generating Facility is specified in the SGIA as being constructed in phases;

(c) The completed phase corresponds to one of the phases specified in the SGIA;

(d) The Interconnection Customer has tendered notice pursuant to the SGIA that the phase has achieved Commercial Operation;

(e) All parties to the SGIA have agreed that the completed phase meets the requirements set forth in the SGIA and any other operating, metering, and interconnection requirements to permit generation output of the entire capacity of the completed phase as specified in the SGIA;

(f) The Network Upgrades necessary for the completed phase to meet the desired level of deliverability are in service; and

(g) The Interconnection Customer has posted one hundred (100) percent of the security required for the Network Upgrades for all the phases of the Small Generating Facility.

Following satisfaction of these conditions (a) through (e) and (g), an Interconnection Customer in a Queue Cluster, or an Interconnection Customer in the Fast Track Process will be entitled to receive a repayment of its financed cost responsibility for the Network Upgrades associated with the completed phase that have been placed in service. The Interconnection Customer shall be entitled to repayment in this manner for each completed phase until the entire Small Generating Facility is completed. With respect to any Network Upgrades necessary for a completed phase to meet its desired level of deliverability that are not in service by the time the phase achieves Commercial Operation, repayment for each such Network Upgrade will commence no later than the later of: (i) the first month of the calendar year following the year in which the Network Upgrade is placed into service or (ii) 90 days after the Network Upgrade is placed into service.

If the SGIA includes a partial termination provision and the partial termination right has been exercised with regard to a phase that has not been built, then the Interconnection Customer's eligibility for repayment under this Article 5.3.1.2 as to the remaining phases shall not be diminished. If the Interconnection Customer completes one or more phases and then defaults on the SGIA, the Participating TO and the CAISO shall be entitled to offset any losses or damages resulting from the default against any repayments made for Network Upgrades related to the completed phases, provided that the Party seeking to exercise the offset has complied with any requirements which may be required to apply the stream of payments utilized to make the repayment to the Interconnection Customer as an offset.

Any repayment amount provided pursuant to this Article 5.3.1.2 shall include any

tax gross-up or other tax-related payments associated with Network Upgrades not refunded to the Interconnection Customer, and shall be paid to the Interconnection Customer by the Participating TO on a dollar-for-dollar basis either through (1) direct payments made on a levelized basis over the five-year period commencing on the applicable date as provided for in this Article 5.3.1.2; or (2) any alternative payment schedule that is mutually agreeable to the Interconnection Customer and Participating TO, provided that such amount is paid within five (5) years of the applicable commencement date. Notwithstanding the foregoing, if this Agreement terminates within five (5) years of the applicable commencement date, the Participating TO's obligation to pay refunds to the Interconnection Customer shall cease as of the date of termination.

#### 5.3.1.3 Interest Payments and Assignment Rights

Any repayment shall include interest calculated in accordance with the methodology set forth in FERC's regulations at 18 C.F.R. §35.19a(a)(2)(iii) from the date of any payment for Network Upgrades through the date on which the Interconnection Customer receives a repayment of such payment. Interest shall continue to accrue on the repayment obligation so long as this Agreement is in effect. The Interconnection Customer may assign such repayment rights to any person.

#### 5.3.1.4 Failure to Achieve Commercial Operation

If the Small Generating Facility fails to achieve commercial operation, but it or another generating facility is later constructed and makes use of the Network Upgrades, the Participating TO shall at that time reimburse Interconnection Customer for the amounts advanced for the Network Upgrades. Before any such reimbursement can occur, the Interconnection Customer, or the entity that ultimately constructs the generating facility, if different, is responsible for identifying the entity to which reimbursement must be made.

### 5.3.2 Special Provisions for Affected Systems

The Interconnection Customer shall enter into an agreement with the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid, as applicable, in accordance with the RIS. Such agreement shall specify the terms governing payments to be made by the Interconnection Customer to the owner of the Affected System and/or other affected owners of portions of the CAISO Controlled Grid. In no event shall the Participating TO be responsible for the repayment for any facilities that are not part of the Participating TO's Transmission System.

### 5.3.3 Rights Under Other Agreements

Notwithstanding any other provision of this Agreement, nothing herein shall be construed as relinquishing or foreclosing any rights, including but not limited to firm transmission rights, capacity rights, transmission congestion rights, or transmission credits, that the Interconnection Customer shall be entitled to, now or in the future, under any other agreement or tariff as a result of, or otherwise associated with, the transmission capacity, if any, created by the Network Upgrades, including the right to obtain cash reimbursements or transmission credits for transmission service that is not associated with the Small Generating Facility.

### 5.3.4 Compensation for Customer-Funded Upgrades Utilized by Subsequent Interconnection Customers.

If the Interconnection Customer funds Network Upgrades for which it is not eligible for repayment, the Interconnection Customer will be entitled to direct compensation by any Interconnection Customers in later Queue Clusters that utilize such Network Upgrades. Such compensation will be determined based on the distribution flow factors of the Generating Facilities that will be using the Network Upgrades.

**Article 6. Billing, Payment, Milestones, and Financial Security**

**6.1 Billing and Payment Procedures and Final Accounting**

**6.1.1** The Participating TO shall bill the Interconnection Customer for the design, engineering, construction, and procurement costs of Interconnection Facilities and Upgrades contemplated by this Agreement on a monthly basis, or as otherwise agreed by the Parties. The Interconnection Customer shall pay each bill within thirty (30) calendar days of receipt, or as otherwise agreed to by the Parties. Notwithstanding the foregoing, any invoices between the CAISO and another Party shall be submitted and paid in accordance with the CAISO Tariff.

**6.1.2** Within six (6) months of completing the construction and installation of the Participating TO's Interconnection Facilities and/or Upgrades described in the Attachments to this Agreement, the Participating TO shall provide the Interconnection Customer with a final accounting report of any difference between (1) the Interconnection Customer's cost responsibility for the actual cost of such facilities or Upgrades, and (2) the Interconnection Customer's previous aggregate payments to the Participating TO for such facilities or Upgrades. If the Interconnection Customer's cost responsibility exceeds its previous aggregate payments, the Participating TO shall invoice the Interconnection Customer for the amount due and the Interconnection Customer shall make payment to the Participating TO within thirty (30) calendar days. If the Interconnection Customer's previous aggregate payments exceed its cost responsibility under this Agreement, the Participating TO shall refund to the Interconnection Customer an amount equal to the difference within thirty (30) calendar days of the final accounting report.

**6.2 Milestones**

The Parties shall agree on milestones for which each Party is responsible and list them in Attachment 4 of this Agreement. A Party's obligations under this provision may be extended by agreement. If a Party anticipates that it will be unable to meet a milestone for any reason other than a Force Majeure Event, as defined in Article 7.5.1, it shall immediately notify the other Parties of the reason(s) for not meeting the milestone and (1) propose the earliest reasonable alternate date by which it can attain this and future milestones, and (2) request appropriate amendments to Attachment 4. The Parties affected by the failure to meet a milestone shall not unreasonably withhold agreement to such an amendment unless (1) they will suffer significant uncompensated economic or operational harm from the delay, (2) attainment of the same milestone has previously been delayed, or (3) they have reason to believe that the delay in meeting the milestone is intentional or unwarranted notwithstanding the circumstances explained by the Party proposing the amendment.

