

June 14, 2018

The Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

**Re: California Independent System Operator Corporation
ER18-____-000**

**Tariff Clarifications Amendment and Request for Waiver of
Notice Requirement**

Dear Secretary Bose:

The California Independent System Operator Corporation (CAISO) submits this tariff amendment to make a number of clarifying revisions to the CAISO tariff.¹ No stakeholder opposes or otherwise expresses concerns about the tariff revisions contained in this filing.

The CAISO respectfully requests that the Commission waive its notice requirement, and issue an order by October 1, 2018, that accepts these tariff revisions effective November 1, 2018. The CAISO requests an order by October 1, 2018, so that the CAISO and market participants can proceed with any system changes needed to implement the changes proposed in this tariff amendment.

I. Background

This tariff amendment consists of a number of clarifications to address miscellaneous issues the CAISO has identified with its tariff. The CAISO improves its tariff, at more than 2,700 pages, with clarifying changes from time-to-time. The changes proposed in this filing involve relatively minor changes and corrections to maintain the integrity and accuracy of the CAISO tariff.

In 2010, the CAISO reviewed its tariff to identify tariff language that needed clarification and to correct inadvertent errors and inconsistencies. The Commission accepted the tariff revisions resulting from that review in 2011.² The CAISO undertook another review in 2013, which resulted in tariff revisions the

¹ The CAISO submits this filing pursuant to section 205 of the Federal Power Act, 16 U.S.C. § 824d.

² *Cal. Indep. Sys. Operator Corp.*, 134 FERC ¶ 61,140 (2011).

Commission accepted that same year.³

In 2015, the CAISO submitted a filing to correct tariff records so that the CAISO tariff reflected all Commission-approved tariff language.⁴ The Commission accepted the filing in 2016.⁵ In addition, in 2015 and 2016, the CAISO reviewed its generator interconnection procedures and identified a number of miscellaneous issues it needed to address. The Commission accepted tariff revisions to resolve those issues in 2016.⁶ Most recently, in 2017, the CAISO filed relatively minor tariff clarifications in three areas, which the Commission accepted by letter order.⁷

The CAISO has again conducted a review of its tariff and identified a need to make clarifications and to correct inadvertent errors and inconsistencies.⁸ The tariff revisions proposed in this filing do not change established policies or the rights and obligations of the CAISO or its market participants.

The CAISO has discussed its proposed tariff changes with stakeholders. The CAISO posted a draft of the proposed tariff changes and an explanatory matrix that addressed each of the changes on April 23, 2018. Stakeholder submitted comments to the proposed tariff language on May 1, 2018. The CAISO held a telephone conference call on May 8, 2018, and responded to all questions. The CAISO posted a matrix containing all comments submitted by stakeholders, with the CAISO's response thereto on May 30, 2018. The CAISO reposted the proposed tariff and explanatory matrix on June 6, 2018. The CAISO did not receive any comments expressing substantive concerns with the proposed tariff language.

³ *Cal. Indep. Sys. Operator Corp.*, 143 FERC ¶ 61,228 (2013).

⁴ The filing addressed the problem of incomplete tariff language (or tariff language omissions) that can arise when the CAISO files two or more tariff amendments to the same tariff sections using the same baseline tariff language. When the Commission approves these tariff amendments serially, the tariff section will just reflect the most recently accepted version, which may not include all of the Commission-accepted language for a particular section.

⁵ Commission letter order, Docket No. ER16-350-000 (Apr. 8, 2016). Additional details regarding the correction of the tariff records are provided in the CAISO filing accepted by that letter order.

⁶ *Cal. Indep. Sys. Operator Corp.*, 153 FERC ¶ 61,242 (2015); *Cal. Indep. Sys. Operator Corp.*, 154 FERC ¶ 61,169 (2016); Commission letter order, Docket No. ER16-693-001 (June 16, 2016).

⁷ Commission letter order, Docket No. ER17-1132-000 (Apr. 24, 2017).

⁸ See <http://www.caiso.com/informed/Pages/StakeholderProcesses/TariffClarificationsFiling.aspx> (CAISO stakeholder page regarding the tariff clarifications stakeholder process).

II. Proposed Tariff Revisions

The clarifications the CAISO proposes in this filing are discussed below. In addition, the CAISO has included a matrix to the proposed clarifications in attachment A hereto. This attachment identifies each tariff section the CAISO is proposing to revise, as well as the reason for the proposed revision.

A. Clarifications to Align the Existing Tariff with the CAISO's Previously Implemented Real-Time Market Design Enhancements Related to Order No. 764

In 2013, the CAISO filed a tariff amendment to implement enhancements to its real-time market design that included revisions to align the CAISO's market design with certain reforms mandated in the Commission's Order No. 764 rulemaking proceeding.⁹ The revisions included deletion from the tariff of the terms "Derate Energy," "Exceptional Dispatch Energy," "Imbalance Energy," "Instructed Imbalance Energy," "Optimal Energy," "Real-Time Settlement Interval MSS Price," and "Resource-Specific Settlement Interval LMP," all of which the CAISO would stop using as defined terms under the enhanced real-time market design.¹⁰ The Commission accepted the CAISO's tariff revisions, including the deletion of those superseded defined terms, effective May 1, 2014.¹¹

In its most recent review of the tariff language, the CAISO discovered that it had mistakenly left many of the defined terms listed above in certain tariff provisions. The CAISO proposes to eliminate the remaining references to those superseded defined terms from the tariff and, where necessary to replace these terms with the new terminology that aligns the tariff provisions with the enhanced real-time market design. In addition, because the CAISO has deleted the defined term "Instructed Imbalance Energy" (IIE for short), the CAISO also proposes to delete the defined terms "IIE," "IIE Settlement Amount" and "Settlement Interval Penalty Location Real-Time LMP," all of which definitions incorporate the outdated term "Instructed Imbalance Energy."¹²

⁹ *Integration of Variable Energy Resources*, Order No. 764, FERC Stats. & Regs. ¶ 31,331, *order on reh'g and clarification*, Order No. 764-A, 141 ¶ 61,232 (2012), *order on clarification and reh'g*, Order No. 764-B, 144 FERC ¶ 61,222 (2013).

¹⁰ See CAISO tariff amendment, Docket No. ER14-480-000, at attachment B (black-lined tariff revisions) (Nov. 26, 2013) (November 2013 Tariff Amendment).

¹¹ *Cal. Indep. Sys. Operator Corp.*, 146 FERC ¶ 61,204 (2014). The Commission also directed the CAISO to submit filings to comply with directives issued in the proceeding, which the Commission accepted in later orders. See *Cal. Indep. Sys. Operator Corp.*, 148 FERC ¶ 61,023 (2014); Commission letter order, Docket No. ER14-480-002 (Nov. 13, 2014).

¹² Revised tariff sections 8.4.1.2, 11.2.3.1.2, 11.5, 11.5.2, 11.5.2.1, 11.5.2.2, 11.5.3, 11.5.6, 11.5.6.1, 11.5.6.2, 11.5.6.2.4, 11.5.6.2.5.1, 11.5.6.2.5.2(ii), 11.5.6.3, 11.5.6.3.2(a), 11.5.6.4, 11.5.6.5, 11.5.6.6, 11.5.6.7, 11.5.6.7.1, 11.5.6.7.2, 11.5.6.7.3, 11.5.7.1, 11.5.7.2, 11.5.8.1, 11.5.8.2, 11.7.1.1, 11.7.1.2, 11.8.4, 11.8.4.1.5, 11.8.4.3.1, 11.8.4.3.2, 11.10.1.4, 11.10.9.3,

As part of the 2014 real-time market enhancements the CAISO adopted transitional measures referred to as “Participating Intermittent Resource Provider (PIRP) Protective Measures” that remained in effect only for a three-year (*i.e.*, until May 1, 2017). These measures have now expired. Therefore, the CAISO is proposing to remove language related to the PIRP Protective Measures, which also includes language that was intended to prohibit scheduling coordinators from submitting economic bids for PIRP Protective Measures,¹³ as well as export fees that only applied to resources that were under the PIRP Protective Measures.¹⁴

B. Clarifications to Align the Tariff with the CAISO’s Previously Implemented Improvements to the Allocation of Contingency Reserve Costs

In 2014, the CAISO filed a tariff amendment to align the allocation of costs for contingency reserves with the then-new procurement requirements for contingency reserves set forth in Western Electricity Coordinating Council (WECC) Reliability Standard BAL-002-WECC-2. In the tariff amendment, the CAISO proposed to eliminate the opportunity for scheduling coordinators to receive a payment for excess self-provision of contingency reserves. The CAISO explained that the tariff revisions would permit a scheduling coordinator’s reserve obligation to go below zero or result in a credit only for purposes of inter-scheduling coordinator trades or energy from imports.¹⁵ The Commission accepted the tariff revisions as just and reasonable.¹⁶

The CAISO, in its review of the tariff for this filing, determined that provisions in tariff sections 8.6.2 and 11.10.6 do not align with the changes the Commission accepted in the July 2014 Tariff Amendment. Therefore, the CAISO

11.17.1.2.2, 11.21.1, 12.5.1, 16.11, 16.12, 17.3.3(3), 17.3.3(5), 17.6, 17.7, 27.5.3.2.2, 30.5.2.7.2, 30.5.2.7.3, 34.5.3, 34.8(b)(ii), 34.13.2, 34.17.1(c), 34.17.4, 34.17.6, 34.20.1, 34.20.2.2, 39.10.1, 39.10.2, and 39.10.5; tariff appendix A, revised definitions of “Dispatch Interval LMP,” “Dispatch Operating Point,” “FMM Instructed Imbalance Energy,” “IIE,” “IIE Settlement Amount,” “Ramping Energy Deviation,” “Residual Imbalance Energy,” “RTD Instructed Imbalance Energy,” “RTD Optimal Energy,” “Settlement Interval Penalty Location Real-Time LMP,” “Standard Ramping Energy,” and “Uninstructed Imbalance Energy”; tariff appendix F, schedule 1, part A, revised section 1; tariff appendix M, revised sections 1.7.1, 1.7.3, 2.6.1, and 2.6.2; and tariff appendix Q, revised section 7.

¹³ See transmittal letter for November 2013 Tariff Amendment at 38-42.

¹⁴ Revised, or removal by marking as “[Not Used],” of tariff sections 4.8.1, 4.8.2.1.1, 4.8.3, 11.12.1.2, 11.12.2, 11.12.3.3, and 34.1.6.3; tariff appendix A, removal of the definition of “PIRP Protective Measures;” and tariff appendix Q, removal of section 5.3.

¹⁵ See transmittal letter for CAISO tariff amendment, Docket No. ER14-2536, at 14-15 (July 30, 2014) (July 2014 Tariff Amendment).

¹⁶ *Cal. Indep. Sys. Operator Corp.*, 148 FERC ¶ 61,239 (2014).

proposes to revise those tariff sections to ensure that they satisfy WECC Reliability Standard BAL-002-WECC-2 and do not result in payment for excess self-provision of contingency reserves.

C. Clarifications to More Accurately Calculate Initial Settlement Statement T+3B

The CAISO proposes two clarifications to more accurately calculate estimated amounts shown on the settlement statement published on the third business day from the relevant trading day (initial T+3B settlement statement).

First, the CAISO proposes to add new tariff section 11.1.4(e) to specify that, in calculating settlement statement T+3B, the CAISO will estimate interchange schedule data based on total expected energy and dispatch as calculated in the real-time market and as modified by any applicable corrections to the dispatch operating point for the resource. This is the same methodology the CAISO uses to estimate meter data for metered generation under tariff section 11.1.4(a).

Second, the CAISO proposes to re-designate existing tariff section 11.1.4(e) as new tariff section 11.1.4(f) and to specify that it will not estimate real-time imbalance energy offset or allocation of real-time market bid cost uplift for purposes of calculating initial settlement statement T+3B. These two new items supplement the existing set of items that the section lists as not being estimated for purposes of the calculation. As is the case with those items listed in the existing tariff provisions, the CAISO does not have the processing time or available data to produce sufficiently reliable estimates for the charge codes associated with the two newly listed items.¹⁷

D. Full Network Model Metric

Section 27.5.1.2 of the CAISO tariff requires the CAISO calculate the external unscheduled flow accuracy metric.¹⁸ The accuracy metric was adopted as part of enhancements the CAISO made to its modeling capabilities that enables the CAISO to account for unscheduled flow in the CAISO market. The metric tests for the accuracy of its modeling of unscheduled flows and prevent the use of its unscheduled flow modeling during periods where that modeling is

¹⁷ See transmittal letter for CAISO tariff amendment, Docket No. ER11-3973-000, at 8 (June 30, 2011) (setting forth the rationale for excluding the existing items from the calculation); *Cal. Indep. Sys. Operator Corp.*, 136 FERC ¶ 61,194 (2011) (accepting tariff amendment for filing subject to conditions not relevant here).

¹⁸ The CAISO also proposes to remove Section 6.5.3.2.4 as it is a cross-reference to the accuracy metric.

inaccurate.¹⁹

In accepting the use of the metric, the Commission agreed with the CAISO that that “its accuracy metric need not be a permanent feature of the tariff” and directed the ISO to “extend its proposal such that following the transitional period of one year after October 1, 2014, the mechanism will cease to be effective once the standard has been met for 12 consecutive months.” The Commission found that to “the extent CAISO is able to demonstrate consistently accurate performance over such a long period, CAISO’s modeling of unscheduled flows should not be subject to more skepticism than any other feature of CAISO’s market.”²⁰

The CAISO met this requirement on October 15, 2016. The reports demonstrating that the CAISO passed the metric for twelve consecutive months following the implementation are available on the CAISO website.²¹ The CAISO ceased publishing the metric February 2017. The CAISO proposes to remove the provisions of the tariff that reflect the requirement that the CAISO calculate the metric since the requirements no longer apply.

E. Other Clarifications

In addition to the tariff changes discussed above, the CAISO proposes clarifications to:

- (1) Update tariff provisions to correct cross-references, use current tariff-defined terms, and otherwise ensure consistency throughout the tariff;²²
- (2) Correct typographical, grammatical, and punctuation errors and omissions, as well as non-sequential numbering of tariff sections;²³

¹⁹ 148 FERC ¶ 61,089 (2014).

²⁰ *Id.* at P 60.

²¹ See Full Network Model Accuracy Reports 2014-2015, <http://www.caiso.com/Pages/documentsbygroup.aspx?GroupID=6A696A8D-63FA-4AE0-9664-905EA633C8FF>.

²² Revised tariff sections 11.5, 11.5.1.2, 11.5.2, 11.5.2.1, 11.5.2.4, 11.5.3, 11.5.4.2, 11.5.6, 11.5.6.1, 11.5.6.2, 11.5.2.6.1, 11.5.6.2.3, 11.5.6.2.4, 11.5.6.2.5.1, 11.5.6.3, 11.5.6.4, 11.5.6.6, 11.5.8.1, 11.5.8.2, 11.8.4.1.1(c), 11.8.4.1.1(h), 11.8.4.1.2, 11.10.1.4, 11.10.2, 11.10.3, 11.10.4, 11.17.1.2.2, 11.17.2.2, 11.20.4(f), 11.21.1, 11.29(b), 11.29.9.3 11.31, 13.1.4, 17.3.3(3), 27.5.3.2.2, 27.8.3, 29.10(e)(2), 29.11(n), 34.8(h), 34.11.3, 34.17.1 (f), 34.17.1(g), and 34.22; tariff appendix A, revised definition of “Ancillary Service Obligation Or AS Obligation”; tariff appendix F, schedule 6; tariff appendix L, sections L.2 and L.7; tariff appendix M, section 1.7.6.

²³ Revised tariff sections 8.6.2, 11.1.4(f), 11.5.1.2, 11.5.6.2.1, 11.5.6.2.3, 11.5.7.2, 11.7.1.1, 11.7.1.2, 11.8.4.1.1(c), 11.8.4.1.1(e), 11.9.1, 11.10.2, 11.10.3, 11.10.4, 11.10.9.3, 11.17.1.2.2,

- (3) Clarify the meaning certain tariff provisions;²⁴
- (4) Better align the tariff with existing and reasonable processes, practices, and requirements;²⁵
- (5) Delete unnecessary and outdated tariff provisions;²⁶ and
- (6) Relocate tariff provisions that currently share the same section number with other, unrelated tariff provisions.²⁷

III. Effective Date and Request for Waiver

The CAISO respectfully requests that the Commission waive its notice requirement and issue an order by October 1, 2018, that accepts the tariff revisions contained in this filing effective November 1, 2018.²⁸ The CAISO requests that the Commission issue an order by October 1, 2018, so that it and market participants can proceed with any system changes needed to implement the changes proposed in this tariff amendment.

11.17.2.2, 11.29(a), 11.29(b), 11.29.8.4.6, 11.29.8.4.8, 29.34(l)(4)(a), 34.13.2, 34.17.1(b); tariff appendix F, schedule 3, revised sections 10.1(a) and 10.1(c).

²⁴ Revised tariff sections 11.5.7.1, 11.10.1.2.1, 11.10.1.4, 11.10.3, 11.10.4, 11.12.1.2, 16.12, 17.6, 17.7, and 34.1.1; and tariff appendix A, revised definition of “Ramping Energy Deviation.”

²⁵ Revised tariff sections 4.13.4.2(a), 11.4, 11.4.2, 11.5.2.2, 11.5.6.5, 11.21.1, 17.6, 17.7, 30.5.2.4, and 34.20.1; tariff appendix A, revised definition of “Dynamic Scheduling Host Balancing Authority Op Agreement,” “RTD Imbalance Energy”; tariff appendix M, sections 1.5.4, 2.5.3, and 2.6.2; tariff appendix Q, sections 3.1.1.2 and 3.1.3.

²⁶ Revised tariff sections 4.6.3.5, 11.5.6.7.3, 27.5.1, 27.5.1.2, 27.5.1.2.1, 27.5.1.2.2, and 27.5.1.2.3; tariff appendix A, revisions to the definitions of “IIE,” “IIE Settlement Amount,” “PIRP Protective Measures,” and “Settlement Interval Penalty Location Real-Time LMP;” tariff appendix F, schedule 6; tariff appendix L, section L.2; and tariff appendix M, revised sections 1.7 and 1.7.6.

²⁷ New tariff sections 27.8.1, 27.8.2, 27.8.3, 30.5.7 (including all subsections therein), 34.22, and 34.22.1; revised tariff sections 30.6.2 (including all subsections therein), 34.18, and 34.18.1.

²⁸ Pursuant to Section 35.11 of the Commission’s Regulations (18 C.F.R. § 35.11) the CAISO requests waiver of the 120 notice requirement set forth in 35.3 of the Commission’s Regulations (18 C.F.R. § 35.3).

IV. Communications

Pursuant to Rule 203(b)(3) of the Commission's regulations,²⁹ all correspondence and other communications regarding this filing should be directed to:

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V. Service

The CAISO has served copies of this filing on the California Public Utilities Commission, the California Energy Commission, and all parties with scheduling coordinator agreements under the CAISO tariff. In addition, the CAISO has posted a copy of the filing on the CAISO website.

VI. Contents of Filing

In addition to this transmittal letter, this filing includes the following attachments:

Attachment A	Key to proposed tariff revisions
Attachment B	Clean CAISO tariff sheets incorporating this tariff amendment
Attachment C	Red-lined document showing the revisions contained in this tariff amendment ³⁰

²⁹ 18 C.F.R. § 385.203(b)(3).

³⁰ The tariff records containing the revised language for sections 8.4.1.2, 30.5.2.4, and 34.17.1(c) include, in their underlying clean text, pending changes from the CAISO tariff amendment filed in Docket No. ER18-1169-000 on March 23, 2018. In the event that any of these pending changes are not approved, the CAISO will make a filing to conform those tariff records.

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VII. Conclusion

For the reasons set forth in this filing, the CAISO respectfully requests that the Commission issue an order by October 1, 2018, that accepts the tariff revisions contained in this filing effective November 1, 2018.

Respectfully submitted,

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Attachment A – Key to Proposed Tariff Revisions
Tariff Clarifications Amendment
California Independent System Operator Corporation

Section	Proposed Revisions	Reason for Change
4.6.3.5	<p>4.6.3.5 [Not Used] — Participating Generator with a Net Scheduled PGA A Participating Generator that is eligible for and has entered into a Net Scheduled Participating Generator Agreement shall be subject to the provisions of this Section 4.6.3.5, as reflected in the terms of the Net Scheduled PGA.</p> <p>4.6.3.5.1 — Revenue Metering for a Net Scheduled Generating Unit In accordance with the terms of the Net Scheduled PGA and Section 10.1.3.3, a Participating Generator that has entered into a Net Scheduled PGA may net the revenue metering value for the Generation produced by each Net Scheduled Generating Unit listed in the Net Scheduled PGA and the revenue metering value for the Demand of the Self-provided Load that is (i) served by the Net Scheduled Generating Unit and (ii) electrically located on the same side of the Point of Demarcation.</p> <p>4.6.3.5.2 — Telemetry for a Net Scheduled Generating Unit A Participating Generator that has entered into a Net Scheduled PGA may satisfy the provisions of Section 7.6.1(d) for the installation of telemetry by installing telemetry at the Point of Demarcation for the purpose of recording the net impact of the Net Scheduled Generating Unit upon the CAISO Controlled Grid; provided that the installed telemetry satisfies the technical, functional, and performance requirements for telemetry set forth in the CAISO Tariff and the applicable Business Practice Manual.</p> <p>4.6.3.5.3 — Market and Settlement Processes for a Net Scheduled Generating Unit For bidding, scheduling, billing, and Settlement purposes regarding the Net Scheduled Generating Unit Self-provided Load of a Participating Generator that has entered into a Net Scheduled PGA, measurements of Generation or Demand of the Net Scheduled Generating Unit shall be made at the Point of Demarcation. In all other respects, the Generation and Load of the Net Scheduled Generating Unit shall be subject to the applicable provisions of the CAISO Tariff regarding bidding, scheduling, billing, and Settlements.</p> <p>4.6.3.5.4 — Operating Requirements for a Net Scheduled Generating Unit</p>	<p>The CAISO is proposing to mark this section as “[Not Used]” as it is duplicative of section 4.6.3.4.</p>

Section	Proposed Revisions	Reason for Change
	<p>A Participating Generator that has entered into a Net Scheduled PGA shall abide by CAISO Tariff provisions regarding the CAISO's ability to dispatch or curtail Generation from the Net Scheduled Generating Units listed in its Net Scheduled PGA. The CAISO shall only dispatch or curtail a Net Scheduled Generating Unit of the Participating Generator: (a) to the extent the Participating Generator bids Energy or Ancillary Services from the Net Scheduled Generating Unit into the CAISO Markets or the Energy is otherwise available to the CAISO under Section 40, subject to the restrictions on operating orders set forth below; or (b) if the CAISO must dispatch or curtail the Net Scheduled Generating Unit in order to respond to an existing or imminent System Emergency or condition that would compromise CAISO Balancing Authority Area integrity or reliability as provided in Sections 7 and 7.6.1.</p> <p>The CAISO will not knowingly issue an operating order to a Participating Generator that has entered into a Net Scheduled PGA that: (1) requires a Participating Generator to reduce its Generation below the delineated minimum operating limit, other than in a System Emergency; (2) conflicts with operating instructions provided to the CAISO by the Participating Generator; or (3) results in damage to the Participating Generator's equipment, provided that any such equipment limitation has been provided to the CAISO and incorporated in the Participating Generator's operating instructions provided to the CAISO. If the Participating Generator: (1) receives a Schedule which requires operation below the minimum operating limit, and (2) deviates from that Schedule to continue to operate at the minimum operating limit, it will not be subject to any penalties or sanctions as a result of operating at the minimum operating limit. The Participating Generator's consequences for deviating from Schedules in Real Time will be governed by the CAISO Tariff.</p> <p>The CAISO shall have the authority to coordinate and approve Generation Outage schedules for the Generating Unit(s) listed in a Net Scheduled PGA, in accordance with the provisions of Section 9.</p>	

Section	Proposed Revisions	Reason for Change
4.8.1	<p>4.8.1 Bidding and Settlement The CAISO shall not accept Bids for an Eligible Intermittent Resource other than through a Scheduling Coordinator. Any Eligible Intermittent Resource that is not a Participating Intermittent Resource, or any Participating Intermittent Resource for which Bids are submitted shall be bid and settled as a Generating Unit for the associated Settlement Periods (except that the Forecast Fee shall apply in such Settlement Periods). Scheduling Coordinators shall not submit Economic Bids for Participating Intermittent Resources that are subject to PIRP Protective Measures.</p>	This amendment removes the expired tariff language pertaining to PIRP Protective Measures.
4.8.2.1.1	<p>4.8.2.1.1 Use of Own Forecast For purposes of participating in the CAISO Markets, Eligible Intermittent Resource may opt to use their own forecast of their resource's output, and not use the forecast of their output provided by the CAISO, only to the extent the CAISO has certified that the Eligible Intermittent Resource has completed the certification requirements specified in the Business Practice Manuals. If the Eligible Intermittent Resources is certified to provide their own forecast, they must provide at a minimum a three-hour rolling forecast with fifteen- (15) minute granularity, updated every fifteen minutes, and may provide in the alternative a three-hour rolling forecast at five- (5) minute granularity, updated every five minutes. If an Eligible Intermittent Resource opts to provide the forecast of their output at a five-minute granularity, the CAISO will use the average of the projected Energy output for the relevant three five (5)-minute forecasts to determine the Variable Energy Resource Self-Schedule for the Fifteen Minute Market as specified in Section 34. An Eligible Intermittent Resource that has elected to use its own forecast of its output must also submit the meteorological and outage data specified in Appendix Q. For purposes of participating in the CAISO Markets, Participating Intermittent Resources may opt to use their own output forecast if they are certified to do so by the CAISO pursuant to the rules specified in the Business Practice Manuals, in which case: (1) the resource will retain its status as a Participating Intermittent Resource; (2) the CAISO will not submit the updated output forecast for that resource through the Real-Time Market; and (3) the resource will be subject to the same</p>	This amendment removes the expired tariff language pertaining to PIRP Protective Measures.

Section	Proposed Revisions	Reason for Change
	<p>requirements that apply to Eligible Intermittent Resource that use their own output forecast as specified in the CAISO Tariff.</p> <p>Participating Intermittent Resources that are subject to PIRP Protective Measures are not eligible to opt to use a forecast of their output for purposes of participating in the CAISO Markets other than the forecast of their output provided by the CAISO.</p>	
4.8.3 (in its entirety)	<p>4.8.3 [Not Used] PIRP Protective Measures</p> <p>4.8.3.1 Request for PIRP Protective Measures</p> <p>4.8.3.1.1 Timing</p> <p>Participating Intermittent Resources or Qualifying Facilities that wish to qualify for PIRP Protective Measures pursuant to Section 4.8.3.2 within the three-year transition period must complete their election for PIRP Protective Measures no later than thirty (30) days after the effective date of this Section 4.8.3.</p> <p>4.8.3.1.2 Materials Submitted with Request</p> <p>For a resource to qualify for PIRP Protective Measures, within thirty (30) days from the effective date of this Section, responsible parties must submit affidavits as described in either Section 4.8.3.1.2.1 or Section 4.8.3.1.2.2. The CAISO reserves the right to audit the representations made in the affidavits by giving written notice at least ten (10) Business Days in advance of the date that the CAISO wishes to initiate such audit, with completion of the audit occurring within 60 days of such notice. The audit shall be for the limited purposes of verifying that the Participating Intermittent Resource and counterparty to the relevant contract has represented the terms specified in the affidavit accurately. Upon request of the CAISO as part of such audit, the Participating Intermittent Resource or counterparty providing the affidavits specified below shall provide information to support its certification under Sections 4.8.3.1.2.1 or Section 4.8.3.1.2.2, as appropriate. Each party will be responsible for its own expenses related to any audit.</p> <p>4.8.3.1.2.1 Physical Limitations</p> <p>A Participating Intermittent Resource or Qualifying Facility requesting PIRP Protective Measures because of physical limitations, as specified in Section 4.8.3.2.2.1, must submit a sworn affidavit by a representative of the Participating Intermittent Resource or Qualifying Facility, who is authorized to bind the resource legally and financially. The affidavit must state that the</p>	This amendment removes the expired tariff language pertaining to PIRP Protective Measures.

Section	Proposed Revisions	Reason for Change
	<p>resource meets the criteria specified in Section 4.8.3.2.1 and 4.8.3.2.2.1. The sworn affidavit must also state that the relevant party agrees that during the term of the three-year transition period, the party will engage in a good faith effort to upgrade the facility in order to address the limitations specified in Section 4.8.3.2.2.1.</p> <p>4.8.3.1.2.2 — Contractual Limitations</p> <p>A Participating Intermittent Resource or Qualifying Facility requesting PIRP Protective Measures because of contractual limitations as specified in Section 4.8.3.2.2.2, must submit a sworn affidavit by a representative of the Participating Intermittent Resource or Qualifying Facility, who that is authorized to bind the resource legally and financially. The affidavit must state that the resource is subject to a contract that meets the criteria specified in Sections 4.8.3.2.1 and 4.8.3.2.2.2. The Participating Intermittent Resource or Qualifying Facility must serve their affidavit electronically to the counterparty to the applicable contract on the same day the affidavit is submitted to the CAISO. A representative of the counterparty to the applicable existing bilateral agreement that is authorized to legally and financially bind the counterparty may also submit a sworn affidavit stating that the resource is subject to a contract that meets the criteria specified in Sections 4.8.3.2.1 and 4.8.3.2.2.2. The counterparty must serve the affidavit electronically on the Participating Intermittent Resource or Qualifying Facility on the same day the affidavit is submitted to the CAISO. Each party's respective affidavit must state that during the term of the three-year transition period, the party will engage in a good faith effort with the counterparty to address the existing contractual limitation specified in Section 4.8.3.2.2.2. In the event that the counterparty submits no affidavits within the thirty days, the CAISO deems the counterparty to have acquiesced to the request by the representative of the Participating Intermittent Resource, except if the Participating Intermittent Resource fails to serve the counterparty with the required documents within the prescribed time. If the counterparty later successfully demonstrates through a formal complaint filed at the Federal Energy Regulatory Commission that the Participating Intermittent Resource failed to serve the counterparty with the relevant</p>	

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	<p>materials as described in this Section, the CAISO will deny, and if appropriate reverse, any PIRP Protective Measures afforded to the requesting party. To the extent that the counterparty instead submits an affidavit by a representative of the company that is fully authorized to legally and financially bind the company stating that the resource's contract does not meet the criteria in Sections 4.8.3.2.1 and 4.8.3.2.2, the affidavit must also state that the Participating Intermittent Resource shall not suffer any economic or other repercussions under the contract and because of the terms of the contract were the resource to participate fully in the CAISO Market, including through the submission of Economic Bid for economic curtailment. The representative of the Participating Intermittent Resource may choose to withdraw its request in light of the counterparty's affidavit or pursue resolution of a contractual dispute through a dispute resolution process specified in the relevant contract, or if none is available, through the process specified in Section 13 of the CAISO Tariff, or through any dispute resolution process available through the Federal Energy Regulatory Commission. During the term that the contract is in dispute, the resource will be subject to PIRP Protective Measures provided it meets all the other criteria specified in this Section 4.8.3. Upon resolution of the dispute, if the dispute resolution process yields a conclusion that the contract is not eligible for PIRP Protective Measures, the resource will resume its status as a Participating Intermittent Resource not subject to PIRP Protective Measures. The CAISO will unwind the Protective Measures provided to the affected Scheduling Coordinator and will process such resettlement charges or payments through the existing resettlement procedures specified in Section 11.29.7. The CAISO will take all reasonable and necessary steps to include the resettlement on the next Recalculation Statement. In unwinding the Protective Measures received, any Scheduling Coordinator that received a payment for the PIRP Protective Measures under the contract in dispute will receive a charge in the amount of the payment previously received plus any interest that may apply under Section 11.29.10.2. Similarly, any Scheduling Coordinator that received a charge due to the provision of the PIRP Protective Measures under the contract in dispute will receive a payment in the amount of the payment</p>	

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	<p>previously received plus any interest that may apply under Section 11.29.10.2.</p> <p>4.8.3.2 Criteria Participating Intermittent Resources or Qualifying Facilities that are registered as such on the day that this Section 4.8.3 becomes effective may qualify for PIRP Protective Measures if they meet the criteria specified below. Fulfilling such criteria is a requirement in addition to providing the affidavits described in Section 4.8.3.1.2. Qualifying Facilities whose capacity exceeds twenty (20) MW on the day this tariff section becomes effective may qualify if they meet the criteria specified below. Such Qualifying Facilities that elect and qualify for PIRP Protective Measures must also be qualified as a Participating Intermittent Resource for the term over which they are to receive the PIRP Protective Measures.</p> <p>4.8.3.2.1 Exposure to Real-Time Imbalance Energy The Participating Intermittent Resource, or Qualifying Facility upon expiration of its Qualifying Facility contract with a Utility Distribution Company, either: (1) is subject to an existing bilateral agreement for power purchases from the affected resource, such as a power purchase agreement, that is in effect the day this Section becomes effective, and such agreement in its totality requires that the resource owner directly or indirectly is subject to Real-Time Imbalance Energy Settlement in the CAISO Market; or (2) is not subject to any bilateral agreement for power purchases from the affected resource on the day this section becomes effective and, therefore, the resource is itself subject to Real-Time Imbalance Energy Settlement in the CAISO Market.</p> <p>4.8.3.2.2 Ability to Curtail The affected resource must also meet one of the two criteria below:</p> <p>4.8.3.2.2.1 Physical Limitation More than fifty (50) percent of the Participating Intermittent Resource or Qualifying Facility is composed of technology that is unable to curtail output and cannot be made to do so without significant investment. Participating Intermittent Resources that only lack Dispatch, control, and telemetry or metering that require upgrades to be able to respond will not qualify. Participating Intermittent Resources that require production facility</p>	

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	<p>investments, such as turbine replacements, will qualify.</p> <p>4.8.3.2.2 Contractual Limitation The resource is subject to an existing bilateral agreement for power purchases, such as a power purchase agreement, that is in effect on the date on which this Section become effective, and that prohibits the resource from curtailing its output (not including times when they are ordered to do so by the CAISO or an affected Utility Distribution Company for reliability reasons).</p> <p>4.8.3.3 Term of PIRP Protective Measures The PIRP Protective Measures for a specific Participating Intermittent Resource shall be in effect until the earlier date of (1) three years after the effective date of this Section, or (2) the execution between the Participating Intermittent Resource owner and its counterparty of a new or amended power purchase agreement (or similar contract for services) that addresses their Imbalance Energy settlement.</p> <p>4.8.3.4 Posting The CAISO will post on its Website the names of the Participating Intermittent Resources that have elected, and subsequently been qualified, to receive PIRP Protective Measures.</p>	
4.13.4.2(a)	<p>4.13.4.2 Metering Generator Output Methodology For behind-the-meter generation registered in Proxy Demand Resources or Reliability Demand Response Resources and settling Energy Transactions pursuant to Section 11.6.2, the Generator Output Baseline will be calculated as follows: (a) Meter Data will be collected for the behind-the-meter generation for the same hour as the Trading Hour on calendar days preceding the Trading Day on which the Demand Response Event occurred for which the Generator Output Baseline is calculated. Meter Data will consist of Energy output of the behind-the-meter generation up to, but not including, output that represent an export of energy from that location. To determine the hours for which the Meter Data will be collected, the calculation will work sequentially backwards from the Trading Day under examination up to a maximum of forty-five (45) calendar days prior to the Trading Day, including only Business Days if the Trading Day is a Business Day, including only non-Business Days if the Trading Day is a non-Business Day, and excluding hours in which the Proxy Demand Resource was subject to an</p>	<p>The CAISO is correcting the Metering Generator Output (MGO) methodology to be consistent with approved policy. MGO baselines will be set to zero where there is insufficient data to form a baseline.</p>

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	<p>Outage or previously provided Demand Response Services (other than capacity awarded for AS or RUC) pursuant to a Bid at or above the net benefits test set forth in Section 30.6.3, or the Reliability Demand Response Resource was subject to an Outage as described in the Business Practice Manual or previously provided Demand Response Services pursuant to a Bid at or above the net benefits test set forth in Section 30.6.3, except as discussed below. The calculation will have complete Meter Data for this purpose if and when it is able to collect Meter Data for its target number of hours the same as the Trading Hour, which target number is ten (10) hours if the Trading Day is a Business Day or four (4) hours if the Trading Day is a non-Business Day. If it is not possible to collect Meter Data for the target number of hours, the Meter Data will include a minimum of five (5) hours if the Trading Day is a Business Day or a minimum of four (4) hours if the Trading Day is a non-Business Day. If it is not possible to collect Meter Data for the minimum number of hours described above, <u>the Generator Output Baseline will be set at zero the calculation will instead include Meter Data for the hours on which the Proxy Demand Resource was subject to an Outage or previously provided Demand Response Services (other than capacity awarded for AS or RUC) pursuant to a Bid at or above the net benefits test set forth in Section 30.6.3, or the Reliability Demand Response Resource was subject to an Outage as described in the Business Practice Manual or previously provided Demand Response Services, and for which the amount of totalized load was highest during the hours when the Demand Response Services were provided in the forty-five (45) calendar days prior to the Trading Day.</u></p> <p style="text-align: center;">* * * * *</p>	
6.5.3.2.4	<p>6.5.3.2.4 <u>[Not Used] External Unscheduled Flow Metric</u> Three Business Days after the applicable Trading Day the CAISO will post the aggregate accuracy metric calculated as specified in Section 27.5.1.2. If the CAISO must suspend the consideration of external unscheduled flow in the Day Ahead Market, the CAISO will notify Market Participants as soon as practicable prior to implementing the suspension. The CAISO will also notify Market Participants as soon as practicable prior to reinstating its consideration of external unsecheduled flow in the Day Ahead</p>	<p>The CAISO has met the accuracy flow metric specified in Section 27.5.1.2, and is proposing to remove this requirement from the tariff.</p>

