

**ARTICLE I – GENERAL PROVISIONS**

**1. DEFINITIONS AND INTERPRETATION.**

**1.1** The general provisions of this Article I shall apply to this ISO Tariff.

**1.2 Definitions.**

Capitalized terms used in this ISO Tariff shall have the meanings set out in the Master Definitions Supplement set out in Appendix A to this ISO Tariff unless otherwise stated or the context otherwise requires.

**1.3 Rules of Interpretation.**

**1.3.1** In this ISO Tariff “includes” or “including” shall mean “including without limitation”.

**1.3.2** In this ISO Tariff, unless the context otherwise requires:

- (a) the singular shall include the plural and vice versa;
- (b) references to a Section or Appendix shall mean a section or appendix of this ISO Tariff;
- (c) references to any law shall be deemed references to such law as it may be amended, replaced or restated from time to time;
- (d) any reference to a “person” includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case, whether or not having separate legal personality;
- (e) any reference to a day, month, week or year is to a calendar day, month, week or year.
- (f) Unless the context otherwise requires, if the provisions of a Protocol and this ISO Tariff conflict, the ISO Tariff will prevail to the extent of the inconsistency.
- (g) A reference in this ISO Tariff or to a given agreement, ISO Protocol or instrument shall be a reference to that agreement or instrument as modified, amended, supplemented or restated through the date as of which such reference is made.

- (h) Unless the context otherwise requires, if the provisions of a Protocol or this ISO Tariff and those of an existing contract conflict, with respect to Outage coordination, the existing contract will prevail to the extent of the inconsistency.
- (i) Time references are references to prevailing Pacific time.
- (j) The Operating Procedures referenced in this ISO Tariff, as may be amended from time to time, shall be posted on the ISO Home Page and such references in this ISO Tariff shall be to the Operating Procedures then posted on the ISO Home Page.
- (k) Any reference to a day or Trading Day, week, month or year is a reference to a calendar day, week, month or year except that a reference to a Business Day shall mean a day on which the banks in California are open for business.
- (l) Titles. The captions and headings in this ISO Tariff are inserted solely to facilitate reference and shall have no bearing upon the interpretation of any of the rates, terms, and conditions of this ISO Tariff.

## **2. ACCESS TO THE ISO CONTROLLED GRID.**

### **2.1 Open Access.**

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

**2.2 Eligibility of Customers for Direct Access or Wholesale Sales.**

The eligibility of an End-Use Customer for Direct Access will be determined in accordance with the Direct Access eligibility and phase-in procedures (if any) adopted by the Local Regulatory Authority. Any dispute as to whether an End-Use Customer meets the eligibility criteria must be resolved by the Local Regulatory Authority prior to the ISO providing Direct Access to that End-Use Customer.

A Wholesale Customer shall not be entitled to participate in Wholesale Sales through a Scheduling Coordinator if it is not entitled to wholesale transmission service pursuant to the provisions of FPA Section 212(h).

**3 FACILITIES FINANCED BY LOCAL FURNISHING BONDS OR OTHER TAX-EXEMPT BONDS.**

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

**3.2** Each Local Furnishing Participating TO and other Tax Exempt Participating TO shall cooperate with and provide all necessary assistance to the ISO in developing an ISO Protocol to meet the objectives of Section 3.1 and shall keep the ISO fully informed of any changes necessary to that ISO Protocol from time to time.

**3.3** The ISO shall implement the ISO Protocol referred to in Section 3.1 provided that the Local Furnishing TOs and other Tax Exempt Participating TOs shall bear sole responsibility for the development of that ISO Protocol including the interpretation of all relevant legislation and the tax and other financial consequences of its implementation.

**4 ROLES AND RESPONSIBILITIES.**

**4.1 [Not Used]**

**4.2 Market Participant Responsibilities.**

**4.2.1 Comply with Operating Orders Issued.**

With respect to this Section 4.2, all Market Participants, including Scheduling Coordinators, Utility Distribution Companies, Participating Transmission Owners, Participating Generators, Control Area Operators (to the extent the agreement between the Control Area Operator and the ISO so provides), and Metered Subsystem Operators within the ISO Control Area and all System Resources shall comply fully and promptly with the ISO's Dispatch Instructions and operating orders, unless such operation would impair public health or safety. A Market Participant is not required to comply with an ISO operating order if it is physically impossible for the Market Participant to perform in compliance with that operating order. Shedding Load for a System Emergency does not constitute impairment to public health or safety. The Market Participant shall immediately notify the ISO of its inability to perform in compliance with the operating order. The ISO will honor the terms of Existing Contracts, **provided that** in a System Emergency and circumstances in which the ISO considers that a System Emergency is imminent or threatened, **holders of** Existing Rights must follow ISO operating orders even if those operating orders **directly** conflict with the terms of Existing Contracts. For this purpose ISO operating orders to shed Load shall not be considered as an impairment to public health or safety. This section does not prohibit a Scheduling Coordinator from modifying its Schedule or re-purchasing Energy in the Hour-Ahead Market.

**4.2.2 Implementation of Instructions.**

All Market Participants shall respond to ISO instructions with no more delay than specified in the response times set out in the ISO Tariff and Protocols.

**4.3 Relationship Between ISO and Participating Tos.**

**4.3.1 Nature of Relationship.**

Each Participating TO shall enter into a Transmission Control Agreement with the ISO. In addition to converting Existing Rights in accordance with Section 16.2.1A, and except as provided in Section 4.3.1.3, New Participating TOs will be required to turn over Operational Control of all facilities and Entitlements that: (1) satisfy the FERC's functional criteria for determining transmission facilities that should be placed under ISO Operational Control; (2) satisfy the criteria adopted by the ISO Governing Board identifying transmission facilities for which the ISO should assume Operational Control; and (3) are the subject of mutual agreement between the ISO and the Participating TOs. The ISO shall notify Market Participants when an application has been received from a potential Participating TO and shall notify Market Participants that a New Participating TO has executed the Transmission Control Agreement and the date on which the ISO will have Operational Control of the transmission facilities.

**4.3.1.1** In any year, a Participating TO applicant must declare its intent in writing to the ISO to become a New Participating TO by January 1 or July 1, and provide the ISO with an application within 15 days of such notice of intent. Applicable agreements will be negotiated and filed with the Federal Energy Regulatory Commission as soon as possible for the New Participating TO, such that the Agreements can be effective the following July 1 or January 1.

**4.3.1.2** With respect to its submission of Schedules to the ISO, a New Participating TO shall become a Scheduling Coordinator or obtain the services of a Scheduling Coordinator that has been certified in accordance with Section 4.5.1.1, which Scheduling Coordinator shall not be the entity's Responsible Participating TO in accordance with the Responsible Participating Transmission Owner Agreement, unless mutually agreed, and shall operate in accordance with the ISO Tariff and applicable agreements.

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

**4.3.1.3** Western Path 15 shall be required to turn over to ISO Operational Control only its rights and interests in the Path 15 Upgrade and shall not be required to turn over to ISO Operational Control Central Valley Project transmission facilities, Pacific AC Intertie transmission facilities, California-Oregon Transmission Project facilities, or any other new transmission facilities or Entitlements not related to the Path 15 Upgrade. For purposes of the ISO Tariff, Western Path 15 shall be treated with respect to revenue recovery as a Project Sponsor in accordance with Section 24.7.

**4.3.1.4** The capacity provided to the ISO under the Transmission Exchange Agreement originally accepted by FERC in Docket No. ER04-688 is deemed to be ISO Controlled Grid facilities and is subject to all terms and conditions of the ISO Tariff.

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

#### **4.4 Relationship Between ISO And UDCs.**

##### **4.4.1 General Nature of Relationship Between ISO and UDCs.**

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

**4.4.1.2** The ISO shall operate the ISO Controlled Grid, and each UDC shall operate its Distribution System at all times in accordance with Good Utility Practice and in a manner which ensures safe and reliable operation. The ISO shall, in respect of its obligations set forth in this Section 4.4, have the right by agreement to delegate certain operational responsibilities to the relevant Participating TO or UDC pursuant to this Section 4.4. All information made available to UDCs by the ISO shall also be made available to Scheduling Coordinators. All information pertaining to the physical state or operation, maintenance and failure of the UDC Distribution System affecting the operation of the ISO Controlled Grid

that is made available to the ISO by the UDC shall also be made available to Scheduling Coordinators upon receipt of reasonable notice.

#### **4.4.3 UDC Responsibilities.**

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

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

**4.4.3.2** provide the ISO Outage Coordination Office each year with a schedule of upcoming maintenance (including all equipment Outages) that has a reasonable potential of impacting the ISO Controlled Grid in accordance with Section 9.3.6 of this ISO Tariff and in accordance with the other scheduling procedures described in this ISO Tariff;

**4.4.3.3** coordinate with the ISO, Participating TOs and Generators to ensure that ISO Controlled Grid Critical Protective Systems, including relay systems, are installed and maintained in order to function on a coordinated and complementary basis with UDCs, Generator's and Participating TO's protective systems.

**4.4.3.4** Each UDC shall coordinate any requests for emergency Outages on point of interconnection equipment directly with the appropriate ISO Control Center as specified in Section 7.1.

#### **4.4.6 System Emergency Reports: UDC Obligations.**

**4.4.6.1** Each UDC shall maintain all appropriate records pertaining to a System Emergency.

**4.4.6.2** Each UDC shall cooperate with the ISO in the preparation of an Outage review pursuant to Section 7.4.13.

**4.4.7 Coordination of Expansion or Modifications to UDC Facilities.**

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

**4.4.8 Information Sharing.**

**4.4.8.1 System Planning Studies.**

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

**4.4.8.2 System Surveys and Inspections.**

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

**4.4.8.3 Reports.**

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

**4.4.8.3.2** The ISO and UDCs shall develop an operating procedure to record requests received for Maintenance Outages by the ISO and the completion of the requested maintenance and turnaround times.

**4.4.8.3.3** The UDCs shall maintain records that substantiate all maintenance performed on UDC facilities which are under the Operational Control of the ISO. These records shall be made available to the ISO upon receipt of reasonable notice.



**4.4.8.4 Installation of and Rights of Access to UDC Facilities.**

**4.4.8.4.1 Installation of Facilities.**

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

**4.4.8.4.1.2 Governing Agreements for Installations.** The ISO and the UDC shall enter into agreements governing the installation of equipment or other facilities containing customary, reasonable terms and conditions.

**4.4.8.4.2 Access to Facilities.**

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

**4.4.8.4.3 Access During Emergencies.**

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

**4.4.8.5 Provision of Information for CRRs to Reflect Load Migration.**

Each UDC shall provide to the CAISO information as provided in Section 36.8.5.2 of Appendix BB that enables the CAISO to perform transfers of CRRs that reflect Load Migration in a timely manner as required in Section 36.8.5 of Appendix BB.

**4.4.9 UDC Facilities under ISO Control.**

The ISO and each UDC shall enter into an agreement in relation to the operation and maintenance of the UDC's facilities which are under the ISO's Operational Control.

#### **4.5 Responsibilities of a Scheduling Coordinator.**

##### **4.5.1 Scheduling Coordinator Certification.**

Only Scheduling Coordinators that the CAISO has certified as having met the requirements of this Section 4.5.1 may participate in the CAISO's Energy and Ancillary Services markets. Scheduling Coordinators offering Ancillary Services shall additionally meet the requirements of Section 8.

Each Scheduling Coordinator shall:

- (a) demonstrate to the CAISO's reasonable satisfaction that it is capable of performing the functions of a Scheduling Coordinator under this CAISO Tariff including (without limitation) the functions specified in Sections 4.5.3 and 4.5.4;
- (b) identify each of the Eligible Customers (including itself if it trades for its own account) which it is authorized to represent as Scheduling Coordinator and confirm that the metering requirements under Section 10 are met in relation to each Eligible Customer that it represents under this CAISO Tariff;
- (c) confirm that each of the End-Use Customers it represents is eligible for Direct Access;
- (d) confirm that none of the Wholesale Customers it represents is ineligible for wholesale transmission service pursuant to the provisions of FPA Section 212(h);
- (e) demonstrate to the CAISO's reasonable satisfaction that it meets the financial criteria set out in Section 12;
- (f) enter into a Scheduling Coordinator Agreement with the CAISO; and
- (g) provide NERC tagging data.

**4.5.1.1 Procedure to become a Scheduling Coordinator.**

**4.5.1.1.1 Scheduling Coordinator Application.**

To become a Scheduling Coordinator, a Scheduling Coordinator Applicant must submit a completed application, as set forth in the applicable Business Practice Manual, to the CAISO by mail or in person. A Scheduling Coordinator Applicant may retrieve the application and necessary information from the CAISO Website.

**4.5.1.1.2 CAISO Information.**

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

- (a) the Scheduling Coordinator Application Form, as set forth in the applicable Business Practice Manual;
- (b) the CAISO Tariff and Business Practice Manuals; and
- (c) forms for a credit application for Scheduling Coordinator Applicants applying for Unsecured Credit Limits and for provision of Financial Security to be provided pursuant to Section 12.

**4.5.1.1.3 Duplicate Information.**

If two or more Scheduling Coordinators apply simultaneously to register with the CAISO for a single meter or Meter Point for a CAISO Metered Entity or if a Scheduling Coordinator applies to register with the CAISO for a meter or Meter Point for a CAISO Metered Entity for which a Scheduling Coordinator has already

registered, the CAISO will return the application with an explanation that only one Scheduling Coordinator may register with the CAISO for the meter or Meter Point in question and that a Scheduling Coordinator has already registered or that more than one Scheduling Coordinator is attempting to register for that meter or Meter Point. The CAISO will send the Scheduling Coordinator Applicant the name and address of the applicable Scheduling Coordinator or Scheduling Coordinator Applicant.