**6.3 Arrangements for Small Generating Facilities Processed Under the Fast Track Process**

The terms and conditions of this Article 6.3 shall apply only to Small Generating Facilities that are no larger than 5 MW that are processed under the Fast Track Process.

*In such case, the terms of Article 6.4 below do not apply to this Agreement.*

*For easy reference, the Parties shall check the Box below when this Article 6.3 applies:*

**[ ] THIS ARTICLE 6.3 APPLIES**

**6.3.1** At least twenty (20) Business Days prior to the commencement of the design, procurement, installation, or construction of a discrete portion of the Participating TO's Interconnection Facilities and Upgrades, the Interconnection Customer shall provide the Participating TO, at the Interconnection Customer's option, a guarantee, a surety bond, letter of credit or other form of security that is reasonably acceptable to the Participating TO and is consistent with the Uniform Commercial Code of the jurisdiction where the Point of Interconnection is located. Such security for payment shall be in an amount sufficient to cover the costs for constructing, designing, procuring, and installing the applicable portion of the Participating TO's Interconnection Facilities and Upgrades and shall be reduced on a dollar-for-dollar basis for payments made to the Participating TO under this Agreement during its term. The Participating TO must use the GIA Deposit required in Section 13.3 of the RIS before requiring Interconnection Customer to submit security in addition to that GIA Deposit. The Participating TO must specify, in Attachment 4 of this SGIA, the dates for which Interconnection Customer must provide additional security for construction of each discrete portion of the Participating TO's Interconnection Facilities, Network Upgrades, or Distribution Upgrades and Interconnection Customer must provide such additional security.

**6.3.2** If a guarantee is provided, the guarantee must be made by an entity that meets the creditworthiness requirements of the Participating TO, and contain terms and conditions that guarantee payment of any amount that may be due from the Interconnection Customer, up to an agreed-to maximum amount.

**6.3.3** If a letter of credit or surety bond is provided, the letter of credit or surety bond must be issued by a financial institution or insurer reasonably acceptable to the Participating TO and must specify a reasonable expiration date.

### 6.4 Arrangements for All Other Small Generating Facilities

The terms of this Article 6.4 apply to Small Generating Facilities that have been processed under the Cluster Study Process. In such case, the provisions of Article 6.3 do not apply to this Agreement.

*In such case, the terms of Article 6.3 above do not apply to this Agreement.*

For easy reference, the Parties shall check the Box below when this Article 6.4 applies:

**[ ] THIS ARTICLE 6.4 APPLIES**

**6.4.1** The Interconnection Customer is obligated to provide the necessary GIA Deposit required under Section 13.3 of the RIS in a manner acceptable under Section 11 of the RIS. Failure by the Interconnection Customer to timely satisfy the RIS's requirements for the provision of GIA Deposit shall be deemed a breach of this Agreement and a condition of Default of this Agreement.

## Article 7. Assignment, Liability, Indemnity, Force Majeure, and Default

### 7.1 Assignment

This Agreement may be assigned by any Party upon fifteen (15) Business Days prior written notice and opportunity to object by the other Parties; provided that:

**7.1.1** Any Party may assign this Agreement without the consent of the other Parties to any affiliate of the assigning Party with an equal or greater credit rating and with the legal

authority and operational ability to satisfy the obligations of the assigning Party under this Agreement, provided that the Interconnection Customer promptly notifies the Participating TO and the CAISO of any such assignment;

**7.1.2** The Interconnection Customer shall have the right to assign this Agreement, without the consent of the Participating TO or the CAISO, for collateral security purposes to aid in providing financing for the Small Generating Facility, provided that the Interconnection Customer will promptly notify the Participating TO and the CAISO of any such assignment.

**7.1.3** Any attempted assignment that violates this article is void and ineffective. Assignment shall not relieve a Party of its obligations, nor shall a Party's obligations be enlarged, in whole or in part, by reason thereof. An assignee is responsible for meeting the same financial, credit, and insurance obligations as the Interconnection Customer. Where required, consent to assignment will not be unreasonably withheld, conditioned or delayed.

## 7.2 Limitation of Liability

Each Party's liability to the other Parties for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this Agreement, shall be limited to the amount of direct damage actually incurred. In no event shall any Party be liable to the other Parties for any indirect, special, consequential, or punitive damages, except as authorized by this Agreement.

## 7.3 Indemnity

**7.3.1** This provision protects each Party from liability incurred to third parties as a result of carrying out the provisions of this Agreement. Liability under this provision is exempt from the general limitations on liability found in Article 7.2.

**7.3.2** The Parties shall at all times indemnify, defend, and hold the other Parties harmless from, any and all damages, losses, claims, including claims and actions relating to injury to or death of any person or damage to property, demand, suits, recoveries, costs and expenses, court costs, attorney fees, and all other obligations by or to third parties, arising out of or resulting from another Party's action or failure to meet its obligations under this Agreement on behalf of the indemnifying Party, except in cases of gross negligence or intentional wrongdoing by the indemnified Party.

**7.3.3** If an indemnified Party is entitled to indemnification under this article as a result of a claim by a third party, and the indemnifying Party fails, after notice and reasonable opportunity to proceed under this article, to assume the defense of such claim, such indemnified Party may at the expense of the indemnifying Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

**7.3.4** If an indemnifying Party is obligated to indemnify and hold any indemnified Party harmless under this article, the amount owing to the indemnified Party shall be the amount of such indemnified Party’s actual loss, net of any insurance or other recovery.

**7.3.5** Promptly after receipt by an indemnified Party of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in this article may apply, the indemnified Party shall notify the indemnifying Party of such fact. Any failure of or delay in such notification shall not affect a Party's indemnification obligation unless such failure or delay is materially prejudicial to the indemnifying Party.

### 7.4 Consequential Damages

Other than as expressly provided for in this Agreement, no Party shall be liable under any provision of this Agreement for any losses, damages, costs or expenses for any special, indirect, incidental, consequential, or punitive damages, including but not limited to loss of profit or revenue, loss of the use of equipment, cost of capital, cost of temporary equipment or services, whether based in whole or in part in contract, in tort, including negligence, strict liability, or any other theory of liability; provided, however, that damages for which a Party may be liable to another Party under another agreement will not be considered to be special, indirect, incidental, or consequential damages hereunder.

### 7.5 Force Majeure

**7.5.1** As used in this article, a Force Majeure Event shall mean "any act of God, labor disturbance, act of the public enemy, war, insurrection, riot, fire, storm or flood, explosion, breakage or accident to machinery or equipment, any order, regulation or restriction imposed by governmental, military or lawfully established civilian authorities, or any other cause beyond a Party's control. A Force Majeure Event does not include an act of negligence or intentional wrongdoing by the Party claiming Force Majeure."

**7.5.2** If a Force Majeure Event prevents a Party from fulfilling any obligations under this Agreement, the Party affected by the Force Majeure Event (Affected Party) shall promptly notify the other Parties, either in writing or via the telephone, of the existence of the Force Majeure Event. The notification must specify in reasonable detail the circumstances of the Force Majeure Event, its expected duration, and the steps that the Affected Party is taking to mitigate the effects of the event on its performance. The Affected Party shall keep the other Parties informed on a continuing basis of developments relating to the Force Majeure Event until the event ends. The Affected Party will be entitled to suspend or modify its performance of obligations under this Agreement (other than the obligation to make payments) only to the extent that the effect of the Force Majeure Event cannot be mitigated by the use of Reasonable Efforts. The Affected Party will use Reasonable Efforts to resume its performance as soon as possible.