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8.4.1.2 (1 st paragraph)	<p>Market.</p> <p>8.4.1.2 Regulation Energy Management The CAISO will make Regulation Energy Management available to Scheduling Coordinators for Non-Generator Resources located within the CAISO Balancing Authority Area that require Energy from the Real-Time Market to offer their full capacity as Regulation. A Scheduling Coordinator for a resource using Regulation Energy Management may submit a Regulation Bid for capacity (MW) of up to four (4) times the maximum Energy (MWh) the resource can generate or curtail for fifteen (15) minutes after issuance of a Dispatch Instruction. In the Real-Time Market, a Scheduling Coordinator for a resource using Regulation Energy Management will produce energy Imbalance Energy as needed to satisfy the sixty (60) minute continuous Energy requirement for Regulation Awards in the Day-Ahead Market.</p> <p style="text-align: center;">* * * *</p>	<p>“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change.</p>
8.4.1.2 (4 th paragraph)	<p style="text-align: center;">* * * *</p> <p>The CAISO will settle Dispatches from resources using Regulation Energy Management as Instructed Imbalance Energy. The portion of Demand of Non-Generator Resources using Regulation Energy Management that is dispatched as Regulation in any Settlement Interval shall not be considered Measured Demand for purposes of allocating payments and charges pursuant to Section 11 during that Settlement Interval.</p> <p style="text-align: center;">* * * *</p>	<p>“Instructed Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change.</p>
8.6.2 (1 st and 4 th paragraphs)	<p>8.6.2 Right to Self-Provide Each Scheduling Coordinator may choose to self-provide all, or a portion, of its Regulation Up, Regulation Down, Spinning Reserve, and Non-Spinning Reserve obligations in the IFM, and, to the extent needed to satisfy the CAISO’s additional requirement, the Real-Time Market, from resources eligible for self-provision, as may be permissible for any given Ancillary Service in these respective markets. The right to self-provide Ancillary Services from capacity that is under a contractual obligation to provide Energy, including but not limited to capacity subject to an RMR Contract and local Resource Adequacy Resources, shall be conditional; self-provision of Ancillary Services from such capacity will only be permitted to the extent</p>	<p>This amendment provides correction to a typographical error in the first paragraph and deletes outdated tariff language that is no longer consistent with the settlement rules approved by the Contingency Reserve Cost Allocation tariff amendment.</p> <p>In July of 2014, the CAISO filed a tariff amendment that proposed to remove the opportunity for scheduling coordinators to receive a payment of excess self-provision of contingency reserves. The CAISO explained that under the proposal a scheduling coordinator’s obligation can only go</p>

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	<p>that capacity is not needed for Energy as a result of the MPM process described in this CAISO Tariff. To self-provide Ancillary Services a Scheduling Coordinator must provide the CAISO with a Submission to Self-Provide an Ancillary Service. Both Ancillary Service Bids and Submissions to Self-Provide an Ancillary Service can be provided to the CAISO for the same Ancillary Service and for the same hour in the same market. To the extent the Submission to Self-Provide an Ancillary Service is from a resource that is a Partial Resource Adequacy Resource, and Energy is needed, including for purposes under Section 31.3.1.3, from that resource the CAISO shall only disqualify the self-provision of Ancillary Services from the portion of the resource's capacity that has must-offer obligation, provided that the Scheduling Coordinator has not submitted an Energy Bid for the capacity that is not subject to a must-offer obligation. The CAISO will treat resources subject to Resource Adequacy requirements consistently with, and such resources must comply with, the bidding requirements in Section 40.6. If there is an Energy Bid submitted for the capacity of a Partial Resource Adequacy Resource that is not subject to a must-offer obligation the CAISO may disqualify the Submission to Self-Provide an Ancillary Service for the portion of the resources capacity that is not under a must-offer obligation consistent with the principles of co-optimization under the CAISO Tariff.</p> <p style="text-align: center;">* * * *</p> <p>The CAISO shall schedule Self-Provided Ancillary Services to the extent qualified in the IFM and the RTM and Dispatch Self-Provided Ancillary Services in the Real-Time. To the extent that a Scheduling Coordinator self-provides Regulation Up, Regulation Down, Spinning Reserve, and Non-Spinning Reserve, the CAISO shall correspondingly reduce the quantity of the Ancillary Services it procures from Bids submitted in the IFM and the Real-Time Market. To the extent a Scheduling Coordinator's Self-Provided Ancillary Service for a particular Ancillary Service is greater than the Scheduling Coordinator's obligation for that particular Ancillary Service in a Settlement Interval, the Scheduling Coordinator will receive the user rate for the Self-Provided Ancillary Service for the amount of the Self-Provided Ancillary Service in excess of the Scheduling Coordinator's</p>	<p>below zero or result in a credit for purposes of inter-scheduling coordinator trades or is associated with energy from imports. Therefore, the CAISO proposes to remove language that would be consistent with this requirement. See <i>Cal. Indep. Sys. Operator Corp.</i>, 148 FERC ¶ 61,239 (2014).</p>

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	obligation. <p style="text-align: center;">* * * *</p>	
11.1.4 (a)	<p>11.1.4 CAISO Estimates for Initial Settlement Statement T+3B</p> <p>Notwithstanding any other provisions of the CAISO Tariff, Initial Settlement Statement T+3B shall be solely based on CAISO Estimated Settlement Quality Meter Data for metered Demand, metered Generation, and Demand Response. CAISO Estimated Settlement Quality Meter Data shall be calculated as follows:</p> <p>(a) CAISO Estimated Settlement Quality Meter Data for metered Generation will be based on total Expected Energy and dispatch of the resource as calculated in the Real Time Market and as modified by any applicable corrections to the Dispatch Operating Point for the resource.</p> <p style="text-align: center;">* * * *</p>	<p>The CAISO is proposing to delete language after the words “Expected Energy,” as it is redundant language in relation to Expected Energy.</p>
11.1.4(e)	<p>(e) <u>The CAISO will estimate E-Tag for Interchange Schedules for System Resources based on total Expected Energy, and for EIM Transfer system resources based on Dispatch Instructions.</u></p> <p style="text-align: center;">* * * *</p>	<p>The CAISO is proposing to add language that involves estimating Intertie Schedules for settlement of T+3B in the same manner as it does for Generation and Load Meters.</p>
11.1.4 (f) (former (e))	<p>(f) <u>The CAISO will not estimate Unaccounted For Energy under Section 11.5.3, the rescission of payments for Regulation Up and Regulation Down Capacity under Section 8.10.8.6, Real-Time Imbalance Energy Offset adjustment under Section 11.5.4.1(c), allocation of RTM Bid Cost Up-lift adjustment under Section 11.8.6.3.2(vi), or MSS deviation payments under 11.7.1 for purposes of calculating Initial Settlement Statement T+3B.</u></p>	<p>The CAISO is proposing to add additional data to more accurately calculate the T+3B Settlement Statement. This change came in with the changes that the CAISO made with credit reform, and the CAISO needed to include a credit run. The CAISO also proposes to add the word “the” before “CAISO.”</p> <p>The CAISO is also proposing to remove language related to rescission payments for Regulation Up and Regulation Down Capacity as the CAISO does not calculate rescission payments for Regulation Up or Regulation Down on the T+3B Settlement Statements.</p>

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11.2.3.1.2	<p>11.2.3.1.2 IFM Payments for MSS Supply under Gross Energy Settlements The CAISO shall pay Scheduling Coordinators that submit Bids for MSS Operators that have selected or are subject to gross Energy Settlement an amount equal to the product of the MWh quantity of Supply from the MSS in its Day-Ahead Schedule at the corresponding PNode and the applicable Resource-Specific Settlement Interval-IFM LMP-at that PNode.</p>	<p>“Resources Specific Settlement Interval LMP” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing. The CAISO is proposing to align the tariff with those changes.</p>
11.4	<p>11.4 Black Start Settlements Payments for Black Start capability shall consist of any payments under any Black Start Agreement. If the Energy price and Start-Up Costs are not specified in the Black Start Agreement, the Black Start Energy will be paid as an Exceptional Dispatch in accordance with Section 11.5.6.1 and the commitment costs for the resource will be entitled-eligible for Bid Cost Recovery <u>under Section 11.8.</u> Black Start Energy resulting from a performance test shall also be paid as an Exceptional Dispatch in accordance with Section 11.5.6.1. RMR Units providing Black Start are compensated in accordance with the RMR Contract rather than this Section 11.4.</p>	<p>This amendment is to clarify that the CAISO will assess the commitment costs and not the energy associated with a Black Start dispatch in bid cost recovery calculations.</p>
11.4.2	<p>11.4.2 Black Start Capability The CAISO shall allocate payments for Black Start capability under a Black Start Agreement as Reliability Services Costs to the Participating Transmission Owner in whose Service-TAC Area where the Black Start Unit is located.</p>	<p>The CAISO proposes to change the reference from “Service Area” to “TAC Area” to clarify that the CAISO will allocate payments for Black Start capability under a Black Start Agreement to the area associated with a participating transmission owner as opposed to an area associated with a utility distribution company.</p>
11.5	<p>11.5 Real-Time Market Settlements The CAISO shall calculate and account for imbalance Eenergy for each Dispatch Interval and settle imbalance Eenergy in the Real-Time Market for each Settlement Interval for each resource within the CAISO Balancing Authority Area and all System Resources dispatched in Real-Time. There are four (4) two categories of imbalance Eenergy: FMM Instructed Imbalance Energy, and RTD <u>Instructed Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Energy.</u> RTD Imbalance Energy consists of RTD IIE and UIE. FMM <u>Instructed Imbalance Energy</u> includes all Energy associated with the FMM Schedule. FMM Instructed Imbalance Energy is settled pursuant</p>	<p>“Imbalance Energy” was eliminated as a defined term in the Order No. 764 tariff amendment and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change. Also, to create consistency and uniformity throughout the tariff, the CAISO is proposing to spell out the acronyms for “FMM IIE,” “RTD IIE,” “UIE,” and “UFE.” This amendment also proposes to correct grammar.</p>

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	<p>to Section 11.5.1.1, including any Energy related with HASP Intertie Block Schedules cleared through the FMM. RTD <u>Instructed Imbalance Energy</u> is settled pursuant to Section 11.5.1.2, and Uninstructed Imbalance Energy is settled pursuant to Section 11.5.2, and Unaccounted For Energy is settled pursuant to Section 11.5.3. In addition, the CAISO shall settle UFE as part of the Real-Time Market Settlements. To the extent that the sum of the Settlements Amounts for FMM <u>Instructed Imbalance Energy</u>, RTD <u>Instructed Imbalance Energy</u>, and Uninstructed Imbalance Energy, and Unaccounted For Energy does not equal zero, the CAISO will assess charges or make payments for the resulting differences to all Scheduling Coordinators based on a pro rata share of their Measured Demand for the relevant Settlement Interval, as further described in Section 11.5.4. <u>FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy</u> due to Exceptional Dispatches, as well as the allocation of related costs, including Excess Costs Payments, are <u>is</u> settled as described in Section 11.5.6. The CAISO shall reverse RTM Congestion Charges for valid and balanced ETC and TOR Self-Schedules as described in Section 11.5.7. The CAISO will settle Energy for emergency assistance as described in Section 11.5.8.</p>	
11.5.1.1	<p>11.5.1.1 FMM Instructed Imbalance Energy For each Settlement Interval, FMM <u>Instructed Imbalance Energy</u> consists of the following types of Energy: (1) FMM Optimal Energy; (2) FMM Minimum Load Energy; (3) FMM Exceptional Dispatch Energy; (4) FMM Derate Energy; and (5) FMM Pumping Energy. Payments and charges for FMM <u>Instructed Imbalance Energy</u> attributable to each resource in each Settlement Interval shall be settled by debiting or crediting, as appropriate, the specific Scheduling Coordinator's FMM IIE Settlement Amount. The FMM IIE Settlement Amounts for FMM Optimal Energy, FMM Minimum Load Energy, FMM Derate Energy, and FMM Pumping Energy shall be calculated as the product of the sum of all of these types of Energy and the FMM LMP. For MSS Operators that have elected net Settlement, the FMM IIE Settlement Amounts for Energy dispatched through the FMM optimization shall be calculated as the product of the FMM MSS Price and the sum of the following types of Energy: FMM Minimum Load</p>	<p>To create consistency and uniformity throughout the tariff, the CAISO is proposing to spell out the "IIE" portion of the acronym for "FMM IIE." This amendment also corrects a tariff cross-reference.</p>

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	<p>Energy from System Units dispatched in FMM, FMM Derate Energy, and FMM Pumping Energy. For MSS Operators that have elected gross Settlement, regardless of whether that entity has elected to follow its Load or to participate in RUC, the FMM <u>Instructed Imbalance Energy</u> for such entities is settled similarly to non-MSS entities as provided in this Section 11.5.1.1. The remaining FMM IIE Settlement Amounts for Exceptional Dispatches are settled pursuant to Section 11.5.6.</p>	
11.5.1.2	<p>11.5.1.2 RTD Instructed Imbalance Energy For each Settlement Interval, RTD <u>Instructed Imbalance Energy</u> consists of the following types of Energy: (1) RTD Optimal Energy; (2) Residual Imbalance Energy; (3) RTD Minimum Load Energy; (4) RTD Exceptional Dispatch Energy; (5) Regulation Energy; (6) Standard Ramping Energy; (7) Ramping Energy Deviation; (8) RTD Derate Energy; (9) MSS Load Following Energy; (10) RTD Pumping Energy; and (11) Operational Adjustments. Payments and charges for RTD <u>Instructed Imbalance Energy</u> attributable to each resource in each Settlement Interval shall be settled by debiting or crediting, as appropriate, the specific Scheduling Coordinator's RTD IIE Settlement Amount. The RTD IIE Settlement Amounts for the Standard Ramping Energy shall be zero. The RTD IIE Settlement Amounts for RTD Optimal Energy, RTD Minimum Load Energy, Regulation Energy, Ramping Energy Deviation, RTD Derate Energy, and RTD Pumping Energy shall be calculated as the product of the sum of all of these types of Energy and the RTD LMP. For MSS Operators that have elected net Settlement, the RTD IIE Settlement Amounts for Energy dispatched through the RTD optimization shall be calculated as the product of the RTD MSS Price and the sum of the following types of Energy: RTD Minimum Load Energy from System Units dispatched in Real-Time, Regulation Energy, Ramping Energy Deviation, RTD Derate Energy, MSS Load Following Energy, and RTD Pumping Energy. For MSS Operators that have elected gross Settlement, regardless of whether that entity has elected to follow its Load or to participate in RUC, the RTD <u>Instructed Imbalance Energy</u> for such entities is settled similarly to non-MSS entities as provided in this Section 11.5.1.2. The remaining RTD IIE Settlement Amounts are determined as follows: (1) <u>RTD IIE</u></p>	<p>"IIE Settlement Amount" was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change. This amendment also corrects a typographical error and corrects a tariff cross-reference. Lastly, in order to create consistency and uniformity throughout the tariff, the CAISO is proposing to spell out the "IIE" portion of the acronym for "RTD IIE."</p>

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	Settlement Amounts for Residual Imbalance Energy are determined pursuant to Section 11.5.5.; and (2) RTD IIE Settlement Amounts for Exceptional Dispatches are settled pursuant to Section 11.5.6.	
11.5.2	<p>11.5.2 Uninstructed Imbalance Energy</p> <p>Scheduling Coordinators shall be paid or charged a UIE Settlement Amount for each LAP, PNode or Scheduling Point for which the CAISO calculates an <u>Uninstructed Imbalance Energy</u> quantity for each Settlement Interval. <u>Uninstructed Imbalance Energy</u> quantities are calculated for each resource that has a Day-Ahead Schedule, Dispatch Instruction, Real-Time Interchange Export Schedule or Metered Quantity. For MSS Operators electing gross Settlement, regardless of whether that entity has elected to follow its Load or to participate in RUC, the <u>Uninstructed Imbalance Energy</u> for such entities is settled similarly to how <u>Uninstructed Imbalance Energy</u> for non-MSS entities is settled as provided in this Section 11.5.2. The CAISO shall account for <u>Uninstructed Imbalance Energy</u> every five minutes based on the resource's Dispatch Instruction. For all resources, including Generating Units, System Units of MSS Operators that have elected gross Settlement, Physical Scheduling Plants, System Resources, Distributed Energy Resource Aggregations and all Participating Load, Reliability Demand Response Resources, and Proxy Demand Resources, the UIE Settlement Amount is calculated for each Settlement Interval as the product of its <u>Uninstructed Imbalance Energy</u> MWh quantity and the applicable RTD LMP. The UIE Settlement Amount for non-Participating Load and MSS Demand under gross Settlement is settled as described in Section 11.5.2.2. For MSS Operators that have elected net Settlement, the UIE Settlement Amount is calculated for each Settlement Interval as the product of its <u>Uninstructed Imbalance Energy</u> quantity and its <u>Real-Time Settlement Interval-RTD</u> MSS Price.</p>	<p>“Real-Time Settlement Interval MSS Price” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and the CAISO proposes to align the tariff with that change. Furthermore, in order to create consistency and uniformity throughout the tariff, the CAISO is proposing to spell out the acronym “UIE.”</p>

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11.5.2.1	<p>11.5.2.1 Resource Specific Tier 1 UIE Settlement Interval Price The Resource-Specific Tier 1 UIE Settlement Interval Price is calculated as the resource’s total <u>FMM IIE Settlement Amount and RTD IIE Settlement Amount</u>, calculated pursuant to Sections 11.5.1.1 and 11.5.1.2 for that Settlement Interval divided by its total <u>FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy</u> quantity (MWh) calculated pursuant to Sections 11.5.1.1 and 11.5.1.2.</p>	<p>“IIE” and “IIE Settlement Amount” were eliminated as a defined terms in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change. This amendment also corrects tariff cross-references.</p>
11.5.2.2	<p>11.5.2.2 Hourly Real-Time Demand Settlement The Default LAP Hourly Real-Time Price will apply to CAISO Demand and MSS Demand under net Settlement of Imbalance Energy, except for CAISO Demand not settled at the Default LAP as provided in Section 30.5.3.2, <u>and per the methodology as may be further defined in the Business Practice Manuals</u>. For each Settlement Interval, the differences between the Day-Ahead Scheduled CAISO Demand and Metered Demand (MWh) is settled at the Default LAP Hourly Real-Time Price or the Custom LAP Hourly Real-Time Price, as appropriate. For each Default LAP, the CAISO calculates the applicable Default LAP Hourly Real-Time Price as the weighted average LMP of the four Default LAP FMM LMPs and the twelve (12) five-minute Default LAP RTD LMPs. The CAISO calculates the weighted average LMP for each Default LAP as the summation of the weighted average SMEC, the weighted average MCC, and the weighted average MCL for that Default LAP. The CAISO calculates the weighted average SMEC, MCC, and MCL for each applicable Trading Hour based on the four applicable Default LAP FMM SMECs, MCCs, and MCLs, respectively, and the twelve (12) applicable Default LAP RTD SMECs, MCCs, and MCLs, respectively. For each Custom LAP, the CAISO calculates the applicable Custom LAP Hourly Real-Time Price as the weighted average LMP of the four Custom LAP FMM LMPs and the twelve (12) five-minute Custom LAP RTD LMPs. The CAISO calculates the weighted average LMP for each Custom LAP as the summation of the weighted average SMEC, the weighted average MCC, and the weighted average MCL for that Custom LAP. The CAISO calculates the weighted average SMEC, MCC, and MCL for each applicable Trading Hour based on the four applicable Custom LAP FMM</p>	<p>“Imbalance Energy” was eliminated in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. As such, the CAISO is proposing to align the tariff with that change and is un-defining the term “Imbalance Energy,” and clarify language relating to the compliance with Order No. 764 tariff amendment. Furthermore, the CAISO is proposing to add language to align the tariff with the applicable Business Practice Manuals.</p>

Section	Proposed Revisions	Reason for Change
	<p>SMECs, MCCs, and MCLs, respectively, and the twelve (12) applicable Custom LAP RTD SMECs, MCCs, and MCLs, respectively. In calculating the weighted average SMEC, MCC, and MCL for each hour for either the Default LAPs or Custom LAPs, the CAISO determines the weights based on the difference between Day-Ahead Schedules at the applicable LAP and the CAISO Forecast of CAISO Demand used in the FMM multiplied by the relevant FMM LMP at the applicable LAP plus the difference between the CAISO Forecast of CAISO Demand used in the FMM and the CAISO Forecast of CAISO Demand used in the RTD multiplied by the relevant RTD LMP at the applicable LAP divided by the sum of the difference between Day-Ahead Schedules at the applicable LAP and the CAISO Forecast of CAISO Demand used in the FMM plus the difference between the CAISO Forecast Of CAISO Demand used in the FMM and the CAISO Forecast Of CAISO Demand used in the RTD.</p> <p>Furthermore, the Default LAP Hourly Real-Time Prices and the Custom LAP Hourly Real-Time Prices will be bounded by the maximum positive LMP and the lowest negative LMP <u>and its components</u>, for the applicable Trading Hour from those relevant intervals at the relevant LAP. If the calculated price exceeds the upper boundary or is below the lower boundary, then the Default LAP Hourly Real-Time Price or the Custom LAP Hourly Real-Time Price, as appropriate, instead will be calculated based on a weighted average price with the weightings based on gross deviations (absolute value of each deviation).</p> <p style="text-align: center;">* * * *</p>	
11.5.2.4	<p>11.5.2.4 Adjustment to Metered Load to Settle <u>Uninstructed Imbalance Energy</u></p> <p style="text-align: center;">* * * *</p>	To create consistency and uniformity throughout the tariff, the CAISO is proposing to spell out the acronym “UIE,” in the heading.
11.5.3	<p>11.5.3 Unaccounted for Energy (UFE)</p> <p>For each Settlement Interval, the CAISO will calculate <u>Unaccounted For Energy</u> for each utility Service Area for which the IOU or Local Publicly Owned Electric Utility has requested separate <u>Unaccounted For Energy</u> calculation and has met the requirements applicable to a CAISO Metered Entity. The <u>Unaccounted For Energy</u> will be settled as Imbalance Energy at the Default applicable LAP Hourly Real-Time Price calculated for each utility Service Area for which <u>Unaccounted For Energy</u> is</p>	“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change. Furthermore, to create consistency and uniformity throughout the tariff, the CAISO is proposing to spell out the acronym “UFE,” and to remove it from the heading.

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	<p>calculated separately. <u>Unaccounted For Energy</u> will be allocated to each Scheduling Coordinator based on the ratio of its metered CAISO Demand within the relevant utility Service Area for which <u>Unaccounted For Energy</u> is calculated separately to total metered CAISO Demand within that utility Service Area. <u>Unaccounted For Energy</u> charges will not be estimated or included on Initial Settlement Statement T+3B.</p>	
11.5.4.2	<p>11.5.4.2 Allocations of Non-Zero Amounts of the Sum of FMM <u>Instructed Imbalance Energy</u>, RTD <u>Instructed Imbalance Energy</u>, RTD Imbalance Energy, <u>Uninstructed Imbalance Energy</u>, <u>Unaccounted For Energy</u>, the Real-Time Ancillary Services Congestion Revenues and Real-Time Virtual Awards Settlements</p> <p>The CAISO will first compute (1) the Real-Time Congestion Offset and allocate it to all Scheduling Coordinators, based on Measured Demand, excluding Demand associated with ETC or TOR Self-Schedules for which a RTM Congestion Credit was provided as specified in Section 11.5.7, and excluding Demand associated with ETC, Converted Right, or TOR Self-Schedules for which an IFM Congestion Credit was provided as specified in Section 11.2.1.5; and (2) the Real-Time Marginal Cost of Losses Offset and allocate it to all Scheduling Coordinators based on Measured Demand, excluding Demand associated with TOR Self-Schedules for which a RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.5.7.2, and excluding Demand associated with TOR Self-Schedules for which an IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.2.1.7. For Scheduling Coordinators for MSS operators that have elected to Load follow or net settlement, or both, the Real-Time Marginal Cost of Losses Offset will be allocated based on their MSS Aggregation Net Measured Demand excluding Demand associated with TOR Self-Schedules for which a RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.5.7.2, and excluding Demand associated with TOR Self-Schedules for which an IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.2.1.7. For Scheduling Coordinators for MSS Operators regardless of</p>	<p>In order to create consistency and uniformity throughout the tariff, the CAISO is proposing to spell out the acronyms for “FMM IIE,” “RTD IIE,” “UIE,” and “UFE.”</p>

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	<p>whether the MSS Operator has elected gross or net Settlement, the CAISO will allocate the Real-Time Congestion Offset based on the MSS Aggregation Net Non-ETC/TOR Measured Demand. To the extent that the sum of the Settlement amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed Imbalance Energy, Unaccounted For Energy, the Real-Time Ancillary Services Congestion revenues and Virtual Awards settlements in the Real-Time Market in accordance with Section 11.3, less Real-Time Congestion Offset, and less the Real-Time Marginal Cost of Losses Offset, does not equal zero, the CAISO will assess charges or make payments for the resulting differences to all Scheduling Coordinators, including Scheduling Coordinators for MSS Operators that are not Load following MSSs and have elected gross Settlement, based on a pro rata share of their Measured Demand for the relevant Settlement Interval. For Scheduling Coordinators for MSS Operators that have elected net Settlement, the CAISO will assess charges or make payments for the resulting non-zero differences of the sum of the Settlement amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Energy, the Real-Time Ancillary Services Congestion Revenues and Virtual Awards settlements in the Real-Time Market in accordance with Section 11.3, less Real-Time Congestion Offset and less the Real-Time Marginal Cost of Losses Offset, based on their MSS Aggregation Net Measured Demand. For Scheduling Coordinators for MSS Operators that have elected Load following, the CAISO will not assess any charges or make payments for the resulting non-zero differences of the sum of the Settlement amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Energy, the Real-Time Ancillary Services Congestion Revenues and Virtual Awards settlements in the Real-Time Market in accordance with Section 11.3, less Real-Time Congestion Offset and less the Real-Time Marginal Cost of Losses Offset.</p>	

Section	Proposed Revisions	Reason for Change
11.5.6	<p>11.5.6 Settlement Amounts for RTD <u>Instructed Imbalance Energy</u> From Exceptional Dispatch For each Settlement Interval, the <u>RTD IIE</u> Settlement Amount from each type of Exceptional Dispatch described in Section 34.11 is calculated as the sum of the products of the relevant FMM <u>Instructed Imbalance Energy</u> or RTD <u>Instructed Imbalance Energy</u> quantity for the Settlement Interval and the relevant FMM or RTD <u>LMP</u> Settlement price for each type of Exceptional Dispatch as further described in this Section 11.5.6. For MSS Operators the Settlement for FMM <u>Instructed Imbalance Energy</u> or RTD <u>Instructed Imbalance Energy</u> from Exceptional Dispatches is conducted in the same manner, regardless of any MSS elections (net/gross Settlement, Load following or opt-in/opt-out of RUC). Except for the Settlement price, Exceptional Dispatches to perform Ancillary Services testing, to perform PMax testing, and to perform pre-commercial operation testing for Generating Units are otherwise settled in the same manner as provided in Section 11.5.6.1. Notwithstanding any other provisions of this Section 11.5.6, the Exceptional Dispatch Settlement price that is applicable in circumstances in which the CAISO applies Mitigation Measures to Exceptional Dispatch of resources pursuant to Section 39.10 shall be calculated as set forth in Section 11.5.6.7.</p>	<p>“IIE Settlement Amount” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change. The CAISO is also proposing to add the acronym “LMP” for clarify. Also, to create consistency and uniformity throughout the tariff, the CAISO is proposing to spell out the “IIE” portion of the acronyms “FMM IIE” and “RTD IIE.”</p>
11.5.6.1	<p>11.5.6.1 Settlement for FMM <u>Instructed Imbalance Energy</u> or RTD <u>Instructed Imbalance Energy</u> from Exceptional Dispatches used for System Emergency Conditions, for a Market Disruption, to Mitigate Overgeneration Conditions or to Prevent or Relieve Imminent System Emergencies The Exceptional Dispatch Settlement price for incremental FMM <u>Instructed Imbalance Energy</u> or RTD <u>Instructed Imbalance Energy</u> that is delivered as a result of an Exceptional Dispatch for System Emergency conditions, for a Market Disruption, to mitigate Overgeneration conditions, or to prevent or relieve an imminent System Emergency, including forced Start-Ups and Shut-Downs, is the higher of the (a) applicable FMM or RTD LMP₃₇; (b) the Energy Bid price₃₇; (c) the Default Energy Bid price if</p>	<p>“IIE” and “IIE Settlement Amount” were eliminated as defined terms in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with those changes and is proposing to correct tariff cross-references to include both types of settlement amounts. The CAISO is also proposing to spell out the “IIE” portion of the acronyms for “FMM IIE” RTD IIE” in order to create consistency and uniformity throughout the tariff. This amendment also proposes to correct punctuation.</p>

Section	Proposed Revisions	Reason for Change
	<p>the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price₃₇ or (d) the negotiated price as applicable to System Resources. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two payments: (1) incremental Energy is first settled at the applicable FMM or RTD LMP and included in the total <u>FMM IIE Settlement Amount or RTD IIE Settlement Amount</u> described in Sections 11.5.1.1 and 11.5.1.2; and (2) the incremental Energy Bid Cost in excess of the applicable FMM or RTD LMP at the relevant Location is settled pursuant to Section 11.5.6.1.1. The Exceptional Dispatch Settlement price for decremental <u>FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy</u> that is delivered as a result of an Exceptional Dispatch Instruction for a Market Disruption, or to prevent or relieve a System Emergency, is the minimum of (a) the FMM or RTD LMP₃₇; (b) the Energy Bid price subject to Section 39.6.1.4₃₇; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price₃₇ or (d) the negotiated price as applicable to System Resources. All Energy costs for decremental <u>FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy</u> associated with this type of Exceptional Dispatch are included in the total <u>FMM IIE Settlement Amount or RTD IIE Settlement Amount</u> described in Sections 11.5.1.1 and 11.5.1.2.</p>	
11.5.6.1.1	<p>11.5.6.1.1 Settlement of Excess Cost Payments for Exceptional Dispatches used for System Emergency Conditions, for a Market Disruption, and to Avoid an Imminent System Emergency</p> <p>The Excess Cost Payment for incremental Exceptional Dispatches used for emergency conditions, for a Market Disruption, or to avoid an imminent System Emergency is calculated for each resource for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.1 for the applicable Exceptional Dispatch at the FMM or RTD LMP and delivered Exceptional Dispatch quantity at one of the following three costs: (1) the resource's Energy Bid Cost₃₇; (2) the Default Energy Bid cost₃₇; or (3) the Energy cost at the negotiated price, as applicable for</p>	This amendment proposes to correct punctuation.

Section	Proposed Revisions	Reason for Change
	System Resources, for the relevant Exceptional Dispatch.	
11.5.6.2	<p>11.5.6.2 Settlement of <u>Instructed Imbalance Energy from Exceptional Dispatches Caused by Modeling Limitations</u></p> <p>The Exceptional Dispatch Settlement price for <u>FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy</u> that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion as a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 is the maximum of (a) the FMM or RTD LMP;¹⁷ (b) the Energy Bid price;¹⁷ (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price;¹⁷ or (d) the negotiated price as applicable to System Resources. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two payments: (1) incremental Energy is first settled at the FMM or RTD LMP and included in the total <u>FMM IIE Settlement Amount or RTD IIE Settlement Amount</u> described in Sections 11.5.1.1 and 11.5.1.2; and (2) the incremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3. The Exceptional Dispatch Settlement price for decremental <u>FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy</u> for this type of Exceptional Dispatch is the minimum of (a) the FMM or RTD LMP;¹⁷ (b) the Energy Bid price;¹⁷ (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price;¹⁷ or (d) the negotiated price as applicable to System Resources. Costs for decremental <u>FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy</u> associated with this type of Exceptional Dispatch are settled in two payments: (1) decremental Energy is first settled at the FMM or RTD LMP and included in the total <u>FMM IIE Settlement Amount or RTD IIE Settlement Amount</u> described in Sections 11.5.1.1 and 11.5.1.2; and (2) the decremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3.</p>	<p>“IIE” and “IIE Settlement Amount” were eliminated as defined terms in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with those changes and to correct tariff cross-references to include both types of settlement amounts. Additionally, this amendment proposes to correct punctuation.</p>
11.5.6.2.1	11.5.6.2.1 [Not Used]	The CAISO is adding a placeholder tariff section so

Section	Proposed Revisions	Reason for Change
	11.5.6.2.2 [Not Used]	that the numbering remains sequential.
11.5.6.2.3	<p>11.5.6.2.3 Settlement of Excess Cost Payments for Exceptional Dispatches used for Transmission-Related Modeling Limitations</p> <p>The Excess Cost Payment for Exceptional Dispatches used for transmission-related modeling limitations as described in Section 34.11.3 is calculated for each resource for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.2.1 or 11.5.6.2.2 for the applicable delivered Exceptional Dispatch quantity at the FMM or RTD LMP and one of the following three costs: (1) the resource's Energy Bid Cost; (2) the Default Energy Bid cost; or (3) the Energy cost at the negotiated price, as applicable for System Resources, for the relevant Exceptional Dispatch.</p>	This amendment removes tariff cross-references that are noted as “[Not Used]”. This amendment also proposes to correct punctuation.
11.5.6.2.4	<p>11.5.6.2.4 Exceptional Dispatches for Non-Transmission-Related Modeling Limitations</p> <p>The Exceptional Dispatch Settlement price for incremental <u>FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy</u> that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion that is not a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 is the maximum of the (a) FMM or RTD LMP; (b) Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. All costs for incremental Energy for this type of Exceptional Dispatch will be included in the total <u>FMM IIE Settlement Amount or RTD IIE Settlement Amount</u> described in Sections 11.5.1.1 and 11.5.1.2. The Exceptional Dispatch Settlement price for decremental <u>FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy</u> for this type of Exceptional Dispatch is the minimum of the (a) FMM or RTD LMP; (b) Energy Bid Price; (c) Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) negotiated price as applicable to System Resources. All costs for decremental <u>FMM Instructed Imbalance Energy or</u></p>	“IIE” and “IIE Settlement Amount” were eliminated as defined terms in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with those changes and to correct tariff cross-references to include both types of settlement amounts. Additionally, this amendment proposes to correct punctuation.