**4.5.1.1.4 Scheduling Coordinator Applicant returns Application.**

At least 120 days before the proposed commencement of service, the Scheduling Coordinator Applicant must return a completed application form with the non-refundable application fee of \$5,000 to cover the application processing costs.

**4.5.1.1.5 Notice of Receipt.**

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

**4.5.1.1.6 CAISO Review of Application.**

Within ten (10) Business Days after receiving an application, the CAISO will provide electronic notification to the Scheduling Coordinator Applicant whether the Scheduling Coordinator Applicant has submitted all necessary information as set forth in Section 4.5.1, and the Scheduling Coordinator Application Form set forth in the applicable Business Practice Manual.

**4.5.1.1.6.1 Information Requirements.**

The Scheduling Coordinator Applicant must submit with its application:

- (a) the proposed date for commencement of service, which may not be less than 120 days after the date the application, was filed, unless waived by the CAISO;
- (b) financial and credit information as set forth in Section 12; and
- (c) the prescribed non-refundable application fee of \$5,000.

**4.5.1.1.6.2 Scheduling Coordinator Applicant's Obligation for Contracts.**

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

- (a) represented Generators have entered into Participating Generator Agreements or Qualifying Facility Participating Generator Agreements as provided in Appendices B.2 and B.3, respectively with the CAISO;
- (b) represented UDCs have entered into UDC Operating Agreements as provided in Appendix B.8 with the CAISO;
- (c) represented CAISO Metered Entities have entered into Meter Service Agreements for CAISO Metered Entities as provided in Appendix B.6 with the CAISO;
- (d) none of the Wholesale Customers it will represent are ineligible for wholesale transmission service pursuant to the provisions of the FPA Section 212(h); and
- (e) each End-Use Customer it will represent is eligible for Direct Access service pursuant to an established program approved by the California Public Utilities Commission or a Local Regulatory Authority.

**4.5.1.1.7 Deficient Application.**

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

**4.5.1.1.7.1 Scheduling Coordinator Applicant's Additional Information.**

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

**4.5.1.1.7.2 No Response from Scheduling Coordinator Applicant.**

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

**4.5.1.1.8 CAISO Approval Or Rejection Of An Application.**

**4.5.1.1.8.1 Approval or Rejection Notification.**

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

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

- i. incomplete information;
- ii. non-compliance with credit requirements pursuant to Section 12;
- iii. non-compliance with third party contractual obligations;
- iv. non-compliance with technical requirements; or
- v. non-compliance with any other CAISO Tariff requirements.

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

**4.5.1.1.8.2 Time for Processing Application.**

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

**4.5.1.1.9 Scheduling Coordinator Applicant's Response.**

**4.5.1.1.9.1 Scheduling Coordinator Applicant's Acceptance.**

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

**4.5.1.1.9.2 Scheduling Coordinator Applicant's Rejection.**

**4.5.1.1.9.2.1 Resubmittal.**

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

**4.5.1.1.9.2.2 Appeal.**

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



**4.5.1.1.10 Post Application Procedures Prior To Final Certification.**

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

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

- (a) provided the technical/operational information required to complete the Scheduling Coordinator Application Form set forth in the applicable Business Practice Manual, and to comply with Section 10.3;
- (b) executed a network connectivity security agreement for access to the CAISO's software used in conducting business with the CAISO and compliance with the CAISO's system security requirements in a form approved by the CAISO, if applicable;
- (c) obtained and installed any required software for functional interface for Validation, Estimation and Editing meter values (VEE), if applicable;

- (d) undertaken required training and testing regarding the use of the CAISO's market, operating, and technical systems, as specified in the applicable Business Practice Manual;
- (e) provided its bank account information and arranged for Fed-Wire transfers;
- (f) provided an emergency plan specifying the procedures by which Scheduling Coordinator operations and contacts with the CAISO will be maintained during an emergency, containing information specified in the applicable Business Practice Manual; and
- (g) obtained and installed a computer link and any necessary software in order to communicate with the CAISO, as specified in the applicable Business Practice Manual.

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

**4.5.1.1.10.2 Application Closure after 12 Months.**

The CAISO will not certify a Scheduling Coordinator Applicant as a Scheduling Coordinator until the Scheduling Coordinator Applicant has completed all of the requirements for certification set forth in this Section 4.5 to the CAISO's satisfaction within twelve (12) months following the CAISO's acceptance of the application for processing. If the Scheduling Coordinator Applicant has not completed all the above referenced requirements within twelve (12) months after the CAISO's acceptance of the application, the CAISO may close the Scheduling Coordinator Applicant's application. The CAISO shall provide the Scheduling Coordinator Applicant thirty (30) days advance notice of its intent to close the application. If the CAISO closes the application, the Scheduling Coordinator Applicant must submit a new application and non-refundable application fee if it continues to request certification as a Scheduling Coordinator.

**4.5.1.1.11 Final Certification of Scheduling Coordinator Applicant.**

The Scheduling Coordinator Applicant will become a Scheduling Coordinator when:

- (a) its application has been accepted;
- (b) it has entered into a Scheduling Coordinator Agreement, a Meter Service Agreement for Scheduling Coordinators, if applicable, and any other applicable agreements with the CAISO;
- (c) it has met the credit requirements of Section 12; and
- (d) it has fulfilled all technical/operational requirements of Sections 4.5.4.1 and 4.5.1.1.10.1.

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

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

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

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

Each Scheduling Coordinator has an ongoing obligation to inform the CAISO of any changes to any of the information submitted by it to the CAISO as part of the application process, including any changes to the additional information requested by the CAISO and including but not limited to changes in its credit ratings. The applicable Business Practice Manual sets forth the procedures for changing the Scheduling Coordinator's information and timing of notifying the CAISO of such changes.

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

The Scheduling Coordinator has an ongoing obligation to inform the CAISO within three (3) Business Days of any change to its credit ratings or any Material Change in Financial Condition.

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

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

If a Scheduling Coordinator fails to inform the CAISO of a material change in its information provided to the CAISO, which may affect the reliability or safety of the CAISO Controlled Grid, or the financial security of the CAISO, the CAISO may suspend or terminate the Scheduling Coordinator's rights under the CAISO Tariff in accordance with the terms of Sections 12 and 4.5 respectively. If the CAISO intends to terminate the Scheduling Coordinator's rights it shall file a notice of termination with FERC, if required by FERC, in accordance with the terms of the Scheduling Coordinator Agreement. Such termination shall be effective upon acceptance by FERC of a notice of termination, if required by FERC rules, or as otherwise permitted by FERC rules.

**4.5.1.3 Additional Scheduling Coordinator Identification Code Registration.**

A Scheduling Coordinator Applicant is granted one Scheduling Coordinator Identification Code with its application fee. Requests may be made for additional Scheduling Coordinator Identification Codes. The fee for each additional Scheduling Coordinator Identification Code is \$500 per month, or as otherwise specified in Schedule 1 of Appendix F.

**4.5.2 Eligible Customers Represented by Scheduling Coordinators.**

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

**4.5.3 Responsibilities of a Scheduling Coordinator.**

**Each Scheduling Coordinator shall be responsible for:**

**4.5.3.1 Obligation to Pay.** Paying the ISO's charges in accordance with this ISO Tariff;

**4.5.3.2 Submit Schedules.** Submitting Schedules for Energy in the Day-Ahead Market and Hour-Ahead Market in relation to Market Participants for which it serves as Scheduling Coordinator, Scheduling Coordinators shall provide the ISO with intertie Interconnection schedules prepared in accordance with all NERC, WECC and ISO requirements;

**4.5.3.3 Modifications in Demand and Supply.** Coordinating and allocating modifications in scheduled Demand and exports and scheduled Generation and imports at the direction of the ISO in accordance with this ISO Tariff;

**4.5.3.3A Trades between Scheduling Coordinators.** Billing and settling an Inter-Scheduling Coordinator Energy or Ancillary Service Trade shall be done in accordance with the agreements between the parties to the trade. The parties to an Inter-Scheduling Coordinator Energy or Ancillary Service Trade shall notify the ISO, in accordance with the ISO Protocols, of the Zone in which the transaction is deemed to occur, which, for Inter-Scheduling Coordinator Energy Trades, shall be used for the purpose of identifying which Scheduling Coordinator will be responsible for payment of applicable Usage Charges;

**4.5.3.4 Scheduling Deliveries.** Including in its Schedules to be submitted to the ISO under this ISO Tariff, the Demand, Generation and Transmission Losses necessary to give effect to trades with other Scheduling Coordinators;

**4.5.3.5 Tracking and Settling Trades.** Tracking and settling all intermediate trades among the entities for which it serves as Scheduling Coordinator;

**4.5.3.6 Ancillary Services.** Providing Ancillary Services in accordance with Section 8;

**4.5.3.7 Annual and Monthly Forecasts.** Submitting to the ISO its forecasted monthly and annual peak Demand in the ISO Control Area and/or its forecasted monthly and annual Generation capacity, as applicable. The forecasts shall be submitted to the ISO electronically on a monthly basis by noon of the 18<sup>th</sup> working day of the month and shall cover a period of twelve (12) months on a rolling basis;

**4.5.3.8 ISO Protocols.** Complying with all ISO Protocols and ensuring compliance by each of the Market Participants which it represents with all applicable provisions of the ISO Protocols;

**4.5.3.9 Interruptible Imports.** Identifying any Interruptible Imports included in its Schedules;

**4.5.3.10 Participating Intermittent Resources.** Submitting Schedules consistent with the ISO Protocols; and

**4.5.3.11 Compliance with Environmental Constraints, Operating Permits and Applicable Law.**

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

**4.5.4 Operations of a Scheduling Coordinator.**

**4.5.4.1 Maintain Twenty-four (24) Hour Scheduling Centers.**

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

**4.5.4.2 Submitting Balanced Schedules.**

A Scheduling Coordinator shall submit to the ISO only Balanced Schedules in the Day-Ahead Market and the Hour-Ahead Market. A Schedule shall be treated as a Balanced Schedule when aggregate Generation, Inter-Scheduling Coordinator Energy Trades (whether purchases or sales), and imports or exports to or from external Control Areas adjusted for Transmission Losses as appropriate, equals aggregate Demand with respect to all entities for which the Scheduling Coordinator schedules in each Zone. If a Scheduling Coordinator submits a Schedule that is not a Balanced Schedule, the ISO shall reject that Schedule provided that Scheduling Coordinators shall have an opportunity to validate their Schedules prior to the deadline for submission to the ISO by requesting such validation prior to the applicable deadline. On an interim basis, the ISO may assist Scheduling Coordinators in matching Inter-Scheduling Coordinator Energy Trades.



**4.5.4.2.1 Submission of Schedules Sufficient to Meet Forecasted Demand**

**4.5.4.2.1.1** Subject to Sections 4.5.4.2.1.2, each Scheduling Coordinator shall submit to the ISO a Day-Ahead Schedule (1) for each hour ending 7 through 22 of each Trading Day that includes at least ninety-five percent (95%) of that Scheduling Coordinator's Demand Forecast, pursuant to Section 31.1.4.1, for each hour, for each UDC or MSS Service Area, with respect to all entities for which the Scheduling Coordinator schedules in the applicable UDC or MSS Service Areas and (2) for each hour ending 1 through 6, 23 and 24 of each Trading Day that includes at least seventy-five percent (75%) of that Scheduling Coordinator's Demand Forecast for each hour, for each UDC or MSS Service Area, with respect to all entities for which the Scheduling Coordinator schedules in the applicable UDC or MSS Service Areas. For purposes of Section 4.5.4.2.1, the Day-Ahead Schedule shall be either a Revised Schedule pursuant to Section 30.3.4 if one is submitted by the Scheduling Coordinator, or, if the Scheduling Coordinator does not submit a revised Schedule, a Preferred Day-Ahead Schedule pursuant to Section 30.3.1.

The requirements of this section do not apply to (a) the portion of a Scheduling Coordinator's Demand associated with Station Power and (b) the Scheduling Coordinator's Demand within a UDC or MSS Service Area if the Scheduling Coordinator's maximum Demand within that UDC or MSS Service Area during the preceding twelve (12) months was less than one (1) megawatt, provided that this exemption shall not apply to any Scheduling Coordinator that did not submit Schedules for any metered Demand within a UDC or MSS Service Area over the preceding twelve (12) month period.

**4.5.4.2.1.2** Exempt Scheduling Deviations by a Scheduling Coordinator in each UDC or MSS Service Area below the ninety-five percent (95%) and seventy-five percent (75%) scheduling levels specified in Section 4.5.4.2.1.1 shall not be deemed violations of Section 4.5.4.2.1.1.

#### **4.5.4.3 Dynamic Scheduling.**

Scheduling Coordinators may dynamically schedule imports of Energy, Supplemental Energy, and Ancillary Services (other than Regulation) for which associated Energy is delivered dynamically from System Resources located outside of the ISO Control Area, provided that (a) such dynamic scheduling is technically feasible and consistent with all applicable NERC and WECC criteria and policies, (b) all operating, technical, and business requirements for dynamic scheduling functionality, as posted in standards on the ISO Home Page, are satisfied, (c) the Scheduling Coordinator for the dynamically scheduled System Resource executes an agreement with the ISO for the operation of dynamic scheduling functionality, and (d) all affected host and intermediary Control Areas each execute with the ISO an Interconnected Control Area Operating Agreement (“ICAOA”) or special operating agreement related to the operation of dynamic functionality. See the forms of agreement in Attachment A to Appendix X.