### 7.6 Default

**7.6.1** No Default shall exist where such failure to discharge an obligation (other than the payment of money) is the result of a Force Majeure Event as defined in this Agreement or the result of an act or omission of another Party. Upon a Default, the affected non-defaulting Party(ies) shall give written notice of such Default to the defaulting Party. Except as provided in Article 7.6.2 and in Article 6.4.2, the defaulting Party shall have sixty (60) calendar days from receipt of the Default notice within which to cure such Default; provided however, if such Default is not capable of cure within 60 calendar days, the defaulting Party shall commence such cure within 20 calendar days after notice and continuously and diligently complete such cure within six months from receipt of the Default notice; and, if cured within such time, the Default specified in such notice shall cease to exist.

**7.6.2** If a Default is not cured as provided in this article, or if a Default is not capable of being cured within the period provided for herein, the affected non-defaulting Party(ies) shall have the right to terminate this Agreement by written notice at any time until cure occurs, and be relieved of any further obligation hereunder and, whether or not such Party(ies) terminates this Agreement, to recover from the defaulting Party all amounts due hereunder, plus all other damages and remedies to which it is entitled at law or in equity. The provisions of this article will survive termination of this Agreement.

## Article 8. Insurance

**8.1** The Interconnection Customer shall, at its own expense, maintain in force general liability insurance without any exclusion for liabilities related to the interconnection undertaken pursuant to this Agreement. The amount of such insurance shall be sufficient to insure against all reasonably foreseeable direct liabilities given the size and nature of the generating equipment being interconnected, the interconnection itself, and the characteristics of the system to which the interconnection is made. The Interconnection Customer shall obtain additional insurance only if necessary as a function of owning and operating a generating facility. Such insurance shall be obtained from an insurance provider authorized to do business in the State where the interconnection is located. Certification that such insurance is in effect shall be provided upon request of the Participating TO or CAISO, except that the Interconnection Customer shall show proof of insurance to the Participating TO and CAISO no later than ten Business Days prior to the anticipated Commercial Operation Date. If the Interconnection Customer is of sufficient credit-worthiness, it may propose to self-insure for such liabilities, and such a proposal shall not be unreasonably rejected.

**8.2** The Participating TO agrees to maintain general liability insurance or self-insurance consistent with the Participating TO's commercial practice. Such insurance or self-insurance shall not exclude coverage for the Participating TO's liabilities undertaken pursuant to this Agreement.

**8.3** The CAISO agrees to maintain general liability insurance or self-insurance consistent with the CAISO's commercial practice. Such insurance shall not exclude coverage for the CAISO's liabilities undertaken pursuant to this Agreement.

**8.4** The Parties further agree to notify each other whenever an accident or incident occurs resulting in any injuries or damages that are included within the scope of coverage of such insurance, whether or not such coverage is sought.

**Article 9. Confidentiality**

**9.1** Confidential Information shall mean any confidential and/or proprietary information provided by one Party to another Party that is clearly marked or otherwise designated "Confidential." For purposes of this Agreement all design, operating specifications, and metering data provided by the Interconnection Customer shall be deemed Confidential Information regardless of whether it is clearly marked or otherwise designated as such.

**9.2** Confidential Information does not include information previously in the public domain, required to be publicly submitted or divulged by Governmental Authorities (after notice to the other Parties and after exhausting any opportunity to oppose such publication or release), or necessary to be divulged in an action to enforce this Agreement. Each Party receiving Confidential Information shall hold such information in confidence and shall not disclose it to any third party nor to the public without the prior written authorization from the Party providing that information, except to fulfill obligations under this Agreement, or to fulfill legal or regulatory requirements.

**9.2.1** Each Party shall employ at least the same standard of care to protect Confidential Information obtained from the other Parties as it employs to protect its own Confidential Information.

**9.2.2** Each Party is entitled to equitable relief, by injunction or otherwise, to enforce its rights under this provision to prevent the release of Confidential Information without bond or proof of damages, and may seek other remedies available at law or in equity for breach of this provision.

**9.3** Notwithstanding anything in this article to the contrary, and pursuant to 18 CFR § 1b.20, if FERC, during the course of an investigation or otherwise, requests information from one of the Parties that is otherwise required to be maintained in confidence pursuant to this Agreement, the Party shall provide the requested information to FERC, within the time provided for in the request for

information. In providing the information to FERC, the Party may, consistent with 18 CFR § 388.112, request that the information be treated as confidential and non-public by FERC and that the information be withheld from public disclosure. Parties are prohibited from notifying the other Parties to this Agreement prior to the release of the Confidential Information to FERC. The Party shall notify the other Parties to this Agreement when it is notified by FERC that a request to release Confidential Information has been received by FERC, at which time any of the Parties may respond before such information would be made public, pursuant to 18 CFR § 388.112. Requests from a state regulatory body conducting a confidential investigation shall be treated in a similar manner if consistent with the applicable state rules and regulations.

**Article 10. Disputes**

All disputes arising out of or in connection with this Agreement whereby relief is sought by or from CAISO shall be settled in accordance with the provisions of Article 13 of the CAISO Tariff, except that references to the CAISO Tariff in such Article 13 of the CAISO Tariff shall be read as reference to this Agreement. Disputes arising out of or in connection with this Agreement not subject to provisions of Article 13 of the CAISO Tariff shall be resolved as follows:

**10.1** The Parties agree to attempt to resolve all disputes arising out of the interconnection process according to the provisions of this article.

**10.2** In the event of a dispute, either Party shall provide the other Party with a written Notice of Dispute. Such Notice shall describe in detail the nature of the dispute.

**10.3** If the dispute has not been resolved within two Business Days after receipt of the Notice, either Party may contact FERC's Dispute Resolution Service (DRS) for assistance in resolving the dispute.

**10.4** The DRS will assist the Parties in either resolving their dispute or in selecting an appropriate dispute resolution venue (e.g., mediation, settlement judge, early neutral evaluation, or technical expert) to assist the Parties in resolving their dispute. DRS can be reached at 1-877-337-2237 or via the internet at http://www.ferc.gov/legal/adr.asp.

**10.5** Each Party agrees to conduct all negotiations in good faith and will be responsible for one-half of any costs paid to neutral third-parties.

**10.6** If neither Party elects to seek assistance from the DRS, or if the attempted dispute resolution fails, then either Party may exercise whatever rights and remedies it may have in equity or law consistent with the terms of this Agreement.

**Article 11. Taxes**

**11.1** The Parties agree to follow all applicable tax laws and regulations, consistent with FERC policy and Internal Revenue Service requirements.

**11.2** Each Party shall cooperate with the other Parties to maintain the other Parties' tax status. Nothing in this Agreement is intended to adversely affect the Participating TO's tax exempt status with respect to the issuance of bonds including, but not limited to, local furnishing bonds.