Section	Proposed Revisions	Reason for Change
	<p><u>RTD Instructed Imbalance Energy</u> associated with this type of Exceptional Dispatch are included in the total <u>FMM IIE Settlement Amount</u> or <u>RTD IIE Settlement Amount</u> described in Sections 11.5.1.1 and 11.5.1.2.</p>	
11.5.6.2.5.1	<p>11.5.6.2.5.1 Allocation of Exceptional Dispatch Excess Cost Payments to PTOs The total Excess Cost Payments calculated pursuant to Section 11.5.6.2.3 for the <u>FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy</u> from Exceptional Dispatches instructed as a result of a transmission-related modeling limitation in the FNM as described in Section 34.119.3 in that Settlement Interval shall be charged to the Participating Transmission Owner in whose PTO Service Territory the transmission-related modeling limitation as described in Section 34.119.3 is located. If the modeling limitation affects more than one Participating TO, the Excess Cost Payments shall be allocated in proportion to the Transmission Revenue Requirements of the affected Participating TOs with PTO Service Territories. Costs allocated to Participating TOs under this section shall constitute Reliability Services Costs.</p>	<p>“IIE” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. This amendment also corrects tariff cross-references, in the compliance with Order No. 764 tariff amendment filing, the CAISO moved tariff section 34.9.3 to 34.11.3. The CAISO proposes to align the tariff with those changes.</p>
11.5.6.2.5.2(ii)	<p>11.5.6.2.5.2 Allocation of Exceptional Dispatch Costs to Scheduling Coordinators * * * *</p> <p>(ii) the amount obtained by multiplying the Scheduling Coordinator’s Net Negative Uninstructed Deviation for each Settlement Interval and a weighted average price. The weighted average price is equal to the total Excess Cost Payments to be allocated divided by the MWh of <u>FMM Exceptional Dispatch Energy or RTD</u> Exceptional Dispatch Energy associated with the Excess Cost Payment.</p> <p>* * * *</p>	<p>“Exceptional Dispatch Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change.</p>
11.5.6.3	<p>11.5.6.3 Settlement for <u>Instructed Imbalance Energy</u> from Exceptional Dispatches for RMR Units * * * *</p>	<p>In order to create consistency and uniformity throughout the tariff, the CAISO is proposing to spell out the acronym “IIE” in the heading as the term “IIE” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing.</p>

Section	Proposed Revisions	Reason for Change
11.5.6.3.2(a)	<p>11.5.6.3.2 Allocation of Costs from Exceptional Dispatch Calls to Condition 2 RMR Units (a) All costs associated with Energy provided by a Condition 2 RMR Unit operating other than according to a RMR Dispatch shall be allocated like other Instructed Imbalance Energy in accordance with Section 11.5.4.2. * * * *</p>	<p>“Instructed Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change.</p>
11.5.6.4	<p>11.5.6.4 Settlement of <u>Instructed Imbalance Energy</u> from Exceptional Dispatches for Testing The Exceptional Dispatch Settlement price for incremental <u>FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy</u> that is consumed or delivered as a result of an Exceptional Dispatch for purposes of Ancillary Services testing, periodic testing, including PMax testing, or pre-commercial operation testing for Generating Units is the maximum of the FMM or RTD LMP or the Default Energy Bid price. All Energy costs for these types of Exceptional Dispatch will be included in the <u>FMM IIE Settlement Amount and RTD Settlement Amount</u> described in Sections <u>11.5.1.1 and 11.5.1.2</u>.</p>	<p>“IIE” and “IIE Settlement Amount” were eliminated as defined terms in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with those changes and to correct tariff cross-references to include both types of settlement amounts.</p>
11.5.6.5	<p>11.5.6.5 Settlement of <u>RTD Instructed Imbalance Energy</u> from Black Start Unless otherwise specified in a Black Start Agreement, all <u>FMM IIE Settlement Amounts or RTD IIE Settlement Amounts</u> associated with Black Start receive the Exceptional Dispatch Settlement price as provided in Section 11.5.6.1, but the costs are allocated pursuant to Section 11.4.</p>	<p>The CAISO proposes to make the following changes to reflect that instructed imbalance energy amounts may be settled at the applicable Fifteen Minute Market or Real-Time Dispatch interval consistent with the CAISO’s current practice.</p>
11.5.6.6	<p>11.5.6.6 Settlement of <u>Instructed Imbalance Energy</u> from Exceptional Dispatches for Real-Time ETC and TOR Self-Schedules The Exceptional Dispatch Settlement price for <u>FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy</u> from Real-Time ETC and TOR Self-Schedules shall be the FMM or RTD LMP. The <u>FMM IIE Settlement Amount and RTD IIE Settlement Amount</u> for this type of Exceptional Dispatch shall be calculated as the product of the sum of all of these types of Energy and the FMM or RTD LMP. All Energy costs for these types of Exceptional Dispatches will be included in the <u>FMM IIE</u></p>	<p>“IIE” and “IIE Settlement Amount” were eliminated as defined terms in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with those changes and to correct tariff cross-references to include both types of settlement amounts.</p>

Section	Proposed Revisions	Reason for Change
	Settlement Amount and RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2.	
11.5.6.7.1	<p>11.5.6.7 Settlement of FMM or RTD Exceptional Dispatch Energy</p> <p>11.5.6.7.1 Settlement of FMM or RTD Exceptional Dispatch Energy from Exceptional Dispatches of Resources Eligible for Supplemental Revenues</p> <p>Except as specified in Section 11.5.6.7.3, the Exceptional Dispatch Settlement price for the <u>FMM Exceptional Dispatch or RTD</u> Exceptional Dispatch Energy delivered by a resource that satisfies all of the criteria set forth in Section 39.10.1 shall be the higher of (a) the resource's Energy Bid price or (b) the FMM or RTD LMP.</p>	"Exceptional Dispatch Energy" was eliminated as a defined term in the compliance Order No. 764 tariff amendment filing and replaced with more exacting terms. The CAISO is proposing to align the tariff with that change.
11.5.6.7.2	<p>11.5.6.7.2 Settlement of FMM or RTD Exceptional Dispatch Energy from Exceptional Dispatches of Resources Not Eligible for Supplemental Revenues</p> <p>Except as specified in Section 11.5.6.7.3, the Exceptional Dispatch Settlement price for the <u>FMM Exceptional Dispatch or RTD</u> Exceptional Dispatch Energy delivered by a resource that satisfies all of the criteria set forth in Section 39.10.2 shall be the higher of (a) the Default Energy Bid price or (b) the Resource-Specific Settlement Interval LMP.</p>	"Exceptional Dispatch Energy" was eliminated as a defined term in the compliance Order No. 764 tariff amendment filing and replaced with more exacting terms. The CAISO is proposing to align the tariff with that change.
11.5.6.7.3	<p>11.5.6.7.3 Exception to the Other Provisions of Section 11.5.6.7</p> <p>Notwithstanding any other provisions of this Section 11.5.6.7, if the Energy Bid price for a resource that satisfies all of the criteria set forth in Sections 39.10.1 or 39.10.2 is lower than the Default Energy Bid price for the resource, and the FMM or RTD LMP is lower than both the Energy Bid price for the resource and the Default Energy Bid price for the resource, the Exceptional Dispatch Settlement price for the <u>FMM Exceptional Dispatch Energy or RTD</u> Exceptional Dispatch Energy delivered by the resource shall be the Energy Bid price for the resource.</p>	<p>The CAISO is also proposing to add clarity to this section by removing the reference "of this Section."</p> <p>"Exceptional Dispatch Energy" was eliminated as a defined term in the compliance Order No. 764 tariff amendment filing and replaced with more exacting terms. The CAISO is proposing to align the tariff with that change.</p>
11.5.7.1	<p>11.5.7.1 RTM Congestion Credit for ETCs and TORs</p> <p>The CAISO shall not apply charges or payments to Scheduling Coordinators related to the MCC associated with all Points of Receipt and Points of Delivery pairs associated with valid and balanced ETC Self-Schedules or TOR Self-Schedules after the Day-Ahead Market. The balanced portion for each ETC or TOR</p>	"Instructed Imbalance Energy" was eliminated as a defined term in the compliance Order No. 764 tariff amendment filing and replaced with more exacting terms. The CAISO is proposing to align the tariff with that change.

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	<p>contract for each Settlement Interval will be based on the difference between: (1) the minimum of (a) the total Demand, (b) the total ETC or TOR Supply Self-Schedule submitted in RTM, including changes after twenty (20) minutes before the applicable Trading Hour if such change is permitted by the Existing Contract, or (c) the Existing Contract maximum capacity as specified in the TRTC Instructions; and (2) the valid and balanced portion of the Day-Ahead Schedule. In determining the balanced portions, the CAISO evaluates the amounts based on the following variables: (a) for exports and imports, the CAISO shall use the schedule quantity specified in the Interchange schedule used for check out between CAISO and other Balancing Authority Areas; (b) for CAISO Demand, the CAISO shall use the metered CAISO Demand associated with the applicable ETC or TOR; and (c) for all Generation the CAISO shall use the quantity specified in the Dispatch Instructions. For each Scheduling Coordinator, the CAISO shall determine for each Settlement Interval the applicable RTM Congestion Credit for <u>FMM Instructed Imbalance Energy or RTD Instructed</u> Imbalance Energy, which can be positive or negative, as the sum of the product of the relevant MWh quantity and the <u>applicable</u> weighted average MCC at each Point of Receipt and Point of Delivery associated with the valid and balanced portions of that Scheduling Coordinator's ETC or TOR Self-Schedules. The weights in the two markets will be based on the absolute values of the (a) deviation of the FMM Schedule or the CAISO Forecast Of CAISO Demand used in the FMM from Day-Ahead Schedules and (b) deviation of the RTD schedule or the CAISO Forecast Of CAISO Demand used in the RTD from Day-Ahead Schedules.</p>	<p>The CAISO also proposes to add the word "applicable" before the phrase "weighted average" in order to provide clarity.</p>
11.5.7.2	<p>11.5.7.2 RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules For all Points of Receipt and Points of Delivery pairs associated with a valid and balanced TOR Self-Schedule submitted to the RTM pursuant to an existing agreement between the TOR holder and either the CAISO or a Participating TO as specified in Section 17.3.3, the CAISO shall not impose any charge or make any payment to the Scheduling Coordinator related to the MCL associated with such TOR Self-Schedules and will instead impose any applicable charges for losses as specified in the</p>	<p>"Exceptional Dispatch Energy" was eliminated as a defined term in the compliance Order No. 764 tariff amendment filing and replaced with more exacting terms. The CAISO is proposing to align the tariff with that change. Additionally, this amendment proposes to correct punctuation.</p>

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	<p>existing agreement between the TOR holder and either the CAISO or a Participating TO applicable to the relevant TOR. In any case in which the TOR holder has an existing agreement regarding its TORs with either the CAISO or a Participating TO, the provisions of the agreement shall prevail over any conflicting provisions of this Section 11.5.7.2. Where the provisions of this Section 11.5.7.2 do not conflict with the provisions of the agreement, the provisions of this Section 11.5.7.2 shall apply to the subject TORs. The balanced portion of the TOR Self-Schedule after the Day-Ahead Market is the same balanced quantity mentioned in this Section 11.5.7.2 for the TOR Self-Schedule. For each Scheduling Coordinator, the CAISO shall determine for each Settlement Interval the applicable RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules for <u>FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy</u>, which can be positive or negative, as the sum of the product of the relevant MWh quantity and the weighted average MCL at each <u>of the</u> eligible Points of Receipt and Points of Delivery associated with the valid and balanced portions of that Scheduling Coordinator's TOR Self-Schedules. The weights in the two markets will be based on the absolute values of the: (a) deviation of the FMM Schedule or the CAISO Forecast Of CAISO Demand used in the FMM from Day-Ahead Schedules; and (b) deviation of the RTD schedule or the CAISO Forecast Of CAISO Demand used in the RTD from Day-Ahead Schedules. For losses that the CAISO shall charge pursuant to Section 17.3.3, the specific loss charge amount shall be the product of: (a) the specific loss percentage as may be specified in an applicable agreement between the TOR holder and the CAISO or an existing agreement between the TOR holder and a Participating TO; (b) the weighted average SMEC price from the FMM and RTD markets with weights based on the absolute values of (1) deviation of FMM schedule or CAISO Forecast Of CAISO Demand used in the FMM from Day-Ahead Schedules and (2) deviation of RTD schedule or CAISO Forecast Of CAISO Demand used in the RTD from Day-Ahead Schedules; and (c) the balanced contract quantity mentioned in Section 11.5.7.1.</p>	

Section	Proposed Revisions	Reason for Change
11.5.8.1 (last two sentences)	<p>11.5.8.1 Settlement for Energy Purchased by the CAISO for System Emergency Conditions, to Avoid Market Disruption, or to Prevent or Relieve Imminent System Emergencies, Other than Exceptional Dispatch Energy * * * *</p> <p>The costs for such emergency assistance, including the payment of a price based on cost support information, will be settled in two payments: (1) the costs will first be settled at the simple average of the relevant Dispatch Interval LMPs and included in the total <u>FMM IIE Settlement Amount and RTD IIE Settlement Amount</u> as described in Sections <u>11.5.1.1 and 11.5.1.2-4</u>; and (2) costs in excess of the simple average of the relevant Dispatch Interval LMPs plus other applicable charges will be settled in accordance with Section 11.5.8.1.1. The allocation of the <u>FMM IIE Settlement Amount and RTD IIE Settlement Amounts</u> settled in accordance with Sections <u>11.5.1.1 and 11.5.1.2</u> will be settled according to Section 11.5.4.2.</p>	<p>“IIE Settlement Amount” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change. Additionally, the CAISO is proposing to correct tariff cross-references to include both types of settlement amounts.</p>
11.5.8.2	<p>11.5.8.2 Settlement for Energy Supplied by the CAISO in Response to a Request for Emergency Assistance</p> <p>The Settlement price for emergency Energy that is delivered by the CAISO to a utility in another Balancing Authority Area in response to a request for emergency assistance shall be the simple average of the relevant Dispatch Interval LMPs at the applicable Scheduling Point, which shall serve as the effective market price for that Energy, plus all other charges applicable to exports from the CAISO Balancing Authority Area, as specified in the CAISO Tariff and will be included in the total <u>FMM IIE Settlement Amount and RTD IIE Settlement Amount</u> as described in Sections <u>11.5.1.1 and 11.5.1.2</u> and will be allocated according to Section 11.5.4.2. Such price may be estimated prior to delivery and finalized in the Settlement process. The CAISO will establish a Scheduling Coordinator account, if necessary, for the purchaser for the sole purpose of facilitating the Settlement of such emergency assistance. Payment to the CAISO for such emergency assistance shall be made in accordance with the Settlement process, billing cycle, and payment timeline set forth in the CAISO Tariff.</p>	<p>“IIE Settlement Amount” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change. Additionally, the CAISO is proposing to correct tariff cross-references to include both types of settlement amounts.</p>

Section	Proposed Revisions	Reason for Change
11.7.1.1	<p>11.7.1 MSS Load Following Deviation Penalty * * * *</p> <p>11.7.1.1 If the metered Generation resources and imports into the MSS exceed: (i) the metered Demand and exports from the MSS;¹⁷ and (ii) Energy expected to be delivered by the Scheduling Coordinator for the MSS in response to the CAISO’s Dispatch Instructions and/or Regulation Set Point signals issued by the CAISO’s AGC by more than the MSS Deviation Band, then the payment for excess Energy outside of the MSS Deviation Band shall be rescinded and Scheduling Coordinator for the MSS Operator will pay the CAISO an amount equal to one hundred percent (100%) of the product of the highest LMP paid to the MSS Operator for its Generation in the Settlement Interval and the amount of the <u>FMM Instructed Imbalance Energy and RTD Instructed</u> Imbalance Energy that is supplied in excess of the MSS Deviation Band.</p>	<p>“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change and to correct punctuation.</p>
11.7.1.2	<p>11.7.1.2 If metered Generation resources and imports into the MSS are insufficient to meet: (i) the metered Demand and exports from the MSS;¹⁷ and (ii) Energy expected to be delivered by the Scheduling Coordinator for the MSS in response to the CAISO’s Dispatch Instructions and/or Regulation Set Point signals issued by the CAISO’s AGC by more than the MSS Deviation Band, then the Scheduling Coordinator for the MSS Operator shall pay the CAISO an amount equal to the product of the Default LAP price for the Settlement Interval and two hundred percent (200%) of the shortfall that is outside of the MSS Deviation Band. The payment in the previous sentence is in addition to the charges for the <u>FMM Instructed Imbalance Energy and RTD Instructed</u> Imbalance Energy that serves the excess MSS Demand that may be applicable under Section 11.5.</p>	<p>“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change and to correct punctuation.</p>
11.8.4	<p>11.8.4 RTM Bid Cost Recovery Amount For purposes of determining the RTM Unrecovered Bid Cost Uplift Payments as determined in Section 11.8.5, and for the purposes of allocation of Net RTM Bid Cost Uplift as described in Section 11.8.6.6 the CAISO shall calculate the RTM Bid Cost Shortfall or the RTM Bid Cost Surplus as the algebraic difference between the RTM Bid Cost and the RTM Market Revenues for</p>	<p>“Instructed Imbalance Energy,” “Exceptional Dispatch Energy,” and “Derate Energy” were eliminated as a defined terms in the compliance with Order No. 764 tariff amendment filing and were replaced with more exacting defined terms. The CAISO proposes to align the tariff with those changes.</p>

Section	Proposed Revisions	Reason for Change
	<p>each Settlement Interval. The RTM Bid Costs shall be calculated pursuant to Section 11.8.4.1. The RTM Market Revenues shall be calculated pursuant to Section 11.8.4.2. The Energy subject to RTM Bid Cost Recovery is the <u>FMM Instructed Imbalance Energy or RTD</u> Instructed Imbalance Energy described in Section 11.5.1, excluding Standard Ramping Energy, Residual Imbalance Energy, <u>FMM Exceptional Dispatch Energy or RTD</u> Exceptional Dispatch Energy, <u>FMM Derate Energy or RTD</u> Derate Energy, Ramping Energy Deviation, Regulation Energy and MSS Load Following Energy regardless of whether the Energy is from the FMM or RTD, and is subject to the application of the Real-Time Performance Metric as described in Section 11.8.4.4 and the Persistent Deviation Metric described in Section 11.17.</p>	
11.8.4.1.1(c)	<p>11.8.4.1.1 RTM Start-Up Cost *****</p> <p>(c) The Real-Time Market Start-Up Cost is zero if the Bid Cost Recovery Eligible Resource is started within the Real-Time Market Commitment Period pursuant to an Exceptional Dispatch issued in accordance with Section 34.119.2 to: (1) perform Ancillary Services testing; (2) perform pre-commercial operation testing for Generating Units; or (3) perform PMax testing.</p>	<p>This amendment proposes to correct a tariff cross-reference. In the CAISO's compliance with Order No. 764 tariff amendment filing, the CAISO had moved section 34.9.2 to section 34.11.2. This amendment also adds punctuation.</p>
11.8.4.1.1(e)	<p>(e) If a Real-Time Market Start-Up is terminated in the Real-Time within the applicable Real-Time Market Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource is starting up, the Real-Time Market Start-Up Cost is prorated by the ratio of the Start-Up Time before termination over the Real-Time Market Start-Up Time.</p>	<p>This amendment adds punctuation.</p>
11.8.4.1.1(h)	<p>(h) For Short-Start Units, the first Start-Up Costs within a CAISO IFM Commitment Period are qualified IFM Start-Up Costs as described above in Section 11.8.2.1.1(gh). For subsequent Start-Ups of Short-Start Units after the CAISO Shuts Down a resource and then the CAISO issues a Start-Up Instruction pursuant to a CAISO RTM Commitment within the CAISO IFM Commitment Period, the Start-Up Costs shall be qualified as Real-Time Start-Up costs, provided that the resource actually Shut-Down and Started-Up based on CAISO Shut-Down and Start-Up Instructions.</p>	<p>This amendment corrects a tariff section cross-reference.</p>

Section	Proposed Revisions	Reason for Change
11.8.4.1.2	<p>11.8.4.1.2 RTM Minimum Load Cost</p> <p>The RTM Minimum Load Cost is the Minimum Load Cost of the Bid Cost Recovery Eligible Resource submitted to the CAISO for the Real-Time Market, as adjusted pursuant to Section 30.7.10.2, if applicable, divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RTM Minimum Load Cost in a CAISO RTM Commitment Period is eligible for Bid Cost Recovery. The RTM Minimum Load Cost for any Settlement Interval is zero if: (1) the Settlement Interval is included in a RTM Self-Commitment Period for the Bid Cost Recovery Eligible Resource; (2) the Bid Cost Recovery Eligible Resource has been manually dispatched under an RMR Contract or the resource has been flagged as an RMR Dispatch in the Day-Ahead Schedule or the Real-Time Market in that Settlement Interval; (3) for all resources that are not Multi-Stage Generating Resources, that Settlement Interval is included in an IFM or RUC Commitment Period; or (4) the Bid Cost Recovery Eligible Resource is committed pursuant to Section 34.119.2 for the purpose of performing Ancillary Services testing, pre-commercial operation testing for Generating Units, or PMax testing. A resource’s RTM Minimum Load Costs for Bid Cost Recovery purposes are subject to the application of the Real-Time Performance Metric as specified in Section 11.8.4.4. For Multi-Stage Generating Resources, the commitment period is further determined based on application of Section 11.8.1.3. For all Bid Cost Recovery Eligible Resources that the CAISO Shuts Down, either through an Exceptional Dispatch or an Economic Dispatch through the Real-Time Market, from its Day-Ahead Schedule that was also from a CAISO commitment, the RTM Minimum Load Costs will include negative Minimum Load Costs for Energy between the Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and zero (0) MWhs.</p>	<p>This amendment proposes to correct a tariff cross-reference. In the CAISO’s compliance with Order No. 764 tariff amendment filing, the CAISO had moved section 34.9.2 to section 34.11.2.</p>
11.8.4.1.5	<p>11.8.4.1.5 RTM Energy Bid Cost</p> <p>For any Settlement Interval, the RTM Energy Bid Cost for the Bid Cost Recovery Eligible Resource except Participating Loads shall be computed as the sum of the products of each <u>RTD</u> Instructed</p>	<p>“Instructed Imbalance Energy” and “Derate Energy” were eliminated as a defined terms in the compliance with Order No. 764 tariff amendment filing and were replaced with more exacting defined</p>

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	<p>Imbalance Energy (IE) portion, except Standard Ramping Energy, Residual Imbalance Energy, FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy, FMM Derate Energy or RTD Derate Energy, MSS Load Following Energy, Ramping Energy Deviation and Regulating Energy, with the relevant Energy Bid prices, the Default Energy Bid price, or the Locational Marginal Price, if any, as further described in Section 11.17, for each Dispatch Interval in the Settlement Interval. For Settlement Intervals for which the Bid Cost Recovery Eligible Resource is ramping up to or down from a rerated Minimum Load that was increased pursuant to Section 9.3.3 for the Real-Time Market, the RTM Energy incurred by the ramping will be classified as FMM Derate Energy or RTD Derate Energy and will not be included in Bid Cost Recovery. For a Bid Cost Recovery Eligible Resource that is ramping up to or down from an Exceptional Dispatch, the relevant Energy Bid Cost related to the Energy caused by ramping will be settled on the same basis as the Energy Bid used in the Settlement of the Exceptional Dispatch that led to the ramping. The RTM Energy Bid Cost for a Bid Cost Recovery Eligible Resource, including Participating Loads and Proxy Demand Response Resources, for a Settlement Interval is subject to the Real-Time Performance Metric as described in Section 11.8.4.4 and the Persistent Deviation Metric as described in Section 11.17. Any Uninstructed Imbalance Energy in excess of FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy is also not eligible for Bid Cost Recovery. For a Multi-Stage Generating Resource the CAISO will determine the RTM Energy Bid Cost based on the Generating Unit level.</p>	<p>terms. The CAISO proposes to align the tariff with those changes.</p>
11.8.4.3.1	<p>11.8.4.3.1 MSS Elected Gross Settlement For an MSS Operator that has elected gross Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the RTM Bid Cost and RTM Market Revenue of the Real-Time RTD Instructed Imbalance Energy subject to Bid Cost Recovery is determined for each resource in the same way these amounts are determined for a non-MSS resource pursuant to the rules specified in Section 11.8.4. The RTM Bid Cost Shortfall or Surplus for Energy and Ancillary Services in total is determined for each Trading Hour of the RTM over the Trading</p>	<p>“Instructed Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change.</p>

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	Day by taking the algebraic difference between the RTM Bid Cost and RTM Market Revenue.	
11.8.4.3.2	<p>11.8.4.3.2 MSS Elected Net Settlement</p> <p>For MSS entities that have elected net Settlement regardless of other MSS optional elections (i.e., Load following or not, or RUC opt-in or out), unlike non-MSS resources, the RUC and RTM Bid Cost Shortfall or Surplus is treated at the MSS level and not at the resource specific level, and is calculated as the RUC and RTM Bid Cost Shortfall or Surplus of all BCR Eligible Resources within the MSS. In calculating the Energy RTM Market Revenue for all the resources within the MSS as provided in Section 11.8.4.2, the CAISO will use the FM MMSS Price or the RTD MSS Price, as applicable Real-Time Settlement Interval MSS Price. The RUC and RTM Bid Cost Shortfall and Surplus for Energy, RUC Availability and Ancillary Services are first calculated separately for the MSS for each Settlement Interval of the Trading Day, with qualified Start-Up Cost, qualified Minimum Load Cost and qualified Multi-Stage Generator transition cost included into the RUC and RTM Bid Cost Shortfalls and Surpluses of Energy calculation. The MSS's overall RUC and RTM Bid Cost Shortfall or Surplus is then calculated as the algebraic sum of the RUC and RTM Bid Cost Shortfall or Surplus for Energy and the RUC and RTM Bid Cost Shortfall or Surplus AS for each Settlement Interval.</p>	<p>“Real-Time Settlement Interval MSS Price” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change.</p>
11.9.1	<p>11.9.1 Physical Trades</p> <p>Inter-SC Trades of Energy in the Day-Ahead Market will be settled separately from Inter-SC Trades of Energy in the RTM. Both the Day-Ahead and RTM Inter-SC Trades of Energy will be settled on an hourly basis and the two respective Settlement amounts between the two parties for each market shall net to zero. All MWh quantities of Physical Trades submitted to the CAISO for Settlement in the Day-Ahead Market that are confirmed through the Physical Trade post market confirmation as provided in Section 28.1.6.3 shall be settled at the Day-Ahead LMP at the relevant PNode. All MWh quantities of Physical Trades that are reduced during the Physical Trade post market confirmation shall be settled at the relevant Existing Zone (EZ) Generation Trading Hub price. All MWh quantities of Physical Trades submitted to the CAISO for Settlement in the RTM that</p>	<p>This amendment proposes to correct a tariff section cross-reference that was typographically transposed.</p>

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	<p>are confirmed through the Physical Trade post market confirmation pursuant to Section 28.16.64.3 shall be settled at the simple average of the four FMM LMPs at the relevant Pricing Node. All MWh quantities of Physical Trades submitted for Settlement in RTM that are reduced during the Physical Trade post market confirmation shall be settled at the FMM price for the EZ Generation Trading Hub.</p>	
11.10.1.2.1	<p>11.10.1.2.1 Congestion Charges If a Scheduling Coordinator, including a Scheduling Coordinator for a Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area, receives an Ancillary Services Award or provides a qualified Self- Provided Ancillary Service at a congested Scheduling Point, the CAISO will charge <u>or pay</u> the Scheduling Coordinator for Congestion. The charge <u>or payment</u> for Congestion at such locations is equal to the simple average of the fifteen (15) minute applicable intertie constraint Shadow Price over the applicable Trading Hour at the location of the Ancillary Service Award, multiplied by the quantity of Ancillary Services Award or the capacity of the qualified Self-Provided Ancillary Service for the Settlement Period. No such charge <u>or payment</u> for Congestion will apply when the Scheduling Coordinator provides Ancillary Services from HASP Block Intertie Schedules at Scheduling Points pursuant to the CAISO Tariff rules that apply to Existing Rights and Transmission Ownership Rights.</p>	<p>This amendment provides clarification by adding the phrase “or payment.”</p>
11.10.1.4	<p>11.10.1.4 Voltage Support The total payments for each Scheduling Coordinator for Voltage Support in any Settlement Period shall be the sum of the opportunity costs of limiting Energy output to enable reactive energy production in response to a CAISO instruction. The opportunity cost shall be calculated based on the product of the Energy amount that would have cleared the market at the price of the Resource-Specific Settlement Interval-FMM or RTD LMP minus the higher of the Energy Bid price or the Default Energy Bid price. If applicable, Scheduling Coordinators shall also receive any payments under any long-term contracts due for the Settlement Period. FMM Exceptional Dispatches or RTD Exceptional Dispatches for incremental or decremental Energy needed for Voltage Support procured through Exceptional Dispatch pursuant</p>	<p>“Resource Specific Settlement Interval” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. This amendment also proposes to correct a tariff cross-reference as section 34.9.2 was moved to section 34.11.2 in the compliance with Order No. 764 tariff amendment. The CAISO proposes to align the tariff with those changes.</p>

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	to Section 34.119.2 will be paid and settled in accordance with Section 11.5.6. RMR Units providing Voltage Support are compensated in accordance with the RMR Contract rather than this Section 11.10.1.4.	
11.10.2 (last paragraph)	<p>11.10.2 Settlement for User Charges for Ancillary Services * * * *</p> <p>With respect to each Settlement Period, in addition to Ancillary Service charges at the applicable user rates determined in accordance with this Section 11.10.2, each Scheduling Coordinator shall be charged additional neutrality adjustment amounts for each Ancillary Service type pursuant to Sections 11.10.2.1.4, 11.10.2.2.3, 11.10.3.43, and 11.10.4.43 and a neutrality adjustment amount for upward Ancillary Service types pursuant to Section 11.14.</p>	This amendment corrects typographical errors by correcting tariff cross-references.
11.10.3	<p>11.10.3 Spinning Reserves</p> <p><u>11.10.3.1 Spinning Reserves Obligation</u> * * * *</p> <p>If the Scheduling Coordinator's Operating Reserve Obligation (before self-provision or Inter-SC Trade of Spinning Reserve or Non-Spinning Reserve) is negative, the SC may be entitled to a credit rather than a charge. In that case, the quantity of the SC's negative Operating Reserve Obligation (before self-provision and Inter-SC Trade) shall be multiplied by the Negative Operating Reserve Obligation Credit Adjustment Factor (NOROCAP) computed for the Trading Hour as specified in Section 11.10.5.</p> <p>11.10.3.24 Hourly User Rate for Spinning Reserves * * * *</p> <p>11.10.3.32 Hourly Net Obligation for Spinning Reserves * * * *</p> <p>11.10.3.43 Spinning Reserve Neutrality Adjustment For each Settlement Period, the difference between the Spinning Reserve net requirement at the hourly Spinning Reserve user rate determined in Section 11.10.3.24 and the total revenue collected from all Scheduling Coordinators in the Spinning Reserve charge pursuant to Section 11.10.3.32 shall be allocated to all Scheduling Coordinators in proportion to their Spinning Reserve obligation quantity. The Spinning Reserve net requirement is the Real-Time Spinning Reserve requirement net of the sum of effective qualified Spinning Reserve self-provision</p>	This amendment proposes to modify the numbering sequence in order to provide clarity, corrects CAISO tariff section cross-references, and corrects punctuation.

Section	Proposed Revisions	Reason for Change
	over all resources.	
11.10.4	<p>11.10.4 Non-Spinning Reserves <u>11.10.4.1 Non-Spinning Reserves Obligations</u> * * * *</p> <p>If the Scheduling Coordinator's Operating Reserve Obligation (before self-provision or Inter-SC Trade of Spinning Reserve or Non-Spinning Reserve) is negative, the Scheduling Coordinator may be entitled to a credit rather than a charge. In that case, the quantity of the Scheduling Coordinator's negative Non-Spinning Reserve Obligation (before self-provision and Inter-SC Trade) shall be multiplied by the Negative Operating Reserve Obligation Credit Adjustment Factor (NOROCAP) computed for the Trading Hour as specified in Section 11.10.5.</p> <p>11.10.4.24 Hourly User Rate Non-Spinning Reserves * * * *</p> <p>11.10.4.32 Hourly Net Obligation for Non-Spinning Reserves * * * *</p> <p>11.10.4.43 Non-Spinning Reserve Neutrality Adjustment For each Settlement Period, the difference between the Non-Spinning Reserve net requirement at the hourly Non-Spinning Reserve user rate determined in Section 11.10.4.24 and the total revenue collected from all Scheduling Coordinators in the Non-Spinning Reserve charge pursuant to Section 11.10.4.32 shall be allocated to all Scheduling Coordinators in proportion to their Non-Spinning Reserve Obligation quantity. The Non-Spinning Reserve net requirement is the Real-Time Non-Spinning Reserve requirement net of the sum of effective qualified Non-Spinning Reserve self-provision over all resources.</p>	This amendment proposes to modify the numbering sequence in order to provide clarity, corrects CAISO tariff section cross-references, and corrects punctuation.
11.10.6	<p>11.10.6 Upward Ancillary Services Neutrality Adjustment For each Settlement Period the difference between the upwards Ancillary Service cost and the product-sum of the total Ancillary Services obligation and neutrality adjustments net requirements at the relevant Ancillary Service user rate will be allocated to all Scheduling Coordinators in proportion to their upward Ancillary Service Obligation (before taking into consideration the Inter-SC Trades of Ancillary Services). The CAISO shall exclude EIM Transfers between the CAISO and an EIM Entity from the</p>	This amendment proposes to align the tariff language with the NERC's BAL-002. This change will cause the upward Ancillary Service Obligation to be neutral.

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	<p>calculation of the upwards Ancillary Service Obligation for this neutrality adjustment. The upwards Ancillary Service cost is the sum of the upward Ancillary Services payments made pursuant to Regulation Up, Spinning Reserve and Non-Spinning Reserve cost described in Sections 11.10.1.12.2.4, 11.10.1.2, and 11.10.3.1 and 11.10.4.4. The total upward Ancillary Services obligation and neutrality adjustments not requirement is the sum of the requirements in Sections 11.10.2.2.2, 11.10.2.2.3, 11.10.3.1, 11.10.3.4, 11.10.4.1, and 11.10.4.4 Real Time Regulation Up not requirement in Section 11.10.2.2.3, Spinning Reserve not requirement in Section 11.10.3.3 and Non-Spinning Reserve not requirement in Section 11.10.4.3.</p>	
11.10.9.3	<p>11.10.9.3 Rescission of Payments for Undelivered Ancillary Service Capacity If the total metered output of a Generating Unit, Participating Load, System Unit or System Resource is insufficient to supply the amount of FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with a Dispatch Instruction issued in accordance with awarded or self-provided Spinning Reserves or awarded or self-provided Non-Spinning Reserves in any Settlement Interval, then the capacity payment associated with the difference between the scheduled amount of each Ancillary Service for which insufficient Energy was delivered and the actual output attributed to the response to the Dispatch Instruction shall be rescinded. If, after the issuance of a Dispatch Instruction associated with Non-Spinning Reserves, the actual response of a Proxy Demand Resource is insufficient to supply the amount of FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with a Dispatch Instruction issued in accordance with awarded or self-provided Non-Spinning Reserves, then the capacity payment associated with the difference between the scheduled amount and the actual amount attributed to the response to the Dispatch Instruction (as established pursuant to the applicable Business Practice Manual) shall be rescinded. However, no capacity payment shall be rescinded if the shortfall in the metered output of the Generating Unit, Participating Load, Proxy Demand Resource, System Unit, or System Resource is less than a deadband amount published by the CAISO on the CAISO Website at least twenty-four hours</p>	<p>“Instructed Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change. Additionally, the CAISO is proposing to add the word “the: before the word “CAISO: for grammatical correctness.</p>

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	<p>prior to the Settlement Interval. For any Settlement Interval with respect to which no deadband amount has been published by the CAISO, the deadband amount shall be zero MWh.</p>	
11.12.1	<p>11.12.1 [Not Used] Settlement of PIRP Protective Measures The provisions in this Section 11.12.1 and its subsections will be in effect as of the day this Section becomes effective and the CAISO will implement these measures no later than twelve months after the effective date of this section. 11.12.1.1 Hourly Settlement Scheduling Coordinators that represent Participating Intermittent Resources that have been qualified for PIRP Protective Measures pursuant to Section 4.8.3 will be subject to the following Settlement requirements. The CAISO will first settle the market outcomes for the Participating Intermittent Resources subject to PIRP Protective Measures consistent with the rules specified in Section 11. 11.12.1.2 PIRP Protective Measures Monthly Adjustments At the end of the month, the CAISO will calculate the PIRP Protective Measures monthly resettlement, which it will base on the forecast established for the Participating Intermittent Resource 90 minutes prior to the applicable Trading Hour. For each month the CAISO will calculate the PIRP Protective Measures Settlement Amount as the total of: (1) the sum of the product of the 90 minute MWh amounts, for each hour of the month multiplied by the simple average of the RTD LMP for the applicable Trading Hour; and (2) the product of (a) the monthly netted MWh quantities under PIRP Protective Measures, which is the sum of the hourly differences between the ninety (90) minute MWh amounts and the Participating Intermittent Resource's 5-minute metered MWhs, and (b) the resource's monthly weighted average RTD LMP, where the weights are the metered Generation quantities associated with each RTD LMP. If the Scheduling Coordinator submits an Economic Bid or Self-Schedule to the Real Time Market, the resource will be disqualified from PIRP Protective Measures for the remaining term that the PIRP Protective Measures are otherwise intended to apply. The disqualification will be in effect as of the Trading Day for which the Scheduling Coordinators submitted the</p>	<p>This amendment removes the expired tariff language pertaining to PIRP Protective Measures.</p>

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	<p>Economic Bid. The CAISO will take the necessary steps to implement that disqualification and will make any necessary Settlement adjustments consistent with the change in status. In addition, for the intervals in which the Scheduling Coordinator submitted an Economic Bid for a the resource while it was still qualified as a resource subject to PIRP Protective Measures, the resource will not be eligible for any Bid Cost Recovery related payments for such Economic Bids.</p> <p>11.12.1.3 Use of Inter-Scheduling Coordinator Trades for Energy</p> <p>To the extent a Participating Intermittent Resource that is subject to PIRP Protective Measures is contractually required to make use of the CAISO's Inter-Scheduling Coordinator Trade for Energy to effectuate payment transfers with its contractual counterparty, the Scheduling Coordinator may select a flag in its Master File to indicate its election to settle of any Physical or Converted Physical Inter-Scheduling Coordinator Trades for Energy submitted for the Participating Intermittent Resource at the Participating Intermittent Resource location as follows; the Inter-Scheduling Coordinator Trades will settle at the hourly simple average of the RTD LMP of the PNode at the affected PIR location. Financial Inter-Scheduling Coordinator Trades for Energy will not be eligible for such treatment.</p>	
11.12.2	<p>11.12.2 [Not Used] Allocation of PIRP Protective Measures Costs/Revenues</p> <p>For each month, the CAISO will calculate the difference between the charges and payments made to the Scheduling Coordinator for each Participating Intermittent Resource under its Settlement as specified in Sections 11, and the PIRP Protective Measurement resettlement amounts. The CAISO will charge or credit the differences to the Scheduling Coordinator and will allocate a corresponding credit or charge to all Scheduling Coordinators in proportion to each Scheduling Coordinator's aggregate Net Negative Uninstructed Deviations in that month relative to the aggregate Net Negative Uninstructed Deviations for all Scheduling Coordinators in the CAISO Balancing Authority Area in that month.</p>	This amendment removes the expired tariff language pertaining to PIRP Protective Measures.