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

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

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

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

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

(iv) if the Scheduling Coordinator does not schedule or bid in the CAISO's markets for Energy or Ancillary Services for a period of twelve (12) consecutive months and fails to comply with the provisions of Section 4.5.4.4.2 within 120 days after the CAISO has given it written notice of the CAISO's intent to terminate its Scheduling Coordinator Agreement.

(b) A Scheduling Coordinator's Scheduling Coordinator Agreement may be terminated by the Scheduling Coordinator on sixty (60) days written notice to the CAISO, provided that such notice shall not be effective to terminate the Scheduling Coordinator Agreement until the Scheduling Coordinator has complied with all applicable requirements of Section 4.5.2.

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

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

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

**4.5.4.5 Notification of Termination.**

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

**4.5.4.5.1 Filing of Notice of Termination.**

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

**4.5.4.6 Continuation of Service on Termination.**

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

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

**4.5.4.6.2 Interim Service.**

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

(a) When the ISO suspends the certification of a Scheduling Coordinator in accordance with Section 4.5.4.4.1, Eligible Customers of the defaulting Scheduling Coordinators shall be assigned to all Scheduling Coordinators on the list established pursuant to Section 4.5.4.6.2 in a non-discriminatory manner to be established by the ISO, and each Eligible Customer shall thereafter be represented by the Scheduling Coordinator to which it is assigned unless and until it selects another Scheduling Coordinator in accordance with Section 4.5.4.6.1, subject to subsection (b).

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

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

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

#### **4.6 Relationship Between ISO and Generators.**

The ISO shall not Schedule Energy or Ancillary Services generated by any Generating Unit interconnected to the ISO Controlled Grid, or to the Distribution System of a Participating TO or of a UDC otherwise than through a Scheduling Coordinator. The ISO shall not be obligated to accept Schedules or Adjustment Bids or bids for Ancillary Services relating to Generation from any Generating Unit interconnected to the ISO Controlled Grid unless the relevant Generator undertakes in writing to the ISO to comply with all applicable provisions of this ISO Tariff as they may be amended from time to time, including, without limitation, the applicable provisions of this Section 4.6 and Section 7.4.

##### **4.6.1 General Responsibilities.**

###### **4.6.1.1 Operate Pursuant to Relevant Provisions of ISO Tariff.**

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

(i) Each Participating Generator shall immediately inform the ISO, through its respective Scheduling Coordinator, of any change or potential change in the current status of any Generating Units that are under the Dispatch control of the ISO. This will include, but not be limited to, any change in status of equipment that could affect the maximum output of a Generating Unit, the minimum load of a Generating

Unit, the ability of a Generating Unit to operate with automatic voltage regulation, operation of the PSSs (whether in or out of service), the availability of a Generating Unit governor, or a Generating Unit's ability to provide Ancillary Services as required. Each Participating Generator shall immediately report to the ISO, through its Scheduling Coordinator any actual or potential concerns or problems that it may have with respect to Generating Unit direct digital control equipment, Generating Unit voltage control equipment, or any other equipment that may impact the reliable operation of the ISO Controlled Grid.

(ii) In the event that a Participating Generator cannot meet its Generation schedule, whether due to a Generating Unit trip or the loss of a piece of equipment causing a reduction in capacity or output, the Participating Generator shall notify the ISO, through its Scheduling Coordinator at once. If a Participating Generator will not be able to meet a time commitment or requires the cancellation of a Generating Unit start up, it shall notify the ISO, through its Scheduling Coordinator at once.

#### **4.6.1.2 Operate Pursuant to Relevant Operating Protocols.**

Participating Generators shall operate, or cause their Generating Units and associated facilities to be operated, in accordance with the relevant operating protocols established by the ISO or, prior to the establishment of such protocols, the operating protocols established by the TO or UDC owning the facilities that interconnect with the Generating Unit of the Participating Generator.

#### **4.6.3 Generators Connected to UDC Systems.**

With regard to any Generating Unit directly connected to a UDC system, a Participating Generator shall comply with applicable UDC tariffs, interconnection requirements and generation agreements. With regard to a Participating Generator's Generating Units directly connected to a UDC system, the ISO and the UDC will coordinate to develop procedures to avoid conflicting ISO and UDC operational directives.

##### **4.6.3.1 Exemption for Generating Units Less Than 1 MW.**

A Generator with a Generating Unit directly connected to a UDC system will be exempt from compliance with this Section 4.6 and Section 10.1.3 in relation to that Generating Unit provided that (i) the rated



capacity of the Generating Unit is less than 1 MW, and (ii) the Generator does not use the Generating Unit to participate in the ISO's Ancillary Services and/or to submit Supplemental Energy bids. This exemption in no way affects the calculation of or any obligation to pay the appropriate charges or to comply with all the other applicable Sections of this ISO Tariff.

**4.6.3.2 Existing Contracts for Regulatory Must-Take Generation.**

Notwithstanding any other provision of this ISO Tariff, the ISO shall discharge its responsibilities in a manner which honors any contractual rights and obligations of the parties to contracts, or final regulatory treatment, relating to Regulatory Must-Take Generation of which protocols or other instructions are notified in writing to the ISO from time to time and on reasonable notice.

**4.6.4 Identification of Generating Units.**

Each Generator shall provide data identifying each of its Generating Units and such information regarding the capacity and the operating characteristics of the Generating Unit as may be reasonably requested from time to time by the ISO.

**4.6.5 WECC Requirements.**

**4.6.5.1 Generator Performance Standard.**

Participating Generators shall, in relation to each of their Generating Units, meet all applicable WECC standards including any standards regarding governor response capabilities, use of power system stabilizers, voltage control capabilities and hourly Energy delivery. Unless otherwise agreed by the ISO, a Generating Unit must be capable of operating at capacity registered in the ISO Controlled Grid interconnection data, and shall follow the voltage schedules issued by the ISO from time to time.

**4.6.5.2 Reliability Criteria.**

Participating Generators shall comply with the requirements of the WSCC Reliability Criteria Agreement, including the applicable WSCC Reliability Criteria set forth in Section IV of Annex A thereof. In the event that a Participating Generator fails to comply, it will be subject to the sanctions applicable to such failure. Such sanctions shall be assessed pursuant to the procedures contained in the WSCC Reliability Criteria

Agreement. Each and all of the provisions of the WSCC Reliability Criteria Agreement are hereby incorporated by reference into this Section 4.6.5.2 as though set forth fully herein, and Participating Generators shall for all purposes be considered Participants as defined in that Agreement, and shall be subject to all of the obligations of Participants, under and in connection with the WSCC Reliability Criteria Agreement. The Participating Generators shall copy the ISO on all reports supplied to the WECC in accordance with Section IV of Annex A of the WSCC Reliability Criteria Agreement.

**4.6.5.3 Payment of Sanctions.**

Each Participating Generator shall be responsible for payment directly to the WECC of any monetary sanction assessed against that Participating Generator by the WECC pursuant to the WSCC Reliability Criteria Agreement. Any such payment shall be made pursuant to the procedures specified in the WSCC Reliability Criteria Agreement.

**4.6.6.2 Forced Outages.**

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

**4.6.7 Recordkeeping; Information Sharing.**

**4.6.7.1 Requirements for Maintaining Records.**

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

**4.6.7.2 Providing Information to Generators.**

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

**4.6.7.3 Preparation of Reports on Major Incidents.**

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

**4.6.8 Sharing Information on Reliability of ISO Controlled Grid.**

The ISO and each Participating Generator shall have the obligation to inform each other, as promptly as possible, of any circumstance of which it becomes aware (including, but not limited to, abnormal temperatures, storms, floods, earthquakes, and equipment depletions and malfunctions and deviations from the Registered Data and operating characteristics) that is reasonably likely to threaten the reliability of the ISO Controlled Grid or the integrity of the Participating Generator's facilities. The ISO and each Participating Generator shall also inform the other as promptly as possible of any incident of which it becomes aware (including, but not limited to, equipment outages, over-loads or alarms) which, in the case of a Participating Generator, is reasonably likely to threaten the reliability of the ISO Controlled Grid or, in the case of the ISO, is reasonably likely to adversely affect the Participating Generator's facilities. Such information shall be provided in a form and content which is reasonable in all the circumstances and sufficient to provide timely warning to the other party of the potential impact.

**4.6.9 Access Right.**

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

**4.7 Relationship Between ISO and Participating Loads.**

The ISO shall only accept bids for Supplemental Energy or Ancillary Services, or Schedules for self-provision of Ancillary Services, from Loads if such Loads are Participating Loads which meet standards

adopted by the ISO and published on the ISO Home Page. The ISO shall not schedule Energy or Ancillary Services from a Participating Load other than through a Scheduling Coordinator.

**4.8 Relationship Between ISO and Eligible Intermittent Resources and Between the ISO and Participating Intermittent Resources.**

The ISO shall not schedule Energy from an Eligible Intermittent Resource other than through a Scheduling Coordinator. No Adjustment Bids or Supplemental Energy bids may be submitted on behalf of Participating Intermittent Resources. Any Eligible Intermittent Resource that is not a Participating Intermittent Resource, or any Participating Intermittent Resource for which Adjustment Bids or Supplemental Energy bids are submitted shall be scheduled and settled as a Generating Unit for the associated Settlement Periods (except that the Forecasting Fee shall apply in such Settlement Periods).

**4.8A Compliance with Scheduling and Data Provision Requirements.** Pursuant to its obligation to notify FERC of any potential violations of Section 37.7 of this ISO Tariff, the ISO will routinely report any underscheduling behavior that it observes to FERC, for investigation as a potential violation of Section 37.7 of this ISO Tariff and/or FERC's Market Behavior Rule 2.

**4.9 Metered Subsystems**

**4.9.1 General Nature of Relationship Between ISO and MSS.**

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

**4.9.2 Coordination of Operations.** Each MSS Operator shall operate its MSS at all times in accordance with Good Utility Practice and Applicable Reliability Criteria, including WECC and NERC

criteria, and in a manner which ensures safe and reliable operation. All information pertaining to the physical state or operation, maintenance and failure of the MSS affecting the operation of the ISO Control Area that is made available to the ISO by the MSS Operator shall also be made available to Scheduling Coordinators, provided that the ISO shall provide reasonable notice to the MSS Operator. The ISO shall not be required to make information available to the MSS Operator other than information that is made available to Scheduling Coordinators.

**4.9.3 Coordinating Maintenance Outages of MSS Facilities.** Each MSS Operator shall make appropriate arrangements to coordinate Outages of Generating Units in accordance with Section 4.6. Each MSS Operator shall make appropriate arrangements to coordinate Outages of transmission facilities forming part of its MSS that will have an effect, or are reasonably likely to have an effect, on any interconnection between the MSS and the system of a Participating TO, prior to the submission by that Participating TO of its Maintenance Outage requirements under Section 9.3. The ISO will coordinate Outages of other Participating TOs transmission facilities that may affect the MSS.

**4.9.4 MSS Operator Responsibilities.**

The MSS Operator's written undertaking to the ISO shall obligate the MSS Operator to comply with all provisions of the ISO Tariff, as amended from time to time, applicable to the UDCs, including, without limitation, the applicable provisions of Section 4.4 and Section 7.4. In addition, recognizing the ISO's responsibility to promote the efficient use and reliable operation of the ISO Controlled Grid and the Control Area consistent with the Applicable Reliability Criteria, each MSS Operator shall:

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

the ISO may suspend MSS status, in accordance with this Section 4.9, until the MSS Operator demonstrates the ability and willingness to so operate and maintain its facilities;

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

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

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

**4.9.4.5** be responsible for Black Start requirements for reliability of the MSS, however, if the MSS can self-provide this requirement, the MSS shall not pay its pro rata share of the Black Start requirement in accordance with Section 8.12.5; and

**4.9.4.6** be responsible for Intra-Zonal Congestion Management and transmission line Outages within or at the boundary of the MSS, and all associated costs and not responsible for Intra-Zonal Congestion Management elsewhere in the Zone except to the extent that a Scheduling Coordinator is delivering Energy to or from the MSS.

**4.9.5 Scheduling by or on behalf of a MSS Operator.** All Schedules submitted on behalf of an MSS Operator for the delivery of Energy and Ancillary Services to Loads connected to the MSS and for the delivery of Energy and Ancillary Services from Generating Units forming part of the MSS or System Units shall be submitted by a Scheduling Coordinator that complies with all applicable provisions of the ISO Tariff, which Scheduling Coordinator may be the MSS Operator, provided that the MSS

Operator complies with all applicable requirements for Scheduling Coordinators. A Scheduling Coordinator shall separately identify Schedules that it submits on behalf of an MSS Operator.

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

**4.9.5.2** The Scheduling Coordinator for the MSS will designate, in discrete quantities and with prices for both Ancillary Services and Energy: (1) Schedules in Day-Ahead and Hour-Ahead Energy markets (including Schedules for internal Generation and internal Demand within the MSS), (2) bids or self-provided Schedules for Regulation, Spinning Reserve, Non-Spinning Reserve, and Replacement Reserve capacity and associated bid Energy, (3) Adjustment Bids, (4) Supplemental Energy bids, or (5) any feasible combination thereof.