**Article 12. Miscellaneous**

**12.1 Governing Law, Regulatory Authority, and Rules**

The validity, interpretation and enforcement of this Agreement and each of its provisions shall be governed by the laws of the state of _____ (where the Point of Interconnection is

located), without regard to its conflicts of law principles. This Agreement is subject to all Applicable Laws and Regulations. Each Party expressly reserves the right to seek changes in, appeal, or otherwise contest any laws, orders, or regulations of a Governmental Authority.

**12.2 Amendment**

The Parties may amend this Agreement by a written instrument duly executed by all of the Parties, or under Article 12.12 of this Agreement.

**12.3 No Third-Party Beneficiaries**

This Agreement is not intended to and does not create rights, remedies, or benefits of any character whatsoever in favor of any persons, corporations, associations, or entities other than the Parties, and the obligations herein assumed are solely for the use and benefit of the Parties, their successors in interest and where permitted, their assigns.

**12.4 Waiver**

**12.4.1** The failure of a Party to this Agreement to insist, on any occasion, upon strict performance of any provision of this Agreement will not be considered a waiver of any obligation, right, or duty of, or imposed upon, such Party.

**12.4.2** Any waiver at any time by any Party of its rights with respect to this Agreement shall not be deemed a continuing waiver or a waiver with respect to any other failure to comply with any other obligation, right, duty of this Agreement. Termination or Default of this Agreement for any reason by Interconnection Customer shall not constitute a waiver of the Interconnection Customer's legal rights to obtain an interconnection from the Participating TO. Any waiver of this Agreement shall, if requested, be provided in writing.

**12.5 Entire Agreement**

This Agreement, including all Attachments, constitutes the entire agreement among the Parties with reference to the subject matter hereof, and supersedes all prior and contemporaneous understandings or agreements, oral or written, between or among the Parties with respect to the subject matter of this Agreement. There are no other agreements, representations, warranties, or covenants which constitute any part of the consideration for, or any condition to, any Party's compliance with its obligations under this Agreement.

**12.6 Multiple Counterparts**

This Agreement may be executed in two or more counterparts, each of which is deemed an original but all constitute one and the same instrument.

**12.7 No Partnership**

This Agreement shall not be interpreted or construed to create an association, joint venture, agency relationship, or partnership among the Parties or to impose any partnership obligation or partnership liability upon any Party. No Party shall have any right, power or authority to enter into any agreement or undertaking for, or act on behalf of, or to act as or be an agent or representative of, or to otherwise bind, another Party.

**12.8 Severability**

If any provision or portion of this Agreement shall for any reason be held or adjudged to be invalid or illegal or unenforceable by any court of competent jurisdiction or other Governmental Authority, (1) such portion or provision shall be deemed separate and independent, (2) the Parties shall

negotiate in good faith to restore insofar as practicable the benefits to each Party that were affected by such ruling, and (3) the remainder of this Agreement shall remain in full force and effect.

### 12.9 Security Arrangements

Infrastructure security of electric system equipment and operations and control hardware and software is essential to ensure day-to-day reliability and operational security. FERC expects all transmission providers, market participants, and interconnection customers interconnected to electric systems to comply with Applicable Reliability Criteria. All public utilities are expected to meet basic standards for system infrastructure and operational security, including physical, operational, and cyber-security practices.

### 12.10 Environmental Releases

Each Party shall notify the other Parties, first orally and then in writing, of the release of any hazardous substances, any asbestos or lead abatement activities, or any type of remediation activities related to the Small Generating Facility or the Interconnection Facilities, each of which may reasonably be expected to affect the other Parties. The notifying Party shall (1) provide the notice as soon as practicable, provided such Party makes a good faith effort to provide the notice no later than 24 hours after such Party becomes aware of the occurrence, and (2) promptly furnish to the other Parties copies of any publicly available reports filed with any governmental authorities addressing such events.

### 12.11 Subcontractors

Nothing in this Agreement shall prevent a Party from utilizing the services of any subcontractor as it deems appropriate to perform its obligations under this Agreement; provided, however, that each Party shall require its subcontractors to comply with all applicable terms and conditions of this Agreement in providing such services and each Party shall remain primarily liable to the other Parties for the performance of such subcontractor.

**12.11.1** The creation of any subcontract relationship shall not relieve the hiring Party of any of its obligations under this Agreement. The hiring Party shall be fully responsible to the other Parties for the acts or omissions of any subcontractor the hiring Party hires as if no subcontract had been made; provided, however, that in no event shall the Participating TO or the CAISO be liable for the actions or inactions of the Interconnection Customer or its subcontractors with respect to obligations of the Interconnection Customer under this Agreement. Any applicable obligation imposed by this Agreement upon the hiring Party shall be equally binding upon, and shall be construed as having application to, any subcontractor of such Party.

**12.11.2** The obligations under this article will not be limited in any way by any limitation of subcontractor's insurance.

### 12.12 Reservation of Rights

The CAISO and Participating TO shall each have the right to make a unilateral filing with FERC to modify this Agreement pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following articles of this Agreement and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these articles:

Introductory Paragraph, 1.1, 1.2, 1.3, 1.4, 1.5.1, 1.5.2, 1.5.3, 1.5.4, 1.5.5, 1.5.6, 1.5.7, 1.6, 1.7, 1.8.1, 1.9, 2.1, 2.2.1, 2.3, 3, 4.1.1 (last sentence only), 5.1, 5.3, 6.2, 7, 8, 9, 11, 12, 13, Attachment 1, Attachment 4, Attachment 5, and Attachment 7.

The Participating TO shall have the exclusive right to make a unilateral filing with FERC to modify this Agreement pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following articles of this Agreement and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these articles:

2.2.2, 4.1.1 (all but the last sentence), 4.1.2, 4.2, 5.2, 6.1.1 (all but the last sentence), 6.1.2, 10 (all but preamble), Attachment 2, Attachment 3 and Attachment 6.

The CAISO shall have the exclusive right to make a unilateral filing with FERC to modify this Agreement pursuant to section 205 or any other applicable provision of the Federal Power Act and FERC's rules and regulations thereunder with respect to the following articles of this Agreement and with respect to any rates, terms and conditions, charges, classifications of service, rule or regulation covered by these articles:

1.8.2, 6.1.1 (last sentence only) and 10 (preamble only).

The Interconnection Customer, the CAISO, and the Participating TO shall have the right to make a unilateral filing with FERC to modify this Agreement under any applicable provision of the Federal Power Act and FERC's rules and regulations; provided that each Party shall have the right to protest any such filing by another Party and to participate fully in any proceeding before FERC in which such modifications may be considered. Nothing in this Agreement shall limit the rights of the Parties or of FERC under sections 205 or 206 of the Federal Power Act and FERC's rules and regulations, except to the extent that the Parties otherwise mutually agree as provided herein.

### 12.13 Annual Reassessment Process

In accordance with Section 7 of the RIS, the CAISO will perform an annual reassessment in which it will update certain base case data prior to beginning the Interconnection Facilities Study. As set forth in Section 7 of the RIS, the CAISO may determine through this assessment that Delivery Network Upgrades and Off-Peak Network Upgrades already identified and included in executed Generator Interconnection Agreements should be modified in order to reflect the current circumstances of Interconnection Customers in the queue, including any withdrawals therefrom, and any additions and upgrades approved in the CAISO's most recent Transmission Planning Process cycle. To the extent that this determination modifies the scope or characteristics of, or the financial responsibility for, any Delivery Network Upgrades and Off-Peak Network Upgrades determined pursuant to this SGIA, such modification(s) will be reflected through an amendment to this SGIA.