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11.12.3.3	<p>11.12.3.3 [Not Used] Participating Intermittent Resource Export Fee A Participating Intermittent Resource Export Fee will be levied to Participating Intermittent Resources that have elected for PIRP Protective Measures in accordance with Section 5.3 of Appendix Q and Schedule 4 of Appendix F.</p>	<p>This amendment removes the expired tariff language pertaining to PIRP Protective Measures.</p>
11.17.1.2	<p>11.17.1.2.2 Rule 2 If seven (7) or more Settlement Intervals of the previous twenty-four (24) Settlement Intervals are flagged as exceeding the Persistent Deviation Metric Threshold, then for all the previous twenty-four (24) Settlement Intervals in the two-hour window: (a) the RTM Energy Bid Costs specified in Section 11.8.4.1.5 (i) for FMM Optimal Energy or RTD Optimal Energy above the Day-Ahead Scheduled Energy will be based on the lesser of the applicable Default Energy Bid price, the applicable Energy Bid price, as mitigated, or the applicable FMM or RTD Locational Marginal Price;; and (ii) for FMM Optimal Energy or RTD Optimal Energy below the Day-Ahead Scheduled Energy <u>will be based on</u> the greater of the applicable Default Energy Bid price, the applicable Energy Bid price, as mitigated, or the applicable FMM or RTD Locational Marginal Price; and (b) Residual Imbalance Energy as specified in Section 11.5.5 (i) for Residual Imbalance Energy above the Day-Ahead Scheduled Energy will be based on the lesser of the applicable Default Energy Bid price, the relevant Energy Bid Price, as mitigated, or the applicable RTD Locational Marginal Price;; and (ii) Residual Imbalance Energy below the Day-Ahead Scheduled Energy will be based on the greater of the applicable Default Energy Bid price, the relevant Energy Bid Price, or the applicable RTD Locational Marginal Price.</p>	<p>“Optimal Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change. The CAISO is also providing additional language to (a)(ii) to make it consistent with (a)(i). The CAISO is also proposing to correct punctuation and to change the phrase “RTD Locational Marginal Price” to “RTD LMP” in order to provide consistency and uniformity throughout the tariff.</p>
11.17.2.2	<p>11.17.2.2 Disqualification Based on ADS Shut-Down Instruction In the event that the CAISO issues a binding Shut-Down Instruction through ADS, a resource will not be eligible for recovery of RTM or RUC Minimum Load Costs from the point of the Shut-Down Instruction forward for the duration of the resource’s registered Minimum Down Time. If a resource ignores the binding Shut-Down Instruction and it has a Day-Ahead</p>	<p>This amendment corrects a tariff cross-reference and to add punctuation.</p>

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	Schedule, the resource is not eligible for IFM Minimum Load Cost recovery as specified in Section 11.8.2.1.23 for the minimum of: 1) the resource's Minimum Down Time; and 2) the IFM Commitment Period.	
11.20.4(f)	<p>11.20.4 Process for Invoicing NERC/WECC Charges * * * *</p> <p>(f) Within fifteen (15) Business Days after receipt of the WECC invoice to the CAISO setting forth the assessment for NERC/WECC Charges for the NERC/WECC Charge Assessment Year, the CAISO will issue Final NERC/WECC Charge Invoices that allocate NERC/WECC Charges for the NERC/WECC Charge Assessment Year to Scheduling Coordinators based on (i) each Scheduling Coordinator's NERC/WECC Metered Demand as adjusted pursuant to Sections 11.20.4(b) and 11.20.4(e) and pursuant to any additional adjustments that the WECC provides to the CAISO in a written statement in accordance with the CAISO-WECC Billing Services Agreement, multiplied by (ii) the Final NERC/WECC Charge Rate for the NERC/WECC Charge Assessment Year. If and to the extent that a Scheduling Coordinator has not already paid all of the NERC/WECC Charges for the NERC/WECC Charge Assessment Year that it is required to pay, the Scheduling Coordinator's Final NERC/WECC Charge Invoice will show the amount the Scheduling Coordinator is still required to pay. If and to the extent that a Scheduling Coordinator has already paid in excess of the NERC/WECC Charges for the NERC/WECC Charge Assessment Year that the Scheduling Coordinator is required to pay, the Scheduling Coordinator's Final NERC/WECC Charge Invoice will show the amount the Scheduling Coordinator will be credited.</p>	This amendment corrects a tariff cross-reference, which remedies a typographical error.
11.21.1	<p>11.21.1 CAISO Demand and Exports</p> <p>If the CAISO corrects an LMP in the upward direction pursuant to Section 35 that impacts Demand in the Day-Ahead Market and the FMM such that either a portion of or the entire cleared CAISO Demand or export Economic Bid curve becomes uneconomic, then the CAISO will calculate and apply the Price Correction Derived LMP for settlement of <u>day-ahead</u> CAISO Demand and exports in Sections 11.2.1.2, 11.2.1.3, and 11.2.1.4, and <u>FMM exports in Section 11.54.1.1</u>. The CAISO shall not calculate and apply a Price Correction Derived LMP for settlement of exports</p>	"Imbalance Energy" was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms, and the CAISO is proposing to align the tariff with that change. Additionally, the CAISO is proposing to correct tariff cross-references.

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	<p>that are part of a Schedule that results from Bids submitted in violation of Section 30.5.5. The CAISO will calculate a Price Correction Derived LMP for each affected CAISO Demand and exports as follows: the total cleared MWhs of CAISO Demand or exports in the Day-Ahead Schedule or FMM Schedule, as applicable, multiplied by the corrected LMP, minus the make-whole payment amount, all of which is divided by the total cleared MWhs of CAISO Demand or export in the Day-Ahead Schedule or FMM Schedule, as applicable. The make-whole payment amount will be calculated on an hourly basis determined by the area between the Scheduling Coordinator's CAISO Demand or Export Bid curve and the corrected LMP, which is calculated as the MWhs for each of the cleared bid segments in the Day-Ahead Schedule or FMM Schedule for the affected resource, multiplied by the maximum of zero or the corrected LMP minus the bid segment price. For the purpose of this calculation, the CAISO will not factor in a make-whole payment amount for Self-Scheduled CAISO Demand or exports. Any non-zero amounts in revenue collected as a result of the application of the Price Correction Derived LMP will be captured through the calculation of the IFM Congestion Charge reflected in Section 11.2.4.1 and the allocation of non-zero amounts of the sum of <u>FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy</u>, Uninstructed Imbalance Energy, and Unaccounted for Energy in accordance with Section 11.5.4.</p>	
11.29(a) (last paragraph)	<p>11.29 CAISO as Counterparty; Billing and Payment * * * *</p> <p>Bids for Supply submitted by a Scheduling Coordinator for any resource funded by Municipal Tax Exempt Debt are not, and shall not be construed or deemed to be, a sale to the CAISO or other transaction that is financially settled by the CAISO to the extent that the load serving entity that holds entitlements to the resource for which such Bids for Supply are submitted is using its entitlements to serve native load during that interval. For purposes of this subsection only, a load serving entity is using its entitlements to a resource to serve native load under the following conditions: A) For a Load Serving Entity that is serving demand inside the <u>CAISO</u> Balancing Authority Area, if the total MW volume of such Bids for Supply that clear in any settlement</p>	This amendment proposes to correct a typographical error in making the name "ISO" consistent throughout the CAISO tariff.

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	<p>interval is less than or equal to the metered CAISO Demand for that settlement interval for the Load Serving Entity that holds entitlements to the resources for which such Bids for Supply are submitted, or B) for load serving entities that serve demand outside of the CAISO Balancing Authority Area by wheeling through or exporting from the CAISO Balancing Authority Area, if the total MW volume of such Bids for Supply that clear in any settlement interval is less than or equal to the total of wheel throughs or exports that are used to serve the native load for the load serving entity that holds entitlements to the resources for which such Bids for Supply are submitted during that settlement interval. Nothing in the two preceding sentences shall affect credit requirements under Section 12 of the CAISO Tariff or settlements charges or credits issued pursuant to any section of the CAISO tariff. The details of such Bids for Supply may be included in Settlement Statements by the CAISO for purposes of calculating settlement charges and credits other than for Supply.</p> <p style="text-align: center;">* * * *</p>	
11.29(b)	<p style="text-align: center;">* * * *</p> <p>(b) The purchase or sale of any products or service, or any other transaction, that<u>which</u> is financially settled by CAISO under this CAISO Tariff shall be deemed to occur within the State of California. To the extent permitted by applicable law, any warranties provided by the sellers to the CAISO of such products or services, whether express, implied or statutory, are hereby passed to the Business Associates who purchase such products or services from the CAISO on a “pass through basis” and to the extent not passed through, any such warranties are hereby assigned by the CAISO to the purchasing Business Associates. Sellers to the CAISO and Business Customers<u>Associates</u> acknowledge that warranties on such products are limited to that offered by the seller to CAISO and will exist, if at all, solely between the seller to the CAISO and the purchasing Business Associate. AS BETWEEN THE PURCHASING BUSINESS ASSOCIATE AND THE CAISO AS COUNTERPARTY, NO EXPRESS OR IMPLIED WARRANTIES ARE MADE BY THE CAISO REGARDING THE PRODUCTS AND SERVICES SOLD BY THE CAISO AS COUNTERPARTY, AND ANY SUCH PRODUCTS AND SERVICES ARE PROVIDED ON AN “AS IS”</p>	<p>The CAISO is proposing to remove the term “Business Customer” and replacing it with “Business Associate” for consistency throughout the CAISO tariff. The CAISO also proposes to correct a typographical error of the word “INCLUDING,” and to change the word “that” to “which” for grammatical correctness.</p>

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	<p>AND “AS AVAILABLE” BASIS. THE CAISO MAKES NO WARRANTY OR REPRESENTATION THAT THE PRODUCTS OR SERVICES WILL BE UNINTERRUPTED OR ERROR FREE. PURCHASING BUSINESS ASSOCIATES HEREBY WAIVE, AND THE CAISO HEREBY DISCLAIMS, ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. THE CAISO DOES NOT WARRANT THAT THE PRODUCTS AND SERVICES OFFERED WILL MEET CUSTOMER’S REQUIREMENTS. NO ORAL OR WRITTEN INFORMATION OR ADVICE GIVEN BY THE CAISO OR ANY AUTHORIZED REPRESENTATIVE OF THE CAISO SHALL CREATE A WARRANTY OR IN ANY WAY INCREASE THE SCOPE OF ANY PASS THROUGH OR ASSIGNED WARRANTY. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES IN CERTAIN CIRCUMSTANCES, SO THE ABOVE EXCLUSION APPLIES ONLY TO THE EXTENT PERMITTED BY APPLICABLE LAW.</p> <p style="text-align: center;">* * * *</p>	
11.29.8.4.6 (heading)	<p>11.29.8.4.6 Dispute of Recalculation Settlement Statement T+353M</p> <p style="text-align: center;">* * * *</p>	This amendment corrects an error in the heading by changing T+35M to T+33M to be consistent with the section.
11.29.8.4.8	<p>11.29.8.4.8 Unscheduled Recalculation Settlement Statements</p> <p>Each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO may submit disputes regarding Incremental Changes on an Unscheduled Recalculation Settlement Statement issued pursuant to Section 11.29.7.3 no later than twenty-two (22) Business Days after the publication date of the Unscheduled Recalculation Settlement Statement. A dispute must only be based on Incremental Changes between the Unscheduled Recalculation Settlement Statement and prior applicable Recalculation Settlement Statement. Valid disputes regarding data appearing on an Unscheduled Recalculation Settlement Statement will be reflected on a later Recalculation Settlement Statement. If a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO disagrees with the</p>	This amendment proposes to correct the reference to the Recalculated Settlement Statement to be T+9M.

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	<p>CAISO's resolution of a dispute regarding data appearing on an Unscheduled Recalculation Settlement Statement, it may initiate dispute resolution under Section 13 of the CAISO Tariff pursuant to the deadlines set forth in Section 13. If a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO does not initiate dispute resolution under Section 13 of the CAISO Tariff within the time period set forth in Section 13, the Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO will be deemed to have validated each Unscheduled Recalculation Settlement Statement T+55B9M.</p>	
11.29.9.3	<p>11.29.9.3 Accounts of the Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs Each Scheduling Coordinator, CRR Holder, Black Start Generator, and Participating TO shall establish and maintain at all times a Settlement Account at a commercial bank located in the United States and reasonably acceptable to the CAISO which can effect money transfers via Fedwire and, at its option, may also maintain an account capable of ACH transfers where payments to and from the CAISO Clearing Account shall be made in accordance with this CAISO Tariff. Scheduling Coordinators, CRR Holders, and Black Start Generators may, but will not be required to, maintain separate accounts for receipts and payments. Each Scheduling Coordinator, CRR Holder, and Black Start Generator shall notify the CAISO of its account details and of any changes to those details in accordance with the provisions of its Scheduling Coordinator Agreement, CRR Entity Agreement, or Interim Black Start Agreement. Participating TOs will notify the CAISO of their Settlement Account details in accordance with Section 2.2.1 of their Transmission Control Agreement and may notify the CAISO from time to time of any changes by giving at least seven (7) days written notice before the new account becomes operational.</p>	<p>The CAISO proposes to modify the term "Interim Black Start Agreement" to be consistent with the definition in the tariff and in Appendix A to the tariff, Master Definitions Supplement.</p>
11.31 (1 st paragraph)	<p>11.31 Intertie Schedules Decline Charges The Decline Potential Charge shall apply to Intertie transactions as discussed below. The Decline Potential Charge does not apply to FMM Schedules of Economic Bids, Ddynamic Ttransfers, and Variable Energy Resources located outside the CAISO Balancing Authority Area that have been qualified to use the forecast of their output produced by the CAISO as specified in</p>	<p>"Dynamic Transfer" is not a defined term in the CAISO tariff. As such, the CAISO proposes to uncapitalize the "D" and "T" to provide clarity.</p>

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	Section 4.8.2.1.2. * * * *	
12.5.1 (last paragraph)	<p>12.5.1 Under-Secured and Non-Compliant Market Participants</p> <p>* * * *</p> <p>In addition, the CAISO may restrict or suspend a Market Participant’s right to submit further Bids, including Self-Schedules, or require the Market Participant to increase its Financial Security Amount if at any time such Market Participant’s potential additional liability for himbalance Eenergy and other CAISO charges is determined by the CAISO to be excessive by comparison with the likely cost of the amount of Energy reflected in Bids or Self-Schedules submitted by the Market Participant.</p>	<p>“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change.</p>
16.11	<p>16.11 Inter-Balancing Authority Area ETC Self-Schedule Bid Changes</p> <p>Changes to ETC Self-Schedules that occur during the CAISO’s Real-Time Market that involve changes to CAISO Balancing Authority Area imports or exports with other Balancing Authority Areas (that is, inter-Balancing Authority Area changes to ETC Self-Schedules) will be allowed and will be recorded by the CAISO based upon notification received from the Scheduling Coordinator representing the holder of the Existing Rights. The Scheduling Coordinator representing the holder of the Existing Right must notify the CAISO of any such changes to external import/export in submitted ETC Self-Schedules. The Scheduling Coordinator representing the holder of the Existing Right must notify the CAISO of Real-Time Market changes to external import/export Interchange Schedules in submitted ETC Self-Schedules, by telephone. The timing and content of any such notification must be consistent with the TRTC Instructions previously submitted to the CAISO by the Responsible PTO. The CAISO will manually adjust or update the FMM Schedule for the Scheduling Coordinator to conform with the other Balancing Authority Area’s net ETC Self-Schedule in Real-Time, and the notifying Scheduling Coordinator will be responsible for and manage any resulting Energy imbalance. These <u>FMM Instructed</u> Imbalance Energy deviations will be priced and charged to the Scheduling Coordinator representing the holder of Existing Rights in accordance with the FMM LMP.</p>	<p>“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change.</p>

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16.12	<p>16.12 Intra-Balancing Authority Area ETC Self-Schedule Changes Changes to ETC Self-Schedules that occur during the CAISO’s Real-Time processes that do not involve changes to CAISO Balancing Authority Area imports or exports with other Balancing Authority Areas (that is, intra-Balancing Authority Area changes to Schedules) will be allowed and will give rise to <u>FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy deviations</u>. These Imbalance Energy deviations will be priced and charged to the Scheduling Coordinator representing the holder of Existing Rights in accordance with the <u>Real-Time relevant FMM or RTD LMP</u>.</p>	<p>“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change. Additionally, the CAISO is proposing to remove the word “deviations” and add the word “relevant” in order to provide clarity to the language.</p>
17.3.3(3)	<p>17.3.3 Settlement Treatment of Valid TOR Self-Schedules * * * *</p> <p>(3) The CAISO will assess only charges applicable to Ancillary Services, Imbalance Energy, Transmission Losses, Flexible Ramping Product, and Grid Management Charges for the use of a TOR and will not assess charges for neutrality, <u>Unaccounted For Energy</u>, transmission Access Charges, Minimum Load Costs, or other charges that might otherwise be applicable to the Demand or exports served solely over the TOR. The CAISO will assess charges applicable to Ancillary Services for the use of a TOR only to the extent that the CAISO must procure Ancillary Services for the TOR holder because Ancillary Services are not self-provided by the TOR holder. The CAISO will assess charges and provide payments for TOR Self-Schedules pursuant to the rules specified in Sections 11.2.1.5 and 11.5.7.2. The CAISO will assess charges applicable to Imbalance Energy for the use of a TOR only if the CAISO must procure Imbalance Energy for the TOR holder. The CAISO will assess Grid Management Charges for the use of a TOR only in accordance with the provisions of Section 11.22 and Appendix F, Schedule 1.</p>	<p>“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change. Also, in order to create consistency and uniformity throughout the tariff, the CAISO is proposing to spell out the acronym for “UFE.”</p>
17.3.3(5)	<p>(5) Parties with TORs shall continue to pay for Transmission Losses or Ancillary Services requirements in accordance with any Existing Contracts applicable to those TORs as they may be modified or changed in accordance with the terms of the Existing</p>	<p>“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the</p>

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	<p>Contract. Any affected Participating TOs shall continue to provide Transmission Losses and any other Ancillary Services to the holder of a TOR subject to an Existing Contract as may be required by the Existing Contract. As described in Section 17.3.3(3) above, the CAISO will charge Scheduling Coordinators submitting the TOR Self-Schedule the charges applicable to Transmission Losses, Ancillary Services, and Imbalance Eenergy in accordance with the CAISO Tariff (e.g., the Transmission Losses Charge based on the Marginal Cost of Losses), and any shortfall or surplus between the CAISO charges and the provisions of any applicable Existing Contract shall be settled bilaterally between the Existing Contract parties or through the relevant TO Tariff. To enable holders of TORs to determine whether the CAISO's calculations result in any associated shortfall or surplus and to enable the parties to the Existing Contracts to settle the differences bilaterally or through the relevant TO Tariff, the CAISO shall calculate and provide the Scheduling Coordinator's Settlements the amounts paid for the MCL for the amounts of MWh submitted with a valid TOR Self-Schedule. Each Participating TO will be responsible for recovering any deficits or crediting any surpluses associated with differences in Transmission Losses and Transmission Loss requirements and/or Ancillary Services requirements, through its bilateral arrangements or its Transmission Owner Tariff.</p>	<p>tariff with that change.</p>
17.6	<p>17.6 Inter-Balancing Authority Area TOR Self-Schedule Bid Changes Changes to TOR Self-Schedules that occur during the CAISO's Real-Time Market that involve changes to CAISO Balancing Authority Area imports or exports with other Balancing Authority Areas (that is, inter-Balancing Authority Area changes to TOR Self-Schedules) will be allowed and will be recorded by the CAISO based upon notification received from the Scheduling Coordinator representing the holder of the TOR. The Scheduling Coordinator representing the holder of the TOR must notify the CAISO of any such changes to external import/export in submitted TOR Self-Schedules. The Scheduling Coordinator representing the holder of the TOR must notify the CAISO of Real-Time Market changes to external import/export Interchange Schedules in submitted TOR Self-Schedules, by telephone. The</p>	<p>"Imbalance Energy" was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change. Additionally, the CAISO is also proposing to add the word "relevant" in order to provide clarity to the language.</p>

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	<p>timing and content of any such notification must be consistent with the TRTC Instructions previously submitted to the CAISO by the Non-Participating TO. The CAISO will manually adjust or update the FMM Schedule for the Scheduling Coordinator to conform with the other Balancing Authority Area's net TOR Self-Schedule in Real-Time, and the notifying Scheduling Coordinator will be responsible for and manage any resulting Energy imbalance. These himbalance Energy deviations will be priced and charged to the Scheduling Coordinator representing the holder of the TOR in accordance with the <u>relevant FMM or RTD</u> LMP.</p>	
17.7	<p>17.7 Intra-Balancing Authority Area TOR Self-Schedule Changes Changes to TOR Self-Schedules that occur during the CAISO's Real-Time processes that do not involve changes to CAISO Balancing Authority Area imports or exports with other Balancing Authority Areas (that is, intra-Balancing Authority Area changes to Schedules) will be allowed and will give rise to himbalance Energy deviations. These himbalance Energy deviations will be priced and charged to the Scheduling Coordinator representing the holder of the TOR in accordance with the Real-Time<u>relevant FMM or RTD</u> LMP.</p>	<p>"Imbalance Energy" was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change. Additionally, the CAISO is also proposing to add the word "relevant" in order to provide clarity to the language.</p>
27.5.1.2	<p>27.5.1.2 [Not Used]Accuracy Metric for Modeled External Unscheduled Flow in the Day-Ahead Market 27.5.1.2.1 [Not Used]Accuracy Metric For each Day-Ahead Market, the CAISO will calculate the external unscheduled flow accuracy metric as described further in this Section 27.5.1.2. The accuracy metric is a comparison of the magnitude of the difference between the following two amounts under two scenarios: 1) the actual unscheduled flows on the Interties caused by external Balancing Authority Area generation, load, and interchanges; and 2) the CAISO's modeled Day-Ahead external unscheduled flow on the Interties per hour in MW. In the first scenario, the CAISO models the external unscheduled flow impacts of external Balancing Authority Area schedules in the Day-Ahead Market. In the second scenario, the CAISO does not model these flow impacts. For purposes of the accuracy metric, the external unscheduled flow is defined as the flow impact over the CAISO Interties of supply, demand, and area-to-area net</p>	<p>The CAISO has met the metric and is proposing to remove this requirement from the tariff.</p>

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	<p>scheduled interchanges between external Balancing Authority Areas. The external unscheduled flow will be derived based on a power flow solution and will be calculated separately for the Day-Ahead and actual network conditions on an average hourly basis for each Intertie. For the Day-Ahead, the CAISO will rerun a solved case and isolate the flow impact of external Balancing Authority Areas, if modeled, to derive the modeled external unscheduled flow. For the actual network conditions, the CAISO will use the actual external area-to-area net scheduled Interchange and the State Estimator solution to capture the actual supply, demand, and topology, and will isolate the flow impact of external Balancing Authority Areas to derive the actual external unscheduled flow. To calculate the external unscheduled flow accuracy metric, the CAISO will compare the Day-Ahead modeled external unscheduled flow and the actual external unscheduled flow for each of the scenarios. For the first scenario, the CAISO will take the difference per Intertie, per Trading Hour of the actual external unscheduled flow and the modeled Day-Ahead external unscheduled flow. For the second scenario, the CAISO will also take the difference per Intertie, per Trading Hour of the actual external unscheduled flow and the modeled Day-Ahead external unscheduled flow. Under the second scenario, the modeled Day-Ahead external unscheduled flow is zero, so the resulting difference is the absolute value of the actual external unscheduled flow. The CAISO will sum the absolute value of these sets of differences under the two scenarios.</p> <p>27.5.1.2.2 [Not Used] Accuracy Metric Threshold and Suspension</p> <p>To determine whether or not the CAISO has met the accuracy metric, the CAISO calculates the accuracy metric on an Intertie basis per Trading Hour and then sums the absolute value of the differences per Intertie, per Trading Hour across all Interties and all Trading Hours to calculate a three-week rolling average per the scenarios described in Section 27.5.1.2.1. The CAISO excludes from the accuracy metric the impact of the following unforeseen Real-Time events: the loss of direct current transmission lines, unexpected outages of generators over 1,000 MW, or a derate of over 1,000 MW at any Intertie. If the three-</p>	

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	<p>week-rolling average of the aggregated accuracy metric shows that the magnitude of the difference under the first scenario is greater than the magnitude of the difference under the second scenario, as described in Section 27.5.1.2.1, the CAISO will suspend its consideration of external unscheduled flow due to external Balancing Authority Area schedules in the Day-Ahead Market by disabling the impact of the net-scheduled interchange between external Balancing Authority Areas. The suspension will be in place until the CAISO demonstrates that the three-week rolling average of the aggregated accuracy metric under the first scenario is less than it is under the second scenario. Even when the accuracy metric threshold is met, if the CAISO determines that the consideration of the external unscheduled flow is hampering the CAISO's ability to operate the system reliably, the CAISO may elect to suspend the consideration of the unscheduled flow in the Day-Ahead Market until it has determined that considering the external unscheduled flow no longer hampers its ability to operate the system reliably. Any suspension and return of the CAISO's consideration of external unscheduled flow in the Day-Ahead Market will be conducted as soon as practicable, consistent with and as permitted by the CAISO Markets timelines and the CAISO's processes. During any period of suspension, the CAISO will continue to calculate the accuracy metric offline and will base its reinstatement of external unscheduled flow consideration in the Day-Ahead Market on the accuracy metric being met based on the three-week rolling average.</p> <p>27.5.1.2.3 [Not Used]Sunset Section 27.5.1.2 and its subsections will no longer be effective, if the CAISO has not failed the metric described therein for twelve (12) consecutive months after the first twelve months that this section is effective.</p>	
27.5.3.2.2 (1 st paragraph)	<p>27.5.3.2.2 Information Needed to Determine Application of MEEA-Specific Pricing in any Settlement Interval or Settlement Period</p> <p>If an MEEA signatory submits a Bid in the CAISO Market and seeks to obtain an MEEA-specific LMP for an interchange transaction, the CAISO must be capable of verifying what portion (output in megawatt hoursMWh) of the resources identified in the</p>	<p>“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change. This amendment also proposes to change a term to the defined acronym and correct tariff cross-references.</p>

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	<p>MEEA, if any, were dispatched to implement the interchange transaction. To the extent that the resources identified in the MEEA, or portion thereof, were dispatched and operated for purposes other than the interchange transaction submitted in the CAISO Market, the Schedule or imbalance Energy associated with the Bid submitted and cleared in the CAISO Market will not receive an MEEA-specific LMP, and will instead receive the default IBAA price specified in Appendix C, Section G.1.1. The CAISO will establish Resource IDs that are to be used only to submit Bids, including Self-Schedules, for the purpose of obtaining MEEA-specific pricing. MEEA signatories may obtain and use other Resource IDs to submit Bids, including Self-Schedules, that are not covered by an MEEA. Prior to obtaining and settling Resource IDs under the terms of the MEEA, the relevant Scheduling Coordinator shall attest that use of the Resource ID shall mean that the MEEA signatory dispatched a resource identified in an MEEA to support the MEEA interchange transaction. This attestation shall be executed under oath by an officer of the MEEA with knowledge of the MEEA signatory's operations. By actually using such Resource IDs, the Scheduling Coordinator represents that MEEA resources are dispatched to support such Bids, including Self-Schedules. The CAISO may challenge the use of these Resource IDs and conduct an audit under Section 27.5.3.7.</p> <p style="text-align: center;">* * * *</p>	
27.5.3.2.2 (last paragraph)	<p style="text-align: center;">* * * *</p> <p>In addition, in the event that there is a Dynamic Resource-Specific System Resource in the IBAA, the MEEA may further provide that the MEEA signatory in control of such resource may also obtain pricing under the MEEA for imports to the CAISO Balancing Authority Area from the Dynamic Resource-Specific System Resource. For any portion of an interchange transaction for which the MEEA Entity has not self-certified that the resources were used to support interchange transactions, the default IBAA price specified in Appendix C, Section G.1.1 will apply for the corresponding volume and time period.</p> <p style="text-align: center;">* * * *</p>	This amendment proposes to correct a tariff cross-reference.

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27.8.3 (last paragraph)	<p>27.8.3 Changes in Status and Configurations of Resource * * * *</p> <p>When transitioning to implement these changes across the midnight hour, for any Real-Time Market run in which the changes specified in this Section 27.8.3 are to take effect within the Time Horizon of any of the Real-Time Market runs, the CAISO will Schedule, Dispatch, or award resources consistent with either the prior or new status and definitions, as appropriate, and required by any Real-Time conditions regardless of the resource’s state scheduled or awarded in the immediately preceding Day-Ahead Market. A Scheduling Coordinator may unregister a Generating Unit from its Multi-Stage Generating Resource status subject to the timing requirements for Master File changes, and such changes are not subject to the timing requirements in Section 27.8.3. Changes to the attributes listed above in this Section may take effect, including the registration of new Multi-Stage Generating Resources, provided Scheduling Coordinators have previously followed the registration process requirements listed in Section 27.8.1. Changes to these attributes may only be made every sixty (60) days after the day on which any such changes have taken effect.</p>	<p>“Time Horizon” was eliminated in the CAISO’s 2011 tariff clarification compliance filing and the CAISO proposes to align the tariff with that change. The CAISO will also be correcting all of the eTariff records related to Section 27.8 as these records were inadvertently filed as one eTariff record and each to the point three decimal should be a separate, individual eTariff record. There are no substantive changes to the new eTariff records.</p>
29.10(e)(2)	<p>29.10 Metering and Settlement Data * * * *</p> <p>(e) EIM Energy Imbalance with an External Balancing Authority Area. For each EIM External Intertie Bid that clears the FMM resulting in a 15-minute EIM External Intertie schedule –</p> <p>(1) the EIM Entity Scheduling Coordinator must submit to the CAISO the corresponding hourly transmission profile and 15-minute Energy profiles from the respective E-Tags, which must reflect the Point of Receipt and Point of Delivery that was declared in the FMM Bid submittal, at least 20 minutes before the start of the Operating Hour; and</p> <p>(2) the EIM Entity Scheduling Coordinator must provide an updated Energy profile to the extent required by Section 30.5.76-2.</p>	<p>Tariff Section 30.6.2 entitled “E-Tag Rules and Treatment of Intertie Schedules” is being moved to Section 30.5.7 and this amendment will change the tariff cross-reference to that section.</p>

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29.11(n)	<p>29.11 Settlements and Billing for EIM Market Participants *****</p> <p>(n) EIM Transfers and Settlement for Contingency Reserve Obligations. The CAISO shall allocate Operating Reserve Obligations to EIM Entity Scheduling Coordinators for EIM Transfers as follows –</p> <p>(1) EIM Entity Scheduling Coordinators will receive a payment equal to three (3) percent of the hourly MW EIM Transfer into the CAISO Balancing Authority Area multiplied by the hourly user rate for Spinning Reserves and Non-Spinning Reserves, as calculated per Section 11.10.3.32 and 11.10.4.32, respectively; and</p> <p>(2) EIM Entity Scheduling Coordinators will receive a charge equal to three (3) percent of the hourly MW EIM Transfer out of the CAISO Balancing Authority Area multiplied by the hourly user rate for Spinning Reserves and Non-Spinning Reserves, as calculated per Section 11.10.3.32 and 11.10.4.32, respectively.</p>	This amendment proposes to correct tariff cross-references.
29.34(l)(4)(a)	<p>29.34 EIM Operations *****</p> <p>(l) EIM Resource Plan Evaluation. *****</p> <p>(4) Additional Hourly Capacity Requirements. (A) In General. If the CAISO determines under the procedures set forth in the Business Practice Manual for the Energy Imbalance Market that a Balancing Authority Area in the EIM Area has historically high import or export schedule changes between forty minutes and twenty minutes before the start of the Trading Hour, the CAISO will add to the Balancing Authority Area in the EIM Area’s capacity requirements an additional requirement.</p>	This amendment corrects a grammatical error by changing the word “an” to “a.”
30.5.2.4	<p>30.5.2.4 Supply Bids for System Resources In addition to the common elements listed in Section 30.5.2.1, Supply Bids for System Resources shall also contain: Start-Up Costs; and Minimum Load Costs. Resource-Specific System Resources are subject to the Proxy Cost methodology or the Registered Cost methodology for Start-Up Costs and Minimum Load Costs as provided in Section 30.4, and Transaction ID as</p>	This amendment aligns the tariff with the CAISO’s compliance with Order No. 764 tariff amendment filing and removes the term “HASP.”

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	<p>created by the CAISO. Other System Resources are not eligible to recover Start-Up Costs and Minimum Load Costs. Resource-Specific System Resources are eligible to participate in the Day-Ahead Market on an equivalent basis as Generating Units and are not obligated to participate in RUC or the RTM if the resource did not receive a Day-Ahead Schedule unless the resource is a Resource Adequacy Resource. If the Resource-Specific System Resource is a Resource Adequacy Resource, the Scheduling Coordinator for the resource is obligated to make it available to the CAISO Market as prescribed by Section 40.6. Dynamic Resource-Specific System Resources are also eligible to participate in the HASP and RTM on an equivalent basis as Generating Units. The quantity (in MWh) of Energy categorized as Interruptible Imports (non-firm imports) can only be submitted through Self-Schedules in the Day-Ahead Market and cannot be incrementally increased in the HASP or RTM. Bids submitted to the Day-Ahead Market for ELS Resources will be applicable for two days after they have been submitted and cannot be changed the day after they have been submitted.</p>	
30.5.2.7.1	<p>30.5.2.7.1 Regulation Up or Regulation Down Bid Information In the case of Regulation Up or Regulation Down, the Ancillary Services Bid or submission to self-provide must also contain: (a) the upward and downward range of generating capacity over which the resource is willing to provide Regulation in ten (10) minutes; (b) the Bid price of the capacity reservation, stated separately for Regulation Up and Regulation Down (\$/MW); and (c) the Bid price (\$) of the Mileage stated separately for Regulation Up and Regulation Down. For submissions to self-provide Regulation Up or Regulation Down, the price for the capacity reservation shall be \$0/MWh and the price for Mileage shall be \$0. In the case of Regulation Up or Regulation Down from Dynamic System Resources, the Ancillary Services Bid must also contain the Contract Reference Number, if applicable. Scheduling Coordinators may include inter-temporal opportunity costs in their Regulation capacity bids, but these inter-temporal opportunity costs must be verifiable. Ancillary Services Bids submitted to the Day-Ahead or Real-Time Market for Regulation need not be accompanied by an Energy Supply Bid that covers</p>	This amendment adds punctuation.