**4.9.6 System Emergencies.**

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

**4.9.6.2** If a Load curtailment is required to manage System Emergencies, the ISO will determine the amount and location of Load to be reduced pursuant to Section 7.4.6 and 7.4.6.1. Each MSS Operator shall be responsible for notifying its customers and Generators connected to its system of curtailments and service interruption.

**4.9.6.3 System Emergency Reports: MSS Obligations.**

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

**4.9.6.3.2** Each MSS Operator shall cooperate with the ISO in the preparation of an Outage review pursuant to Section 7.4.13.



**4.9.7 Coordination of Expansion or Modifications to MSS Facilities.**

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

**4.9.8 Ancillary Service Obligations for MSS.**

**4.9.8.1** Ancillary Service obligations will be allocated to the Scheduling Coordinator scheduling Load within a MSS in accordance with the ISO Tariff. The ISO shall have the right to call upon Ancillary Service capacity self-provided by a Scheduling Coordinator for an MSS or procured by the ISO from such Scheduling Coordinator in accordance with the ISO Tariff. The Scheduling Coordinator representing the MSS Operator may bid or self-provide Ancillary Services from a System Unit or from individual Generating Units or Participating Loads in the MSS. Alternatively, the Scheduling Coordinator representing the MSS may purchase Ancillary Services from the ISO or third parties to meet all or part of its Ancillary Service obligations in accordance with the ISO Tariff.

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

**4.9.9 Load Following.**

**4.9.9.1** The MSS Operator may operate a System Unit or Generating Units in the MSS to follow its Load, provided that: (a) the Scheduling Coordinator for the MSS Operator shall remain responsible for purchases of Imbalance Energy in accordance with the ISO Tariff if the MSS Operator does not operate its System Unit or Generating Units and schedule imports into the MSS, to match the metered Demand in the MSS and exports from the MSS; and (b) if the deviation between the Generation in the MSS and imports into the MSS and metered Demand in the MSS and exports from the MSS exceeds a deviation

band equal to three percent (3%) of the lesser of the MSS Operator's metered or Hour-Ahead scheduled Demand and exports from the MSS, adjusted for Forced Outages and any ISO directed firm Load Shedding for the MSS's portfolio as a whole (the "Deviation Band"), then the Scheduling Coordinator for the MSS Operator shall pay the additional amounts specified in Section 4.9.9.2. The Scheduling Coordinator for an MSS Operator that chooses to follow its Load in accordance with this Section 4.9.9 shall provide sixty (60) days advance notice to the ISO. If the Scheduling Coordinator later desires not to follow the Load of the MSS Operator, the Scheduling Coordinator shall provide sixty (60) days advance notice to the ISO that it will no longer follow Load.

**4.9.9.2** Under the circumstances described in Section 4.9.9.1, the Scheduling Coordinator for an MSS Operator shall pay amounts based on a price that is the effective weighted average Ex Post Price applicable to the MSS's Scheduling Coordinator for the billing interval (the "Deviation Price"). The revenue received from these payments will be used as an off-set to the ISO's Grid Management Charge. The payments due from a Scheduling Coordinator will be calculated as follows:

**4.9.9.2.1** If the metered Generation resources and imports into the MSS exceed the metered Demand and exports from the MSS, and Energy expected to be delivered by the Scheduling Coordinator for the MSS in response to the ISO's Dispatch instructions and/or Regulation set-point signals issued by the ISO's AGC by more than the Deviation Band, then the Scheduling Coordinator for the MSS Operator will pay the ISO an amount equal to one hundred percent (100%) of the product of the Deviation Price and the amount of the Imbalance Energy that is supplied in excess of the Deviation Band.

**4.9.9.2.2** If metered Generation resources and imports into the MSS are insufficient to meet the metered Demand and exports from the MSS, and Energy expected to be delivered by the Scheduling Coordinator for the MSS in response to the ISO's Dispatch instructions and/or Regulation set-point signals issued by the ISO's AGC by more than the Deviation Band, then the Scheduling Coordinator for the MSS Operator shall pay the ISO an amount equal to the product of the Deviation Price and two hundred percent (200%) of the shortfall that is outside of the Deviation Band, in addition to the Imbalance Energy charges that may be applicable under the ISO Tariff.

**4.9.9.3** If the ISO is charging Grid Management Charges for uninstructed deviations, and the Scheduling Coordinator for the MSS has uninstructed deviations associated with Load following from the MSS's resources, then the ISO will net the Generation and imports into the MSS to match the Demand and exports out of the MSS, and will not assess GMC associated with uninstructed deviations for such portion of Energy that is used to match MSS Demand and net exports.

**4.9.9.3.1** If Generation, above the amount to cover Demand and exports, was sold into the ISO's Imbalance Energy market, then the Scheduling Coordinator for the MSS will be charged GMC associated with uninstructed deviations for this quantity.

**4.9.9.3.2** If insufficient Generation and imports was available to cover Demand and exports, and the Scheduling Coordinator for the MSS purchased Imbalance Energy from the ISO's market, then such Scheduling Coordinator will be charged GMC associated with uninstructed deviations for this quantity.

**4.9.9.3.3** Only GMC associated with uninstructed deviations (the Ancillary Services and Real-Time Energy Operations Charge (ASREO)) will be treated on a net basis. GMC for Control Area Services (CAS) will be charged based on Gross Load and exports out of the MSS. The Scheduling Coordinator for the MSS Operator will be assessed the GMC Congestion Management Charge (CONG) in accordance with Section 11.2.2.3. Ancillary Service bids accepted by the ISO and Instructed Energy will be assessed the GMC ASREO.

**4.9.10 Information Sharing.**

**4.9.10.1 System Planning Studies and Forecasts.**

The ISO, the MSS Operator and Participating TOs shall share information such as projected Load growth and system expansions necessary to conduct necessary system planning studies to the extent that these may impact the operation of the ISO Control Area. Each MSS Operator shall provide to the ISO annually its ten-year forecasts of Demand growth, internal Generation, and expansion of or replacement for any transmission facilities that are part of the MSS that will or may significantly affect any point of interconnection between the MSS and the ISO Controlled Grid. Such forecasts shall be provided on the date that UDCs are required to submit forecasts to the ISO under Section 4.4.8.1.

Each MSS Operator or each Scheduling Coordinator for an MSS Operator shall also submit weekly and monthly peak Demand Forecasts in accordance with the ISO's protocols.

**4.9.10.2 System Surveys and Inspections.**

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

**4.9.10.3 Reports.**

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

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

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

**4.9.10.3.4 Reliability Information.** Each MSS Operator shall inform the ISO, and the ISO shall inform each MSS Operator, in each case as promptly as possible, of any circumstance of which it

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

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

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

**4.9.14 Installation of and Rights of Access to MSS Facilities.**

**4.9.14.1 Installation of Facilities.**

**4.9.14.1.1 Meeting Service Obligations.**

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

**4.9.14.1.2 Governing Agreements for Installations.**

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

**4.9.14.2 Access to Facilities.**

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

**4.9.14.3 Access During Emergencies.**

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

**4.9.15 MSS System Unit.**

**4.9.15.1** A MSS Operator may aggregate one or more Generating Units and/or Participating Loads as a System Unit. Except as specifically provided in the agreement referred to in Section 4.9.1.1, all provisions of the ISO Tariff applicable to Participating Generators and to Generating Units (and, if the System Unit includes a Load, to Participating Loads), shall apply fully to the System Unit and the Generating Units and/or Loads included in it. The MSS Operator's written undertaking to the ISO in accordance with Section 4.9.1.1 shall obligate the MSS Operator to comply with all provisions of the ISO Tariff, as amended from time to time, applicable to the System Unit, including, without limitation, the applicable provisions of Section 4.6.1 and Section 7.4. In accordance with Section 7.3.1, the ISO will obtain control over the System Unit, not the individual Generating Unit, except for Regulation, to comply with Section 4.6.

**4.9.15.2** Without limiting the generality of Section 4.9.15.1, a MSS Operator that owns or has an entitlement to a System Unit:

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

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

**4.9.15.2.3** shall obtain ISO certification of the System Unit's Ancillary Service capabilities in accordance with Section 8.4 and 8.10 before the Scheduling Coordinator representing the MSS may self-provide its Ancillary Service obligations or bid into the ISO's markets from that System Unit;

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

**4.9.15.2.5** shall install ISO certified meters on each individual resource or facility that is aggregated to a System Unit.

**4.9.15.3** Subject to Section 4.9.15.5, the ISO shall have the authority to exercise control over the System Unit to the same extent that it may exercise control pursuant to the ISO Tariff over any other Participating Generator, Generating Unit or, if applicable, Participating Load, but the ISO shall not have the authority to direct the MSS Operator to adjust the operation of the individual resources that make up the System Unit to comply with directives issued with respect to the System Unit.

**4.9.15.5** When and to the extent that Energy from a System Unit is scheduled to provide for the needs of Loads within the MSS and is not being bid to the ISO's Ancillary Service or Supplemental Energy markets, the ISO shall have the authority to dispatch the System Unit only to avert or respond to a circumstance described in the third sentence of Section 7.3.1 or, pursuant to Section 7.4.2.3, to a System Emergency.

**4.9.16 MSS Settlements.**

**4.9.16.1** The ISO will assess the Scheduling Coordinator for the MSS the neutrality adjustments and Existing Contracts cash neutrality charges pursuant to Section 11.2.9 (or collect refunds therefore) based on the net metered Demand and exports of the MSS.

**4.9.16.2** If the ISO is charging Scheduling Coordinators for summer reliability or demand programs, the MSS Operator may petition the ISO for an exemption of these charges. If the MSS



Operator provides documentation to the ISO by November 1 of any year demonstrating that the MSS Operator has secured generating capacity for the following calendar year at least equal to one hundred and fifteen percent (115%), on an annual basis, of the peak Demand responsibility of the MSS Operator, the ISO shall grant the exemption. Eligible generating capacity for such a demonstration may include on-demand rights to Energy, peaking resources, and Demand reduction programs. The peak Demand responsibility of the MSS Operator shall be equal to the annual peak Demand Forecast of the MSS Load plus any firm power sales by the MSS Operator, less interruptible Loads, and less any firm power purchases. Firm power for the purposes of this Section 4.9.16.2 shall be Energy that is intended to be available to the purchaser without being subject to interruption or curtailment by the supplier except for Uncontrollable Forces or emergency. To the extent that the MSS Operator demonstrates that it has secured generating capacity in accordance with this Section 4.9.16.2., the Scheduling Coordinator for the MSS Operator shall not be obligated to bear any share of the ISO's costs for any summer Demand reduction program or for any summer reliability Generation procurement program pursuant to ISO Tariff Section 42.1.8 for the calendar year for which the demonstration is made.

**4.9.16.3** If the ISO is compensating Generating Units for Emissions Costs, Start-Up Fuel Costs and Minimum Load Costs, and if MSS Operator charges the ISO for the Emissions Costs, Start-Up Fuel Costs and Minimum Load Costs, of the Generating Units serving the Load of the MSS, then the Scheduling Coordinator for the MSS shall bear its proportionate share of the total amount of those costs incurred by the ISO based on the MSS gross metered Demand and exports and the Generating Units shall be made available to the ISO through the submittal of Supplemental Energy bids. If the MSS Operator chooses not to charge the ISO for the Emissions Costs, Start-Up Fuel Costs and Minimum Load Costs of the Generating Units serving the Load of the MSS, then the Scheduling Coordinator for the MSS shall bear its proportionate share of the total amount of those costs incurred by the ISO based on the MSS's net metered Demand and exports. The MSS Operator shall make the election whether to charge the ISO for these costs on an annual basis on November 1 for the following calendar year.

**4.9.16.4** The Scheduling Coordinator for the MSS shall be responsible for Transmission Losses, in accordance with the ISO Tariff, only within the MSS, at any points of interconnection between the MSS

and the ISO Controlled Grid, and for the delivery of Energy to the MSS or from the MSS, provided the MSS Operator fulfills its obligation to provide for Transmission Losses on the transmission facilities forming part of the MSS. A Generation Meter Multiplier shall be assigned to the Generating Units on the MSS at the Points of Interconnection for use of the ISO Controlled Grid. That GMM shall be 1.0 for all Generating Units within the MSS that are located at or behind a Point of Interconnection, to the extent that the Load at the Point of Interconnection for that portion of the MSS exceeds the amount of Generation produced by the Generating Units connected to that portion of the MSS, except that a GMM shall be calculated by the ISO for Energy produced pursuant to a Dispatch instruction from the ISO.

**4.9.16.5** If the MSS Operator has elected to follow its Load in accordance with Section 4.9.9, then the MSS is not eligible to receive bid cost recovery as provided for in Section 11.2.4.1.1.1 and the Scheduling Coordinator for the MSS shall be allocated costs associated with bid cost recovery on a net Metered Demand basis. If the MSS Operator has elected to not follow its Load in accordance with Section 4.9.9, then the MSS is eligible to receive bid cost recovery as provided for in Section 11.2.4.1.1.1, if applicable, subject to resource-specific performance review, and the Scheduling Coordinator for the MSS shall be allocated costs associated with bid cost recovery on a gross metered Demand basis.