## Article 13. Notices

### 13.1 General

Unless otherwise provided in this Agreement, any written notice, demand, or request required or authorized in connection with this Agreement ("Notice") shall be deemed properly given if delivered in person, delivered by recognized national courier service, or sent by first class mail, postage prepaid, to the person specified below:

If to the Interconnection Customer:

Interconnection Customer: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

If to the Participating TO:

Participating TO: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

If to the CAISO:

California Independent System Operator Corporation

Attention: _____

250 Outcropping Way

Folsom, CA 95630

Phone: 916-351-4400 Fax: _____

**13.2 Billing and Payment**

Billings and payments shall be sent to the addresses set out below:

Interconnection Customer: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip: _____

Participating TO: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip: _____

**13.3 Alternative Forms of Notice**

Any notice or request required or permitted to be given by any Party to the other Parties and not required by this Agreement to be given in writing may be so given by telephone, facsimile or e-mail to the telephone numbers and e-mail addresses set out below:

If to the Interconnection Customer:

Interconnection Customer: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

E-mail address: _____

If to the Participating TO:

Participating TO: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

E-mail address: _____

If to the CAISO:

California Independent System Operator Corporation

Attention: _____

250 Outcropping Way

Folsom, CA 95630

Phone: 916-351-4400 Fax: _____

E-mail address: _____

**13.4 Designated Operating Representative**

The Parties may also designate operating representatives to conduct the communications which may be necessary or convenient for the administration of this Agreement. This person will also serve as the point of contact with respect to operations and maintenance of the Party's facilities.

Interconnection Customer's Operating Representative:

Interconnection Customer: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

Participating TO's Operating Representative:

Participating TO: _____

Attention: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Fax: _____

CAISO's Operating Representative

California Independent System Operator Corporation

Attention: _____

250 Outcropping Way

Folsom, CA 95630

**13.5 Changes to the Notice Information**

Any Party may change this information by giving five Business Days written notice to the other Parties prior to the effective date of the change.

**Article 14. Signatures**

**IN WITNESS WHEREOF,** the Parties have caused this Agreement to be executed by their respective duly authorized representatives.

For the California Independent System Operator Corporation

By: _____

Name: _____

Title: _____

Date: _____

For the Participating TO

By: _____

Name: _____

Title: _____

Date: _____

For the Interconnection Customer

By: _____

Name: _____

Title: _____

Date: _____

**Attachment 1**

**Glossary of Terms**

**Affected System** - An electric system other than the CAISO Controlled Grid that may be affected by the proposed interconnection, including the Participating TO's electric system that is not part of the CAISO Controlled Grid.

**Applicable Laws and Regulations** - All duly promulgated applicable federal, state and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority.

**Area Deliverability Constraint** - A previously identified transmission system operating limit, based on a CAISO interconnection study or transmission planning study and listed on the CAISO website, that would constrain the deliverability of a substantial number of generators if the CAISO were to assign full capacity or partial capacity deliverability status to additional generating facilities in one or more specified geographic or electrical areas of the CAISO Controlled Grid in a total amount that is greater than the TP Deliverability for those areas. May also be a transmission system operating limit that constrains all or most of the same generation already constrained by a previously identified Area Deliverability Constraint.

**Area Delivery Network Upgrade (ADNU)** - A transmission upgrade or addition identified by the CAISO to relieve an Area Deliverability Constraint.

**Area Off-Peak Constraints** - A transmission system operating limit that would cause excessive curtailment to a substantial number of Generating Facilities during Off-Peak Load conditions, as described in Section 6.3.2.2 of Appendix DD and the CAISO Off-Peak Deliverability Assessment posted on the CAISO Website.

**Area Off-Peak Network Upgrades (AOPNUs)** - A transmission upgrade or addition the CAISO identifies in the Transmission Planning Process to relieve an Area Off-Peak Constraint.

**Assigned Network Upgrade (ANU)** - Reliability Network Upgrades, Local Off-Peak Network Upgrades, and Local Delivery Network Upgrades currently assigned to the Interconnection Customer. Assigned Network Upgrades exclude Conditionally Assigned Network Upgrades unless they become Assigned Network Upgrades.

**Balancing Authority Area** - The collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The Balancing Authority maintains load-resource balance within this area.

**Business Day** - Monday through Friday, excluding federal holidays and the day after Thanksgiving Day.

**CAISO Controlled Grid** - The system of transmission lines and associated facilities of the parties to a Transmission Control Agreement that have been placed under the CAISO's Operational Control.

**CAISO Tariff** - The CAISO's tariff, as filed with FERC, and as amended or supplemented from time to time, or any successor tariff.

**Cluster Application Window** - The time period for submitting Interconnection Requests as set forth in Section 3.3 of Appendix KK.

**Cluster Study Process** -The following processes, conducted in sequence: the Cluster Application Window; the Customer Engagement Window and Scoping Meetings therein; the Cluster Study; any needed Cluster Restudies; and the Interconnection Facilities Study.

**Commercial Operation Date** - The date on which a Small Generating Facility commenced generating

electricity for sale as agreed upon by the Participating TO and the Interconnection Customer and in accordance with any implementation plan agreed to by the Participating TO and the CAISO for multiple individual generating units or project phases at a Small Generating Facility where an Interconnection Customer intends to establish separate Commercial Operation Dates for those generating units or project phases.

**Commercial Readiness Deposit -** A deposit paid as set forth in Sections 3.5.1, 7.5, and 8.1.1 of the RIS.

**Conditionally Assigned Network Upgrade (CANU)** - Reliability Network Upgrades and Local Delivery Network Upgrades currently assigned to an earlier Interconnection Customer, but which may be assigned to the Interconnection Customer.

**Current Cost Responsibility (CCR)** - The Interconnection Customer's current allocated costs for Assigned Network Upgrades, not to exceed the Maximum Cost Responsibility. This cost is used to calculate the Interconnection Customer's, Commercial Readiness Deposit, and GIA Deposit requirements, as applicable.

**Customer Engagement Window** - The time period set forth in Section 3.5.2 of the RIS.

**Default** - The failure of a breaching Party to cure its breach under this Agreement.

**Distribution System** - Those non-CAISO-controlled transmission and distribution facilities owned by the Participating TO.

**Distribution Upgrades** - The additions, modifications, and upgrades to the Participating TO's Distribution System. Distribution Upgrades do not include Interconnection Facilities.

**Electric Reliability Organization** - The North American Electric Reliability Corporation (NERC) and the Western Electricity Coordinating Council (WECC) or their successor organizations.

**General Reliability Network Upgrade (GRNU)** - Reliability Network Upgrades that are not Interconnection Reliability Network Upgrades.

**Generator Interconnection and Deliverability Allocation Procedures (GIDAP)** - The CAISO protocol that sets forth the interconnection and allocation procedures applicable to an Interconnection Request pertaining to a Small Generating Facility that is included in CAISO Tariff Appendix DD.

**GIA Deposit -** The deposit Interconnection Customer submits when returning the executed GIA, or within ten (10) Business Days of requesting that the GIA be filed unexecuted at the Commission, in accordance with Section 11 of the RIS.