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	<p>the Ancillary Services capacity being offered. A Regulation Down Bid will be erased unless there is an Energy Supply Bid or Energy Self-Schedule at a level that would permit the resource to provide Regulation Down to its lower Regulation Limit. A submission to self-provide Regulation Down will be erased unless there is an Energy Self-Schedule at a level that would permit the resource to provide Regulation Down to its lower Regulation Limit. A Regulation Up Bid will be erased unless there is an Energy Supply Bid or Energy Self-Schedule at a level that would permit the resource to provide Regulation Up within its Regulation Limit. A submission to self-provide Regulation Up will be erased unless there is an Energy Self-Schedule at a level that would permit the resource to provide Regulation Up within its Regulation Limit.</p>	
30.5.2.7.2	<p>30.5.2.7.2 Spinning Reserve Capacity Bid Information In the case of Spinning Reserve capacity, the Ancillary Services Bid must also contain: (a) MW of additional capability synchronized to the system, immediately responsive to system frequency, and available within ten (10) minutes; (b) Bid price of capacity reservation; and (c) an indication whether the capacity reserved would be available to supply Imbalance Eenergy only in the event of the occurrence of an unplanned Outage, a Contingency or an imminent or actual System Emergency (Contingency Flag). In the case of Spinning Reserve capacity from System Resources, the Ancillary Services Bid must also contain: (a) Schedule ID (NERC ID number); and (b) a Contract Reference Number, if applicable. Ancillary Services Bids and Submissions to Self-Provide an Ancillary Services submitted to the Real-Time Market for Spinning Reserves must also submit an Energy Bid that covers the Ancillary Services capacity being offered into the Real-Time Market.</p>	<p>“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change. This amendment also proposes to correct punctuation.</p>
30.5.2.7.3	<p>30.5.2.7.3 Non-Spinning Reserve Capacity In the case of Non-Spinning Reserve, the Ancillary Service Bid must also contain: (a) the MW capability available within ten (10) minutes; (b) the Bid price of the capacity reservation; (c) time of synchronization following notification (minutes); and (d) an indication whether the capacity reserved would be available to supply Imbalance Eenergy only in the event of the occurrence of an unplanned Outage, a Contingency or an imminent or actual</p>	<p>“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change. This amendment also proposes to correct punctuation.</p>

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	<p>System Emergency (Contingency Flag). In the case of Non-Spinning Reserve Capacity from System Resources, the Ancillary Services Bid must also contain: (a) Schedule ID (NERC ID number); and (b) a Contract Reference Number, if applicable. In the case of Non-Spinning Reserve Capacity from Participating Load within the CAISO Balancing Authority Area, the Ancillary Service Bid must also contain: (a) a Load identification name and Location Code; (b) Demand reduction available within ten (10) minutes; (c) time to interruption following notification (minutes); and (d) maximum allowable curtailment duration (hour). In the case of Aggregated Participating Load, and Proxy Demand Resources, Scheduling Coordinators must submit Bids using a Generating Unit, Physical Scheduling Plant Resource ID, or Resource ID for the Proxy Demand Resource for the Demand reduction capacity of the Aggregated Participating Load through a Bid to provide Non-Spinning Reserve or a Submission to Self-Provide an Ancillary Service for Non-Spinning Reserve. Ancillary Services Bids and Submissions to Self-Provide an Ancillary Services submitted to the Real-Time Market for Non-Spinning Reserves must also submit an Energy Bid that covers the Ancillary Services capacity being offered into the Real-Time Market.</p>	
30.5.7	<p>30.5.7 30.6.2 E-Tag Rules and Treatment of Intertie Schedules</p> <p>In addition to complying with all generally applicable E-Tagging requirements, Scheduling Coordinators must submit their E-tags consistent with the requirements specified in this Section 30.5.7. If a Scheduling Coordinator receives an intra-hour Schedule change, then the Scheduling Coordinator must, by twenty minutes before the start of the FMM interval to which the Schedule change applies, ensure that an updated energy profile reflects the change. Absent extenuating circumstances, the CAISO automatically updates Energy profiles on E-tags for Energy Schedules that change from HASP to the FMM within a Trading Hour. In performing this service for a Scheduling Coordinator, the CAISO does not assume any responsibility for compliance with any E-tag requirements or obligations to which the Scheduling Coordinator is subject. The changed energy profile will apply for the balance of the operating hour unless it is</p>	<p>The CAISO is moving Section 30.6.2 entitled “E-Tag Rules and Treatment of Intertie Schedules” to Section 30.5.7 as two separate tariff sections are currently assigned to the same eTariff record and tariff section number.</p>

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	subsequently changed by a further updated energy profile.	
30.5.7.1	<p>30.5.7.130.6.2.1 Self-Scheduled Hourly Blocks By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of Self-Scheduled Hourly Blocks. The transmission profile must be greater than or equal to the Energy profile, and the Energy profile must equal the Self-Scheduled Hourly Block. The CAISO may modify the Energy profile due to Reliability related curtailments.</p>	The CAISO is moving Section 30.6.2.1 entitled “Self-Scheduled Hourly Blocks” to Section 30.5.7.1 as two separate tariff sections are currently assigned to the same eTariff record and tariff section number.
30.5.7.2	<p>30.5.7.230.6.2.2 Variable Energy Resource Self-Schedule By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of a Variable Energy Resource Self-Schedule. The transmission profile must be greater than or equal to the Energy profile, and the Energy profile must equal the Variable Energy Resource Self-Schedule. The CAISO may modify the Energy profile due to Reliability related curtailments.</p>	The CAISO is moving Section 30.6.2.2 entitled “Variable Energy Resource Self-Schedule” to Section 30.5.7.2 as two separate tariff sections are currently assigned to the same eTariff record and tariff section number.
30.5.7.3	<p>30.5.7.330.6.2.3 Economic Hourly Bid By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of an Economic Hourly Block Bid. The transmission profile must be greater than or equal to the Energy profile, and the Energy profile must equal the Economic Hourly Block Bid as awarded through HASP. The CAISO may modify the Energy profile due to Reliability related curtailments.</p>	The CAISO is moving Section 30.6.2.3 entitled “Economic Hourly Bid” to Section 30.5.7.3 as two separate tariff sections are currently assigned to the same eTariff record and tariff section number.
30.5.7.4	<p>30.5.7.430.6.2.4 Economic Hourly Block Bid with Intra-Hour Option By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of an Economic Hourly Block Bid. The transmission profile must be greater than or equal to the Energy profile, and the Energy profile must equal the Economic Hourly Block Bid as awarded through HASP. The CAISO may modify the Energy profile due to Reliability related curtailments. In the case of an intra-hour redispatch from the FMM, the CAISO may increment or decrement the Energy profile to correspond to the intra-hour redispatch.</p>	The CAISO is moving Section 30.6.2.4 entitled “Economic Hourly Block Bid with Intra-Hour Option” to Section 30.5.7.4 as two separate tariff sections are currently assigned to the same eTariff record and tariff section number.

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30.5.7.5	<p>30.5.7.530.6.2.5 FMM Economic Bid</p> <p>By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of a FMM Economic Bid. The transmission profile must be greater than or equal to the maximum bid-in capacity for the Trading Hour, and the Energy profile must equal the MWs awarded for the first FMM interval of the Operating Hour. If the Scheduling Coordinator intends to limit its participation in the FMM to the quantity in the HASP advisory energy schedule (including zero), the Scheduling Coordinator may update its transmission profile to the maximum amount it wants to make available to the FMM prior to the start of the binding FMM optimization, which is no earlier than thirty-seven and a half minutes before the applicable Trading Hour. If the Scheduling Coordinator does not have a transmission profile greater than or equal to its advisory Energy schedule, then the CAISO will limit the schedule for Energy in the FMM so that it does not exceed amounts greater than what is listed in the transmission profile. Cleared FMM Economic Bids are eligible for Bid Cost Recovery as specified in Section 11.8.</p>	<p>The CAISO is moving Section 30.6.2.5 entitled “FMM Economic Bid” to Section 30.5.7.5 as two separate tariff sections are currently assigned to the same eTariff record and tariff section number.</p>
30.6.2	<p>30.6.2 Bidding and Scheduling of RDRRs</p> <p>Unless otherwise specified in the CAISO Tariff and applicable Business Practice Manuals, and subject to Section 30.6.3, the CAISO will treat Bids for Energy on behalf of Reliability Demand Response Resources like Bids for Energy on behalf of other types of supply resources. A Scheduling Coordinator for a Demand Response Provider representing a Reliability Demand Response Resource may submit Energy Bids for the Reliability Demand Response Resource only in the Day-Ahead Market and in the Real-Time Market, but may not submit Energy Self-Schedules for the Reliability Demand Response Resource, may not Self-Provide Ancillary Services from the Reliability Demand Response Resource, and may not submit RUC Availability Bids or Ancillary Service Bids for the Reliability Demand Response Resource. The Demand Response Provider’s Demand Response Services for Reliability Demand Response Resources will be bid separately and independently from the LSE’s underlying Demand Bid.</p>	<p>The CAISO is submitting an eTariff record for Section 30.6.2 to read as “Bidding and Scheduling of RDRRs,” as there are currently two separate tariff sections assigned to the same tariff section number and same eTariff record.</p>

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	<p>30.6.2.1 Bidding and Scheduling of RDRRs in the Real-Time Market</p> <p>30.6.2.1.1 Limitations on Obligation to Bid in the Real-Time Market</p> <p>Within each Reliability Demand Response Services Term, any capacity of a Reliability Demand Response Resource that remains uncommitted after the Day-Ahead Market shall be bid in the Real-Time Market in order to be available to provide Demand Response Services in Real-Time until such time as the Reliability Demand Response Resource has reached the RDRR Availability Limit for the Reliability Demand Response Services Term. Within each Reliability Demand Response Services Term, any capacity of a Reliability Demand Response Resource that remains uncommitted after the Day-Ahead Market may be (but is not required to be) bid in the Real-Time Market in order to be available to provide Demand Response Services in Real-Time after the Reliability Demand Response Resource has reached the RDRR Availability Limit during the Reliability Demand Response Services Term.</p> <p>30.6.2.1.2 Real-Time Dispatch Options</p> <p>For purposes of bidding and scheduling in the Real-Time Market, each Scheduling Coordinator for a Demand Response Provider representing a Reliability Demand Response Resource shall select either the Marginal Real-Time Dispatch Option or the Discrete Real-Time Dispatch Option prior to the start of the initial Reliability Demand Response Services Term applicable to the Reliability Demand Response Resource. The selection for each Reliability Demand Response Resource shall remain in effect until such time as the Scheduling Coordinator for the Reliability Demand Response Resource chooses to change its selection from the Marginal Real-Time Dispatch Option to the Discrete Real-Time Dispatch Option or vice versa, in which case the change in selection shall go into effect at the start of the next Reliability Demand Response Services Term applicable to the Reliability Demand Response Resource. A Reliability Demand Response Resource that is subject to either the Marginal Real-Time Dispatch Option or the Discrete Real-Time Dispatch Option</p>	

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	<p>shall have Minimum Load Costs of zero (0) dollars registered in the Master File.</p> <p>30.6.2.1.2.1 Marginal Real-Time Dispatch Option A Reliability Demand Response Resource that is subject to the Marginal Real-Time Dispatch Option: (a) May submit either a single-segment Bid or a multi-segment bid in the Real-Time Market that must be at least ninety-five (95) percent of the applicable maximum Bid price and can be no greater than one hundred (100) percent of the applicable maximum Bid price set forth in Section 39.6.1.1. (b) Shall be dispatched as a marginal resource if it is dispatched by the CAISO.</p> <p>30.6.2.1.2.2 Discrete Real-Time Dispatch Option A Reliability Demand Response Resource that is subject to the Discrete Real-Time Dispatch Option: (a) May submit only a single-segment Bid in the Real-Time Market that must be at least ninety-five (95) percent of the applicable maximum Bid price and can be no greater than one hundred (100) percent of the applicable maximum Bid price set forth in Section 39.6.1.1. (b) Shall be dispatched as a discrete (non-marginal) resource if it is dispatched by the CAISO.</p>	
34.1.1	<p>34.1.1 Day-Ahead Market Results as Inputs to the Real-Time Market All of the Real-Time Market processes utilize results produced by the Day-Ahead Market for each Trading Hour of the Trading Day, including the combined commitments contained in the Day-Ahead Schedules, Day-Ahead Ancillary Services Awards, and RUC Awards. Although the RTM utilizes such These DAM results as an are inputs to the RTM, and the The transactions associated with these DAM results are settled based on the relevant DAM prices, such transactions and are not deemed performed until in the Real-Time Market.</p>	The CAISO is proposing to modify language in order to provide clarity about when transactions are in the day-ahead market are being deemed to be performed.
34.1.6.3	<p>34.1.6.3 [Not Used]Participating Intermittent Resources under PIRP Protective Measures For Participating Intermittent Resources that have elected PIRP Protective Measures, the CAISO will use a Self Schedule of MWhs that is equal to the MWhs specified in the output forecast for that resource created by the CAISO ninety (90) minutes</p>	This amendment removes the expired tariff language pertaining to PIRP Protective Measures.

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	before the applicable Trading Hour to clear the resource in the RTM.	
34.5.3	<p>34.5.3 Real-Time Manual Dispatch RTMD mode of operation for RTD is a merit-order run activated upon CAISO Operator request as a backup process in case the normal RTED process fails to converge. The RTMD run will provide the CAISO Operator a list of resources and quantity of MW available for Dispatch in merit-order based on Operational Ramp Rate but otherwise ignores Transmission Losses and Transmission Constraints. The CAISO Operator may dispatch resources from the list by identifying the quantity of FMM <u>Instructed Imbalance Energy or RTD Instructed</u> Imbalance Energy that is required for the system and/or directly selecting resources from the merit order taking into consideration actual operating conditions. After Dispatches have been selected, reviewed and accepted by the CAISO Operator, Dispatch Instructions will be communicated in accordance with Section 6.3. While the RTMD mode is being used for Dispatch a uniform five-minute MCP will be produced for all PNodes based on the merit order Dispatch. Until RTMD is actually run and RTMD-based Dispatch Instructions are issued after RTED fails to converge, all five-minute Dispatch Interval LMPs will be set to the last LMP at each Node produced by the last RTED run that converged.</p>	<p>“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change.</p>
34.8(b)(ii)	<p>34.8 Dispatch Instructions to Units, Participating Loads, PDRs, and RDRRs</p> <p style="text-align: center;">* * * *</p> <p>(b) Energy, which may be used for: (i) Congestion relief; (ii) provision of limbalance Eenergy; or</p> <p style="text-align: center;">* * * *</p>	<p>“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change.</p>
34.8(h)	<p>(h) Dispatch of Reliability Demand Response Resources pursuant to Section 34. 1822; or</p> <p style="text-align: center;">* * * *</p>	<p>Tariff Section 34.18 entitled “Real-Time Dispatch of RDRRs” is being moved to Section 34.22 and this amendment will change the tariff cross-reference to that section.</p>
34.11.3	<p>34.11.3 Transmission-Related Modeling Limitations The CAISO may also manually Dispatch resources in addition to or instead of resources with a Day-Ahead Schedule or dispatched by the RTM optimization software, during or prior to the Real-Time as appropriate, to address transmission-related</p>	<p>This amendment proposes to correct a tariff cross-reference as section 34.9.3 was moved to section 34.11.3 in the compliance with Order No. 764 tariff amendment filing.</p>

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	<p>modeling limitations in the Full Network Model. Transmission-related modeling limitations for the purposes of Exceptional Dispatch, including for settlement of such Exceptional Dispatch as described in Section 11.5.6, shall consist of any FNM modeling limitations that arise from transmission maintenance, lack of Voltage Support at proper levels as well as incomplete or incorrect information about the transmission network, for which the Participating TOs have primary responsibility. The CAISO shall also manually Dispatch resources under this Section 34.11.3 in response to system conditions including threatened or imminent reliability conditions for which the timing of the Real-Time Market optimization and system modeling are either too slow or incapable of bringing the CAISO Controlled Grid back to reliable operations in an appropriate time-frame based on the timing and physical characteristics of available resources to the CAISO. All reliability-based Exceptional Dispatch Instructions for Reliability Demand Response Resources, including for testing, will be issued under this Section 34.119.3.</p>	
<p>34.13.2 (1st paragraph)</p>	<p>34.13.2 Failure to Conform to Dispatch Instructions In the event that, in carrying out the Dispatch Instruction, an unforeseen problem arises (relating to plant operations or equipment, personnel or the public safety), the recipient of the Dispatch Instruction must notify the CAISO or, in the case of a Generator, the relevant Scheduling Coordinator immediately. The relevant Scheduling Coordinator shall notify the CAISO of the problem immediately. If a resource is unavailable or incapable of responding to a Dispatch Instruction, or fails to respond to a Dispatch Instruction in accordance with its terms, the resource shall be considered to be non-conforming to the Dispatch Instruction unless the resource has notified the CAISO of an event that prevents it from performing its obligations within thirty (30) minutes of the onset of such event through a submission in the CAISO's outage management system pursuant to Section 9 log entry. Notification of non-compliance via the Automated Dispatch System (ADS) will not supplant nor serve as the official notification mechanism to the CAISO. If the resource is considered to be non-conforming as described above, the Scheduling Coordinator for the resource concerned shall be subject to Uninstructed Imbalance Energy as specified in Section</p>	<p>The CAISO is proposing to clarify language regarding a Scheduling Coordinator's submission to the CAISO's outage management system pursuant to Section 9 of the CAISO tariff. Additionally, the CAISO is proposing to remove language pertaining to Uninstructed Deviation Penalties assessed under Section 11.23 of the CAISO tariff. The CAISO does not have authority to assess Uninstructed Deviation Penalties. Section 11.23 states that the CAISO shall not charge any Uninstructed Deviation Penalties until the Commission issues an order authorizing the CAISO to do so.</p>

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	<p>11.5.2 and Uninstructed Deviation Penalties as specified in Section 11.23. This applies whether any Ancillary Services concerned are contracted or Self-Provided. For a Non-Dynamic System Resource Dispatch Instruction prior to the Trading Hour, the Scheduling Coordinator shall inform the CAISO of its ability to conform to a Dispatch Instruction via ADS. The Non-Dynamic System Resource has the option to accept, partially accept, or decline the Dispatch Instruction, but in any case must respond within the timeframe specified in a Business Practice Manual. The Non-Dynamic System Resource can change its response within the indicated timeframe. If a Non-Dynamic System Resource does not respond within the indicated timeframe, the Dispatch Instruction will be considered accepted. A decline of such a Non-Dynamic System Resource for a Dispatch Instruction received at least forty (40) minutes prior to the Trading Hour will be subject to Uninstructed Deviation Penalties as specific in Section 11.23. A decline of such a Non-Dynamic System Resource for a Dispatch Instruction received less than forty (40) minutes prior to the Trading Hour will not be subject to Uninstructed Deviation Penalties. A Non-Dynamic System Resource that only partially accepts a Dispatch Instruction is subject to Uninstructed Deviation Penalties for the portion of the Dispatch Instruction that is declined.</p> <p style="text-align: center;">* * * *</p>	
34.13.2 (2 nd paragraph)	<p style="text-align: center;">* * * *</p> <p>When a resource demonstrates that it is not following Dispatch Instructions, the RTM will no longer assume that the resource will ramp from its current output level. The RTM assumes the resource to be “non-compliant” if it is deviating its five (5)-minute Ramping capability for more than N intervals by a magnitude determined by the CAISO based on its determination that it is necessary to improve the calculation of the expected h imbalance Eenergy as further defined in the BPM. When a resource is identified as “non-compliant,” RTM will set the Dispatch operating target for that resource equal to its actual output in the Market Clearing software such that the persistent error does not cause excessive AGC action and consequently require CAISO to take additional action to comply with reliability requirements. Such a resource will be considered to have returned to compliance when</p>	<p>“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change. Additionally, the CAISO is proposing to correct punctuation.</p>

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	<p>the resource's State Estimator or telemetry value (whichever is applicable) is within the above specified criteria. During the time when the resource is "non-compliant," the last applicable Dispatch target shall be communicated to the Scheduling Coordinator as the Dispatch operating target. The last applicable Dispatch target may be (i) the last Dispatch operating target within the current Trading Hour that was instructed prior to the resource becoming "non-compliant" or (ii) the Day-Ahead Schedule or (iii) awarded Self-Schedule Hourly Block depending on whether the resource submitted a Bid and the length of time the resource was "non-compliant" or (iv) for a Dynamic System Resource or a Pseudo-Tie Generating Unit that is an Eligible Intermittent Resource, the most recently available telemetry for the actual output. During the time the resource is deemed to be "non-compliant" the CAISO will suspend the resource's eligibility for Ancillary Services and Uncertainty Awards.</p>	
34.17.1(b)	<p>34.17.1 Resource Constraints * * * *</p> <p>(b) Forbidden Operating Regions. When ramping in the Forbidden Operating Region, the implicit ramp rate will be used as determined based on the time it takes for the resource to cross its Forbidden Operating Region. A resource can only be ramped through a Forbidden Operating Region after being dispatched into a Forbidden Operating Region. The CAISO will not Dispatch a resource within its Forbidden Operating Regions in the Real-Time Market, except that the CAISO may Dispatch the resource through the Forbidden Operating Region in the direction that the resource entered the Forbidden Operating Region at the maximum applicable Ramp Rate over consecutive Dispatch Intervals. A resource with a Forbidden Operating Region cannot provide Ancillary Services in a particular fifteen (15) minute Dispatch Interval unless that resource can complete its transit through the relevant Forbidden Operating Region within that particular Dispatch Interval.</p>	<p>This amendment corrects a typographical error to reflect the term "Operating" rather than "Operation."</p>
34.17.1(c)	<p>(c) Operational Ramp Rates and Start-Up Times. The Operational Ramp Rate for resources shall be used as the basis for all Dispatch Instructions, provided that the Dispatch Operating Point for resources that are providing Regulation remains within their applicable Regulating Range. The Regulating Range will</p>	<p>"Imbalance Energy" was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change.</p>

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	<p>limit the Ramping of Dispatch Instructions issued to resources that are providing Regulation. The Ramp Rate for Non-Dynamic System Resources cleared in the FMM will not be observed. Rather, the ramp of the Non-Dynamic System Resource will respect inter-Balancing Authority Area Ramping conventions established by WECC. Ramp Rates for Dynamic System Resources will be observed like Participating Generators in the RTD. Each Energy Bid shall be Dispatched only up to the amount of Imbalance Eenergy that can be provided within the Dispatch Interval based on the Operational Ramp Rate. The Dispatch Instruction shall consider the relevant Start-Up Time as, if the resource is off-line, the relevant Operational Ramp Rate function, and any other resource constraints or prior commitments such as Schedule changes across hours and previous Dispatch Instructions. The Start-Up Time shall be determined from the Start-Up Time function and when the resource was last shut down. The Start-Up Time shall not apply if the corresponding resource is on-line or expected to start.</p> <p style="text-align: center;">* * * *</p>	
34.17.1(f)	<p style="text-align: center;">* * * *</p> <p>(f) Operating (Spinning and Non-Spinning) Reserve. The SCED shall Dispatch Spinning and Non-Spinning Reserve subject to the limitations set forth in Section 34.18.23.</p>	This amendment corrects a tariff cross-reference as section 34.18.3 does is noted as “[Not Used,” and the correct cross-reference is section 34.18.2.
34.17.1(g)	<p>(g) Non-Dynamic System Resources. If Dispatched, each Non-Dynamic System Resource flagged for hourly pre-dispatch in the next Trading Hour shall be Dispatched to operate at a constant level over the entire Trading Hour. The HASP shall perform the hourly pre-dispatch for each Trading Hour once prior to the Operating Hour. The hourly pre-dispatch shall not subsequently be revised by the SCED and the resulting HASP Block Intertie Schedules are financially binding and are settled pursuant to Section 11.54.</p>	This amendment corrects a tariff cross-reference.
34.17.4	<p>34.17.4 Inter-Hour Dispatch of Resources with Real-Time Energy Bids Dispatch Instructions associated with the ramp between the Real-Time Market Bid in one hour and the Real-Time Market Bid in the immediately succeeding Trading Hour shall be determined optimally by the SCED if the CAISO has Bids for either or both relevant Operating Hours. For any Operating Hour(s) for which</p>	“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to align the tariff with that change.

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	<p>Bids have been submitted Dispatch Instructions will be optimized such that the Dispatch Operating Point is within the Bid range(s). For any Operating Hour without submitted Bids, Dispatch Instructions will be optimized such that the Dispatch Operating Point conforms to the Schedule within the Operating Hour. Energy resulting from the Standard Ramp shall be deemed Standard Ramping Energy and will be settled in accordance with Section 11.5.1. Energy resulting from any ramp extending beyond the Standard Ramp will be deemed Ramping Energy Deviation and will be settled in accordance with Section 11.5.1. Energy delivered or consumed as a result of CAISO Dispatch of a resource's Energy Bid in one Operating Hour to a Dispatch Operating Point such that the resource cannot return to its successive Operating Hour Schedule or to an infra-marginal operating point by the beginning of the next Operating Hour is Residual Imbalance Energy and shall be settled as <u>RTD</u> Instructed Imbalance Energy as provided for in Section 11.5.1 and also may be eligible for recovery of its applicable Energy Bid Costs in accordance with Section 11.8. Similarly, Energy delivered or consumed as a result of CAISO Dispatch of a resource's Energy Bid in a future Operating Hour to a Dispatch Operating Point different from its current Operating Point prior to the end of the current Operating Hour is also considered Residual Imbalance Energy and shall be settled as <u>RTD</u> Instructed Imbalance Energy as provided for in Section 11.5.1 and also may be eligible for recovery of its applicable Energy Bid Costs in accordance with Section 11.8. When Ramping Energy Deviation and Residual Imbalance Energy coexist within a given Dispatch Interval, the Ramping Energy Deviation shall be the portion of <u>RTD</u> Instructed Imbalance Energy that is produced or consumed within the Schedule-change band defined by the accepted RTM Bids of the two consecutive Settlement Periods; the Residual Imbalance Energy shall be the portion of <u>RTD</u> Instructed Imbalance Energy that is produced or consumed outside the Schedule-change band.</p>	
34.17.6 (1 st paragraph)	<p>34.17.6 Intra-Hour Exceptional Dispatches For the special case where an Exceptional Dispatch begins in the new hour and the rules above would result in the violation of the resource's inter-temporal constraint(s), the following rules are</p>	<p>"Exceptional Dispatch Energy" was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO is proposing to</p>

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	<p>applied and the Energy is settled as <u>FMM Exceptional Dispatch or RTD</u> Exceptional Dispatch Energy as described in Section 11.5.6.</p> <p style="text-align: center;">* * * *</p>	<p>align the tariff with that change.</p>
<p>34.20.1 (1st paragraph)</p>	<p>34.20.1 General Principles <u>FMM Instructed Imbalance Energy and RTD</u> Instructed <u>Imbalance Energy shall be paid or charged at the applicable FMM or RTD LMP.</u> and Uninstructed Imbalance Energy shall be paid or charged the applicable FMM or RTD LMP. These prices are determined using the Dispatch Interval LMPs. The Dispatch Interval LMPs shall be based on the Bid of the marginal Generating Units, System Units, Participating Loads, <u>Reliability Demand Response Resources</u>, and Proxy Demand Resources dispatched by the CAISO to increase or reduce Demand or Energy output in each Dispatch Interval as provided in Section 34.20.2.1.</p> <p style="text-align: center;">* * * *</p>	<p>“Instructed Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO also proposes to add language that was inadvertently omitted in overlapping tariff amendment filings in Docket Nos. ER13-2192 and ER14-480. The CAISO is proposing to align the tariff with those changes.</p>
<p>34.20.2.2</p>	<p>34.20.2.2 Computation For each Dispatch Interval, the CAISO will compute updated h imbalance Eenergy needs and will Dispatch Generating Units, System Units, Dynamic System Resources, Participating Load, Reliability Demand Response Resources, and Proxy Demand Resources according to the CAISO's SCED during that time period to meet h imbalance Eenergy requirements. The RTM transactions will be settled at the Dispatch Interval LMPs in accordance with Section 11.5.</p>	<p>“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change.</p>
<p>34.22</p>	<p>34.2234.18 Real-Time Dispatch of RDRRs The CAISO may issue an Exceptional Dispatch Instruction for the Reliability Demand Response Resource for reliability or to perform a test as provided in Section 34.119.3. An entity other than the CAISO that has a contractual or tariff-based right to do so may dispatch a Reliability Demand Response Resource in Real-Time in order to (1) mitigate a local transmission or distribution system emergency pursuant to applicable state or local programs, contracts, or regulatory requirements not set forth in the CAISO Tariff or (2) perform a test. If an entity other than the CAISO dispatches a Reliability Demand Response Resource in Real-Time in order to mitigate a local transmission or distribution system emergency or perform a test, the Scheduling</p>	<p>The CAISO is moving Section 34.18 entitled “Real-Time Dispatch of RDRRs” to Section 34.22 as two separate tariff sections are currently assigned to the same eTariff record and tariff section number. The CAISO is also proposing to correct a tariff cross-reference that was moved in the CAISO’s compliance with Order No. 764 tariff amendment filing.</p>

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	Coordinator for the Demand Response Provider representing the Reliability Demand Response Resource shall immediately inform the CAISO, through the CAISO's Outage reporting system, that such dispatch has occurred or will occur and the MW amount of the dispatch.	
34.22.1	<p>34.22.134.18.1 Testing of RDRRs</p> <p>The CAISO may issue one (1) unannounced Exceptional Dispatch Instruction per year to each Reliability Demand Response Resource pursuant to Section 34.119.2 in order to test the availability and performance of the Reliability Demand Response Resource. The Demand Response Provider representing the Reliability Demand Response Resource may also test its Reliability Demand Response Resources in coordination with the CAISO. Any Demand Response Provider initiated testing will not trigger any CAISO settlement. The CAISO will share the results of all tests of the Reliability Demand Response Resource with the applicable Local Regulatory Authority. All tests of the Reliability Demand Response Resource shall count toward its RDRR Availability Limit. If, prior to the performance of a CAISO unannounced yearly test, the Reliability Demand Response Resource provides Demand Response Services in that year, its provision of Demand Response Services will eliminate the need for that year's test. Testing of Reliability Demand Response Resources will be conducted as described in the applicable Operating Procedure or Business Practice Manual.</p>	The CAISO is moving Section 34.18.1 entitled "Testing of RDRRs" to Section 34.22.1 as two separate tariff sections are currently assigned to the same eTariff record and tariff section number. The CAISO is also proposing to correct a tariff cross-reference that was moved in the CAISO's compliance with Order No. 764 tariff amendment filing.
39.10.1	<p>39.10.1 Measures for Resources Eligible for Supplemental Revenues</p> <p>In all cases where a resource is subject to Mitigation Measures under Section 39.10, and the resource is eligible for supplemental revenues pursuant to Section 39.10.3, <u>FMM Exceptional Dispatch Energy or RTD</u> Exceptional Dispatch Energy delivered by the resource shall be settled as set forth in either Section 11.5.6.7.1 or Section 11.5.6.7.3, whichever is applicable.</p>	"Exceptional Dispatch Energy" was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change.
39.10.2	<p>39.10.2 Resources Not Eligible for Supplemental Revenues</p> <p>In all cases where a resource is subject to Mitigation Measures under Section 39.10, and the resource is not eligible for supplemental revenues pursuant to Section 39.10.3, <u>FMM Exceptional Dispatch Energy or RTD</u> Exceptional Dispatch</p>	"Exceptional Dispatch Energy" was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change.

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	Energy delivered by the resource shall be settled as set forth in either Section 11.5.6.7.2 or Section 11.5.6.7.3, whichever is applicable.	
39.10.5	<p>39.10.5 Calculation of Exceptional Dispatch Supplemental Revenues</p> <p>The amount of Exceptional Dispatch supplemental revenues accrued by a resource within any 30-day period as defined in Section 39.10.4 shall be a running total of the sum of supplemental revenues received during that 30-day period. The calculation of supplemental revenues accrued by a resource within a 30-day period is based on the higher of (a) the Energy Bid price for the resource minus the Default Energy Bid price for the resource or (b) the Resource Specific Settlement Interval relevant FMM or RTD LMP minus the Default Energy Bid price for the resource. The greater of (a) or (b) is multiplied by the amount of Energy provided by the resource under Exceptional Dispatch, and the results of that multiplication are summed across the successive hours of the 30-day period. Once the resource has reached the limit on supplemental revenues described in Section 39.10.4 based on the calculation above, then the Settlement for the resource will be as provided in Section 11.5.6.7.2 and the resource will not be eligible for additional supplemental revenues for the rest of the 30-day period.</p>	“Resource Specific Settlement Interval” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change.
Appendix A - Ancillary Services Obligation or AS Obligation	<p>- Ancillary Services Obligation or AS Obligation</p> <p>A Scheduling Coordinator's hourly obligation for Regulation Down, Regulation Up, Spinning Reserves, and Non-Spinning Reserves calculated pursuant to Sections 11.10.2.1.3, 11.10.2.2.2, 11.10.3.32, and 11.10.4.32, respectively.</p>	This amendment corrects tariff cross-references.
Appendix A - Dispatch Interval LMP	<p>- Dispatch Interval LMP</p> <p>The price of Imbalance Energy energy determined at each Dispatch Interval in accordance with Section 11.5.4.</p>	“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change.
Appendix A - Dispatch Operating Point	<p>- Dispatch Operating Point</p> <p>The expected operating point of a resource that has received a Dispatch Instruction. The resource is expected to operate at the Dispatch Operating Point after completing the Dispatch Instruction, taking into account any relevant Ramp Rate and time delays. Energy expected to be produced or consumed above or</p>	“Instructed Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change.

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	below the Day-Ahead Schedule in response to a Dispatch Instruction constitutes <u>FMM Instructed Imbalance Energy or RTD</u> Instructed Imbalance Energy. For resources that have not received a Dispatch Instruction, the Dispatch Operating Point defaults to the corresponding Day-Ahead Schedule.	
Appendix A - Dynamic Scheduling Host Balancing Authority Operating Agreement	<p>- Dynamic Scheduling Host Balancing Authority Operating Agreement</p> <p>An agreement entered into between the CAISO and a Host Balancing Authority governing the terms of dynamic scheduling between the <u>two Balancing Authorities where one of the Balancing Authorities is designated as the</u> Host Balancing Authority and the CAISO in accordance with the Dynamic Scheduling Protocol set forth in Appendix M, a pro forma version of which agreement is set forth in Appendix B.9.</p>	This amendment is to conform the Dynamic Scheduling Protocol to be consistent with NERC/WECC standards, which allows the Balancing Authorities to decide which Balancing Authority will be responsible for ancillary services.
Appendix A - FMM Instructed Imbalance Energy (FMM IIE)	<p>- FMM Instructed Imbalance Energy or (FMM IIE)</p> <p>The <u>accounted for energy resulting from the difference between a resource's portion of Imbalance Energy resulting from</u> Day-Ahead Schedules or EIM Base Schedules and FMM Schedules determined pursuant to Section 11.5.1.1.</p>	"Imbalance Energy" was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change and to update a tariff cross-reference.
Appendix A - IIE	<p>- [Not Used] IIE</p> <p>Instructed Imbalance Energy</p>	"IIE," the acronym for "Instructed Imbalance Energy," was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change.
Appendix A - IIE Settlement Amount	<p>- [Not Used] IIE Settlement Amount</p> <p>The payment due a Scheduling Coordinator for positive Instructed Imbalance Energy or the charge assessed on a Scheduling Coordinator for negative Instructed Imbalance Energy, as calculated pursuant to Section 11.5.1.</p>	"IIE Settlement Amount" was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change and correct a tariff cross-reference.
Appendix A - PIRP Protective Measures	<p>- [Not Used] PIRP Protective Measures</p> <p>The temporary Settlement treatment delineated in Section 11.12.1 that is provided to Participating Intermittent Resources that qualify to receive such treatment under Section 4.8.1 and that complete their election to receive such treatment no later than thirty (30) days after the effective date of Section 4.8.1.</p>	This amendment removes the expired defined term PIRP Protective Measures from the tariff.
Appendix A	- Ramping Energy Deviation	"Imbalance Energy" was eliminated as a defined

Section	Proposed Revisions	Reason for Change
- Ramping Energy Deviation	<p>The portion of <u>RTD Instructed Imbalance Energy</u> produced or consumed due to deviation from the Standard Ramp because of ramp constraints, Start-Up, or Shut-Down. Ramping Energy Deviation may overlap with Standard Ramping Energy, and both Standard Ramping Energy and Ramping Energy Deviation may overlap with Day-Ahead Scheduled Energy, but <u>not with no-any other Real-Time imbalance energy types</u>IIE subtype. Ramping Energy Deviation may be composed of two parts: a) the part that overlaps with Standard Ramping Energy whenever the DOP crosses the Standard Ramping Energy region; and b) the part that does not overlap with Standard Ramping Energy. The latter part of Ramping Energy Deviation consists only of extra-marginal <u>FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy</u> contained within the hourly schedule change band and not attributed to Exceptional Dispatch or derates. Ramping Energy Deviation does not apply to Non-Dynamic System Resources (including Resource-Specific System Resources). Ramping Energy Deviation is settled as described in Section 11.5.1, <u>and it is included in BCR only for market revenue calculations as provided in Section 11.8.1.4.5.</u></p>	<p>term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change.</p>
Appendix A - Residual Imbalance Energy	<p>- Residual Imbalance Energy Extra-marginal <u>RTD Instructed Imbalance Energy</u> produced or consumed at the start or end of a Trading Hour outside the hourly schedule-change band and not attributed to Exceptional Dispatch. Residual Imbalance Energy is due to a Dispatch Instruction in the previous Trading Hour or a Dispatch Instruction in the next Trading Hour. Residual Imbalance Energy may overlap only with Day-Ahead Scheduled Energy. Residual Imbalance Energy does not apply to Non-Dynamic System Resources (including Resource-Specific System Resources). Residual Imbalance Energy is settled as described in Section 11.5.5 and it is not included in BCR as described in Section 11.8.4.</p>	<p>“IIE,” the acronym for “Instructed Imbalance Energy,” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change.</p>
Appendix A - RTD Imbalance Energy	<p>- RTD Imbalance Energy The deviation of Supply or Demand from FMM Schedule, positive or negative, as measured by metered Generation, <u>metered Load,</u> or Real-Time Interchange Schedules. RTD Imbalance Energy is composed of RTD Instructed Imbalance Energy and Uninstructed Imbalance Energy, <u>or in the case of metered Load from the Day-</u></p>	<p>The CAISO proposes to clarify the definition of the term “RTD Imbalance Energy” in order to be consistent throughout the tariff.</p>

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	Ahead Schedule, as applicable, as Uninstructed Imbalance Energy.	
Appendix A - RTD Instructed Imbalance Energy (RTD IIE)	<p>- RTD Instructed Imbalance Energy (or RTD IIE) The portion of Imbalance accounted for Eenergy resulting from the difference between Dispatch Instructions and the Day-Ahead Schedules and EIM Base Schedules that have not already been accounted for as FMM-Schedules <u>Instructed Imbalance Energy determined pursuant to Section 11.5.1.2.</u></p>	<p>“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change. Additionally, the CAISO is clarifying the language of this definition in order to make it consistent with the definition of FMM Instructed Imbalance Energy.</p>
Appendix A - RTD Optimal Energy	<p>- RTD Optimal Energy Any remaining RTD Instructed Imbalance Energy after accounting for all other RTD Instructed Imbalance Energy subtypes. RTD Optimal Energy does not overlap with FMM Optimal Energy Standard Ramping Energy, Ramping Energy Deviation, Residual Imbalance Energy, RTD Minimum Load Energy, RTD Derate Energy, and RTD Exceptional Dispatch Energy, but it may overlap with Day-Ahead Scheduled Energy, and MSS Load Following Energy. RTD Optimal Energy is indexed against the relevant Energy Bid and sliced by service type, depending on the AS capacity allocation on the Energy Bid. <u>RTD Optimal Energy is also divided into RTD Overlapping Optimal Energy and RTD Non-Overlapping Optimal Energy. Any RTD Optimal Energy slice below or above the Energy Bid has no associated Energy Bid price, and it is not included in BCR as described in Section 11.5.1.1.</u></p>	<p>“Optimal Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change. Also, to create consistency and uniformity throughout the tariff, the CAISO is proposing to spell out the acronym “IIE” for “RTD IIE.”</p>
Appendix A - Settlement Interval Penalty Real-Time LMP	<p>- [Not Used]-Settlement Interval Penalty Location Real-Time LMP he optimal Instructed Imbalance Energy weighted average of the individual Dispatch Interval Real-Time LMPs for the resources in a UDP Aggregation established pursuant to Appendix R.</p>	<p>“Instructed Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change.</p>
Appendix A - Standard Ramping Energy	<p>- Standard Ramping Energy <u>RTD Instructed</u> Imbalance Energy produced or consumed in the first two and the last two Dispatch Intervals due to hourly schedule changes. Standard Ramping Energy is a schedule deviation along a linear symmetric twenty (20)-minute ramp (Standard Ramp) across hourly boundaries. Standard Ramping Energy is always present when there is an hourly schedule change, including resource Start-Ups and Shut-Downs. Standard</p>	<p>“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change.</p>

Section	Proposed Revisions	Reason for Change
	Ramping Energy does not apply to Non-Dynamic System Resources (including Resource-Specific System Resources) and is not subject to Settlement as described in Section 11.5.1.	
Appendix A - Uninstructed Imbalance Energy (UIE)	<p>- Uninstructed Imbalance Energy (or UIE) The portion of <u>RTD</u> Imbalance Energy that is not RTD Instructed Imbalance Energy.</p>	“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change.
Appendix F Schedule 1, Part A, 1.	<p>Part A - Monthly Calculation of Grid Management Charge (GMC)</p> <p style="text-align: center;">* * * *</p> <p>1. The rate for the Market Services Charge will be calculated by dividing the annual GMC revenue requirement allocated to this service category by the forecast annual gross absolute value of MW per hour of Ancillary Services capacity awarded in the Day-Ahead and Real-Time Markets, MWh of Energy cleared in the Day-Ahead market, Virtual Demand Award, Virtual Supply Award, and <u>FMM Instructed Imbalance Energy and RTD</u> Instructed Imbalance Energy, less the forecast annual gross absolute value of such Energy as may be excluded for a load following MSS pursuant to an MSS agreement, Standard Ramping Energy, Regulation Energy, Ramping Energy Deviation, Residual Imbalance Energy, Exceptional Dispatch Energy and Operational Adjustments for the Day-Ahead and Real-Time.</p>	“Instructed Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change.
Appendix F Schedule 3, Section 10.1(a) and (c)	<p>10. Disbursement of Regional Access Charge Revenues. 10.1 Regional Access Charge revenues shall be calculated for disbursement to each Participating TO and Approved Project Sponsor on a monthly basis as follows:</p> <p>(a) the amount determined in accordance with Section 26.1.2 of the CAISO Tariff (“Billed RAC”);</p> <p style="text-align: center;">* * * *</p> <p>(c) if the total Billed RAC in subsection (a) received by the CAISO less the total dollar amounts calculated in in subsection (b)(i) and subsection (b)(ii) is different from zero, the CAISO shall allocate the positive or negative difference among those Participating TOs that are subject to the calculations in subsection (b)(i) based on the ratio of each Participating TO's Regional Transmission Revenue Requirement to the sum of all of those Participating TOs' Regional Transmission Revenue</p>	This amendment corrects a typographical error by deleting the duplicative word “in,” and corrects punctuation.