## **5 RELATIONSHIP BETWEEN ISO AND SUDCS.**

### **5.1 General Nature of Relationship Between ISO and SUDCs.**

**5.1.1** The ISO shall not be obliged to accept Schedules, Adjustment Bids or bids for Ancillary Services which would require Energy to be transmitted to or from the Distribution System of a SUDC directly connected to the ISO Controlled Grid unless the relevant SUDC has entered into a SUDC Operating Agreement. The SUDC Operating Agreement shall require SUDCs to comply with the applicable provisions of this Section 5 and any other expressly applicable Sections of this ISO Tariff, as they may be amended from time to time. The ISO shall maintain a pro forma SUDC Operating Agreement available for SUDCs to enter into with the ISO.

**5.1.2** The ISO shall operate the ISO Control Area and the ISO Controlled Grid and each SUDC shall operate its Distribution System at all times in accordance with Good Utility Practice and in a manner

which ensures safe and reliable operation. The ISO shall, in respect of its obligations set forth in this Section 5, have the right by mutual agreement to delegate certain operational responsibilities to the relevant Participating TO or SUDC pursuant to this Section 5. All information made available to SUDCs by the ISO shall also be made available to Scheduling Coordinators. Any information, pertaining to the physical state, operation, maintenance or failure of the SUDC Distribution System that may cause a material adverse affect to the operation of the ISO Controlled Grid, that is made available to the ISO by the SUDC shall also be made available to Scheduling Coordinators upon receipt of reasonable notice.

## **5.2 Coordinating Maintenance Outages of SUDC Facilities.**

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

## **5.3 SUDC Responsibilities.**

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

**5.3.1** operate and maintain its Distribution System in accordance with applicable reliability standards, statutes and regulations, and Good Utility Practice so as to avoid any material adverse impact on the reliability of the ISO Control Area and the ISO Controlled Grid;

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

## **5.4 System Emergencies.**

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

**5.4.2** During a System Emergency, the ISO and SUDCs shall communicate in accordance with procedures established in individual SUDC operating agreements.

**5.5 Load Reduction.**

**5.5.1** If the ISO declares a Stage 1 System Emergency, the SUDC shall use any reasonably available local communication infrastructure to request that its customers curtail their electricity usage. The SUDC shall not be called separately in Stage 3 System Emergencies to manually shed Load. Load restoration of any voluntary Load reduction will occur once the ISO declares that a System Emergency no longer exists.

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

**5.6 System Emergency Reports: SUDC Obligations.**

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

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

**5.7 Coordination of Expansion or Modifications to SUDC Facilities.**

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

**5.8 Information Sharing.**

**5.8.1 System Planning Studies.**

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

**5.8.2 System Surveys and Inspections.**

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

**5.8.3 Reports.**

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

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

**5.9 Installation of Equipment on and Rights of Access to SUDC Facilities.**

**5.9.1 Installation of Facilities.**

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

ISO and the SUDC shall enter into agreements governing the installation of such equipment or other facilities containing customary, reasonable terms and conditions.

**5.9.2 Access to Facilities.**

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

**5.9.3 Access During Emergencies.**

Notwithstanding any provision in this Section 5 the ISO may have access, without giving prior notice, to any SUDC's equipment or other facilities during times of a System Emergency.

**5.9.4 Access For Audit Functions.**

Notwithstanding any provision in this Section 5 the ISO may have access, without giving prior notice, to any SUDC's equipment or other facilities where the ISO has a reasonable basis to believe the SUDC has failed to comply with the SUDC Operating Agreement, applicable ISO Tariff or ISO Protocol provisions and access is required to conduct an audit to gather relevant facts.

**6 COMMUNICATIONS.**

**6.1 Methods of Communications.**

**6.1.1 Full-Time Communications Facility Requirement.**

Each Scheduling Coordinator, Utility Distribution Company, Participating Transmission Owner, Participating Generator, Control Area Operator (to the extent the agreement between the Control Area Operator and the ISO so provides), and Metered Subsystem Operator must provide a communications facility manned twenty-four (24) hours a day, seven (7) days a week capable of receiving Dispatch Instructions issued by the ISO.

**6.1.2 Recording of Dispatch Instructions.**

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

**6.1.3 Contents of Dispatch Instructions.**

Dispatch Instructions shall include the following information as appropriate:

- (a) exchange of operator names;
- (b) specific resource being Dispatched;
- (c) specific MW value and price point of the resource being Dispatched;
- (d) specific type of instruction (action required);
- (e) time the resource is required to begin initiating the Dispatch Instruction;
- (f) time the resource is required to achieve the Dispatch Instruction;
- (g) time of notification of the Dispatch Instruction; and
- (h) any other information which the ISO considers relevant.

**6.2 Communications.**

**6.2.1** Communications between the ISO and Scheduling Coordinators shall take place via direct computer link to a dedicated terminal at the Scheduling Coordinator's scheduling center. If there is a failure of communications with a Scheduling Coordinator, then, at the ISO's discretion, the Scheduling Coordinator may communicate by facsimile, but only if the ISO and the Scheduling Coordinator have communicated by telephone in advance.

**6.2.1A** Normal verbal and electronic communication of Dispatch Instructions between the ISO and Generators will be via the relevant Scheduling Coordinator. Each Scheduling Coordinator must immediately pass on to the Generator concerned any communication for the Generator which it receives from the ISO. If the ISO considers that there has been a failure at a particular point in time or inadequate response over a particular period of time by the Generating Units to the Dispatch Instruction, the ISO will notify the relevant Scheduling Coordinator. The ISO may, with the prior permissions of the Scheduling Coordinator concerned, communicate with and give Dispatch Instructions to the operators of Generating Units and Loads directly without having to communicate through their appointed Scheduling Coordinator. In situations of deteriorating system conditions or emergency, the ISO reserves the right to communicate directly with the Generator(s) as required to ensure System Reliability.

**6.3 Communication Protocols.**

Communications between the ISO and Scheduling Coordinators shall be as described below:

**6.3.1 Information Transfer from Scheduling Coordinator to ISO.**

Unless otherwise agreed by the ISO, Scheduling Coordinators who wish to schedule or bid Ancillary Services to the ISO must submit the information by direct computer link. Scheduling Coordinators that wish to submit dynamic schedules or bids for Ancillary Services to the ISO must also comply with the applicable requirements of Sections 4.5.4.3, 8.4.5 and 8.4.7.3.2.

**6.3.2 Submitting Information By Direct Computer Link.**

For Scheduling Coordinators submitting information by direct computer link, each such Scheduling Coordinator shall establish a network connection with the ISO through the WEnet network. This shall be a permanent link with the ISO. Link initialization procedures shall be necessary to establish the connection for the first time, and to re-establish the connection each time the connection is restored after a system or communication failure. In order to log in, each Scheduling Coordinator shall furnish the ISO with user ID and password.



**6.3.3 Information Transfer from ISO to Scheduling Coordinator.**

Unless otherwise agreed between a Scheduling Coordinator and the ISO, the ISO shall furnish scheduling information to Scheduling Coordinators by electronic transfer as described in Sections 6.4.1 and 6.4.1.4. If electronic data transfer is not available, the information may be furnished by facsimile. If it is not possible to communicate with the Scheduling Coordinator using the primary means of communication, an alternate means of communication shall be selected by the ISO.

**6.4 Transmission System Information and Communications**

**6.4.1 WEnet.**

**6.4.1A** The ISO shall engage the services of an Internet Service Provider (ISP) to establish, implement and operate WEnet as a wide-band, wide-area backbone which is functionally similar to the Internet.

**6.4.1A.1** WEnet provides the backbone on which any of three communications mechanisms will be utilized. These are:

- (a) use of a web browser such as Netscape;
- (b) use of File Transfer Protocol (FTP); or
- (c) use of an Application Programming Interface (API).

**6.4.1A.2** Details of the technical aspects of each of these mechanisms, including information on how to change mechanisms and back-up procedures for individual Scheduling Coordinator failures, will be made available by the ISO to Scheduling Coordinators on request. It is assumed that each Scheduling Coordinator has made application for and signed a Scheduling Coordinator Agreement. As such, each Scheduling Coordinator will already be familiar with and have arranged the mechanism, including security arrangements, by which it will initially communicate with the ISO.

**6.4.1A.3** The ISO Data Templates and Validation Rules document provides a description of the templates which will be utilized to enter data into the ISO's systems. For each of the three communications mechanisms, data entry is as follows:

- (a) direct entry of data into the template screens through the use of a browser;
- (b) upload of ASCII delimited text through use of an upload button on the template screens which activates the FTP mechanism; or
- (c) use of the Scheduling Coordinator's own API.

**6.4.1B** The ISO shall provide non-discriminatory access to information concerning the status of the ISO Controlled Grid by posting that information on the public access sites on WEnet, or other similar computer communications device, or by telephone or facsimile in the event of computer systems failure.

**6.4.1B.1** WEnet will provide an interface for data exchange between the ISO and Scheduling Coordinators who shall each have individually assigned login accounts on WEnet.

**6.4.1B.2** Through the use of the security provisions of WEnet, some data will be provided on a confidential basis (such as individual Scheduling Coordinator Schedules and bids) and other ISO data (such as ISO forecasts of Demand) will be published on the public section of WEnet and be available to anyone. The public information that the ISO provides over WEnet shall include, at a minimum, but not be limited to:

**6.4.1.1 Advisory Information:**

The following may be provided over such time scales as the ISO may in its discretion decide:

- (a) Future planned transmission Outages;
- (b) Generator Meter Multipliers.

**6.4.1.2 Day-Ahead and Hour-Ahead Information:**

- (a) Date;
- (b) Hour;
- (c) Total forecast Demand by UDC;

- (d) Inter-Zonal Congestion price per Congested path; Total Regulation and Reserve service capacity reservation cost by Zone;
- (e) Total capacity of Inter-Zonal Interfaces; and
- (f) Available capacity of Inter-Zonal Interfaces.

**6.4.1.3 Ex Post Information:**

- (a) Date;
- (b) Hour; and
- (c) Hourly Ex Post Price.

**6.4.1.3A** WEnet shall be used by the ISO to post Usage Charges for Inter-Zonal Interfaces within the ISO Controlled Grid.

**6.4.1.3B** WEnet shall serve as a bulletin board to enable Market Participants to inform one another of scheduling changes and trades made.

**6.4.1.3C** WEnet may be used by the ISO to communicate operating orders to the Scheduling Coordinators and other Market Participants, both in advance of actual operation and in real time. Such orders may include but are not limited to:

- (a) Notifying Scheduling Coordinators and other Market Participants to be on call to provide Non-Spinning Reserve and Replacement Reserves and Black Start;
- (b) Issuing start-up instructions;
- (c) Stating the amount of Spinning Reserves to be carried;
- (d) Requesting specific Ramping patterns;
- (e) Indicating which Scheduling Coordinators and other Market Participants are to provide Regulation;

- (f) Specifying the minimum amount of unloaded capacity that must be maintained in order to meet Regulation Requirements;
- (g) Issuing shut-down instructions; and
- (h) Specifying the voltage level and reactive reserve each Market Participant must maintain.

**6.4.1.3D** WEnet shall be used by the ISO to provide information to Market Participants regarding the ISO Controlled Grid. Such information may include but is not limited to:

- (a) Voltage control parameters;
- (b) ISO historical data for Congestion;
- (c) Forecasts of Usage Charges; and
- (d) Generation Meter Multipliers to support seven (7) day advance submission of Schedules by Scheduling Coordinators. Additional Generation Meter Multipliers may be published for different seasons and loading patterns.

**6.4.1.4 Reliable Operation of the WEnet.**

**6.4.1.4.1** Market Participants shall arrange access to WEnet through the Internet Service Provider.

**6.4.1.4.2** The ISO shall arrange for the Internet Service Provider to provide a pathway for public Internet connectivity through the WEnet backbone to accommodate users other than Market Participants without the need for a separate, dedicated user data link. This public Internet connection may provide a reduced level of data exchange and reduced information concerning the reliability and performance of the ISO Controlled Grid when compared to that provided to Market Participants through dedicated user data links.

**6.5 Information to be Provided By Connected Entities to the ISO.**

**6.5.1** Each Participating TO and Connected Entity shall provide to the ISO:

**6.5.1.1** A single and an alternative telephone number and a single and an alternative facsimile number by which the ISO may contact 24 hours a day a representative of the Participating TO or Connected Entity in, or in relation to, a System Emergency;

**6.5.1.2** The names or titles of the Participating TO's or Connected Entity's representatives who may be contacted at such telephone and facsimile numbers.

**6.5.2** Each representative specified pursuant to Section 6.5.1 shall be a person having appropriate experience, qualification, authority, responsibility and accountability within the Participating TO or the Connected Entity to act as the primary contact for the ISO in the event of a System Emergency.

**6.5.3** The details required under this Section 6.5 shall at all times be maintained up to date and the Participating TO and the Connected Entity shall notify the ISO of any changes promptly and as far in advance as possible.

**6.6 Failure or Corruption of the WEnet.**

The ISO shall, in consultation with Scheduling Coordinators, make provision for procedures to be implemented in the event of a total or partial failure of WEnet or the material corruption of data on WEnet and include these procedures in the ISO Protocols. The ISO shall ensure that such alternative communications systems are tested periodically.

**6.7 Confidentiality.**

All information posted on WEnet shall be subject to the confidentiality obligations contained in Section 20 of this ISO Tariff.