**Good Utility Practice** - Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be any one of a number of the optimum practices, methods, or acts to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region.

**Governmental Authority** - Any federal, state, local or other governmental regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, or other governmental authority having jurisdiction over the Parties, their respective facilities, or the respective services they provide, and exercising or entitled to exercise any administrative, executive, police, or taxing authority or power; provided, however, that such term does not include the Interconnection Customer, CAISO, Participating TO, or any affiliate thereof.

**Interconnection Facilities** - The Participating TO's Interconnection Facilities and the Interconnection Customer's Interconnection Facilities. Collectively, Interconnection Facilities include all facilities and equipment between the Small Generating Facility and the Point of Interconnection, including any modification, additions or upgrades that are necessary to physically and electrically interconnect the Small Generating Facility to the Participating TO's Transmission System. Interconnection Facilities are sole use facilities and shall not include Distribution Upgrades or Network Upgrades.

**Interconnection Handbook** - A handbook, developed by the Participating TO and posted on the Participating TO's website or otherwise made available by the Participating TO, describing technical and operational requirements for wholesale generators and loads connected to the Participating TO's Transmission System, as such handbook may be modified or superseded from time to time. The Participating TO's standards contained in the Interconnection Handbook shall be deemed consistent with Good Utility Practice and applicable reliability standards.

**Interconnection Reliability Network Upgrade (IRNU)** - Reliability Network Upgrades at the Point of Interconnection to accomplish the physical interconnection of the Generating Facility to the CAISO Controlled Grid. IRNUs are treated as Reliability Network Upgrades unless otherwise noted.

**Interconnection Request** – An Interconnection Customer's request, in the form of Appendix 1 Appendix KK in accordance with Section 25.1 of the CAISO Tariff.

**Interconnection Study** - Any of the following studies: the Interconnection Feasibility Study, the Interconnection System Impact Study, the Interconnection Facilities Study, the Phase I Interconnection Study, the Phase II Interconnection Study, the Cluster Study, the Cluster Restudy, the Surplus Interconnection Service Study, the Affected System Study, or the reassessment of any of these.

**Local Deliverability Constraint** - A transmission system operating limit modeled in the GIDAP study process that would be exceeded if the CAISO were to assign full capacity or partial capacity deliverability status to one or more additional generating facilities interconnecting to the CAISO Controlled Grid in a specific local area, and that is not an Area Deliverability Constraint.

**Local Delivery Network Upgrade (LDNU)** - A transmission upgrade or addition identified by the CAISO in the GIDAP study process to relieve a Local Deliverability Constraint.

**Local Off-Peak Constraints** - A transmission system operating limit modeled in the generator interconnection study process that would be exceeded or lead to excessive curtailment, as described in the Off-Peak Deliverability Assessment methodology, if the CAISO were to assign Off-Peak Deliverability Status to one or more Generating Facilities interconnecting to the CAISO Controlled Grid in a specific local area, and that is not an Area Off-Peak Constraint.

**Local Off-Peak Network Upgrades (LOPNUs)** - A transmission upgrade or addition the CAISO identifies in the generator interconnection study process to relieve a Local Off-Peak Constraint.

**Material Modification** - A modification that has a material impact on the cost or timing of any Interconnection Request or any other valid interconnection request with an equal or later Queue Position.

**Maximum Cost Exposure (MCE)** - The sum of (1) the Interconnection Customer's Maximum Cost Responsibility and (2) the Conditionally Assigned Network Upgrades from its Interconnection Studies.

**Maximum Cost Responsibility (MCR)** - The sum of the Interconnection Customer's (1) full cost of assigned Interconnection Reliability Network Upgrades and (2) allocated costs for all other Assigned Network Upgrades, from its Interconnection Facilities Study, not to exceed the Maximum Cost Exposure.

**Merchant Network Upgrades** - Network Upgrades constructed and owned by an Interconnection Customer pursuant to Article 5.2.1 of this SGIA, Section 13.3 of the GIDAP, and Sections 24.4.6.1 and 36.11 of the CAISO Tariff.

**Network Upgrades** - Additions, modifications, and upgrades to the Participating TO's Transmission System required at or beyond the point at which the Small Generating Facility interconnects with the CAISO Controlled Grid to accommodate the interconnection of the Small Generating Facility with the CAISO Controlled Grid. Network Upgrades do not include Distribution Upgrades.

**Operational Control** - The rights of the CAISO under a Transmission Control Agreement and the CAISO Tariff to direct the parties to the Transmission Control Agreement how to operate their transmission lines and facilities and other electric plant affecting the reliability of those lines and facilities for the purpose of affording comparable non-discriminatory transmission access and meeting applicable reliability criteria.

**Off-Peak Deliverability Constraints** - A transmission system operating limit that constrains Generating Facilities in an area, leading to the excessive curtailment of expected Energy.

**Off-Peak Network Upgrades** - Network Upgrades needed to relieve Off-Peak Deliverability Constraints. Area Off-Peak Network Upgrades address Area Off-Peak Constraints. Local Off-Peak Network Upgrades address Local Off-Peak Constraints.

**Operating Requirements** - Any operating and technical requirements that may be applicable due to the CAISO, Western Electricity Coordinating Council, Balancing Authority Area, or the Participating TO's requirements, including those set forth in this Agreement.

**Option (A) Interconnection Customer** – A Generating Facility for which the Interconnection Customer has selected Option (A) as the Deliverability option under Section 7.2 of Appendix DD or KK.

**Option (B) Interconnection Customer** – Generating Facilities for which the Interconnection Customer has selected Option (B) as the Deliverability option under Section 7.2 of Appendix DD or KK.

**Party or Parties** - The Participating TO, CAISO, Interconnection Customer or the applicable combination of the above.

**Phased Generating Facility** - A Small Generating Facility that is structured to be completed and to achieve Commercial Operation in two or more successive sequences that are specified in this SGIA, such that each sequence comprises a portion of the total megawatt generation capacity of the entire Small Generating Facility.

**Point of Interconnection** - The point where the Interconnection Facilities connect with the Participating TO's Transmission System.

**Precursor Network Upgrades (PNU)** - Network Upgrades required for the Interconnection Customer consisting of (1) Network Upgrades assigned to an earlier Interconnection Customer in an earlier Queue Cluster, Independent Study Process, or Fast Track Process, that has executed its GIA pursuant to Section 14.2.2 of the GIDAP; and (2) Network Upgrades in the approved CAISO Transmission Plan.

**Reasonable Efforts** - With respect to an action required to be attempted or taken by a Party under this Agreement, efforts that are timely and consistent with Good Utility Practice and are otherwise substantially equivalent to those a Party would use to protect its own interests.

**Reliability Network Upgrades (RNU)** - The transmission facilities at or beyond the Point of Interconnection identified in the Interconnection Studies as necessary to interconnect one or more Generating Facility(ies) safely and reliably to the CAISO Controlled Grid, which would not have been necessary but for the interconnection of one or more Generating Facility(ies), including Network Upgrades necessary to remedy short circuit or stability problems, or system operating limits. Reliability Network Upgrades shall only be deemed necessary for system operating limits, occurring under any system condition, which cannot be adequately mitigated through Congestion Management or Operating Procedures based on the characteristics of the Generating Facilities included in the Interconnection

Studies, limitations on market models, systems, or information, or other factors specifically identified in the Interconnection Studies. Reliability Network Upgrades also include, consistent with WECC practice, the facilities necessary to mitigate any adverse impact the Generating Facility's interconnection may have on a path's WECC rating. Reliability Network Upgrades include Interconnection Reliability Network Upgrades and General Reliability Network Upgrades.