Section	Proposed Revisions	Reason for Change
	<p>Requirements that are subject to the calculations in subsection (b)(i). This monthly distribution amount is the “RAC Revenue Adjustment.”;</p> <p style="text-align: center;">* * * *</p>	
Appendix F Schedule 6	<p style="text-align: center;">Schedule 6 CPM SCHEDULES FOR CPM DESIGNATIONS UNDER SECTION 43A Monthly CPM Capacity Payment</p> <p>The monthly CPM Capacity Payment shall be calculated by multiplying the monthly shaping factor of 1/12 by the annual effective fixed CPM Capacity price per kW-year in accordance with Section 43A.7.1, unless the Scheduling Coordinator for the CPM Capacity resource has agreed to another price that has been determined in accordance with Section 43.7.2.</p>	This amendment corrects a tariff cross-reference and deletes methodology related to the CAISO’s 2015 Capacity Procurement Mechanism tariff amendment (Docket No. ER15-1783).
Appendix L Section L.2 (Formula)	<p>L.2 ATC Algorithm</p> <p>The ATC algorithm is a calculation used to determine the transfer capability remaining in the physical transmission network and available for further commercial activity over and above already committed uses. The CAISO posts the ATC values in megawatts (MW) to OASIS in conjunction with the Market Close for the Day-Ahead Market and Real-Time Market process.</p> <p>The following OASIS ATC algorithms are used to implement the CAISO ATC calculation for the ATC rated path (Transmission Interface):</p> <p>ATC Calculation For Imports: $ATC = TTC - CBM - TRM - AS \text{ from Imports} - \text{Net Energy Flow} - \text{Hourly Unused TR Capacity}.$</p> <p>ATC Calculation For Exports: $ATC = TTC - CBM - TRM - \text{Net Energy Flow} - \text{Hourly Unused TR Capacity}.$</p> <p>ATC Calculation For Internal Paths 15 and 26: $ATC = TTC - CBM - TRM - \text{Net Energy Flow}$</p> <p style="text-align: center;">* * * *</p>	The CAISO is proposing to remove the formula from Appendix L because it is an anachronism. The ATC algorithm calculations are for inerties (points between two balancing authorities). These paths are entirely within the CAISO’s balancing authority area and have been for quite a few years and there is no need to continue this calculation.

Section	Proposed Revisions	Reason for Change
Appendix L Section L.2 (Chart)	<p style="text-align: center;">* * * *</p> <p>Hourly Total Transfer Capability of a specified Transmission Interface, per path direction, with consideration given to known <u>Transmission</u> Constraints and operating limitations.</p> <p style="text-align: center;">* * * *</p>	<p>“Constraints” was eliminated as a defined term from the CAISO Tariff in the Clarifications tariff amendment in 2010 and was replaced with “Transmission Constraints” as a defined term. The CAISO is proposing to align this Appendix L with that change.</p>
Appendix L Section L.7	<p>L.7 Traditional Planning Methodology to Protect Against Violating Operating Limits</p> <p>After performing Contingency analysis studies, the CAISO next develops the transfer capability and develops procedures, Nomograms, RMR Generation requirements, or other <u>Transmission</u> Constraints to ensure that transfer capabilities respect operating limits.</p>	<p>“Constraints” was eliminated as a defined term from the CAISO Tariff in the Clarifications tariff amendment in 2010 and was replaced with “Transmission Constraints” as a defined term. The CAISO is proposing to align this Appendix L with that change.</p>
Appendix M Section 1.5.4	<p>1.5 OPERATING AND SCHEDULING REQUIREMENTS</p> <p style="text-align: center;">* * * *</p> <p>1.5.4 The CAISO will procure (or allow for self-provision of) Operating Reserves <u>and Regulation</u> for Loads served by imports from Dynamic System Resources, <u>unless otherwise agreed to or as reflected in the Dynamic Scheduling Host Balancing Authority Operating Agreement.</u></p> <p style="text-align: center;">* * * *</p>	<p>Currently, the tariff requires that the host balancing authority (the balancing authority receiving the dynamic import or dynamic export) provides the ancillary services for the dynamic transaction. WECC Standard BAL-002-WECC-2a provides flexibility for the two balancing authorities to decide by agreement. The CAISO is amending Appendix M to provide similar flexibility.</p>
Appendix M Section 1.7.1	<p>1.7 COMPLIANCE, LOSSES, AND FINANCIAL SETTLEMENTS</p> <p>1.7.1 Energy delivered in association with Dynamic System Resources will be subject to all provisions of the CAISO’s Imbalance Eenergy markets, including Uninstructed Deviation Penalties (UDP) (just as is the case with CAISO intra- Balancing Authority Area Generating Units of Participating Generators).</p> <p style="text-align: center;">* * * *</p>	<p>“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change. Also, the CAISO is removing reference to Uninstructed Deviation Penalties (UDP) as the CAISO is not allowed to assess or charge UDP.</p>
Appendix M. Section 1.7.3	<p style="text-align: center;">* * * *</p> <p>1.7.3 All Day-Ahead Market and RTM submitted Dynamic Schedules shall be subject to CAISO Congestion Management and as such may not exceed their transmission reservations in Real-Time (with the exception of intra-hour Dispatch Instructions of the Energy associated with accepted Ancillary Services Bids or Dispatch Instructions for Imbalance Eenergy).</p> <p style="text-align: center;">* * * *</p>	<p>“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change.</p>

Section	Proposed Revisions	Reason for Change
Appendix M Section 1.7.6	<p style="text-align: center;">* * * *</p> <p>1.7.6 A predetermined, mutually agreed, and achievable “PMax-like” fixed MW value will be established for every Dynamic System Resource to be used as the basis for the UDP calculation. Responsible Scheduling Coordinators will be able to report de-rates affecting the Dynamic System Resource via <u>through</u> the CAISO’s SLIC-OO <u>Outage reporting management</u> system.</p> <p style="text-align: center;">* * * *</p>	<p>“SLIC” was eliminated as a defined term from the ISO tariff in the Minimum Load Costs After Re-Rate tariff amendment, and the CAISO proposes to align the tariff with that change.</p>
Appendix M Section 2.5.3	<p>2.5 OPERATING AND SCHEDULING REQUIREMENTS</p> <p style="text-align: center;">* * * *</p> <p>2.5.3 The Balancing Authority receiving the Dynamic Schedule of the export of Energy from the CAISO Balancing Authority Area is responsible for Operating Reserves <u>and Regulation</u> for Loads served by such exports of Energy, <u>unless the receiving Balancing Authority and the CAISO otherwise agree as reflected in the Dynamic Scheduling Host Balancing Authority Operating Agreement.</u></p> <p style="text-align: center;">* * * *</p>	<p>Currently, the tariff requires that the host balancing authority (the balancing authority receiving the dynamic import or dynamic export) provides the ancillary services for the dynamic transaction. WECC Standard BAL-002-WECC-2a provides flexibility for the two balancing authorities to decide by agreement. The CAISO is amending Appendix M to provide similar flexibility.</p>
Appendix M Section 2.6.1	<p>2.6 Compliance, Losses, and Financial Settlements</p> <p>2.6.1 Energy delivered in association with a Dynamic Schedule of an export of Energy from a Generating Unit will be subject to all provisions of the CAISO’s Imbalance E <u>energy</u> markets, including Uninstructed Deviation Penalties (UDP) (just as is the case with CAISO intra-Balancing Authority Area Generating Units of Participating Generators).</p> <p style="text-align: center;">* * * *</p>	<p>“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change. Also, the CAISO is removing reference to Uninstructed Deviation Penalties (UDP) as the CAISO is not allowed to assess or charge UPD.</p>
Appendix M Section 2.6.2	<p style="text-align: center;">* * * *</p> <p>2.6.2 All Day-Ahead Market and RTM submitted Dynamic Schedules shall be subject to CAISO Congestion Management and as such may not exceed their transmission reservations in Real-Time (with the exception of intra-hour Dispatch Instructions for Imbalance E <u>energy</u> issued by the CAISO and responses to the dynamic signal from the Balancing Authority receiving the Dynamic Schedule of the export of Energy).</p> <p style="text-align: center;">* * * *</p>	<p>“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change.</p>

Section	Proposed Revisions	Reason for Change
Appendix Q Section 2.2.5(a) and header	<p>2.2.5 Information Requirements For Participating Intermittent Resource Export Fee * * * *</p> <p>(a) A certification, in the form set forth in a Business Practice Manual, signed by an officer of the Participating Intermittent Resource and its Scheduling Coordinator, identifying (1) the PIR Export Percentage under Section 5.3.2 of this EIRP for resources that have elected PIRP Protective Measures, if any, and basis thereof, and (2) each contract to sell Energy or capacity from the Participating Intermittent Resource, including for each such contract, the counterparty, start and end dates, delivery point(s), quantity in MW, other temporal terms, i.e., seasonal or hourly limitations.</p> <p>* * * *</p>	<p>This amendment removes the expired tariff language pertaining to PIRP Protective Measures. This amendment also proposes to correct a typographical error and un-capitalize the word “For” in the header to be consistent throughout the tariff.</p>
Appendix Q Section 3.1.1.2	<p>3.1.1 Wind Generation Meteorological Station Requirements * * * *</p> <p>3.1.1.2 Each wind Eligible Intermittent Resource shall locate its meteorological station(s) on the windward side of the wind farm. Each wind Eligible Intermittent Resource must install one meteorological station at the average hub height of the wind turbines. The second meteorological station, if any, may be co-located on the primary meteorological station and installed approximately 30 meters below the average hub height. Hub height is the distance from the ground to the center of the turbine axis. <u>If a second meteorological station is required, then it may be so co-located with the primary station, then the second station shall be installed below the primary station. The approximate distance separating the primary station and the secondary station shall be an average of one (1) rotator blade length.</u> Where placement of the meteorological station(s) in accordance with this Eligible Intermittent Resource Protocol would reduce production or violate a local, state, or federal statute, regulation or ordinance, the CAISO, in coordination with any applicable forecast service provider, will coordinate with the Eligible Intermittent Resource to identify an acceptable placement of the meteorological station.</p>	<p>The CAISO is proposing to modify the reference to having the second meteorological station 30 meters below the second station because not every wind turbine is 30 meters tall and this would be inapplicable to some wind turbines.</p>

Section	Proposed Revisions	Reason for Change
Appendix Q Section 3.1.3	<p>3.1.3 Designated Turbines For any wind eligible Intermittent Resource, designated turbines are required to improve forecast accuracy within a wind park. The CAISO shall identify a designated turbine, from which the Eligible Intermittent Resource shall provide nacelle wind speed and generation in MWs <u>wind direction</u> every four seconds. <u>Wind EIRs with a PGA or NS PGA that are operating or have final regulatory approvals to construct as of [[the effective date of this change]] that have wind turbines without nacelle anemometers need not comply with the requirements of this section for Designated Turbines. However, when the wind EIR repowers or replaces a portion of its existing wind turbines, then the Wind EIR must become compliant with the requirements of this section for Designated Turbines.</u></p>	<p>The CAISO has historically received wind speed and wind direction, rather than wind speed and generation. This requirement is a misprint from what the CAISO and participants have been conducting themselves since before this requirement was in the CAISO tariff. When this language was moved from the Business Practice Manual to the tariff, it already included this error. As part of the process of moving this language from the Business Practice Manual to the tariff, the CAISO inadvertently did not move the nacelle anemometer exemption to the CAISO tariff, potentially creating a discrepancy between the tariff and the Business Practice Manual. This change clarifies that such units remain covered by the pre-Order No. 764 legacy treatment which respect to this limited issue.</p>
Appendix Q Section 5.3	<p>5.3 [Not Used] Participating Intermittent Resource Export Fee The rules specified in this Section 5.3 and its subsection applies only to Participating Intermittent Resources that have elected PIRP Protective Measures and do not apply to resources that have not elected for such measures.</p> <p>5.3.1 Exemptions After November 1, 2006, Participating Intermittent Resources shall be subject to the Participating Intermittent Resource Export Fee, as set forth in Schedule 4 of Appendix F, for Energy generated, except to the extent the Participating Intermittent Resource is exempt under one or more of the following conditions:</p> <p>(a) — The owner of a Participating Intermittent Resource, as of November 1, 2006, utilizes the Energy generated from the Participating Intermittent Resource to meet its own Native Load outside the CAISO Balancing Authority Area. Should any Participating Intermittent Resource subject to this exemption increase its PMax set forth in the CAISO's Master File by modification under Section 2.4.2 of this EIRP, the exemption will not apply to the added capacity unless exempt under another</p>	<p>This amendment removes expired tariff language pertaining to PIRP Protective Measures.</p>

Section	Proposed Revisions	Reason for Change
	<p>subsection of this Section 5.3.1.</p> <p>If the Participating Intermittent Resource subject to this exemption changes ownership, the Participating Intermittent Resource Export Fee will apply, except where the prior exempt owner demonstrates that the entire output of the Participating Intermittent Resource continues to be delivered to the exempt owner under a power purchase agreement for the purpose of serving the prior exempt owner's Native Load. The exemption will then continue only for the period of the power purchase agreement as provided in accordance with Section 2.2.5 of this EIRP and cannot exceed the MW quantity originally exempted.</p> <p>(b) — A Participating Intermittent Resource demonstrates in its certification under Section 2.2.5(a) of this EIRP an export contract with a starting term prior to November 1, 2006. An export contract is any power purchase agreement to sell Energy to any entity other than a Load Serving Entity with an obligation under law or franchise to serve Demand within the CAISO Balancing Authority Area.</p> <p>The exemption will apply to any extension of the current export contract through an evergreen or other existing extension provision. The exemption terminates upon termination of the export contract. Should any Participating Intermittent Resource subject to this exemption increase its PMax set forth in the CAISO's Master File by modification under Section 2.4.2 of this EIRP, the exemption will apply only to Energy generated up to the contract quantity, unless the Participating Intermittent Resource demonstrates a basis for exemption under subsection (c) for the expanded capacity.</p> <p>(c) — A Participating Intermittent Resource demonstrates in its certification under Section 2.2.5(a) of this EIRP a contract to sell Energy to a Load Serving Entity with Native Load within the CAISO Balancing Authority Area. Energy service providers with contractual obligations with customers within the CAISO Balancing Authority Area would be deemed a Load Serving Entity with an obligation to serve Native Load within the CAISO Balancing Authority Area.</p> <p>The exemption will apply to any extension of the current contract through an evergreen or other existing extension provision. The exemption terminates upon termination of the contract. Should</p>	

Section	Proposed Revisions	Reason for Change
	<p>any Participating Intermittent Resource subject to this exemption increase its PMax set forth in the CAISO's Master File by modification under Section 2.4.2 of this EIRP, the exemption will continue to apply only to Energy generated up to the contract quantity unless the Participating Intermittent Resource demonstrates a basis for exemption under this subsection (c) for the expanded capacity.</p> <p>5.3.2—Participating Intermittent Resource Export Percentage Based on the information required in Section 2.2.5 of this EIRP and application of the exemptions to the Participating Intermittent Resource Export Fee in Section 5.3.1 of this EIRP, the CAISO will determine a PIR Export Percentage for each Participating Intermittent Resource that will be calculated as the ratio of the Participating Intermittent Resource's PMax in the CAISO Master File minus the MW, subject to an exemption under Section 5.3.1 of this EIRP on a MW basis to the Participating Intermittent Resource's PMax in the CAISO Master File. For example, a Participating Intermittent Resource with a PMax of 100 MW and a contract with a CAISO Balancing Authority Area Load Serving Entity for 40 MW would have a PIR Export Percentage of $(100 - 40) / 100 = 60\%$. A Participating Intermittent Resource with a PIR Export Percentage greater than zero (0) will be deemed an Exporting Participating Intermittent Resource. The CAISO will notify the Participating Intermittent Resource and its Scheduling Coordinator of the facility's PIR Export Percentage. Any dispute regarding the CAISO's determination of the PIR Export Percentage shall be subject to the dispute resolution procedures under Section 13 of the CAISO Tariff.</p> <p>5.3.3—Monthly Application of Participating Intermittent Resource Export Fee Each month the CAISO will charge Exporting Participating Intermittent Resources the Participating Intermittent Resource Export Fee, as set forth in Schedule 4 of Appendix F.</p> <p>5.3.4—Allocation of Credit for Participating Intermittent Resource Export Fees Received Payments received by the CAISO from application of the Participating Intermittent Resource Export Fee in accordance with this Section 5.3 shall be allocated as a credit on a quarterly basis</p>	

Section	Proposed Revisions	Reason for Change
	<p>to Scheduling Coordinators with Net Negative Uninstructed Deviations in proportion to the to the amount of Net Negative Uninstructed Deviations that each Scheduling Coordinator was assessed for Participating Intermittent Resources Settlement charges for the applicable CAISO Charge Code during the prior quarter.</p> <p>5.3.5—Recording of Exemptions and Notice of Termination The CAISO will record any exemption period ending date, if applicable, for each Participating Intermittent Resource. At the conclusion of the exemption period, the CAISO will notify the Scheduling Coordinator for the Participating Intermittent Resource that the facility is no longer exempt from the Participating Intermittent Resource Export Fee.</p> <p>5.3.6—Annual Confirmation On December 31 of each calendar year, each Participating Intermittent Resource shall confirm in the form set forth in a Business Practice Manual, signed by an officer of the Participating Intermittent Resource, that the operations of the Participating Intermittent Resource are consistent with any certification(s) provided to the CAISO under Section 2.2.5 of this EIRP.</p> <p>5.3.7—Audit Rights In addition to the rights set forth in CAISO Tariff Section 4.6.9, the CAISO shall have the right to contact any counterparty to a contract relied upon under Section 5.3.1 of this EIRP for purposes of determining compliance with this EIRP.</p>	
Appendix Q Section 7, last paragraph	<p>7 PROGRAM MONITORING * * * *</p> <p>The CAISO will monitor the impact of rules for Participating Intermittent Resources on <u>FMM or RTD</u> imbalance Eenergy and Regulation costs to the CAISO.</p>	<p>“Imbalance Energy” was eliminated as a defined term in the compliance with Order No. 764 tariff amendment filing and replaced with more exacting defined terms. The CAISO proposes to align the tariff with that change.</p>

Attachment B – Clean Tariff
Tariff Clarifications Amendment
California Independent System Operator Corporation

4.6.3.5 [Not Used]

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4.8.1 Bidding and Settlement

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

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4.8.2 Forecasting

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4.8.2.1.1 Use of Own Forecast

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

which case: (1) the resource will retain its status as a Participating Intermittent Resource; (2) the CAISO will not submit the updated output forecast for that resource through the Real-Time Market; and (3) the resource will be subject to the same requirements that apply to Eligible Intermittent Resource that use their own output forecast as specified in the CAISO Tariff.

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4.8.3 [Not Used]

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4.13.4 Performance Evaluation Methodologies for PDRs and RDRRs

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4.13.4.2 Metering Generator Output Methodology

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

- (a) Meter Data will be collected for the behind-the-meter generation for the same hour as the Trading Hour on calendar days preceding the Trading Day on which the Demand Response Event occurred for which the Generator Output Baseline is calculated. Meter Data will consist of Energy output of the behind-the-meter generation up to, but not including, output that represent an export of energy from that location. To determine the hours for which the Meter Data will be collected, the calculation will work sequentially backwards from the Trading Day under examination up to a maximum of forty-five (45) calendar days prior to the Trading Day, including only Business Days if the Trading Day is a Business Day, including only non-Business Days if the Trading Day is a non-Business Day, and excluding hours in which the Proxy Demand Resource was subject to an Outage or previously provided Demand Response Services (other than capacity awarded for AS or RUC) pursuant to a Bid at or above the net benefits test set forth in

Section 30.6.3, or the Reliability Demand Response Resource was subject to an Outage as described in the Business Practice Manual or previously provided Demand Response Services pursuant to a Bid at or above the net benefits test set forth in Section 30.6.3, except as discussed below. The calculation will have complete Meter Data for this purpose if and when it is able to collect Meter Data for its target number of hours the same as the Trading Hour, which target number is ten (10) hours if the Trading Day is a Business Day or four (4) hours if the Trading Day is a non-Business Day. If it is not possible to collect Meter Data for the target number of hours, the Meter Data will include a minimum of five (5) hours if the Trading Day is a Business Day or a minimum of four (4) hours if the Trading Day is a non-Business Day. If it is not possible to collect Meter Data for the minimum number of hours described above, the Generator Output Baseline will be set at zero.

- (b) The baseline amount of Energy provided by the behind-the-meter generation will be calculated on the simple hourly average of the collected Meter Data.
- (c) In calculating the Generator Output Baseline pursuant to 4.13.4.2(a), the Meter Data must be set to zero in any Settlement Interval in which the behind-the-meter generation is charging.
- (d) In any Settlement Interval where the behind-the-meter generation is exporting Energy (i.e., where the behind-the-meter generation Energy output exceeds its location Demand), the Meter Data will consist of the Energy output of the behind-the-meter generation up to, but not including, the output greater than its facility Demand that would represent an export of Energy from that location.

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6.5.3.2 Public Market Information

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

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

- (a) Total Day-Ahead Schedules (MWh) for total Supply and Demand by TAC Area and for the entire CAISO Balancing Authority Area;
- (b) Total Day-Ahead Schedules (MWh) of imports and exports by Transmission Interface;
- (c) Total Day-Ahead AS Awards by AS Region and AS type;
- (d) RUC Prices by PNode and APNodes, RUC Forecast Demand for each RUC Zone, hourly RUC Capacity from Generation, and hourly RUC Capacity from imports for each TAC Area and the entire CAISO Balancing Authority Area;
- (e) Day-Ahead LMP for Energy for each PNode and APNode, including the Energy, MCC and MCL components;
- (f) Day-Ahead ASMP by AS Region and AS type;
- (g) Day-Ahead mitigation indicator;
- (h) CAISO Forecast of CAISO Demand for each TAC Area and the entire CAISO Balancing Authority Area;
- (i) Shadow Prices of binding Transmission Constraints and an indication of whether the Transmission Constraints were binding because of the base operating conditions or a Contingency, and if caused by a Contingency, the identity of the specific Contingency; and
- (j) Total Day-Ahead system Marginal Losses in MWh and Marginal Cost of Losses for each Trading Hour of the next Trading Day.

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

6.5.3.2.4 [Not Used]

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8.4.1 Operating Characteristics Required to Provide AS

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8.4.1.2 Regulation Energy Management

The CAISO will make Regulation Energy Management available to Scheduling Coordinators for Non-Generator Resources located within the CAISO Balancing Authority Area that require Energy from the Real-Time Market to offer their full capacity as Regulation. A Scheduling Coordinator for a resource using Regulation Energy Management may submit a Regulation Bid for capacity (MW) of up to four (4) times the maximum Energy (MWh) the resource can generate or curtail for fifteen (15) minutes after issuance of a Dispatch Instruction. In the Real-Time Market, a Scheduling Coordinator for a resource using Regulation Energy Management will produce energy as needed to satisfy the sixty (60) minute continuous Energy requirement for Regulation Awards in the Day-Ahead Market.

Scheduling Coordinators may request to use Regulation Energy Management for these Non-Generator Resources by submitting a request to certify such a resource to provide Regulation using Regulation Energy Management. The owner or operator of a Resource using Regulation Energy Management must execute both a Participating Generator Agreement and/or Participating Load Agreement and may provide only Regulation in the CAISO Market. A resource using Regulation Energy Management may not provide Energy other than Energy associated with Regulation. Scheduling Coordinators for Resources using Regulation Energy Management may define a Ramp Rate for operating as Generation and a Ramp Rate for operating as Load, respectively. These resources shall comply with the requirements to provide Regulation as specified in this Section 8, Appendix K, and the CAISO's Operating Procedures, including the requirement to undergo a market simulation using Regulation Energy Management as part of the

certification procedure.

Scheduling Coordinators for resources using Regulation Energy Management shall register these resources in the Master File. Scheduling Coordinators may only submit Bids for Regulation Up and Regulation Down and Mileage for these resources. Scheduling Coordinators may not submit Energy Bids, Energy Self-Schedules, Residual Unit Commitment Bids, or Ancillary Service Bids other than Regulation and Mileage for these resources. Scheduling Coordinators may not submit any type of commitment costs as part of their Regulation Up and Regulation Down Bids for resources using Regulation Energy Management, including Start-Up Cost, Minimum Load Costs, Pumping Cost or Pump Shut-Down Costs, or Transition Cost. All other bidding rules for Regulation set forth in Section 30 shall apply to resources using Regulation Energy Management.

The CAISO will settle Dispatches from resources using Regulation Energy Management as energy. The portion of Demand of Non-Generator Resources using Regulation Energy Management that is dispatched as Regulation in any Settlement Interval shall not be considered Measured Demand for purposes of allocating payments and charges pursuant to Section 11 during that Settlement Interval.

The CAISO shall control the resource's operating set point through its Energy Management System with the objective of maintaining the resource's operating set point at its preferred operating point. In the Day-Ahead Market and FMM, the procurement of Regulation from resources using Regulation Energy Management will not be constrained by the resource's MWh limit to generate, curtail the consumption of, or consume Energy continuously. In the Real-Time Dispatch, the CAISO will base the Dispatches on the resource's capability to provide Regulation. When the resource has a physical MWh limit, the CAISO will observe the resource's MWh constraint during Real-Time Dispatch and will assess whether the CAISO can support the resource's self-provided Regulation capacity or Regulation award with Real-Time Market Dispatches. To the extent the CAISO determines in the Integrated Forward Market or FMM that the MWh constraint of resources using Regulation Energy Management limits the capability of the CAISO, through Real-time Dispatch, to support these resources' self-provided Regulation capacity or Regulation awards, the CAISO may disqualify resources using Regulation Energy Management on a pro rata basis across the System Region from providing Regulation, which shall result in the rescission of the disqualified portion of the resources' self-provided or awarded Regulation capacity payments.

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8.6.2 Right to Self-Provide

Each Scheduling Coordinator may choose to self-provide all, or a portion, of its Regulation Up, Regulation Down, Spinning Reserve, and Non-Spinning Reserve obligations in the IFM, and, to the extent needed to satisfy the CAISO's additional requirement, the Real-Time Market, from resources eligible for self-provision, as may be permissible for any given Ancillary Service in these respective markets. The right to self-provide Ancillary Services from capacity that is under a contractual obligation to provide Energy, including but not limited to capacity subject to an RMR Contract and local Resource Adequacy Resources, shall be conditional; self-provision of Ancillary Services from such capacity will only be permitted to the extent that capacity is not needed for Energy as a result of the MPM process described in this CAISO Tariff. To self-provide Ancillary Services a Scheduling Coordinator must provide the CAISO with a Submission to Self-Provide an Ancillary Service. Both Ancillary Service Bids and Submissions to Self-Provide an Ancillary Service can be provided to the CAISO for the same Ancillary Service and for the same hour in the same market. To the extent the Submission to Self-Provide an Ancillary Service is from a resource that is a Partial Resource Adequacy Resource, and Energy is needed, including for purposes under Section 31.3.1.3, from that resource the CAISO shall only disqualify the self-provision of Ancillary Services from the portion of the resource's capacity that has must-offer obligation, provided that the Scheduling Coordinator has not submitted an Energy Bid for the capacity that is not subject to a must-offer obligation. The CAISO will treat resources subject to Resource Adequacy requirements consistent with, and such resources must comply with, the bidding requirements in Section 40.6. If there is an Energy Bid submitted for the capacity of a Partial Resource Adequacy Resource that is not subject to a must-offer obligation the CAISO may disqualify the Submission to Self-Provide an Ancillary Service for the portion of the resources capacity that is not under a must-offer obligation consistent with the principles of co-optimization under the CAISO Tariff.

Prior to evaluating Ancillary Service Bids, the CAISO will determine whether Submissions to Self-Provide Ancillary Services are feasible with regard to resource operating characteristics and regional constraints and are qualified to provide the Ancillary Services in the markets for which they were submitted.

If the total Submissions to Self-Provide Ancillary Services exceed the maximum regional requirement for the relevant Ancillary Service in an Ancillary Service Region, the submissions that would otherwise be accepted by the CAISO as feasible and qualified will be awarded on a pro-rata basis among the suppliers offering to self-provide the Ancillary Service up to the amount of the Ancillary Services requirement. If a regional constraint imposes a limit on the total amount of Regulation Up, Spinning Reserve, and Non-Spinning Reserve, and the total self-provision of these Ancillary Services in that region exceeds that limit, Self-Provided AS are qualified pro rata from higher to lower quality service in three tiers: Regulation Up first, followed by Spinning Reserve, and then by Non-Spinning Reserve. Submissions to Self-Provide Ancillary Services in excess of the maximum regional requirement for the relevant Ancillary Service in an Ancillary Service Region will not be accepted and qualified by the CAISO as Self-Provided Ancillary Services.

The CAISO shall schedule Self-Provided Ancillary Services to the extent qualified in the IFM and the RTM and Dispatch Self-Provided Ancillary Services in the Real-Time. To the extent that a Scheduling Coordinator self-provides Regulation Up, Regulation Down, Spinning Reserve, and Non-Spinning Reserve, the CAISO shall correspondingly reduce the quantity of the Ancillary Services it procures from Bids submitted in the IFM and the Real-Time Market.

Scheduling Coordinators may trade Ancillary Services so that any Scheduling Coordinator may reduce its Ancillary Services Obligation through purchase of Ancillary Services capacity from another Scheduling Coordinator, or self-provide in excess of its obligation to sell Ancillary Services to another Scheduling Coordinator.

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11.1.4 CAISO Estimates for Initial Settlement Statement T+3B

Notwithstanding any other provisions of the CAISO Tariff, Initial Settlement Statement T+3B shall be solely based on CAISO Estimated Settlement Quality Meter Data for metered Demand, metered Generation, and Demand Response. CAISO Estimated Settlement Quality Meter Data shall be calculated

as follows:

- (a) CAISO Estimated Settlement Quality Meter Data for metered Generation will be based on total Expected Energy.
- (b) CAISO Estimated Settlement Quality Meter Data for metered Demand, including Non-Participating TO demand will be based on Scheduled Demand by the appropriate LAP. This value will be increased by fifteen (15) percent if the total actual system Demand in Real Time, as determined by the CAISO each hour, is greater than the total Scheduled Demand by more than fifteen (15) percent. CAISO Estimated Settlement Quality Meter Demand for Participating Load will not be increased by fifteen (15) percent.
- (c) CAISO Estimated Settlement Quality Meter Data for Demand Response will be calculated using the same method as set forth in Section 11.1.4(a) for metered Generation. The Proxy Demand Response Default Load Adjustment will not be estimated or applied for purposes of calculating Initial Settlement Statement T+3B.
- (d) To estimate net load for a Metered Subsystem, the CAISO will apply a monthly historical based net/gross ratio to the MSS's estimated gross load. The historical monthly ratio shall be specific to each MSS Operator and shall be calculated as the sum of each entity's monthly actual net load divided by the sum of each entity's monthly actual gross load, of the previous year.
- (e) The CAISO will estimate E-Tag for Interchange Schedules for System Resources based on total Expected Energy, and for EIM Transfer system resources based on Dispatch Instructions.
- (f) The CAISO will not estimate Unaccounted For Energy under Section 11.5.3, Real-Time Imbalance Energy Offset adjustment under Section 11.5.4.1(c), allocation of RTM Bid Cost Up-lift adjustment under Section 11.8.6.3.2(vi), or MSS deviation payments under 11.7.1 for purposes of calculating Initial Settlement Statement T+3B.

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11.2.3 IFM Energy Charges and Payments for Metered Subsystems

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11.2.3.1.2 IFM Payments for MSS Supply under Gross Energy Settlements

The CAISO shall pay Scheduling Coordinators that submit Bids for MSS Operators that have selected or are subject to gross Energy Settlement an amount equal to the product of the MWh quantity of Supply from the MSS in its Day-Ahead Schedule at the corresponding PNode and the applicable IFM LMP.

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11.4 Black Start Settlements

Payments for Black Start capability shall consist of any payments under any Black Start Agreement. If the Energy price and Start-Up Costs are not specified in the Black Start Agreement, the Black Start Energy will be paid as an Exceptional Dispatch in accordance with Section 11.5.6.1 and the commitment costs for the resource will be eligible for Bid Cost Recovery under Section 11.8. Black Start Energy resulting from a performance test shall also be paid as an Exceptional Dispatch in accordance with Section 11.5.6.1. RMR Units providing Black Start are compensated in accordance with the RMR Contract rather than this Section 11.4.

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11.4.2 Black Start Capability

The CAISO shall allocate payments for Black Start capability under a Black Start Agreement as Reliability Services Costs to the Participating Transmission Owner in whose TAC Area where the Black Start Unit is located.

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11.5 Real-Time Market Settlements

The CAISO shall calculate and account for imbalance energy for each Dispatch Interval and settle imbalance energy in the Real-Time Market for each Settlement Interval for each resource within the CAISO Balancing Authority Area and all System Resources dispatched in Real-Time. There are four (4) categories of imbalance energy: FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Energy. FMM Instructed Imbalance Energy includes all Energy associated with the FMM Schedule. FMM Instructed Imbalance Energy is settled pursuant to Section 11.5.1.1, including any Energy related with HASP Intertie Block Schedules cleared through the FMM. RTD Instructed Imbalance Energy is settled pursuant to Section 11.5.1.2, Uninstructed Imbalance Energy is settled pursuant to Section 11.5.2, and Unaccounted For Energy is settled pursuant to Section 11.5.3. To the extent that the sum of the Settlements Amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Energy does not equal zero, the CAISO will assess charges or make payments for the resulting differences to all Scheduling Coordinators based on a pro rata share of their Measured Demand for the relevant Settlement Interval, as further described in Section 11.5.4. FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy due to Exceptional Dispatches, as well as the allocation of related costs, including Excess Costs Payments, are settled as described in Section 11.5.6. The CAISO shall reverse RTM Congestion Charges for valid and balanced ETC and TOR Self-Schedules as described in Section 11.5.7. The CAISO will settle Energy for emergency assistance as described in Section 11.5.8.