**6.8 Standards of Conduct.**

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

**6.9 ISO Postings.**

**6.9.1 Information to be Provided by the ISO to all Scheduling Coordinators.** By 6:00 p.m. two days prior to a Trading Day, the ISO shall publish on WEnet information, including the following to all Scheduling Coordinators for each Settlement Period of the Trading Day:

**6.9.1.1 Scheduled Line Outages.** Scheduled transmission line Outages;

**6.9.1.2 Forecast Loop-Flow.** Forecast Loop Flow over ISO Inter-Zonal Interfaces and Scheduling Points;

**6.9.1.3 Advisory Demand Forecasts.** Advisory Demand Forecasts by location;

**6.9.1.4 Updated Transmission Loss Factors.** Updated Generation Meter Multipliers reflecting Transmission Losses to be supplied by each Generating Unit and by each import into the ISO Control Area;

**6.9.1.5 Ancillary Services.** Expected Ancillary Services requirement by reference to Zones for each of the reserve Ancillary Services.

**6.9.2 Public Dissemination of Information: Day-Ahead.**

By 3:00 p.m. of the day preceding the Trading Day, the ISO shall make available to all Market Participants the following information on the scheduling of Ancillary Services: Ancillary Service	Quantity Units	Period	Clearing Prices
Regulation/AGC	MW	Hourly	\$/MW
Spinning Reserve	MW	Hourly	\$/MW

Non-Spinning Reserve	MW	Hourly	\$/MW
Replacement Reserve	MW	Hourly	\$/MW
Black Start	MW	Annual	\$/MW

**7 SYSTEM OPERATIONS UNDER NORMAL AND EMERGENCY OPERATING CONDITIONS.**

**7.1 ISO Control Center Operations.**

**7.1.1 ISO Control Center.**

**7.1.1.1 Establish ISO Control Center.**

The ISO shall establish a WECC approved Control Area and control center to direct the operation of all facilities forming part of the ISO Controlled Grid, Reliability Must-Run Units and Generating Units providing Ancillary Services.

**7.1.2 Establish Back-up Control Facility.**

The ISO shall establish back-up control facilities remote from the ISO Control Center sufficient to enable the ISO to continue to direct the operation of the ISO Controlled Grid, Reliability Must-Run Units, System Resources and Generating Units providing Ancillary Services in the event of the ISO Control Center becoming inoperable.

**7.1.3 ISO Control Center Authorities.**

The ISO shall have full authority, subject to Section 4.2, to direct the operation of the facilities referred to in Section 7.1.2 including (without limitation), to:

- (a) direct the physical operation by the Participating TOs of transmission facilities under the Operational Control of the ISO, including (without limitation) circuit breakers, switches, voltage control equipment, protective relays, metering, and Load Shedding equipment;
- (b) commit and dispatch Reliability Must-Run Units, except that the ISO shall only commit Reliability Must-Run Generation for Ancillary Services capacity according to Section 30.6.1 of the Tariff;
- (c) order a change in operating status of auxiliary equipment required to control voltage or frequency;
- (d) take any action it considers to be necessary consistent with Good Utility Practice to protect against uncontrolled losses of Load or Generation and/or equipment damage resulting from unforeseen occurrences;
- (e) control the output of Generating Units, Interconnection schedules, and System Resources that are selected to provide Ancillary Services or Imbalance Energy;
- (f) Dispatch Curtailable Demand which has been scheduled to provide Non-Spinning Reserve or Replacement Reserve;
- (g) procure Supplemental Energy; and
- (h) require the operation of resources which are at the ISO's disposal in a System Emergency, as described in Section 7.4

The ISO will exercise its authority under this Section 7.1.3 by issuing Dispatch Instructions to the relevant Participants using the relevant communications method described in Section 34.3.6.

#### **7.1.4 Primary ISO Control Center.**

The Primary ISO Control Center shall have Operational Control over:

- (a) all transmission lines greater than 230kV and associated station equipment on the ISO Controlled Grid;
- (b) all Interconnections; and



(c) all 230 kV and lower voltage transmission lines and associated station equipment identified in the ISO Register as that portion of the ISO Controlled Grid located in the PG&E PTO Service Territory.

**7.1.5 Backup ISO Control Center.**

The Backup ISO Control Center shall have Operational Control over all 230 kV and lower voltage transmission lines and associated station equipment identified in the ISO Register as that portion of the ISO Controlled Grid located in the SCE and SDGE PTO Service Territories.

**7.2 Operating Reliability Criteria.**

**7.2.1 Reliability Coordinator.**

The ISO shall be the WECC reliability coordinator for the ISO Controlled Grid. As Reliability Coordinator, the ISO, in conjunction with the other WECC Reliability Coordinators, will be responsible for the stable and reliable operation of the Western Interconnection in accordance with the WECC Regional Security Plan.

**7.2.1.1 Reliability Coordinator.**

As Reliability Coordinator, the ISO may direct activities as appropriate to curtail Schedules, Dispatch Generation or impose transfer limitations as necessary to relieve grid Congestion, mitigate potential overloads or eliminate operation outside of existing Nomogram criteria.

**7.2.1.2 Authority of WECC Reliability Coordinators.**

(a) The Reliability Coordinator has the final authority to direct operations before, during and after problems or disturbances that have regional impacts. The WECC Security Monitoring plans include collaboration with sub-regional Reliability Coordinators and Control Area operators to determine actions for anticipated problems. If there is insufficient time, or mutual concurrence is not reached, the Reliability Coordinator is authorized to direct actions and the control area operators must comply.

(b) In the event of any situation occurring which is outside those problems already identified in the list of known problems, the Reliability Coordinator shall have the responsibility and authority to implement whatever measures are necessary to maintain System Reliability. Those actions include but are not

limited to; interchange curtailment, generation Dispatch adjustment (real power, reactive power and voltage), transmission configuration adjustments, special protection activation, load curtailment and any other action deemed necessary to maintain System Reliability.

(c) The Reliability Coordinator shall also have the responsibility and authority to take action in its sub-region for problems in another sub-region that it may help resolve. This must be accomplished at the request of and in coordination with the Reliability Coordinators of the other sub-regions.

## **7.2.2 [Not used]**

**7.2.2.1** The ISO shall exercise Operational Control over the ISO Controlled Grid to meet planning and Operating Reserve criteria no less stringent than those established by WECC and NERC as those standards may be modified from time to time, and Local Reliability Criteria that are in existence on the ISO Operations Date and have been submitted to the ISO by each Participating TO pursuant to Section 2.2.1(v) of the TCA. All Market Participants and the ISO shall comply with the ISO Reliability Criteria, standards, and procedures.

**7.2.2.2** The ISO Governing Board may establish planning guidelines more stringent than those established by NERC and WECC as needed for the secure and reliable operation of the ISO Controlled Grid. The ISO may revise the Local Reliability Criteria subject to and in accordance with **section 5** of the TCA.

## **7.2.2.3 Standards to be Observed.**

The ISO shall exercise Operational Control over the ISO Controlled Grid in compliance with all Applicable Reliability Criteria.

### **7.2.2.3.1 Applicable Reliability Criteria.**

Applicable Reliability Criteria are defined as the standards established by NERC, WECC and Local Reliability Criteria and include the requirements of the Nuclear Regulatory Commission (NRC).

### **7.2.2.3.2 WECC Criteria (Standards).**

(a) Western Interconnection.

The WECC set of standards for the Western Interconnection, which are based on the NERC standards.

The WECC further defines procedures and policies applicable to the Western Interconnection. WECC guidelines include:

- (i) Part 1 – Reliability Criteria for Transmission System Planning
  - (ii) Part 2 – Power Supply Design Criteria
  - (iii) Part 3 – Minimum Operating Reliability Criteria (MORC)
  - (iv) Part 4 – Definitions
- (b) Operating Procedures.

The WECC Operating Procedures submitted to WECC by individual utilities and the ISO to address specific operating problems in their respective grids that could affect operations of the interconnected grid.

- (c) Dispatcher's Handbook.

The WECC Dispatcher's Handbook supplied by WECC to all utilities and Control Areas as a reference for dispatchers to use during normal and emergency operations of the grid.

#### **7.2.2.3.3 NERC Policies and Standards.**

- (a) National Standards

The NERC national level standards for all utilities to follow to allow for safe and reliable operation of electric systems.

- (b) Operating Manual

The NERC Operating Manual supplied by NERC to all utilities and Control Areas as a reference for dispatchers to use during normal and emergency operations of the grid.

**7.2.2.4 NAESB Standards.** The following standards of the Wholesale Electric Quadrant (WEQ) of the North American Energy Standards Board (NAESB) are incorporated by reference:

- Coordinate Interchange (WEQ-004, Version 000, January 15, 2005, with minor corrections applied on March 25, 2005, and additional numbering added October 3, 2005) including Purpose, Applicability, and Standards 004-0 through 004-13, and 004-A through 004-D;
- Area Control Error (ACE) Equation Special Cases Standards (WEQ-005, Version 000, January 15, 2005, with minor corrections applied on March 25, 2005, and additional numbering added October 3, 2005) including Purpose, Applicability, and Standards 005-0 through 005-3.1.3, and 005-A;
- Inadvertent Interchange Payback (WEQ-007, Version 000, January 15, 2005, with minor corrections applied on March 25, 2005, and additional numbering added October 3, 2005) including Purpose, Applicability, and Standards 007-0 through 007-2, and 007-A; and
- Manual Time Error Correction – Time Error Initiation (WEQ-006-4, Version 000, with minor corrections applied on October 17, 2006).

The ISO has obtained a waiver of the following NAESB WEQ standards:

- Business Practices for Open Access Same-Time Information Systems (OASIS) (WEQ-001, Version 000, January 15, 2005, with minor corrections applied on March 25, 2005, and additional numbering added October 3, 2005) including Standards 001-0.2 through 001-0.8, 001-2.0 through 001-9.6.2, 001-9.8 through 001-10.8.6, and Examples 001-8.3-A, 001-9.2-A, 001-10.2-A, 001-9.3-A, 001-10.3-A, 001-9.4.1-A, 001-10.4.1-A, 001-9.4.2-A, 001-10.4.2-A, 001-9.5-A, 001-10.5-A, 001-9.5.1-A, and 001-10.5.1-A;

- Business Practices for Open Access Same-Time Information Systems (OASIS) Standards & Communication Protocols (WEQ-002, Version 000, January 15, 2005, with minor corrections applied on March 25, 2005, and additional numbering added October 3, 2005) including Standards 002-1 through 002-5.10;  
and

- Open Access Same-Time Information Systems (OASIS) Data Dictionary (WEQ-003, Version 000, January 15, 2005, with minor corrections applied on March 25, 2005, and additional numbering added October 3, 2005) including Standard 003-0.

WECC has obtained a waiver of the following NAESB WEQ standard on its own behalf and on behalf of the Control Areas in the Western Interconnection, including the ISO:

- Manual Time Error Correction (WEQ-006, Version 000, January 15, 2005, with minor corrections applied on March 25, 2005, and additional numbering added October 3, 2005) including Purpose, Applicability, and Standards 006-0 through 006-12.

**7.2.3 General Standard of Care.** When the ISO is exercising Operational Control of the ISO Controlled Grid, the ISO and Market Participants shall comply with Good Utility Practice.

**7.2.4 Routine Operation of the ISO Controlled Grid.** The ISO shall operate the ISO Controlled Grid in accordance with the standards described in Section 7.2.2.3 and within the limit of all applicable Nomograms and established operating limits and procedures.

**7.2.4.1 ISO Controlled Facilities.**

**7.2.4.1.1 General.**

The ISO shall have Operational Control of all transmission lines and associated station equipment that have been transferred to the ISO Controlled Grid from the PTOs as listed in the ISO Register.

**7.2.4.2 Clearing Equipment for Work.**

The clearance procedures of the ISO and the relevant UDC and PTO must be adhered to by all parties, to ensure the safety of all personnel working on ISO Controlled Grid transmission lines and equipment. In accordance with Section 9.3, no work shall start on any equipment or line which is under the Operational Control of the ISO unless final approval has first been obtained from the appropriate ISO Control Center. Prior to starting the switching to return any line or equipment to service the ISO shall confirm that all formal requests to work on the cleared line or equipment have been released.

**7.2.4.3 Equipment De-energized for Work.**

In some circumstances, System Reliability requirements may require a recall capability that can only be achieved by allowing work to proceed with the line or equipment de-energized only (i.e. not cleared and grounded). Any personnel working on such de-energized lines and equipment must take all precautions as if the line or equipment were energized. Prior to energizing any such lines or equipment deenergized for work, the ISO shall confirm that all formal requests to work on the de-energized line or equipment have been released.

**7.2.4.4 Hot-Line Work.**

The ISO has full authority to approve requests by PTOs to work on energized equipment under the Operational Control of the ISO, and no such work shall be commenced until the ISO has given its approval.

**7.2.4.5 Intertie Switching.**

The ISO and the appropriate single point of contact for the relevant PTO and the adjacent Control Area shall coordinate during the de-energizing or energizing of any Interconnection.

**7.2.4.6 Operating Voltage Control Equipment.**

**7.2.4.6.1 Operating Voltage Control Equipment Under ISO Control.**

The ISO will direct each PTO's single point of contact in the operation of voltage control equipment that is under the ISO's Operational Control.

**7.2.4.6.2 Operating Voltage Control Equipment Under UDC Control.**

Each UDC must operate voltage control equipment under UDC control in accordance with existing UDC voltage control guidelines.