**Resource Interconnection Standards (RIS)** - Appendix KK to the CAISO Tariff.

**Site Control -** the exclusive land right to develop, construct, operate, and maintain the Generating Facility over the term of expected operation of the Generating Facility. Site Control may be demonstrated by documentation establishing: (1) ownership of, a leasehold interest in, or a right to develop a site of sufficient size to construct and operate the Generating Facility; (2) an option to purchase or acquire a leasehold site of sufficient size to construct and operate the Generating Facility; or (3) any other documentation that clearly demonstrates the right of Interconnection Customer to exclusively occupy a site of sufficient size to construct and operate the Generating Facility. The CAISO will maintain acreage requirements for each Generating Facility type on its Website.

**Small Generating Facility** - The Interconnection Customer's device for the production and/or storage for later injection of electricity identified in the Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities.

**Small Generator Interconnection Agreement -** The pro forma Interconnection Agreement applicable to an Interconnection Request for a Small Generating Facility.

**TP Deliverability** - The capability, measured in MW, of the CAISO Controlled Grid as modified by transmission upgrades and additions identified in the annual Transmission Plan to support the interconnection with Full Capacity Deliverability Status or Partial Capacity Deliverability Status of additional Generating Facilities in a specified geographic or electrical area of the CAISO Controlled Grid.

**Transmission Control Agreement** - CAISO FERC Electric Tariff No. 7.

**Transmission System** - The facilities owned and operated by the Participating TO and that have been placed under the CAISO's Operational Control, which facilities form part of the CAISO Controlled Grid.

**Upgrades** - The required additions and modifications to the Participating TO's Transmission System and Distribution System at or beyond the Point of Interconnection. Upgrades may be Network Upgrades or Distribution Upgrades. Upgrades do not include Interconnection Facilities.

**Withdrawal Penalty -** The penalty assessed by the CAISO to an Interconnection Customer that chooses to withdraw or is deemed withdrawn from the CAISO's interconnection queue or whose Generating Facility does not otherwise reach Commercial Operation. The calculation of the Withdrawal Penalty is set forth in Section 3.8.1 of the RIS.

**Attachment 2**

**Description and Costs of the Small Generating Facility,**

**Interconnection Facilities, and Metering Equipment**

Equipment, including the Small Generating Facility, Interconnection Facilities, and metering equipment shall be itemized and identified as being owned by the Interconnection Customer or the Participating TO. The Participating TO will provide a best estimate itemized cost, including overheads, of its Interconnection Facilities and metering equipment, and a best estimate itemized cost of the annual operation and maintenance expenses associated with its Interconnection Facilities and metering equipment.

**Attachment 3**

**One-line Diagram Depicting the Small Generating Facility, Interconnection Facilities, Metering Equipment, and Upgrades**

**Attachment 4**

**Milestones**

In-Service Date: _____

[***Site Control***
*Interconnection Customer with qualifying regulatory limitations must demonstrate 100% Site Control by {insert date 180 days from the effective date of this SGIA} or the SGIA may be terminated per Article 7 (Default) of this SGIA and the Interconnection Customer may be subject to Withdrawal Penalties per Section 3.8 of Appendix KK CAISO Tariff (Withdrawal Penalties).]*

Critical milestones and responsibility as agreed to by the Parties:

| | Milestone/Date | Responsible Party |
|---|---|---|
| (1) | | |
| (2) | | |
| (3) | | |
| (4) | | |
| (5) | | |
| (6) | | |
| (7) | | |
| (8) | | |
| (9) | | |
| (10) | | |

Agreed to by:

For the CAISO _____ Date _____

For the Participating TO _____ Date _____

For the Interconnection Customer _____ Date _____

**Attachment 5**

**Additional Operating Requirements for the CAISO Controlled Grid and Affected Systems Needed to Support the Interconnection Customer's Needs**

The Participating TO and the CAISO shall also provide requirements that must be met by the Interconnection Customer prior to initiating parallel operation with the CAISO Controlled Grid.

**Attachment 6**

**Participating TO's Description of its Upgrades and Best Estimate of Upgrade Costs**

The Participating TO shall describe Upgrades and provide an itemized best estimate of the cost, including overheads, of the Upgrades and annual operation and maintenance expenses associated with such Upgrades. The Participating TO shall functionalize Upgrade costs and annual expenses as either transmission or distribution related.

**Attachment 7**

**Interconnection Requirements for an Asynchronous Small Generating Facility**

Attachment 7 sets forth requirements and provisions specific to all Asynchronous Generating Facilities. Except as provided in Section 25.4.2 of the CAISO Tariff, existing individual Generating Units of an Asynchronous Generating Facility that are, or have been, interconnected to the CAISO Controlled Grid at the same location are exempt from the requirements of this Attachment 7 for the remaining life of the existing Generating Unit.

## A. Technical Standards Applicable to Asynchronous Generating Facilities

### i. Voltage Ride-Through Capability

An Asynchronous Generating Facility shall be able to remain online during voltage disturbances up to the time periods and associated voltage levels set forth in the requirements below.

1. An Asynchronous Generating Facility shall remain online for the voltage disturbance caused by any fault on the transmission grid, or within the Asynchronous Generating Facility between the Point of Interconnection and the high voltage terminals of the Asynchronous Generating Facility's step up transformer, having a duration equal to the lesser of the normal three-phase fault clearing time (4-9 cycles) or one-hundred fifty (150) milliseconds, plus any subsequent post-fault voltage recovery to the final steady-state post-fault voltage unless clearing the fault effectively disconnects the generator from the system. Clearing time shall be based on the maximum normal clearing time associated with any three-phase fault location that reduces the voltage at the Asynchronous Generating Facility's Point of Interconnection to 0.2 per-unit of nominal voltage or less, independent of any fault current contribution from the Asynchronous Generating Facility.

2. An Asynchronous Generating Facility shall remain online for any voltage disturbance caused by a single-phase fault on the transmission grid, or within the Asynchronous Generating Facility between the Point of Interconnection and the high voltage terminals of the Asynchronous Generating Facility's step up transformer, with delayed clearing, plus any subsequent post-fault voltage recovery to the final steady-state post-fault voltage unless clearing the fault effectively disconnects the generator from the system. Clearing time shall be based on the maximum backup clearing time associated with a single point of failure (protection or breaker failure) for any single-phase fault location that reduces any phase-to-ground or phase-to-phase voltage at the Asynchronous Generating Facility's Point of Interconnection to 0.2 per-unit of nominal voltage or less, independent of any fault current contribution from the Asynchronous Generating Facility.