11.5.1 Imbalance Energy Settlements

11.5.1.1 FMM Instructed Imbalance Energy

For each Settlement Interval, FMM Instructed Imbalance Energy consists of the following types of Energy: (1) FMM Optimal Energy; (2) FMM Minimum Load Energy; (3) FMM Exceptional Dispatch Energy; (4) FMM Derate Energy; and (5) FMM Pumping Energy. Payments and charges for FMM Instructed Imbalance Energy attributable to each resource in each Settlement Interval shall be settled by debiting or crediting, as appropriate, the specific Scheduling Coordinator's FMM IIE Settlement Amount. The FMM IIE Settlement Amounts for FMM Optimal Energy, FMM Minimum Load Energy, FMM Derate Energy, and FMM Pumping Energy shall be calculated as the product of the sum of all of these types of Energy and

the FMM LMP. For MSS Operators that have elected net Settlement, the FMM IIE Settlement Amounts for Energy dispatched through the FMM optimization shall be calculated as the product of the FMM MSS Price and the sum of the following types of Energy: FMM Minimum Load Energy from System Units dispatched in FMM, FMM Derate Energy, and FMM Pumping Energy. For MSS Operators that have elected gross Settlement, regardless of whether that entity has elected to follow its Load or to participate in RUC, the FMM Instructed Imbalance Energy for such entities is settled similarly to non-MSS entities as provided in this Section 11.5.1.1. The remaining FMM IIE Settlement Amounts for Exceptional Dispatches are settled pursuant to Section 11.5.6.

11.5.1.2 RTD Instructed Imbalance Energy Settlements

For each Settlement Interval, RTD Instructed Imbalance Energy consists of the following types of Energy: (1) RTD Optimal Energy; (2) Residual Imbalance Energy; (3) RTD Minimum Load Energy; (4) RTD Exceptional Dispatch Energy; (5) Regulation Energy; (6) Standard Ramping Energy; (7) Ramping Energy Deviation; (8) RTD Derate Energy; (9) MSS Load Following Energy; (10) RTD Pumping Energy; and (11) Operational Adjustments. Payments and charges for RTD Instructed Imbalance Energy attributable to each resource in each Settlement Interval shall be settled by debiting or crediting, as appropriate, the specific Scheduling Coordinator's RTD IIE Settlement Amount. The RTD IIE Settlement Amounts for the Standard Ramping Energy shall be zero. The RTD IIE Settlement Amounts for RTD Optimal Energy, RTD Minimum Load Energy, Regulation Energy, Ramping Energy Deviation, RTD Derate Energy, and RTD Pumping Energy shall be calculated as the product of the sum of all of these types of Energy and the RTD LMP. For MSS Operators that have elected net Settlement, the RTD IIE Settlement Amounts for Energy dispatched through the RTD optimization shall be calculated as the product of the RTD MSS Price and the sum of the following types of Energy: RTD Minimum Load Energy from System Units dispatched in Real-Time, Regulation Energy, Ramping Energy Deviation, RTD Derate Energy, MSS Load Following Energy, and RTD Pumping Energy. For MSS Operators that have elected gross Settlement, regardless of whether that entity has elected to follow its Load or to participate in RUC, the RTD Instructed Imbalance Energy for such entities is settled similarly to non-MSS entities as provided in this Section 11.5.1.2. The remaining RTD IIE Settlement Amounts are determined as follows: (1) RTD IIE Settlement Amounts for Residual Imbalance Energy are determined pursuant to Section 11.5.5; and (2)

RTD IIE Settlement Amounts for Exceptional Dispatches are settled pursuant to Section 11.5.6.

11.5.2 Uninstructed Imbalance Energy

Scheduling Coordinators shall be paid or charged a UIE Settlement Amount for each LAP, PNode or Scheduling Point for which the CAISO calculates an Uninstructed Imbalance Energy quantity for each Settlement Interval. Uninstructed Imbalance Energy quantities are calculated for each resource that has a Day-Ahead Schedule, Dispatch Instruction, Real-Time Interchange Export Schedule or Metered Quantity. For MSS Operators electing gross Settlement, regardless of whether that entity has elected to follow its Load or to participate in RUC, the Uninstructed Imbalance Energy for such entities is settled similarly to how Uninstructed Imbalance Energy for non-MSS entities is settled as provided in this Section 11.5.2. The CAISO shall account for Uninstructed Imbalance Energy every five minutes based on the resource's Dispatch Instruction. For all resources, including Generating Units, System Units of MSS Operators that have elected gross Settlement, Physical Scheduling Plants, System Resources, Distributed Energy Resource Aggregations and all Participating Load, Reliability Demand Response Resources, and Proxy Demand Resources, the UIE Settlement Amount is calculated for each Settlement Interval as the product of its Uninstructed Imbalance Energy MWh quantity and the applicable RTD LMP. The UIE Settlement Amount for non-Participating Load and MSS Demand under gross Settlement is settled as described in Section 11.5.2.2. For MSS Operators that have elected net Settlement, the UIE Settlement Amount is calculated for each Settlement Interval as the product of its Uninstructed Imbalance Energy quantity and RTD MSS Price.

11.5.2.1 Resource Specific Tier 1 UIE Settlement Interval Price

The Resource-Specific Tier 1 UIE Settlement Interval Price is calculated as the resource's total FMM IIE Settlement Amount and RTD IIE Settlement Amount, calculated pursuant to Sections 11.5.1.1 and 11.5.1.2 for that Settlement Interval divided by its total FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy quantity (MWh) calculated pursuant to Sections 11.5.1.1 and 11.5.1.2.

11.5.2.2 Hourly Real-Time Demand Settlement

The Default LAP Hourly Real-Time Price will apply to CAISO Demand and MSS Demand under net Settlement of imbalance energy, except for CAISO Demand not settled at the Default LAP as provided in Section 30.5.3.2, and per the methodology as may be further defined in the Business Practice Manuals.

For each Settlement Interval, the differences between the Day-Ahead Scheduled CAISO Demand and Metered Demand (MWh) is settled at the Default LAP Hourly Real-Time Price or the Custom LAP Hourly Real-Time Price, as appropriate. For each Default LAP, the CAISO calculates the applicable Default LAP Hourly Real-Time Price as the weighted average LMP of the four Default LAP FMM LMPs and the twelve (12) five-minute Default LAP RTD LMPs. The CAISO calculates the weighted average LMP for each Default LAP as the summation of the weighted average SMEC, the weighted average MCC, and the weighted average MCL for that Default LAP. The CAISO calculates the weighted average SMEC, MCC, and MCL for each applicable Trading Hour based on the four applicable Default LAP FMM SMECs, MCCs, and MCLs, respectively, and the twelve (12) applicable Default LAP RTD SMECs, MCCs, and MCLs, respectively. For each Custom LAP, the CAISO calculates the applicable Custom LAP Hourly Real-Time Price as the weighted average LMP of the four Custom LAP FMM LMPs and the twelve (12) five-minute Custom LAP RTD LMPs. The CAISO calculates the weighted average LMP for each Custom LAP as the summation of the weighted average SMEC, the weighted average MCC, and the weighted average MCL for that Custom LAP. The CAISO calculates the weighted average SMEC, MCC, and MCL for each applicable Trading Hour based on the four applicable Custom LAP FMM SMECs, MCCs, and MCLs, respectively, and the twelve (12) applicable Custom LAP RTD SMECs, MCCs, and MCLs, respectively. In calculating the weighted average SMEC, MCC, and MCL for each hour for either the Default LAPs or Custom LAPs, the CAISO determines the weights based on the difference between Day-Ahead Schedules at the applicable LAP and the CAISO Forecast of CAISO Demand used in the FMM multiplied by the relevant FMM LMP at the applicable LAP plus the difference between the CAISO Forecast of CAISO Demand used in the FMM and the CAISO Forecast of CAISO Demand used in the RTD multiplied by the relevant RTD LMP at the applicable LAP divided by the sum of the difference between Day-Ahead Schedules at the applicable LAP and the CAISO Forecast of CAISO Demand used in the FMM plus the difference between the CAISO Forecast Of CAISO Demand used in the FMM and the CAISO Forecast Of CAISO Demand used in the RTD. Furthermore, the Default LAP Hourly Real-Time Prices and the Custom LAP Hourly Real-Time Prices will be bounded by the maximum and the lowest LMP and its components, for the applicable Trading Hour from those relevant intervals at the relevant LAP. If the calculated price exceeds the upper boundary or is below the lower boundary, then

the Default LAP Hourly Real-Time Price or the Custom LAP Hourly Real-Time Price, as appropriate, instead will be calculated based on a weighted average price with the weightings based on gross deviations (absolute value of each deviation).

The Default LAP Hourly Real-Time Prices and the Custom LAP Hourly Real-Time Prices are further determined by the requirements in Section 27.2.2.2.1 and 27.2.2.2.2, respectively.

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11.5.2.4 Adjustment to Metered Load to Settle Uninstructed Imbalance Energy

For the purpose of settling Uninstructed Imbalance Energy of a Scheduling Coordinator representing a Load Serving Entity, the amount of Demand Response Energy Measurement delivered by a Proxy Demand Resource or Reliability Demand Response Resource that is also served by that Load Serving Entity and that is paid a Market Clearing Price below the threshold Market Clearing Price set forth in Section 30.6.3.1 will be added to the metered load quantity of the Load Serving Entity's Scheduling Coordinator's Load Resource ID with which the Proxy Demand Resource or Reliability Demand Response Resource is associated.

11.5.3 Unaccounted for Energy

For each Settlement Interval, the CAISO will calculate Unaccounted For Energy for each utility Service Area for which the IOU or Local Publicly Owned Electric Utility has requested separate Unaccounted For Energy calculation and has met the requirements applicable to a CAISO Metered Entity. The Unaccounted For Energy will be settled at the applicable LAP Hourly Real-Time Price calculated for each utility Service Area for which Unaccounted For Energy is calculated separately. Unaccounted For Energy will be allocated to each Scheduling Coordinator based on the ratio of its metered CAISO Demand within the relevant utility Service Area for which Unaccounted for Energy is calculated separately to total metered CAISO Demand within that utility Service Area. Unaccounted For Energy charges will not be estimated or included on Initial Settlement Statement T+3B.

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11.5.4.2 Allocations of Non-Zero Amounts of the Sum of FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed Imbalance Energy, Unaccounted For Energy, the Real-Time Ancillary Services Congestion Revenues and Real-Time Virtual Awards Settlements

The CAISO will first compute (1) the Real-Time Congestion Offset and allocate it to all Scheduling Coordinators, based on Measured Demand, excluding Demand associated with ETC or TOR Self-Schedules for which a RTM Congestion Credit was provided as specified in Section 11.5.7, and excluding Demand associated with ETC, Converted Right, or TOR Self-Schedules for which an IFM Congestion Credit was provided as specified in Section 11.2.1.5; and (2) the Real-Time Marginal Cost of Losses Offset and allocate it to all Scheduling Coordinators based on Measured Demand, excluding Demand associated with TOR Self-Schedules for which a RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.5.7.2, and excluding Demand associated with TOR Self-Schedules for which an IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.2.1.7. For Scheduling Coordinators for MSS operators that have elected to Load follow or net settlement, or both, the Real-Time Marginal Cost of Losses Offset will be allocated based on their MSS Aggregation Net Measured Demand excluding Demand associated with TOR Self-Schedules for which a RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.5.7.2, and excluding Demand associated with TOR Self-Schedules for which an IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.2.1.7. For Scheduling Coordinators for MSS Operators regardless of whether the MSS Operator has elected gross or net Settlement, the CAISO will allocate the Real-Time Congestion Offset based on the MSS Aggregation Net Non-ETC/TOR Measured Demand. To the extent that the sum of the Settlement amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed Imbalance Energy, Unaccounted For Energy, the Real-Time Ancillary Services Congestion revenues and Virtual Awards settlements in the Real-Time Market in accordance with Section 11.3, less Real-Time Congestion Offset, and less the Real-Time Marginal Cost of Losses Offset, does not equal zero, the CAISO will assess charges or make payments for the resulting differences to all Scheduling Coordinators, including Scheduling Coordinators for MSS Operators that are

not Load following MSSs and have elected gross Settlement, based on a pro rata share of their Measured Demand for the relevant Settlement Interval. For Scheduling Coordinators for MSS Operators that have elected net Settlement, the CAISO will assess charges or make payments for the resulting non-zero differences of the sum of the Settlement amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Energy, the Real-Time Ancillary Services Congestion Revenues and Virtual Awards settlements in the Real-Time Market in accordance with Section 11.3, less Real-Time Congestion Offset and less the Real-Time Marginal Cost of Losses Offset, based on their MSS Aggregation Net Measured Demand. For Scheduling Coordinators for MSS Operators that have elected Load following, the CAISO will not assess any charges or make payments for the resulting non-zero differences of the sum of the Settlement amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Energy, the Real-Time Ancillary Services Congestion Revenues and Virtual Awards settlements in the Real-Time Market in accordance with Section 11.3, less Real-Time Congestion Offset and less the Real-Time Marginal Cost of Losses Offset.

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11.5.6 Settlement Amounts for RTD Instructed Imbalance Energy from Exceptional Dispatch

For each Settlement Interval, the RTD IIE Settlement Amount from each type of Exceptional Dispatch described in Section 34.11 is calculated as the sum of the products of the relevant FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy quantity for the Settlement Interval and the relevant FMM or RTD LMP Settlement price for each type of Exceptional Dispatch as further described in this Section 11.5.6. For MSS Operators the Settlement for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy from Exceptional Dispatches is conducted in the same manner, regardless of any MSS elections (net/gross Settlement, Load following or opt-in/opt-out of RUC). Except for the Settlement price, Exceptional Dispatches to perform Ancillary Services testing, to perform PMax testing, and to perform pre-commercial operation testing for Generating Units are otherwise settled in the same manner as provided in Section 11.5.6.1. Notwithstanding any other provisions of this Section 11.5.6, the

Exceptional Dispatch Settlement price that is applicable in circumstances in which the CAISO applies Mitigation Measures to Exceptional Dispatch of resources pursuant to Section 39.10 shall be calculated as set forth in Section 11.5.6.7.

11.5.6.1 Settlement for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy from Exceptional Dispatches used for System Emergency Conditions, for a Market Disruption, to Mitigate Overgeneration Conditions or to Prevent or Relieve Imminent System Emergencies

The Exceptional Dispatch Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered as a result of an Exceptional Dispatch for System Emergency conditions, for a Market Disruption, to mitigate Overgeneration conditions, or to prevent or relieve an imminent System Emergency, including forced Start-Ups and Shut-Downs, is the higher of the (a) applicable FMM or RTD LMP; (b) the Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two payments: (1) incremental Energy is first settled at the applicable FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; and (2) the incremental Energy Bid Cost in excess of the applicable FMM or RTD LMP at the relevant Location is settled pursuant to Section 11.5.6.1.1. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered as a result of an Exceptional Dispatch Instruction for a Market Disruption, or to prevent or relieve a System Emergency, is the minimum of (a) the FMM or RTD LMP; (b) the Energy Bid price subject to Section 39.6.1.4; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. All Energy costs for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with this type of Exceptional Dispatch are included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2.

11.5.6.1.1 Settlement of Excess Cost Payments for Exceptional Dispatches used for System Emergency Conditions, for a Market Disruption, and to Avoid an Imminent System Emergency

The Excess Cost Payment for incremental Exceptional Dispatches used for emergency conditions, for a Market Disruption, or to avoid an imminent System Emergency is calculated for each resource for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.1 for the applicable Exceptional Dispatch at the FMM or RTD LMP and delivered Exceptional Dispatch quantity at one of the following three costs: (1) the resource's Energy Bid Cost; (2) the Default Energy Bid cost; or (3) the Energy cost at the negotiated price, as applicable for System Resources, for the relevant Exceptional Dispatch.

11.5.6.2 Settlement of Instructed Imbalance Energy from Exceptional Dispatches Caused by Modeling Limitations

The Exceptional Dispatch Settlement price for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion as a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 is the maximum of (a) the FMM or RTD LMP; (b) the Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two payments: (1) incremental Energy is first settled at the FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; and (2) the incremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the minimum of (a) the FMM or RTD LMP; (b) the Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. Costs for

decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with this type of Exceptional Dispatch are settled in two payments: (1) decremental Energy is first settled at the FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; and (2) the decremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3.

11.5.6.2.1 [Not Used]

11.5.6.2.2 [Not Used]

11.5.6.2.3 Settlement of Excess Cost Payments for Exceptional Dispatches used for Transmission-Related Modeling Limitations

The Excess Cost Payment for Exceptional Dispatches used for transmission-related modeling limitations as described in Section 34.11.3 is calculated for each resource for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.2 for the applicable delivered Exceptional Dispatch quantity at the FMM or RTD LMP and one of the following three costs: (1) the resource's Energy Bid Cost; (2) the Default Energy Bid cost; or (3) the Energy cost at the negotiated price, as applicable for System Resources, for the relevant Exceptional Dispatch.

11.5.6.2.4 Exceptional Dispatches for Non-Transmission-Related Modeling Limitations

The Exceptional Dispatch Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion that is not a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 is the maximum of the (a) FMM or RTD LMP; (b) Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. All costs for incremental Energy for this type of Exceptional Dispatch will be included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the minimum of the (a) FMM or RTD LMP; (b) Energy Bid Price; (c) Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid

price; or (d) negotiated price as applicable to System Resources. All costs for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with this type of Exceptional Dispatch are included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2.

11.5.6.2.5 Allocation of Exceptional Dispatch Excess Cost Payments

11.5.6.2.5.1 Allocation of Exceptional Dispatch Excess Cost Payments to PTOs

The total Excess Cost Payments calculated pursuant to Section 11.5.6.2.3 for the FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy from Exceptional Dispatches instructed as a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 in that Settlement Interval shall be charged to the Participating Transmission Owner in whose PTO Service Territory the transmission-related modeling limitation as described in Section 34.11.3 is located. If the modeling limitation affects more than one Participating TO, the Excess Cost Payments shall be allocated in proportion to the Transmission Revenue Requirements of the affected Participating TOs with PTO Service Territories. Costs allocated to Participating TOs under this section shall constitute Reliability Services Costs.

11.5.6.2.5.2 Allocation of Exceptional Dispatch Costs to Scheduling Coordinators

Excess Cost Payments for the Exceptional Dispatches used for emergency conditions and to avoid Market Disruption and System Emergencies as determined pursuant to Section 11.5.6.1.1 shall be charged to Scheduling Coordinators as follows in a two-step process. First, each Scheduling Coordinator's charge shall be the lesser of:

- (i) the pro rata share of total Excess Cost Payment based upon the ratio of each Scheduling Coordinator's Net Negative Uninstructed Deviations to the total system Net Negative Uninstructed Deviations; or
- (ii) the amount obtained by multiplying the Scheduling Coordinator's Net Negative Uninstructed Deviation for each Settlement Interval and a weighted average price. The weighted average price is equal to the total Excess Cost Payments to be allocated divided by the MWh of FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy associated with the Excess Cost Payment.

Second, any remaining unallocated costs shall be allocated to all Scheduling Coordinators pro-rata based on their Measured Demand. For a Scheduling Coordinator of an MSS Operator that has elected to follow Load, allocation of this second category of Excess Cost Payments will be based on net metered MSS Demand. In addition, to the extent the Exceptional Dispatches are made to resolve congestion internal to the MSS, the Scheduling Coordinator for such an MSS will also be subject to these two categories of Excess Cost Payments.

A Scheduling Coordinator shall be exempt from the first category of the Excess Cost Payment allocation for a Settlement Interval if the Scheduling Coordinator has sufficient incremental Energy Bids from physically available resources in the Real-Time Market for Energy to cover its Net Negative Uninstructed Deviation in the given Settlement Interval and the prices of such Energy Bids do not exceed the applicable maximum Bid level as set forth in Section 39.

11.5.6.3 Settlement for Instructed Imbalance Energy from Exceptional Dispatches for RMR Units

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11.5.6.3.2 Allocation of Costs from Exceptional Dispatch Calls to Condition 2 RMR Units

- (a) All costs associated with Energy provided by a Condition 2 RMR Unit operating other than according to a RMR Dispatch shall be allocated in accordance with Section 11.5.4.2.
- (b) Start-Up Costs for Condition 2 RMR Units providing service outside the RMR Contract shall be treated similar to costs under Section 11.5.6.2.5.2.

11.5.6.4 Settlement of Instructed Imbalance Energy from Exceptional Dispatches for Testing

The Exceptional Dispatch Settlement price for incremental FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy that is consumed or delivered as a result of an Exceptional Dispatch for purposes of Ancillary Services testing, periodic testing, including PMax testing, or pre-commercial operation testing for Generating Units is the maximum of the FMM or RTD LMP or the Default Energy Bid price. All Energy costs for these types of Exceptional Dispatch will be included in the FMM IIE Settlement Amount and RTD Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2.

11.5.6.5 Settlement of Instructed Imbalance Energy from Black Start

Unless otherwise specified in a Black Start Agreement, all FMM IIE Settlement Amounts or RTD IIE Settlement Amounts associated with Black Start receive the Exceptional Dispatch Settlement price as provided in Section 11.5.6.1, but the costs are allocated pursuant to Section 11.4.

11.5.6.6 Settlement of Instructed Imbalance Energy from Exceptional Dispatches for Real-Time ETC and TOR Self-Schedules

The Exceptional Dispatch Settlement price for FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy from Real-Time ETC and TOR Self-Schedules shall be the FMM or RTD LMP. The FMM IIE Settlement Amount and RTD IIE Settlement Amount for this type of Exceptional Dispatch shall be calculated as the product of the sum of all of these types of Energy and the FMM or RTD LMP. All Energy costs for these types of Exceptional Dispatches will be included in the FMM IIE Settlement Amount and RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2.

11.5.6.7 Settlement of FMM or RTD Exceptional Dispatch Energy

11.5.6.7.1 Settlement of FMM or RTD Exceptional Dispatch Energy from Exceptional Dispatches of Resources Eligible for Supplemental Revenues

Except as specified in Section 11.5.6.7.3, the Exceptional Dispatch Settlement price for the FMM Exceptional Dispatch or RTD Exceptional Dispatch Energy delivered by a resource that satisfies all of the criteria set forth in Section 39.10.1 shall be the higher of (a) the resource's Energy Bid price or (b) the FMM or RTD LMP.

11.5.6.7.2 Settlement of FMM or RTD Exceptional Dispatch Energy from Exceptional Dispatches of Resources Not Eligible for Supplemental Revenues

Except as specified in Section 11.5.6.7.3, the Exceptional Dispatch Settlement price for the FMM Exceptional Dispatch or RTD Exceptional Dispatch Energy delivered by a resource that satisfies all of the criteria set forth in Section 39.10.2 shall be the higher of (a) the Default Energy Bid price or (b) the Resource-Specific Settlement Interval LMP.

11.5.6.7.3 Exception to the Other Provisions of Section 11.5.6.7

If the Energy Bid price for a resource that satisfies all of the criteria set forth in Sections 39.10.1 or

39.10.2 is lower than the Default Energy Bid price for the resource, and the FMM or RTD LMP is lower than both the Energy Bid price for the resource and the Default Energy Bid price for the resource, the Exceptional Dispatch Settlement price for the FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy delivered by the resource shall be the Energy Bid price for the resource.

11.5.7 Congestion Credit and Marginal Cost of Losses Credit

11.5.7.1 RTM Congestion Credit for ETCs and TORs

The CAISO shall not apply charges or payments to Scheduling Coordinators related to the MCC associated with all Points of Receipt and Points of Delivery pairs associated with valid and balanced ETC Self-Schedules or TOR Self-Schedules after the Day-Ahead Market. The balanced portion for each ETC or TOR contract for each Settlement Interval will be based on the difference between: (1) the minimum of (a) the total Demand, (b) the total ETC or TOR Supply Self-Schedule submitted in RTM, including changes after twenty (20) minutes before the applicable Trading Hour if such change is permitted by the Existing Contract, or (c) the Existing Contract maximum capacity as specified in the TRTC Instructions; and (2) the valid and balanced portion of the Day-Ahead Schedule. In determining the balanced portions, the CAISO evaluates the amounts based on the following variables: (a) for exports and imports, the CAISO shall use the schedule quantity specified in the Interchange schedule used for check out between CAISO and other Balancing Authority Areas; (b) for CAISO Demand, the CAISO shall use the metered CAISO Demand associated with the applicable ETC or TOR; and (c) for all Generation the CAISO shall use the quantity specified in the Dispatch Instructions. For each Scheduling Coordinator, the CAISO shall determine for each Settlement Interval the applicable RTM Congestion Credit for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy, which can be positive or negative, as the sum of the product of the relevant MWh quantity and the applicable weighted average MCC at each Point of Receipt and Point of Delivery associated with the valid and balanced portions of that Scheduling Coordinator's ETC or TOR Self-Schedules. The weights in the two markets will be based on the absolute values of the (a) deviation of the FMM Schedule or the CAISO Forecast Of CAISO Demand used in the FMM from Day-Ahead Schedules and (b) deviation of the RTD schedule or the CAISO Forecast Of CAISO Demand used in the RTD from Day-Ahead Schedules.

11.5.7.2 RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules

For all Points of Receipt and Points of Delivery pairs associated with a valid and balanced TOR Self-Schedule submitted to the RTM pursuant to an existing agreement between the TOR holder and either the CAISO or a Participating TO as specified in Section 17.3.3, the CAISO shall not impose any charge or make any payment to the Scheduling Coordinator related to the MCL associated with such TOR Self-Schedules and will instead impose any applicable charges for losses as specified in the existing agreement between the TOR holder and either the CAISO or a Participating TO applicable to the relevant TOR. In any case in which the TOR holder has an existing agreement regarding its TORs with either the CAISO or a Participating TO, the provisions of the agreement shall prevail over any conflicting provisions of this Section 11.5.7.2. Where the provisions of this Section 11.5.7.2 do not conflict with the provisions of the agreement, the provisions of this Section 11.5.7.2 shall apply to the subject TORs. The balanced portion of the TOR Self-Schedule after the Day-Ahead Market is the same balanced quantity mentioned in this Section 11.5.7.2 for the TOR Self-Schedule. For each Scheduling Coordinator, the CAISO shall determine for each Settlement Interval the applicable RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules for FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy, which can be positive or negative, as the sum of the product of the relevant MWh quantity and the weighted average MCL at each of the eligible Points of Receipt and Points of Delivery associated with the valid and balanced portions of that Scheduling Coordinator's TOR Self-Schedules. The weights in the two markets will be based on the absolute values of the: (a) deviation of the FMM Schedule or the CAISO Forecast Of CAISO Demand used in the FMM from Day-Ahead Schedules; and (b) deviation of the RTD schedule or the CAISO Forecast Of CAISO Demand used in the RTD from Day-Ahead Schedules. For losses that the CAISO shall charge pursuant to Section 17.3.3, the specific loss charge amount shall be the product of: (a) the specific loss percentage as may be specified in an applicable agreement between the TOR holder and the CAISO or an existing agreement between the TOR holder and a Participating TO; (b) the weighted average SMEC price from the FMM and RTD markets with weights based on the absolute values of (1) deviation of FMM schedule or CAISO Forecast Of CAISO Demand used in the FMM from Day-Ahead Schedules and (2) deviation of RTD schedule or CAISO Forecast Of CAISO Demand used in

the RTD from Day-Ahead Schedules; and (c) the balanced contract quantity mentioned in Section 11.5.7.1.

11.5.8 Settlement for Emergency Assistance

This Section 11.5.8 shall apply to Settlement for emergency assistance provided to or by the CAISO. In any case in which the CAISO has entered into an agreement regarding emergency assistance, which agreement has been accepted by FERC, the provisions of the agreement shall prevail over any conflicting provisions of this Section 11.5.8. Where the provisions of this Section 11.5.8 do not conflict with the provisions of the FERC-accepted agreement, the provisions of this Section 11.5.8 shall apply to the subject emergency assistance.

11.5.8.1 Settlement for Energy Purchased by the CAISO for System Emergency Conditions, to Avoid Market Disruption, or to Prevent or Relieve Imminent System Emergencies, Other than Exceptional Dispatch Energy

The Settlement price for Energy that is delivered to the CAISO from a utility in another Balancing Authority Area as a result of a CAISO request pursuant to Section 42.1.5 or any other provision for assistance in System Emergency conditions, to avoid a Market Disruption, or to prevent or relieve an imminent System Emergency, other than Energy from an Exceptional Dispatch, shall be either (i) a negotiated price agreed upon by the CAISO and the seller or (ii) a price established by the seller for such emergency assistance in advance, as may be applicable. In the event no Settlement price is established prior to the delivery of the emergency Energy, the default Settlement price shall be the simple average of the relevant FMM and RTD LMPs at the applicable Scheduling Point, plus all other charges applicable to imports to the CAISO Balancing Authority Area, as specified in the CAISO Tariff. If the default Settlement price is determined by the seller not to compensate the seller for the value of the emergency Energy delivered to the CAISO, then the seller shall have the opportunity to provide the CAISO with cost support information demonstrating that a higher price is justified. The cost support information must be provided in writing to the CAISO within thirty (30) days following the date of the provision of emergency assistance. The CAISO shall have the discretion to pay that higher price based on the seller's justification of this higher price. The CAISO will provide notice of its determination whether to pay such a higher price within thirty (30) days after receipt of the cost support information. Any dispute regarding the CAISO's

determination whether to pay a higher price for emergency assistance based on cost support information shall be subject to the CAISO ADR Procedures. Payment by the CAISO for such emergency assistance will be made in accordance with the Settlement process, billing cycle, and payment timeline set forth in the CAISO Tariff. The costs for such emergency assistance, including the payment of a price based on cost support information, will be settled in two payments: (1) the costs will first be settled at the simple average of the relevant Dispatch Interval LMPs and included in the total FMM IIE Settlement Amount and RTD IIE Settlement Amount as described in Sections 11.5.1.1 and 11.5.1.2; and (2) costs in excess of the simple average of the relevant Dispatch Interval LMPs plus other applicable charges will be settled in accordance with Section 11.5.8.1.1. The allocation of the FMM IIE Settlement Amount and RTD IIE Settlement Amount settled in accordance with Sections 11.5.1.1 and 11.5.1.2 will be settled according to Section 11.5.4.2.

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11.5.8.2 Settlement for Energy Supplied by the CAISO in Response to a Request for Emergency Assistance

The Settlement price for emergency Energy that is delivered by the CAISO to a utility in another Balancing Authority Area in response to a request for emergency assistance shall be the simple average of the relevant Dispatch Interval LMPs at the applicable Scheduling Point, which shall serve as the effective market price for that Energy, plus all other charges applicable to exports from the CAISO Balancing Authority Area, as specified in the CAISO Tariff and will be included in the total FMM IIE Settlement Amount and RTD IIE Settlement Amount as described in Sections 11.5.1.1 and 11.5.1.2 and will be allocated according to Section 11.5.4.2. Such price may be estimated prior to delivery and finalized in the Settlement process. The CAISO will establish a Scheduling Coordinator account, if necessary, for the purchaser for the sole purpose of facilitating the Settlement of such emergency assistance. Payment to the CAISO for such emergency assistance shall be made in accordance with the Settlement process, billing cycle, and payment timeline set forth in the CAISO Tariff.

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11.7.1 MSS Load Following Deviation Penalty

For MSS Operators that have elected to follow their Load as described in Section 4.9.13.2, the Scheduling Coordinator for a Load following MSS Operator shall pay amounts for: (i) excess MSS Generation supplied to the CAISO Markets and (ii) excess MSS Load relying on CAISO Markets and not served by MSS generating resources. The revenue received from these payments will be used as an offset to the CAISO's Grid Management Charge. The payments due from a Scheduling Coordinator will be calculated as follows:

11.7.1.1 If the metered Generation resources and imports into the MSS exceed: (i) the metered Demand and exports from the MSS; and (ii) Energy expected to be delivered by the Scheduling Coordinator for the MSS in response to the CAISO's Dispatch Instructions and/or Regulation Set Point signals issued by the CAISO's AGC by more than the MSS Deviation Band, then the payment for excess Energy outside of the MSS Deviation Band shall be rescinded and Scheduling Coordinator for the MSS Operator will pay the CAISO an amount equal to one hundred percent (100%) of the product of the highest LMP paid to the MSS Operator for its Generation in the Settlement Interval and the amount of the FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy that is supplied in excess of the MSS Deviation Band.

11.7.1.2 If metered Generation resources and imports into the MSS are insufficient to meet: (i) the metered Demand and exports from the MSS; and (ii) Energy expected to be delivered by the Scheduling Coordinator for the MSS in response to the CAISO's Dispatch Instructions and/or Regulation Set Point signals issued by the CAISO's AGC by more than the MSS Deviation Band, then the Scheduling Coordinator for the MSS Operator shall pay the CAISO an amount equal to the product of the Default LAP price for the Settlement Interval and two hundred percent (200%) of the shortfall that is outside of the MSS Deviation Band. The payment in the previous sentence is in addition to the charges for the FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy that serves the excess MSS Demand that may be applicable under Section 11.5.

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11.8.4 RTM Bid Cost Recovery Amount

For purposes of determining the RTM Unrecovered Bid Cost Uplift Payments as determined in Section 11.8.5, and for the purposes of allocation of Net RTM Bid Cost Uplift as described in Section 11.8.6.6 the CAISO shall calculate the RTM Bid Cost Shortfall or the RTM Bid Cost Surplus as the algebraic difference between the RTM Bid Cost and the RTM Market Revenues for each Settlement Interval. The RTM Bid Costs shall be calculated pursuant to Section 11.8.4.1. The RTM Market Revenues shall be calculated pursuant to Section 11.8.4.2. The Energy subject to RTM Bid Cost Recovery is the FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy described in Section 11.5.1, excluding Standard Ramping Energy, Residual Imbalance Energy, FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy, FMM Derate Energy or RTD Derate Energy, Ramping Energy Deviation, Regulation Energy and MSS Load Following Energy regardless of whether the Energy is from the FMM or RTD, and is subject to the application of the Real-Time Performance Metric as described in Section 11.8.4.4 and the Persistent Deviation Metric described in Section 11.17.

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11.8.4.1.1 RTM Start-Up Cost

For each Settlement Interval of the applicable Real-Time Market Commitment Period, the Real-Time Market Start-Up Cost shall consist of the Start-Up Cost of the Bid Cost Recovery Eligible Resource submitted to the CAISO for the Real-Time Market divided by the number of Settlement Intervals in the applicable Real-Time Market Commitment Period. For each Settlement Interval, only the Real-Time Market Start-Up Cost in a CAISO Real-Time Market Commitment Period is eligible for Bid Cost Recovery. The CAISO will determine the RTM Start-Up Cost for a Multi-Stage Generating Resource based on the MSG Configuration committed by the CAISO in RTM. The following rules shall be applied in sequence and shall qualify the Real-Time Market Start-Up Cost in a Real-Time Market Commitment Period:

- (a) The Real-Time Market Start-Up Cost is zero if there is a Real-Time Market Self-Commitment Period within the Real-Time Market Commitment Period.

- (b) The Real-Time Market Start-Up Cost is zero if the Bid Cost Recovery Eligible Resource has been manually pre-dispatched under an RMR Contract or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule or Real-Time Market anywhere within that Real-Time Market Commitment Period.
- (c) The Real-Time Market Start-Up Cost is zero if the Bid Cost Recovery Eligible Resource is started within the Real-Time Market Commitment Period pursuant to an Exceptional Dispatch issued in accordance with Section 34.11.2 to: (1) perform Ancillary Services testing; (2) perform pre-commercial operation testing for Generating Units; or (3) perform PMax testing.
- (d) The Real-Time Market Start-Up Cost is zero if there is no Real-Time Market Start-Up at the start of that Real-Time Market Commitment Period because the Real-Time Market Commitment Period is the continuation of an IFM or RUC Commitment Period from the previous Trading Day.
- (e) If a Real-Time Market Start-Up is terminated in the Real-Time within the applicable Real-Time Market Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource is starting up, the Real-Time Market Start-Up Cost is prorated by the ratio of the Start-Up Time before termination over the Real-Time Market Start-Up Time.
- (f) The Real-Time Market Start-Up Cost shall be qualified if an actual Start-Up occurs within that Real-Time Market Commitment Period. An actual Start-Up is detected when the relevant metered Energy in the applicable Settlement Interval(s) indicates the unit is Off before the time the resource is instructed to be On as specified in its Start Up Instruction and is On in the Settlement Interval that falls within the CAISO Real-Time Market Commitment Period. The CAISO will determine whether the resource is On for this purpose based on whether its metered Energy is at or above the resource's Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3. The CAISO will determine that the Multi-Stage Generating Resource is On based

on the MSG Configuration that the CAISO has committed in the Real-Time Market.