**7.2.4.6.3 Special ISO Voltage Control Requirements.**

The ISO may request a PTO via its single point of contact or a UDC via its single point of contact to operate under special voltage control requirements from time to time due to special system conditions.

**7.3 Normal System Operations.**

**7.3.1 Actions for Maintaining Reliability of ISO Controlled Grid.**

The ISO plans to obtain the control over Generating Units that it needs to control the ISO Controlled Grid and maintain reliability by purchasing Ancillary Services from the market auction for these services. When the ISO responds to events or circumstances, it shall first use the generation control it is able to obtain from the Ancillary Services bids it has received to respond to the operating event and maintain reliability. Only when the ISO has used the Ancillary Services that are available to it under such Ancillary Services bids which prove to be effective in responding to the problem and the ISO is still in need of additional control over Generating Units, shall the ISO assume supervisory control over other Generating Units. It is expected that at this point, the operational circumstances will be so severe that a real-time system problem or emergency condition could be in existence or imminent.



Each Participating Generator shall take, at the direction of the ISO, such actions affecting such Generator as the ISO determines to be necessary to maintain the reliability of the ISO Controlled Grid. Such actions shall include (but are not limited to):

- (a) compliance with the ISO's Dispatch instructions including instructions to deliver Ancillary Services in real time pursuant to the Final Day-Ahead Schedules and Final Hour-Ahead Schedules;
- (b) compliance with the system operation requirements set out in Section 7 of this ISO Tariff;
- (c) notification to the ISO of the persons to whom an instruction of the ISO should be directed on a 24-hour basis, including their telephone and facsimile numbers; and
- (d) the provision of communications, telemetry and direct control requirements, including the establishment of a direct communication link from the control room of the Generator to the ISO in a manner that ensures that the ISO will have the ability, consistent with this ISO Tariff and the ISO Protocols, to direct the operations of the Generator as necessary to maintain the reliability of the ISO Controlled Grid, except that a Participating Generator will be exempt from ISO requirements imposed in accordance with this subsection (d) with regard to any Generating Unit with a rated capacity of less than 10 MW, unless that Generating Unit is certified by the ISO to participate in the ISO's Ancillary Services and/or to submit Supplemental Energy bids.

#### **7.4 Management of System Emergencies.**

##### **7.4.1 Declaration of System Emergencies.**

The ISO shall, when it considers that conditions giving rise to a System Emergency exist, declare the existence of such System Emergency. A declaration by the ISO of a System Emergency shall be binding on all Market Participants until the ISO announces that the System Emergency no longer exists.

##### **7.4.2 Emergency Procedures.**

In the event of a System Emergency, the ISO shall take such action as it considers necessary to preserve or restore stable operation of the ISO Controlled Grid. The ISO shall act in accordance with Good Utility Practice to preserve or restore reliable, safe and efficient service as quickly as reasonably practicable.

The ISO shall keep system operators in adjacent Control Areas informed as to the nature and extent of the System Emergency in accordance with WECC procedures and, where practicable, shall additionally keep the Market Participants within the Control Area informed.

**7.4.2.1** In the event of a System Emergency, UDCs shall comply with all directions from the ISO concerning the management and alleviation of the System Emergency and shall comply with all procedures concerning System Emergencies set out in this Tariff and the ISO Protocols, and each MSS Operator shall comply with all directions from the ISO concerning the avoidance, management and alleviation of the System Emergency and shall comply with all procedures concerning System Emergencies set forth in the ISO Tariff.

**7.4.2.2** During a System Emergency, the ISO and UDCs shall communicate through their respective control centers and in accordance with procedures established in individual UDC operating agreements, and the ISO and the MSS Operator shall communicate through their respective control centers and in accordance with procedures established in the agreement through which the MSS Operator undertakes to the ISO to comply with the provisions of the ISO Tariff.

**7.4.2.3 System Emergencies.**

**7.4.2.4** All Generating Units, System Units and System Resources that are owned or controlled by a Participating Generator are (without limitation to the ISO's other rights under this ISO Tariff) subject to control by the ISO during a System Emergency and in circumstances in which the ISO considers that a System Emergency is imminent or threatened. The ISO shall, subject to Section 7.4.4.1, have the authority to instruct a Participating Generator to bring its Generating Unit on-line, off-line, or increase or curtail the output of the Generating Unit and to alter scheduled deliveries of Energy and Ancillary Services into or out of the ISO Controlled Grid, if such an instruction is reasonably necessary to prevent an imminent or threatened System Emergency or to retain Operational Control over the ISO Controlled Grid during an actual System Emergency. The ISO shall have the authority to instruct an RMR Unit whose owner has selected Condition 2 of its RMR Contract to start-up and change its output if the ISO has reasonably used all other available and effective resources to prevent a threatened System Emergency

without declaring that a System Emergency exists. If the ISO so instructs a Condition 2 RMR Unit, it shall compensate that unit in accordance with Section 11.2.4.2 and allocate the costs in accordance with Section 11.2.4.2.1.1.

**7.4.3.1 Notifications by ISO of System Conditions.**

The ISO will provide the following notifications to Participants to communicate unusual system conditions or emergencies.

**7.4.3.2 System Alert.**

ISO will give a system Alert Notice when the operating requirements of the ISO Controlled Grid are marginal because of Demand exceeding forecast, loss of major Generation or loss of transmission capacity that has curtailed imports into the ISO Control Area, or if the Hour-Ahead Market is short on scheduled Energy and Ancillary Services for the ISO Control Area.

**7.4.3.3 System Warning.**

The ISO will give a system warning notice when the operating requirements for the ISO Controlled Grid are not being met in the Hour-Ahead Market, or the quantity of Regulation, Spinning Reserve, Non-Spinning Reserve, Replacement Reserve and Supplemental Energy available to the ISO is not acceptable for the Applicable Reliability Criteria. This system warning notice will notify Participants that the ISO will, acting in accordance with Good Utility Practice, take such steps as it considers necessary to ensure compliance with Applicable Reliability Criteria, including the negotiation of Generation through processes other than competitive bids.

**7.4.3.4 System Emergency.**

When, in the judgment of the ISO, the System Reliability of the ISO Controlled Grid is in danger of instability, voltage collapse or under-frequency caused by transmission or Generation trouble in the ISO Control Area, or events outside of the ISO Control Area that could result in a cascade of events throughout the WECC grid, the ISO will declare a System Emergency. This declaration may include a notice to suspend the Day-Ahead, Hour-Ahead and Real Time Markets, authorize full use of Black Start

Generation, initiate full control of manual Load Shedding, authorize the curtailment of Curtailable Demand (even though not scheduled as an Ancillary Service). The ISO will reduce the System Emergency declaration to a lower alert status when it is satisfied, after conferring with Reliability Coordinators within the WECC that the major contributing factors have been corrected, all involuntarily interrupted Demand is back in service (except interrupted Curtailable Demand selected as an Ancillary Service). This reduction in alert status will reinstate the competitive markets if they have been suspended.

#### **7.4.4 Intervention in Market Operations.**

The ISO may intervene in the operation of the Day-Ahead Market, the Hour-Ahead Market or the Real Time Market and set the Administrative Price, if the ISO determines that such intervention is necessary in order to contain or correct a System Emergency as follows.

**7.4.4.1** The ISO will not intervene in the operation of the Day-Ahead Market unless there has been a total or major collapse of the ISO Controlled Grid and the ISO is in the process of restoring it. The ISO shall, where reasonably practicable, utilize Ancillary Services which it has the contractual right to instruct and which are capable of contributing to containing or correcting the actual, imminent or threatened System Emergency prior to issuing instructions to a Participating Generator under Section 7.4.2.4.

**7.4.4.2** Before any such intervention the ISO must (in the following order): (a) dispatch all scheduled Generation and all other Generation offered or available to it regardless of price (including all Adjustment Bids, Supplemental Energy bids, Ancillary Services and reserves); (b) dispatch all interruptible Loads made available by UDCs to the ISO in accordance with the relevant agreements with UDCs; (c) dispatch or curtail all price-responsive Demand that has been bid into any of the markets and exercise its rights under all load curtailment contracts available to it; (d) exercise Load Shedding to curtail Demand on an involuntary basis to the extent that the ISO considers necessary.

**7.4.4.3** The Administrative Price in relation to each of the markets for Imbalance Energy and Ancillary Services shall be set at the applicable Market Clearing Price in the Settlement Period

immediately preceding the Settlement Period in which the intervention took place. When Administrative Prices are imposed, Inter-Zonal Congestion will be managed in accordance with Section 27.1.1.6(c).

**7.4.4.4** The intervention will cease as soon as the ISO has restored all Demand that was curtailed on an involuntary basis under Section 7.4.4.2(d).

**7.4.5 Emergency Guidelines.**

The ISO shall issue protocols for all Market Participants to follow during a System Emergency. These guidelines shall be consistent with the specific obligations of Scheduling Coordinators and Market Participants referenced in Sections 7.4.10, 7.4.11, 7.4.2, 7.4.2.4 and 7.4.4.1 of this tariff. All Participants shall respond to ISO Dispatch Instructions with an immediate response during System Emergencies.

**7.4.6** The ISO shall in accordance with Section 7.4.5 hereof implement the Electrical Emergency Plan in consultation with the UDCs, the MSS Operator, or other entities, at the ISO's discretion, when Energy reserve margins are forecast to be at the levels specified in the plan.

**7.4.6.1** Each UDC and MSS Operator will notify its End-Use Customers connected to the UDC's or the MSS's Distribution System of any voluntary curtailments notified to the UDC or to the MSS Operator by the ISO pursuant to the provisions of the EEP.

**7.4.7 Periodic Tests of Emergency Procedures.**

The ISO shall develop and administer periodic unannounced tests of System Emergency procedures. Such tests shall be designed to ensure that the ISO Market Participants are capable of promptly and efficiently responding to imminent or actual System Emergencies.

**7.4.8 Prioritization Schedule for Shedding and Restoring Load.**

Prior to the ISO Operations Date, and annually thereafter, the ISO shall, in consultation with Market Participants and subject to the provisions of Section 3, develop a prioritization schedule for Load Shedding should a System Emergency require such action. The prioritization schedule shall also establish a sequence for the restoration of Load in the event that multiple Scheduling Coordinators or Market Participants are affected by service interruptions and Load must be restored in blocks. For Load

shed in accordance with Section 7.4.11.4.2, the prioritization schedule will only include those UDCs or MSS Operators that have Scheduling Coordinators that are scheduling insufficient resources to meet the Load in the UDC or MSS Service Area. For Load shed in accordance with Section 7.4.11.4.3, the prioritization schedule will include all UDCs and MSS Operators.

**7.4.9 Under Frequency Load Shedding (UFLS).**

**7.4.9.1** Each UDC's agreement with the ISO and each agreement through which the MSS Operator undertakes to the ISO to comply with the provisions of the ISO Tariff shall describe the UFLS program for that UDC or for that MSS. The ISO and UDC or the ISO and the MSS shall review the UFLS program periodically to ensure compliance with Applicable Reliability Criteria.

**7.4.9.2** The ISO shall perform periodic audits of each UDC's UFLS system and of each MSS's UFLS system to verify that the system is properly configured for each UDC or MSS.

**7.4.9.** The ISO will use its reasonable endeavors to ensure that UFLS is coordinated among the UDCs and MSSs so that no UDC bears a disproportionate share of the ISO's UFLS program.

**7.4.9.4** In compiling its UFLS program, the ISO, at its discretion, may also coordinate with other entities, review and audit their UFLS programs and systems as described in Section Sections 7.4.9.1 to 7.4.9.3.

**7.4.10 Further Obligations Relating to System Emergencies.**

The ISO and Participating TOs shall comply with their obligations in Section 9 of the TCA.

**7.4.11 Use of Load Curtailment Programs.**

**7.4.11.1 Use of UDC's Existing Load Curtailment Programs.**

As an additional resource for managing System Emergencies, the ISO will, subject to Section 3, notify the UDCs when the conditions to implement their Load curtailment programs have been met in accordance with their terms. The UDCs will exercise their best efforts, including seeking any necessary regulatory approvals, to enable the ISO to rely on their curtailment rights at specified levels of Operating Reserve. Each UDC shall by not later than October 1 of each year advise the ISO of the capabilities of its Load

curtailment programs for the forthcoming year, and the conditions under which those capabilities may be exercised and shall give the ISO as much notice as reasonably practicable of any change to such programs.

**7.4.11.2 Load Curtailment.**

A Scheduling Coordinator may specify that Loads will be reduced at specified Market Clearing Prices or offer the right to exercise Load curtailment to the ISO as an Ancillary Service or utilize Load curtailment itself (by way of self-provision of Ancillary Services) as Non-Spinning Reserve or Replacement Reserve. The ISO, at its discretion, may require direct control over such Curtailable Demand to assume response capability for managing System Emergencies. However, non-firm Loads shall not be eligible to provide Curtailable Demand if they are receiving incentives for interruption under existing programs approved by a Local Regulatory Authority, unless: a) participation in the ISO's Ancillary Services markets is specifically authorized by such Local Regulatory Authority, and b) there exist no contingencies on the availability, nor any unmitigated incentives encouraging prior curtailment, of such interruptible Load for Dispatch as Curtailable Demand as a result of the operation of such existing program. The ISO may establish standards for automatic communication of curtailment instructions to implement Load curtailment as a condition for accepting any offered Load curtailment as an Ancillary Service.