3. Remaining on-line shall be defined as continuous connection between the Point of Interconnection and the Asynchronous Generating Facility's units, without any mechanical isolation. Momentary cessation (namely, ceasing to inject current during a fault without mechanical isolation) is prohibited unless transient high voltage conditions rise to 1.20 per unit or more. For transient low voltage conditions, the Asynchronous Generating Facility's inverters will inject reactive current. The level of this reactive current must be directionally proportional to the decrease in per unit voltage at the inverter AC terminals. The inverter must produce full reactive current capability when the AC voltage at the inverter terminals drops to a level of 0.50 per unit or below. The Asynchronous

Generating Facility must continue to operate and absorb reactive current for transient voltage conditions between 1.10 and 1.20 per unit.

Upon the cessation of transient voltage conditions and the return of the grid to normal operating voltage (0.90 < V < 1.10 per unit), the Asynchronous Generating Facility's inverters automatically must transition to normal active (real power) current injection. The Asynchronous Generating Facility's inverters must ramp up to inject active (real power) current with a minimum ramping rate of at least 100% per second (from no output to full available output). The total time to complete the transition from reactive current injection or absorption to normal active (real power) current injection must be one second or less. The total time to return from momentary cessation, if used, during transient high voltage conditions over 1.20 per unit or more must be one second or less.

The Asynchronous Generating Facility's inverter will be considered to have tripped where its AC circuit breaker is open or otherwise has electrically isolated the inverter from the grid. Following an inverter trip, the inverter must make at least one attempt to resynchronize and connect back to the grid unless the trip resulted from a fatal fault code, as defined by the inverter manufacturer. This attempt must take place within 2.5 minutes from the inverter trip. An attempt to resynchronize and connect back to the grid is not required if the trip was initiated due to a fatal fault code, as determined by the original equipment manufacturer.

4. The Asynchronous Generating Facility is not required to remain on line during multi-phased faults exceeding the duration described in Section A.i.1 of this Attachment 7 or single-phase faults exceeding the duration described in Section A.i.2 of this Attachment 7.

5. The requirements of this Section A.i of this Attachment 7 do not apply to faults that occur between the Asynchronous Generating Facility's terminals and the high side of the step-up transformer to the high-voltage transmission system.

6. Asynchronous Generating Facilities may be tripped after the fault period if this action is intended as part of a special protection system.

7. Asynchronous Generating Facilities may meet the requirements of this Section A of this Attachment 7 through the performance of the generating units or by installing additional equipment within the Asynchronous Generating Facility or by a combination of generating unit performance and additional equipment.

8. The provisions of this Section A.i of this Attachment 7 apply only if the voltage at the Point of Interconnection has remained within the range of 0.9 and 1.10 per-unit of nominal voltage for the preceding two seconds, excluding any sub-cycle transient deviations.

9. Asynchronous Generating Facility inverters may not trip or cease to inject current for momentary loss of synchronism. As a minimum, the Asynchronous Generating Facility's inverter controls may lock the phase lock loop to the last synchronized point and continue to inject current into the grid at that last calculated phase prior to the loss of synchronism until the phase lock loop can regain synchronism. The current injection may be limited to protect the inverter. Any inverter may trip if the phase lock loop is unable to regain synchronism 150 milliseconds after loss of synchronism.

10. Inverter restoration following transient voltage conditions must not be impeded by plant level controllers. If the Asynchronous Generating Facility uses a plant level controller, it must be programmed to allow the inverters to automatically re-synchronize rapidly and ramp up to active current injection (without delayed ramping) following transient voltage recovery, before resuming overall control of the individual plant inverters.

**ii. Frequency Disturbance Ride-Through Capacity**

An Asynchronous Generating Facility shall comply with the off nominal frequency requirements set forth in the Electric Reliability Organization Reliability Standard for Generator Frequency and Voltage Protective Relay Settings as they may be amended from time to time.

**iii. Power Factor Design Criteria (Reactive Power)**

An Asynchronous Generating Facility will operate within a power factor within the range of 0.95 leading to 0.95 lagging, measured at the high voltage side of the substation transformer, as defined in this SGIA in order to maintain a specified voltage schedule, if the Interconnection Facilities Study shows that such a requirement is necessary to ensure safety or reliability. The power factor range standards set forth in this section can be met by using, for example, power electronics designed to supply this level of reactive capability (taking into account any limitations due to voltage level, real power output, etc.) or fixed and switched capacitors, or a combination of the two, if agreed to by the Participating TO and CAISO. The Interconnection Customer shall not disable power factor equipment while the Asynchronous Generating Facility is in operation. Asynchronous Generating Facilities shall also be able to provide sufficient dynamic voltage support in lieu of the power system stabilizer and automatic voltage regulation at the generator excitation system if the Interconnection Facilities Study shows this to be required for system safety or reliability.

**iv. Supervisory Control and Data Acquisition (SCADA) Capability**

An Asynchronous Generating Facility shall provide SCADA capability to transmit data and receive instructions from the Participating TO and CAISO to protect system reliability. The Participating TO and CAISO and the Asynchronous Generating Facility Interconnection Customer shall determine what SCADA information is essential for the proposed Asynchronous Generating Facility, taking into account the size of the plant and its characteristics, location, and importance in maintaining generation resource adequacy and transmission system reliability.

**v. Power System Stabilizers (PSS)**

Power system stabilizers are not required for Asynchronous Generating Facilities.

**vi. Transient Data Recording Equipment for Facilities**

Asynchronous Generating Facilities must monitor and record data for all frequency ride-through events, transient low voltage disturbances that initiated reactive current injection, reactive current injection or momentary cessation for transient high voltage disturbances, and inverter trips. The data may be recorded and stored in a central plant control system. The following data must be recorded:

**Plant Level:**

(1) Plant three phase voltage and current
(2) Status of ancillary reactive devices
(3) Status of all plant circuit breakers
(4) Status of plant controller
(5) Plant control set points
(6) Position of main plant transformer no-load taps
(7) Position of main plant transformer tap changer (if extant)
(8) Protective relay trips or relay target data

**Inverter Level:**

(1) Frequency, current, and voltage during frequency ride-through events
(2) Voltage and current during momentary cessation for transient high voltage events (when used)
(3) Voltage and current during reactive current injection for transient low or high voltage events
(4) Inverter alarm and fault codes
(5) DC current
(6) DC voltage

The data must be time synchronized, using a GPS clock or similar device, to a one millisecond level of resolution. All data except phase angle measuring unit data must be sampled at least every 10 milliseconds. Data recording must be triggered upon detecting a frequency ride-through event, a transient low voltage disturbance that initiated reactive current injection, momentary cessation or reactive current injection for a transient high voltage disturbance, or an inverter trip. Each recording will include as a minimum 150 milliseconds of data prior to the triggering event, and 1000 milliseconds of data after the event trigger. The Asynchronous Generating Facility must store this data for a minimum of 30 days. The Asynchronous Generating Facility will provide all data within 10 calendar days of a request from the CAISO or the Participating TO.

The Asynchronous Generating Facility must install and maintain a phase angle measuring unit or functional equivalent at the entrance to the facility or at the Generating Facility's main substation transformer. The phase angle measuring unit must have a resolution of at least sixteen (16) samples per cycle. The Asynchronous Generating Facility will store this data for a minimum of thirty (30) days. The Asynchronous Generating Facility will provide all phase angle measuring unit data within 10 calendar days of a request from the CAISO or the Participating TO.

**Attachment 8**

**[This Attachment is Intentionally Omitted]**