**7.4.11.3** The ISO shall have the authority to direct a UDC or an MSS Operator to disconnect Load from the ISO Controlled Grid if necessary to avoid an anticipated System Emergency or to regain operational control over the ISO Controlled Grid during an actual System Emergency. The ISO shall direct the UDCs or the MSS Operator to shed Load in accordance with the prioritization schedule developed pursuant to Section 7.4.8. When ISO Controlled Grid conditions permit restoration of Load, the ISO shall restore Load according to the prioritization schedule developed pursuant to Section 7.4.8 hereof. The MSS Operator shall restore Load internal to the MSS.

**7.4.11.4 Load Shedding.**

**7.4.11.4.1** A portion of the ISO forecast of Control Area Load for each Trading Day will be allocated to each UDC or MSS Service Area. The ISO will aggregate each Scheduling Coordinator's

Day-Ahead Schedules to Load in each UDC or MSS Service Area and will compare those aggregated Load Schedules to the ISO's Control Area Load forecast of metered Demand for that UDC or MSS Service Area to determine if the Load in the UDC or MSS Service Area has a resource deficiency based on the Day-Ahead Schedules.

**7.4.11.4.2** If the ISO forecasts in advance of the Hour-Ahead Market that Load curtailment will be necessary due to a resource deficiency, the ISO will identify any UDC or MSS Service Area that is resource deficient. The ISO will provide notice to all Scheduling Coordinators if one or more UDC or MSS is deficient. If Load curtailment is required to manage a System Emergency associated with insufficient Hour-Ahead Schedules of resources, the ISO will determine the amount and location of Load to be curtailed and will allocate a portion of that required Load curtailment to each UDC or MSS Operator whose Service Area has been identified, based on Hour-Ahead Schedules, as being resource-deficient based on the ratio of its resource deficiency to the total Control Area resource deficiency. Each UDC or MSS Operator shall be responsible for notifying its customers and Generators connected to its system of curtailments and service interruptions.

**7.4.11.4.3** If a Load curtailment is required to manage System Emergencies, in any circumstances other than those described in Section 7.4.11.4.2, the ISO will determine the amount and location of Load to be reduced and to the extent practicable, will allocate a portion to each UDC based on the ratio of its Demand (at the time of the Control Area annual peak for the previous year) to total Control Area annual peak Demand for the previous year taking into account system considerations and the UDC's curtailment rights under their tariffs. Each UDC or MSS Operator shall be responsible for notifying its customers and Generators connected to its system of curtailments and service interruption.

**7.4.12 Curtailment under Emergency and Non-Emergency Conditions.**

**7.4.12.1 Emergency Conditions.**

To the extent practicable, the ISO shall allocate necessary curtailments of Existing Rights or Non-Converted Rights under emergency conditions in accordance with the instructions submitted by the Responsible PTO pursuant to Section 16.2.4A.1. If circumstances prevent the ISO's compliance with



such instructions, the ISO shall allocate such curtailments in a non-discriminatory manner consistent with Good Utility Practice.

**7.4.12.2 Non-Emergency Conditions.**

Unless otherwise specified by the Responsible PTO in the instructions that it submits to the ISO under Section 16.2.4A.1, the ISO will allocate any necessary curtailments under non-emergency conditions, pro rata, among holders of Existing Rights, at particular Scheduling Points and/or on particular contract paths, in the order of: (1) non-firm, (2) each priority of conditional firm, and (3) each priority of firm rights. Priorities for firm and conditional firm transmission service are indicated using contract usage templates, as described in Section 30.2.7.

**7.4.13 System Emergency Reports and Sanctions.**

**7.4.13.1 Review of Major Outages.**

The ISO with the cooperation of any affected UDC shall jointly perform a review following a major Outage that affects at least ten (10) percent of the Load served by the Distribution System of a UDC or any Outage that results in major damage to the ISO Controlled Grid or to the health and safety of personnel. The review shall address the cause of the Outage, the response time and effectiveness of emergency management efforts, and whether the operation, maintenance or scheduling practices of the ISO, any Participating TOs, Eligible Customers, UDCs or Participating Generators enhanced or undermined the ability of the ISO to maintain or restore service efficiently and in a timely manner.

**7.4.13.2 Provide Information to Review Outages.**

Participating TOs, Participating Generators, Eligible Customers, Scheduling Coordinators and UDCs shall promptly provide information requested by the ISO to review Outages pursuant to Section 7.4.13.1 and to prepare Outage reports. The ISO shall seek the views of any affected Participating TOs, Participating Generators, Eligible Customers, Scheduling Coordinator or UDCs and allow such affected Participating TOs, Participating Generators, Eligible Customers, Scheduling Coordinators or UDCs to comment on any issues arising during the preparation of a report. All findings and reports arising from the ISO's review shall be shared with Participating TOs, Participating Generators, Eligible Customers and UDCs.

**7.4.13.3 Imposing Sanctions.**

If the ISO finds that the operation and maintenance practices of any Participating TOs, Participating Generators, Eligible Customers, or UDCs prolonged the response time or contributed to the Outage, the ISO may impose sanctions on the responsible Participating TOs, Participating Generators, Eligible Customers, or UDCs provided that no sanction shall be imposed in respect of actions taken in compliance with the ISO's instructions or pursuant to a Remedial Action Scheme. The ISO shall develop and file with FERC a schedule of such sanctions. Any dispute concerning whether sanctions should be imposed under this Section shall be resolved through the ISO ADR Procedures. The schedule of sanctions filed with FERC (including categories and levels of sanctions) shall not be subject to the ISO ADR Procedures. The ISO shall publish on the ISO Home Page details of all instances in which a sanction has been imposed.

**7.4.14 ISO Facilities and Equipment.**

**7.4.14.1 ISO Facility and Equipment Outages.**

The ISO has installed redundant control centers, communication systems and computer systems. Most, but not necessarily all, equipment problems or failures should be transparent to Participants. This Section 7.4.14.1 addresses some situations when Participants could be affected, but it is impossible to identify and plan for every type of equipment problem or failure. Real time situations will be handled by the real time ISO dispatchers. The ISO control room in Folsom is the Primary ISO Control Center and the ISO control room in Alhambra is the Backup ISO Control Center.

**7.4.14.2 WEnet Unavailable.**

**7.4.14.2.1 Unavailable Critical Functions of WEnet.**

During a total disruption of the WEnet several critical functions of the ISO will not be available including:

- (a) the Scheduling Infrastructure (SI) computer will not be able to communicate with Scheduling Coordinators to receive any type of updated Schedule information;

- (b) the SI computer will not be able to communicate Congestion Management information and Schedule changes to the Scheduling Coordinators; and
- (c) the ISO will not be able to communicate general information, including emergency information, to any Participants.

**7.4.14.2.2 Communications during WEnet Unavailability.**

During any period of WEnet unavailability, the ISO shall:

- (a) make all reasonable efforts to keep Participants aware of current ISO Controlled Grid status using voice communications;
- (b) use the most recent set of Balanced Schedules for each Scheduling Coordinator for the current and all future Settlement Periods and/or Trading Days until the WEnet is restored; and
- (c) attempt to take critical Schedule changes from Scheduling Coordinators via voice communications as time and manpower allows.

**7.4.14.2.3 Primary ISO Control Center – Loss of all Voice Communications.**

In the event of loss of all voice communication at the Primary ISO Control Center, the Primary ISO Control Center will use alternate communications to notify the Backup ISO Control Center of the loss of voice communications. The Backup ISO Control Center will post information on the situation on the WEnet. Additional voice notifications will be made as time permits. Once voice communications have been restored to the Primary ISO Control Center, the ISO will post this information on the WEnet.

**7.4.14.2.4 Primary ISO Control Center – Control Center Completely Unavailable.**

In the event that the Primary ISO Control Center becomes completely unavailable, the Primary ISO Control Center will use alternate communications to notify the Backup ISO Control Center that the Primary ISO Control Center is unavailable. The Backup ISO Control Center will post information on the situation on the WEnet. Additional voice notifications will be made as time permits.

The Backup ISO Control Center will post confirmation on the WEnet that all computer systems are functioning normally (if such is the case) and take complete control of the ISO Controlled Grid. The Backup ISO Control Center will notify the TOC by direct voice communication of the situation.

Once the Primary ISO Control Center is again available, all functions will be transferred back, and the Primary ISO Control Center will notify all Participants via the WEnet.

**7.4.14.2.5 Primary ISO Control Center - ISO Energy Management System (EMS) Unavailable.**

Should an outage occur to the redundant EMS computer systems in the Primary ISO Control Center, an auto transfer should occur to transfer EMS operation to the redundant EMS back up computers at the Backup ISO Control Center. Due to the severity of a total ISO EMS computer outage, the Primary ISO Control Center will post information on the WEnet that the Primary ISO Control Center EMS computer is unavailable and that EMS control has been transferred to the Backup ISO Control Center.

When the Primary ISO Control Center EMS computer is restored, the Backup ISO Control Center will initiate a transfer back of the EMS system to the Primary ISO Control Center. The Primary ISO Control Center will post information on the restored EMS computer system status on the WEnet.

**7.4.14.2.6 Backup ISO Control Center – Loss of all Voice Communications.**

In the event of a loss of all voice communications at the Backup ISO Control Center, the Backup ISO Control Center will use alternate communications to notify the Primary ISO Control Center of the loss of voice communications. The Primary ISO Control Center will post information on the situation via the WEnet. Additional voice notifications will be made as time permits.

Once voice communications have been restored to the Backup ISO Control Center, the Primary ISO Control Center will post this information on the WEnet.

**7.4.14.2.7 Backup ISO Control Center – Control Center Completely Unavailable.**

In the event that the Backup ISO Control Center becomes completely unavailable, the Backup ISO Control Center will use alternate communications to notify the Primary ISO Control Center that the

Backup ISO Control Center is unavailable. The Primary ISO Control Center will post information on the situation on the WEnet. Additional voice notifications will be made as time permits.

The Primary ISO Control Center will post confirmation on the WEnet that all computer systems are functioning normally (if such is the case) and take complete control of the ISO Controlled Grid. The Primary ISO Control Center will notify the SCE GCC by direct voice communications of the situation.

Once the Backup ISO Control Center is again available all functions will be transferred back, and the Backup ISO Control Center will notify all Participants via the WEnet.

#### **7.4.14.2.8 Use of IOUs' Energy Control Center Computers.**

The ISO and the IOUs will comply with the procedures for the utilization by the ISO of the IOUs' Energy control center computers when developed. The ISO will post such procedures on the WEnet when agreed.

#### **7.5 Management of Overgeneration Conditions.**

The ISO's management of Overgeneration relates only to real time. In the event that Overgeneration conditions occur during real time, the ISO will direct the Scheduling Coordinators to take the steps described in this Section 7.5 of the ISO Tariff and Scheduling Coordinators shall implement ISO directions without delay. Overgeneration in real time will be mitigated by the ISO as follows; provided that the ISO Operator will have the discretion, if necessary to avoid a System Emergency, to eliminate one or more of the following steps.

**7.5.1** Commencing one hour prior to the start of the Settlement Period, the ISO will, based on available Adjustment Bids, Supplemental Energy bids and Ancillary Service Energy bids, issue Dispatch instructions to Scheduling Coordinators to reduce Generation and imports for the next operating hour.

**7.5.2** To the extent that there are insufficient decremental Energy bids available for the operating hour to fully mitigate the Overgeneration condition, the ISO will notify Scheduling Coordinators of the projected amount of Overgeneration to be mitigated in that hour.

**7.5.3** In addition to the action taken under 7.5.2, the ISO will, if it considers it necessary to maintain the reliable operation of the ISO Control Area, offer Energy for sale on behalf of Scheduling Coordinators to adjacent Control Area operators at the estimated BEEP Interval Ex Post Price or, if the ISO considers it necessary, at a price established by the ISO on behalf of Scheduling Coordinators, to be paid to adjacent Control Area operators.

**7.5.4** To the extent that the steps described in Sections 7.5.1 through 7.5.3 fail to mitigate Overgeneration, the ISO will instruct Scheduling Coordinators to reduce either Generation, or imports, or both. The amount of the reduction for each Scheduling Coordinator will be calculated pro rata based on the product of the total required reduction in Generation and imports (or increase in exports) and the ratio of its Demand to the total Demand in the ISO Control Area.

**7.5.5** To the extent that the above steps fail to fully mitigate the Overgeneration, the ISO will issue mandatory Dispatch instructions for specific reductions in Generating Unit output and external imports and all relevant Scheduling Coordinators shall be obligated to comply with such Dispatch instructions.

**7.5.6** Any costs incurred by the ISO in implementing Section 7.5.3 shall be reimbursed to the ISO by Scheduling Coordinators based upon the extent to which they supplied Energy, in metered amounts, greater than the Generation and imports scheduled in their Final Schedules and consumed Energy, in metered amounts, less than the Demand scheduled in their Final Schedules, as a proportion of the total amount of such excess or shortfall among all Scheduling Coordinators.

## **8. ANCILLARY SERVICES.**

### **8.1 Scope.**

The ISO shall be responsible for ensuring that there are sufficient Ancillary Services available to maintain the reliability of the ISO Controlled Grid consistent with WECC and NERC criteria. The ISO's Ancillary Services requirements may be self-provided by Scheduling Coordinators. Those Ancillary Services which the ISO requires to be available but which are not being self-provided will be competitively procured by the ISO from Scheduling Coordinators in the Day-Ahead Market, Hour-Ahead Market and in real time or