- (g) The Real-Time Market Start-Up Cost for a Real-Time Market Commitment Period shall be qualified if an actual Start-Up occurs earlier than the start of the Real-Time Market Start-Up, if the relevant Start-Up is still within the same Trading Day and the Bid Cost Recovery Eligible Resource actually stays on until the Real-Time Market Start-Up, otherwise the Start-Up Cost is zero for the Real-Time Market Commitment Period.
- (h) For Short-Start Units, the first Start-Up Costs within a CAISO IFM Commitment Period are qualified IFM Start-Up Costs as described above in Section 11.8.2.1.1(g). For subsequent Start-Ups of Short-Start Units after the CAISO Shuts Down a resource and then the CAISO issues a Start-Up Instruction pursuant to a CAISO RTM Commitment within the CAISO IFM Commitment Period, the Start-Up Costs shall be qualified as Real-Time Start-Up costs, provided that the resource actually Shut-Down and Started-Up based on CAISO Shut-Down and Start-Up Instructions.

11.8.4.1.2 RTM Minimum Load Cost

The RTM Minimum Load Cost is the Minimum Load Cost of the Bid Cost Recovery Eligible Resource submitted to the CAISO for the Real-Time Market, as adjusted pursuant to Section 30.7.10.2, if applicable, divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RTM Minimum Load Cost in a CAISO RTM Commitment Period is eligible for Bid Cost Recovery. The RTM Minimum Load Cost for any Settlement Interval is zero if: (1) the Settlement Interval is included in a RTM Self-Commitment Period for the Bid Cost Recovery Eligible Resource; (2) the Bid Cost Recovery Eligible Resource has been manually dispatched under an RMR Contract or the resource has been flagged as an RMR Dispatch in the Day-Ahead Schedule or the Real-Time Market in that Settlement Interval; (3) for all resources that are not Multi-Stage Generating Resources, that Settlement Interval is included in an IFM or RUC Commitment Period; or (4) the Bid Cost Recovery Eligible Resource is committed pursuant to Section 34.11.2 for the purpose of performing Ancillary Services testing, pre-commercial operation testing for Generating Units, or PMax testing. A resource's RTM Minimum Load Costs for Bid Cost Recovery purposes are subject to the application of the Real-Time Performance Metric as specified in Section 11.8.4.4. For Multi-Stage Generating Resources, the commitment period is further

determined based on application of Section 11.8.1.3. For all Bid Cost Recovery Eligible Resources that the CAISO Shuts Down, either through an Exceptional Dispatch or an Economic Dispatch through the Real-Time Market, from its Day-Ahead Schedule that was also from a CAISO commitment, the RTM Minimum Load Costs will include negative Minimum Load Costs for Energy between the Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and zero (0) MWhs.

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11.8.4.1.5 RTM Energy Bid Cost

For any Settlement Interval, the RTM Energy Bid Cost for the Bid Cost Recovery Eligible Resource except Participating Loads shall be computed as the sum of the products of each RTD Instructed Imbalance Energy portion, except Standard Ramping Energy, Residual Imbalance Energy, FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy, FMM Derate Energy or RTD Derate Energy, MSS Load Following Energy, Ramping Energy Deviation and Regulating Energy, with the relevant Energy Bid prices, the Default Energy Bid price, or the Locational Marginal Price, if any, as further described in Section 11.17, for each Dispatch Interval in the Settlement Interval. For Settlement Intervals for which the Bid Cost Recovery Eligible Resource is ramping up to or down from a ratered Minimum Load that was increased pursuant to Section 9.3.3 for the Real-Time Market, the RTM Energy incurred by the ramping will be classified as FMM Derate Energy or RTD Derate Energy and will not be included in Bid Cost Recovery. For a Bid Cost Recovery Eligible Resource that is ramping up to or down from an Exceptional Dispatch, the relevant Energy Bid Cost related to the Energy caused by ramping will be settled on the same basis as the Energy Bid used in the Settlement of the Exceptional Dispatch that led to the ramping. The RTM Energy Bid Cost for a Bid Cost Recovery Eligible Resource, including Participating Loads and Proxy Demand Response Resources, for a Settlement Interval is subject to the Real-Time Performance Metric as described in Section 11.8.4.4 and the Persistent Deviation Metric as described in Section 11.17. Any Uninstructed Imbalance Energy in excess of FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy is also not eligible for Bid Cost Recovery. For a Multi-

Stage Generating Resource the CAISO will determine the RTM Energy Bid Cost based on the Generating Unit level.

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11.8.4.3.1 MSS Elected Gross Settlement

For an MSS Operator that has elected gross Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the RTM Bid Cost and RTM Market Revenue of the RTD Instructed Imbalance Energy subject to Bid Cost Recovery is determined for each resource in the same way these amounts are determined for a non-MSS resource pursuant to the rules specified in Section 11.8.4. The RTM Bid Cost Shortfall or Surplus for Energy and Ancillary Services in total is determined for each Trading Hour of the RTM over the Trading Day by taking the algebraic difference between the RTM Bid Cost and RTM Market Revenue.

11.8.4.3.2 MSS Elected Net Settlement

For MSS entities that have elected net Settlement regardless of other MSS optional elections (i.e., Load following or not, or RUC opt-in or out), unlike non-MSS resources, the RUC and RTM Bid Cost Shortfall or Surplus is treated at the MSS level and not at the resource specific level, and is calculated as the RUC and RTM Bid Cost Shortfall or Surplus of all BCR Eligible Resources within the MSS. In calculating the Energy RTM Market Revenue for all the resources within the MSS as provided in Section 11.8.4.2, the CAISO will use the FM MMSS Price or the RTD MSS Price, as applicable. The RUC and RTM Bid Cost Shortfall and Surplus for Energy, RUC Availability and Ancillary Services are first calculated separately for the MSS for each Settlement Interval of the Trading Day, with qualified Start-Up Cost, qualified Minimum Load Cost and qualified Multi-Stage Generator transition cost included into the RUC and RTM Bid Cost Shortfalls and Surpluses of Energy calculation. The MSS's overall RUC and RTM Bid Cost Shortfall or Surplus is then calculated as the algebraic sum of the RUC and RTM Bid Cost Shortfall or Surplus for Energy and the RUC and RTM Bid Cost Shortfall or Surplus AS for each Settlement Interval.

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11.9.1 Physical Trades

Inter-SC Trades of Energy in the Day-Ahead Market will be settled separately from Inter-SC Trades of Energy in the RTM. Both the Day-Ahead and RTM Inter-SC Trades of Energy will be settled on an hourly basis and the two respective Settlement amounts between the two parties for each market shall net to zero. All MWh quantities of Physical Trades submitted to the CAISO for Settlement in the Day-Ahead Market that are confirmed through the Physical Trade post market confirmation as provided in Section 28.1.6.3 shall be settled at the Day-Ahead LMP at the relevant PNode. All MWh quantities of Physical Trades that are reduced during the Physical Trade post market confirmation shall be settled at the relevant Existing Zone (EZ) Generation Trading Hub price. All MWh quantities of Physical Trades submitted to the CAISO for Settlement in the RTM that are confirmed through the Physical Trade post market confirmation pursuant to Section 28.1.6.3 shall be settled at the simple average of the four FMM LMPs at the relevant Pricing Node. All MWh quantities of Physical Trades submitted for Settlement in RTM that are reduced during the Physical Trade post market confirmation shall be settled at the FMM price for the EZ Generation Trading Hub.

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11.10.1.2.1 Congestion Charges

If a Scheduling Coordinator, including a Scheduling Coordinator for a Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area, receives an Ancillary Services Award or provides a qualified Self-Provided Ancillary Service at a congested Scheduling Point, the CAISO will charge or pay the Scheduling Coordinator for Congestion. The charge or payment for Congestion at such locations is equal to the simple average of the fifteen (15) minute applicable intertie constraint Shadow Price over the applicable Trading Hour at the location of the Ancillary Service Award, multiplied by the quantity of Ancillary Services Award or the capacity of the qualified Self-Provided Ancillary Service for the Settlement Period. No such charge or payment for Congestion will apply when the Scheduling Coordinator provides Ancillary Services from HASP Block Intertie Schedules at Scheduling Points pursuant to the CAISO Tariff rules that apply to

Existing Rights and Transmission Ownership Rights.

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11.10.1.4 Voltage Support

The total payments for each Scheduling Coordinator for Voltage Support in any Settlement Period shall be the sum of the opportunity costs of limiting Energy output to enable reactive energy production in response to a CAISO instruction. The opportunity cost shall be calculated based on the product of the Energy amount that would have cleared the market at the price of the FMM or RTD LMP minus the higher of the Energy Bid price or the Default Energy Bid price.

If applicable, Scheduling Coordinators shall also receive any payments under any long-term contracts due for the Settlement Period. FMM Exceptional Dispatches or RTD Exceptional Dispatches for incremental or decremental Energy needed for Voltage Support procured through Exceptional Dispatch pursuant to Section 34.11.2 will be paid and settled in accordance with Section 11.5.6. RMR Units providing Voltage Support are compensated in accordance with the RMR Contract rather than this Section 11.10.1.4.

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11.10.2 Settlement for User Charges for Ancillary Services

The CAISO shall determine a separate hourly user rate for Regulation Down Reserve, Regulation Up Reserve, Spinning Reserve, and Non-Spinning Reserve purchased for each Settlement Period. The hourly user rates for Regulation Down, Regulation Up, Spinning Reserve, and Non-Spinning Reserve include the cost incurred by the CAISO across the Day-Ahead Market and the Real-Time Market to procure this service. In computing the user rate for each service the quantity (MW) and costs of any substituting Ancillary Service will be treated as if they are costs and MW associated with the Ancillary Service need they are being used to fulfill. Each rate will be charged to Scheduling Coordinators on a volumetric basis applied to each Scheduling Coordinator's obligation for the specific Ancillary Service concerned which it has not self-provided, as adjusted by any Inter-SC Trades of Ancillary Services.

Each Scheduling Coordinator's obligation for Regulation Down Reserve, Regulation Up Reserve, Spinning Reserve, and Non-Spinning Reserve shall be calculated in accordance with this Section 11.10.2, notwithstanding any adjustment to the quantities of each Ancillary Service purchased by the CAISO in accordance with Section 8.2.3.5.

Ancillary Services Obligations for an individual Scheduling Coordinator (before taking into account Self-Provided Ancillary Services) or Inter-SC Trades of Ancillary Services may be negative. Credits for such negative obligations will be in accordance with the rates calculated in this Section 11.10.2, except that a Scheduling Coordinator's credit shall be reduced pro rata to the extent the sum of the negative obligations of all Scheduling Coordinators with the negative Ancillary Services Obligation (before self-provision or Inter-SC Trade) exceeds the obligation of all Scheduling Coordinators with positive obligation net of Self-Provided Ancillary Services, as specified in Section 11.10.5 in any Settlement Period, the net procurement quantity of Regulation Up, Regulation Down, Spinning Reserve, or Non-Spinning Reserve purchased by the CAISO in the Day-Ahead Market and the Real-Time Market due to the operation of Section 8.2.3.5 is zero (0), then the user rate for that Ancillary Service type will be zero (0). With respect to each Settlement Period, in addition to the user rates determined in accordance with this Section 11.10.2, each Scheduling Coordinator shall be charged an additional amount equal to its proportionate share, based on total purchases by Scheduling Coordinators of Regulation Down, Regulation Up, Spinning Reserve, and Non-Spinning Reserve of the amount, if any, by which (i) the total payments to Scheduling Coordinators pursuant to this Section 11.10.2 for the Day-Ahead Market and the Real-Time Market, exceed (ii) the total amounts charged to Scheduling Coordinators pursuant to this Section 11.10.2, for the Day-Ahead Market and the Real-Time Market. If total amounts charged to Scheduling Coordinators exceed the total payments to Scheduling Coordinators, each Scheduling Coordinator will be refunded its proportionate share, based on total purchases by Scheduling Coordinators of Regulation Down, Regulation Up, Spinning Reserve, and Non-Spinning Reserve.

With respect to each Settlement Period, in addition to Ancillary Service charges at the applicable user rates determined in accordance with this Section 11.10.2, each Scheduling Coordinator shall be charged additional neutrality adjustment amounts for each Ancillary Service type pursuant to Sections 11.10.2.1.4, 11.10.2.2.3, 11.10.3.4, and 11.10.4.4 and a neutrality adjustment amount for upward Ancillary Service

types pursuant to Section 11.14.

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11.10.3 Spinning Reserves

11.10.3.1 Spinning Reserves Obligation

The charges a Scheduling Coordinator must pay for Spinning Reserves for each Settlement Period of the Trading Day are based upon the product of the Scheduling Coordinator's hourly obligation for Spinning Reserves (MW) and the hourly user rate for Spinning Reserves (\$/MW).

If the Scheduling Coordinator's Operating Reserve Obligation (before self-provision or Inter-SC Trade of Spinning Reserve or Non-Spinning Reserve) is negative, the SC may be entitled to a credit rather than a charge. In that case, the quantity of the SC's negative Operating Reserve Obligation (before self-provision and Inter-SC Trade) shall be multiplied by the Negative Operating Reserve Obligation Credit Adjustment Factor (NOROCAF) computed for the Trading Hour as specified in Section 11.10.5.

11.10.3.2 Hourly User Rate for Spinning Reserves

The hourly user rate for Spinning Reserves is the ratio of: (1) the sum of the portion of Spinning Reserve Cost used to meet the spin requirement and the portion of Regulation Up cost that can substitute for Spinning Reserve and (2) the Net Procurement quantity of Spinning Reserves by the CAISO (\$/MW).

The cost of Regulation Up substituting for Spinning Reserve is the user rate for Regulation Up multiplied by the quantity of Regulation Up used to satisfy the Spinning Reserve requirement.

The CAISO's Spinning Reserve Cost is equal to: (i) the revenues paid to the suppliers of the total awarded Spinning Reserve capacity in the Day-Ahead Market, HASP, and Real-Time Market, minus, (ii) the payments rescinded due to either the failure to conform to Dispatch Instructions or the unavailability of the Spinning Reserves under Section 8.10.8. The Net Procurement of Spinning Reserves is equal to: (i) the amount (MWs) of total awarded Spinning Reserve capacity in the Day-Ahead Market, HASP, and Real-Time Market, minus, (ii) the Spinning Reserve capacity associated with payments rescinded pursuant to any of the provisions of Section 8.10.8. The amount (MW) of awarded Spinning Reserve capacity includes the amounts (MW) associated with any Regulation Up Reserve capacity used as Spinning Reserve under Section 8.2.3.5.

11.10.3.3 Hourly Net Obligation for Spinning Reserves

Each Scheduling Coordinator's hourly net obligation for Spinning Reserves is determined as follows: the Scheduling Coordinator's total Ancillary Services Obligation for Operating Reserve for the hour multiplied by the ratio of the CAISO's total Ancillary Services Obligation for Spinning Reserves in the hour to the CAISO's total Operating Reserve Obligations in the hour (and if negative, multiplied by NOROCAP), reduced by the accepted Self-Provided Ancillary Services for Spinning Reserves, plus or minus any Spinning Reserve Obligations for the hour acquired or sold through Inter-SC Trades of Ancillary Services. The Scheduling Coordinator's total Operating Reserve Obligation for the hour is the sum of six (6) percent of its CAISO Demand and three (3) percent of its Energy for exports from the CAISO Balancing Authority Area (excluding export Dynamic Schedules); less three (3) percent of its Energy from imports into the CAISO Balancing Authority Area (excluding import Dynamic Schedules). The Scheduling Coordinator's total Operating Reserve Obligation for the applicable Trading Hour may be less than zero (0) only if the resulting credit supports an Inter-SC Trade of Ancillary Services or the credit results from the portion of Operating Reserve Obligation associated with Energy from imports. The CAISO does not apply Self-Provided Ancillary Services to reduce a Scheduling Coordinator's total Operating Reserve Obligation for the applicable Trading Hour below zero (0).

11.10.3.4 Spinning Reserve Neutrality Adjustment

For each Settlement Period, the difference between the Spinning Reserve net requirement at the hourly Spinning Reserve user rate determined in Section 11.10.3.2 and the total revenue collected from all Scheduling Coordinators in the Spinning Reserve charge pursuant to Section 11.10.3.3 shall be allocated to all Scheduling Coordinators in proportion to their Spinning Reserve obligation quantity. The Spinning Reserve net requirement is the Real-Time Spinning Reserve requirement net of the sum of effective qualified Spinning Reserve self-provision over all resources.

11.10.4 Non-Spinning Reserves

11.10.4.1 Non-Spinning Reserves Obligations

The charges an SC must pay for Non-Spinning Reserves for each Settlement Period of the Trading Day are based upon the product of SC's hourly obligation for Non-Spinning Reserves (MWs) and the hourly

user rate for Non-Spinning Reserves (\$/MW).

If the Scheduling Coordinator's Operating Reserve Obligation (before self-provision or Inter-SC Trade of Spinning Reserve or Non-Spinning Reserve) is negative, the Scheduling Coordinator may be entitled to a credit rather than a charge. In that case, the quantity of the Scheduling Coordinator's negative Non-Spinning Reserve Obligation (before self-provision and Inter-SC Trade) shall be multiplied by the Negative Operating Reserve Obligation Credit Adjustment Factor (NOROCAF) computed for the Trading Hour as specified in Section 11.10.5.

11.10.4.2 Hourly User Rate Non-Spinning Reserves

The hourly user rate for Non-Spinning Reserves is calculated as the ratio of: (i) the sum of the portion of the Non-Spinning Reserve Cost used to meet the Non-Spinning requirement and a portion of the Regulation Up and Spinning Reserve costs that can substitute for Non-Spinning Reserve and (ii) the Net Procurement quantity of Non-Spinning Reserves by the CAISO (\$/MW). The CAISO's Non-Spinning Reserve Cost includes the costs associated with any Regulation Up Reserve or Spinning Reserve capacity used as Non-Spinning Reserve under Section 8.2.3.5.

The CAISO's Non-Spinning Reserve Cost is equal to: (i) the revenues paid to the suppliers of the total awarded Non-Spinning Reserve capacity in the Day-Ahead Market and Real-Time Market, minus, (ii) the payments rescinded due to either the failure to conform to CAISO Dispatch Instructions or the unavailability of the Non-Spinning Reserves under Section 8.10.8. The Net Procurement of Non-Spinning Reserves is equal to: (i) the amount (MWs) of total awarded Non-Spinning Reserve capacity in the Day-Ahead Market and Real-Time Market, minus, (ii) the Non-Spinning Reserve capacity associated with payments rescinded pursuant to any of the provisions of Section 8.10.8. The amount (MW) of awarded Non-Spinning Reserve capacity includes the amounts (MW) associated with any Regulation Up Reserve or Spinning Reserve capacity used as Non-Spinning Reserve under Section 8.2.3.5.

11.10.4.3 Hourly Net Obligation for Non-Spinning Reserves

Each Scheduling Coordinator's hourly net obligation for Non-Spinning Reserves is determined as follows: the product of the Scheduling Coordinator's total Ancillary Services Obligation for Operating Reserve for the hour (and if negative, multiplied by NOROCAF) multiplied by the ratio of the CAISO's total Ancillary Services Obligation for Non-Spinning Reserves in the hour to the CAISO's total Operating Reserve

obligations in the hour, reduced by the accepted Self-Provided Ancillary Services for Non-Spinning Reserves, plus or minus any Non-Spinning Reserve Obligations for the hour acquired or sold through Inter-SC Trades of Ancillary Services. The Scheduling Coordinator's total Operating Reserve Obligation for the hour is the sum of six (6) percent of its CAISO Demand and three (3) percent of its Energy for exports from the CAISO Balancing Authority Area (excluding export Dynamic Schedules); less three (3) percent of its Energy from imports into the CAISO Balancing Authority Area (excluding import Dynamic Schedules). The Scheduling Coordinator's total Operating Reserve Obligation for the applicable Trading Hour may be less than zero (0) only if the resulting credit supports an Inter-SC Trade of Ancillary Services or the credit results from the portion of Operating Reserve Obligation associated with Energy from imports. The CAISO does not apply Self-Provided Ancillary Services to reduce a Scheduling Coordinator's total Operating Reserve Obligation for the applicable Trading Hour below zero (0).

11.10.4.4 Non-Spinning Reserve Neutrality Adjustment

For each Settlement Period, the difference between the Non-Spinning Reserve net requirement at the hourly Non-Spinning Reserve user rate determined in Section 11.10.4.2 and the total revenue collected from all Scheduling Coordinators in the Non-Spinning Reserve charge pursuant to Section 11.10.4.3 shall be allocated to all Scheduling Coordinators in proportion to their Non-Spinning Reserve Obligation quantity. The Non-Spinning Reserve net requirement is the Real-Time Non-Spinning Reserve requirement net of the sum of effective qualified Non-Spinning Reserve self-provision over all resources.

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11.10.6 Upward Ancillary Services Neutrality Adjustment

For each Settlement Period the difference between the upwards Ancillary Service cost and the sum of the total Ancillary Services obligation and neutrality adjustments will be allocated to all Scheduling Coordinators in proportion to their upward Ancillary Service Obligation (before taking into consideration the Inter-SC Trades of Ancillary Services). The CAISO shall exclude EIM Transfers between the CAISO and an EIM Entity from the calculation of the upwards Ancillary Service Obligation for this neutrality adjustment. The upwards Ancillary Service cost is the sum of the upward Ancillary Services payments

made pursuant to Sections 11.10.1.1, 11.10.1.2, and 11.10.3.1. The total upward Ancillary Services obligation and neutrality adjustments is the sum of the requirements in Sections 11.10.2.2.2, 11.10.2.2.3, 11.10.3.1, 11.10.3.4, 11.10.4.1, and 11.10.4.4.

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11.10.9.3 Rescission of Payments for Undelivered Ancillary Service Capacity

If the total metered output of a Generating Unit, Participating Load, System Unit or System Resource is insufficient to supply the amount of FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with a Dispatch Instruction issued in accordance with awarded or self-provided Spinning Reserves or awarded or self-provided Non-Spinning Reserves in any Settlement Interval, then the capacity payment associated with the difference between the scheduled amount of each Ancillary Service for which insufficient Energy was delivered and the actual output attributed to the response to the Dispatch Instruction shall be rescinded. If, after the issuance of a Dispatch Instruction associated with Non-Spinning Reserves, the actual response of a Proxy Demand Resource is insufficient to supply the amount of FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with a Dispatch Instruction issued in accordance with awarded or self-provided Non-Spinning Reserves, then the capacity payment associated with the difference between the scheduled amount and the actual amount attributed to the response to the Dispatch Instruction (as established pursuant to the applicable Business Practice Manual) shall be rescinded. However, no capacity payment shall be rescinded if the shortfall in the metered output of the Generating Unit, Participating Load, Proxy Demand Resource, System Unit, or System Resource is less than a deadband amount published by the CAISO on the CAISO Website at least twenty-four hours prior to the Settlement Interval. For any Settlement Interval with respect to which no deadband amount has been published by the CAISO, the deadband amount shall be zero MWh.

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11.12.1 [Not Used]

11.12.2 [Not Used]

11.12.3 Payment of Participating Resource Fees

11.12.3.1 Forecasting Fee

A fee to defray the costs of the implementation of the forecasting service for Eligible Intermittent Resources shall be assessed to Scheduling Coordinators for Eligible Intermittent Resources as specified in Schedule 4 of Appendix F.

11.12.3.2 [Not Used]

11.12.3.3 [Not Used]

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11.17.1.2 Persistent Deviation Adjustments

The ISO will apply the following rules to evaluate the resource's performance relative to the Persistent Deviation Metric Threshold and will apply the Persistent Deviation Metric as specified below.

11.17.1.2.1 Rule 1

If six (6) or fewer Settlement Intervals out of the previous twenty-four (24) Settlement Intervals are flagged pursuant to the rules in Section 11.17.1.1, then: (a) the RTM Energy Bid Costs will be based on the applicable Energy Bid price as specified in Section 11.8.4.1.5, and (b) Residual Imbalance Energy will be settled based on the reference hour Energy Bid as specified in Section 11.5.5.

11.17.1.2.2 Rule 2

If seven (7) or more Settlement Intervals of the previous twenty-four (24) Settlement Intervals are flagged as exceeding the Persistent Deviation Metric Threshold, then for all the previous twenty-four (24) Settlement Intervals in the two-hour window: (a) the RTM Energy Bid Costs specified in Section 11.8.4.1.5 (i) for FMM Optimal Energy or RTD Optimal Energy above the Day-Ahead Scheduled Energy will be based on the lesser of the applicable Default Energy Bid price, the applicable Energy Bid price, as mitigated, or the applicable FMM or RTD LMP; and (ii) for FMM Optimal Energy or RTD Optimal Energy

below the Day-Ahead Scheduled Energy will be based on the greater of the applicable Default Energy Bid price, the applicable Energy Bid price, as mitigated, or the applicable FMM or RTD LMP; and (b) Residual Imbalance Energy as specified in Section 11.5.5 (i) for Residual Imbalance Energy above the Day-Ahead Scheduled Energy will be based on the lesser of the applicable Default Energy Bid price, the relevant Energy Bid Price, as mitigated, or the applicable RTD LMP; and (ii) Residual Imbalance Energy below the Day-Ahead Scheduled Energy will be based on the greater of the applicable Default Energy Bid price, the relevant Energy Bid Price, or the applicable RTD LMP.

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11.17.2.2 Disqualification Based on ADS Shut-Down Instruction

In the event that the CAISO issues a binding Shut-Down Instruction through ADS, a resource will not be eligible for recovery of RTM or RUC Minimum Load Costs from the point of the Shut-Down Instruction forward for the duration of the resource's registered Minimum Down Time. If a resource ignores the binding Shut-Down Instruction and it has a Day-Ahead Schedule, the resource is not eligible for IFM Minimum Load Cost recovery as specified in Section 11.8.2.1.2 for the minimum of: 1) the resource's Minimum Down Time; and 2) the IFM Commitment Period.

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11.20.4 Process for Invoicing NERC/WECC Charges

With regard to the NERC/WECC Charges to be assessed by the WECC for each NERC/WECC Charge Assessment Year, the following processes shall apply:

- (a) The CAISO will issue a Market Notice that will include the total of all Scheduling Coordinators' NERC/WECC Metered Demand for the calendar year two years prior to the NERC/WECC Charge Assessment Year. On or after the date on which the CAISO issues this Market Notice, the CAISO will notify each Scheduling Coordinator in writing of the Scheduling Coordinator's NERC/WECC Metered Demand for the calendar year two

years prior to the NERC/WECC Charge Assessment Year. Each Scheduling Coordinator shall have sixty (60) calendar days from the date the CAISO provides it with this notification in writing to raise any disputes concerning the CAISO's calculation of the Scheduling Coordinator's NERC/WECC Metered Demand for the calendar year two years prior to the NERC/WECC Charge Assessment Year.

- (b) The CAISO will report to the WECC the total of all Scheduling Coordinators' NERC/WECC Metered Demand for the calendar year two years prior to the NERC/WECC Charge Assessment Year, including any adjustments to the calculation of NERC/WECC Metered Demand for that year made by the CAISO in response to disputes raised by Scheduling Coordinators pursuant to Section 11.20.4(a). The report will also include any adjustments to the calculation of NERC/WECC Metered Demand, based on decisions by the WECC to permit such adjustments, that the CAISO has time to reflect in the report and that the WECC provides to the CAISO in a written statement in accordance with the CAISO-WECC Billing Services Agreement. This report shall facilitate the WECC's calculation of actual NERC/WECC Charges to be invoiced to the CAISO for the NERC/WECC Charge Assessment Year.
- (c) The CAISO will issue a Market Notice setting forth the Preliminary NERC/WECC Charge Rate for the NERC/WECC Charge Assessment Year.
- (d) By August 31 of the year preceding the NERC/WECC Charge Assessment Year, the CAISO will issue Preliminary NERC/WECC Charge Invoices for the NERC/WECC Charge Assessment Year.
- (e) Within five (5) Business Days after receipt of the WECC's invoice to the CAISO setting forth the assessment of NERC/WECC Charges for the NERC/WECC Charge Assessment Year, the CAISO shall issue a Market Notice setting forth the Final NERC/WECC Charge Rate for the NERC/WECC Charge Assessment Year. The Final NERC/WECC Charge Rate for the NERC/WECC Charge Assessment Year shall be based on (i) the total NERC/WECC Charges for the NERC/WECC Charge Assessment Year that were invoiced to the CAISO by the WECC, divided by (ii) the total of all

Scheduling Coordinators' NERC/WECC Metered Demand including any adjustments to the calculation of NERC/WECC Metered Demand as reported to the WECC pursuant to Section 11.20.4(b), and including any additional adjustments to the calculation of NERC/WECC Metered Demand, based on decisions by the WECC to permit such adjustments, that the WECC provides to the CAISO in a written statement in accordance with the CAISO-WECC Billing Services Agreement.

- (f) Within fifteen (15) Business Days after receipt of the WECC invoice to the CAISO setting forth the assessment for NERC/WECC Charges for the NERC/WECC Charge Assessment Year, the CAISO will issue Final NERC/WECC Charge Invoices that allocate NERC/WECC Charges for the NERC/WECC Charge Assessment Year to Scheduling Coordinators based on (i) each Scheduling Coordinator's NERC/WECC Metered Demand as adjusted pursuant to Sections 11.20.4(b) and 11.20.4(e) and pursuant to any additional adjustments that the WECC provides to the CAISO in a written statement in accordance with the CAISO-WECC Billing Services Agreement, multiplied by (ii) the Final NERC/WECC Charge Rate for the NERC/WECC Charge Assessment Year. If and to the extent that a Scheduling Coordinator has not already paid all of the NERC/WECC Charges for the NERC/WECC Charge Assessment Year that it is required to pay, the Scheduling Coordinator's Final NERC/WECC Charge Invoice will show the amount the Scheduling Coordinator is still required to pay. If and to the extent that a Scheduling Coordinator has already paid in excess of the NERC/WECC Charges for the NERC/WECC Charge Assessment Year that the Scheduling Coordinator is required to pay, the Scheduling Coordinator's Final NERC/WECC Charge Invoice will show the amount the Scheduling Coordinator will be credited.

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11.21.1 CAISO Demand and Exports

If the CAISO corrects an LMP in the upward direction pursuant to Section 35 that impacts Demand in the Day-Ahead Market and the FMM such that either a portion of or the entire cleared CAISO Demand or export Economic Bid curve becomes uneconomic, then the CAISO will calculate and apply the Price Correction Derived LMP for settlement of day-ahead CAISO Demand and exports in Sections 11.2.1.2, 11.2.1.3, and 11.2.1.4, and FMM exports in Section 11.5.1.1. The CAISO shall not calculate and apply a Price Correction Derived LMP for settlement of exports that are part of a Schedule that results from Bids submitted in violation of Section 30.5.5. The CAISO will calculate a Price Correction Derived LMP for each affected CAISO Demand and exports as follows: the total cleared MWhs of CAISO Demand or exports in the Day-Ahead Schedule or FMM Schedule, as applicable, multiplied by the corrected LMP, minus the make-whole payment amount, all of which is divided by the total cleared MWhs of CAISO Demand or export in the Day-Ahead Schedule or FMM Schedule, as applicable. The make-whole payment amount will be calculated on an hourly basis determined by the area between the Scheduling Coordinator's CAISO Demand or Export Bid curve and the corrected LMP, which is calculated as the MWhs for each of the cleared bid segments in the Day-Ahead Schedule or FMM Schedule for the affected resource, multiplied by the maximum of zero or the corrected LMP minus the bid segment price. For the purpose of this calculation, the CAISO will not factor in a make-whole payment amount for Self-Scheduled CAISO Demand or exports. Any non-zero amounts in revenue collected as a result of the application of the Price Correction Derived LMP will be captured through the calculation of the IFM Congestion Charge reflected in Section 11.2.4.1 and the allocation of non-zero amounts of the sum of FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted for Energy in accordance with Section 11.5.4.

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11.29 CAISO as Counterparty; Billing and Payment

- (a) The CAISO shall be the contracting counterparty, in its own name and right, to each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO for any purchase or sale of any product or service, or for any other transaction, that is financially settled by the CAISO under the CAISO Tariff, except under the following circumstances:
- (i) The CAISO shall not be the contracting counterparty for transactions that procure Station Power for a Generating Unit located in Mexico or for transactions that procure Energy or Ancillary Services within Mexico; for such transactions, the CAISO will not act as principal but instead as agent for and on behalf of the relevant Scheduling Coordinators.
 - (ii) The provisions of this Section 11.29 will not apply to the billing and payment of transactions associated with Trading Days that occurred prior to September 1, 2012. Billing and payment of such transactions shall be governed by the terms of the tariff effective on the Trading Days.
 - (iii) The CAISO's status as contracting counterparty is not intended to affect the tax-exempt status of transmission facilities or entitlements subject to the CAISO's operational control.

Bids for Supply submitted by a Scheduling Coordinator for any resource funded by Municipal Tax Exempt Debt are not, and shall not be construed or deemed to be, a sale to the CAISO or other transaction that is financially settled by the CAISO to the extent that the load serving entity that holds entitlements to the resource for which such Bids for Supply are submitted is using its entitlements to serve native load during that interval. For purposes of this subsection only, a load serving entity is using its entitlements to a resource to serve native load under the following conditions: A) For a Load Serving Entity that is serving demand inside the CAISO Balancing Authority Area, if the total MW volume of such Bids for Supply that clear in any settlement interval is less than or equal to the metered CAISO Demand for that settlement interval for the Load Serving Entity

that holds entitlements to the resources for which such Bids for Supply are submitted, or B) for load serving entities that serve demand outside of the CAISO Balancing Authority Area by wheeling through or exporting from the CAISO Balancing Authority Area, if the total MW volume of such Bids for Supply that clear in any settlement interval is less than or equal to the total of wheel throughs or exports that are used to serve the native load for the load serving entity that holds entitlements to the resources for which such Bids for Supply are submitted during that settlement interval. Nothing in the two preceding sentences shall affect credit requirements under Section 12 of the CAISO Tariff or settlements charges or credits issued pursuant to any section of the CAISO tariff. The details of such Bids for Supply may be included in Settlement Statements by the CAISO for purposes of calculating settlement charges and credits other than for Supply.

- (b) The purchase or sale of any products or service, or any other transaction, which is financially settled by CAISO under this CAISO Tariff shall be deemed to occur within the State of California. To the extent permitted by applicable law, any warranties provided by the sellers to the CAISO of such products or services, whether express, implied or statutory, are hereby passed to the Business Associates who purchase such products or services from the CAISO on a “pass through basis” and to the extent not passed through, any such warranties are hereby assigned by the CAISO to the purchasing Business Associates. Sellers to the CAISO and Business Associates acknowledge that warranties on such products are limited to that offered by the seller to CAISO and will exist, if at all, solely between the seller to the CAISO and the purchasing Business Associate. AS BETWEEN THE PURCHASING BUSINESS ASSOCIATE AND THE CAISO AS COUNTERPARTY, NO EXPRESS OR IMPLIED WARRANTIES ARE MADE BY THE CAISO REGARDING THE PRODUCTS AND SERVICES SOLD BY THE CAISO AS COUNTERPARTY, AND ANY SUCH PRODUCTS AND SERVICES ARE PROVIDED ON AN “AS IS” AND “AS AVAILABLE” BASIS. THE CAISO MAKES NO WARRANTY OR REPRESENTATION THAT THE PRODUCTS OR SERVICES WILL BE UNINTERRUPTED OR ERROR FREE. PURCHASING BUSINESS ASSOCIATES

HEREBY WAIVE, AND THE CAISO HEREBY DISCLAIMS, ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. THE CAISO DOES NOT WARRANT THAT THE PRODUCTS AND SERVICES OFFERED WILL MEET CUSTOMER'S REQUIREMENTS. NO ORAL OR WRITTEN INFORMATION OR ADVICE GIVEN BY THE CAISO OR ANY AUTHORIZED REPRESENTATIVE OF THE CAISO SHALL CREATE A WARRANTY OR IN ANY WAY INCREASE THE SCOPE OF ANY PASS THROUGH OR ASSIGNED WARRANTY. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES IN CERTAIN CIRCUMSTANCES, SO THE ABOVE EXCLUSION APPLIES ONLY TO THE EXTENT PERMITTED BY APPLICABLE LAW.

- (c) The CAISO will calculate for each charge the amounts payable by the relevant Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO for each Settlement Period of the Trading Day, and the amounts payable to that Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO for each charge for each Settlement Period of that Trading Day and shall arrive at a net amount payable for each charge by or to that Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO for each charge for that Trading Day. Each of these net amounts will appear in the Settlement Statements that the CAISO will provide to the relevant Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO.
- (d) The components of the Grid Management Charge will be included in an Initial Settlement Statement T+3B, and any Recalculation Settlement Statement with the other types of charges referred to in Section 11.

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11.29.8.4.6 Dispute of Recalculation Settlement Statement T+33M

Each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO may submit disputes regarding Incremental Changes in a Recalculation Settlement Statement T+33M, including the CAISO's implementation of a prior accepted dispute contained in a Recalculation Settlement Statement T+33M, no later than twenty-two (22) Business Days after the publication date of a Recalculation Settlement Statement T+33M. A dispute must only be based on: (i) Incremental Changes between the immediately preceding Recalculation Settlement Statement for the given Trading Day and Recalculation Settlement Statement T+33M; (ii) Meter Data issues identified through the audit process; or (iii) any good faith negotiation or dispute resolution settlement. Valid disputes regarding data appearing on a Recalculation Settlement Statement T+33M will be reflected on the Recalculation Settlement Statement T+36M. If a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO disagrees with the CAISO's resolution of a dispute regarding data appearing on a Recalculation Settlement Statement T+33M, it may initiate a good faith negotiation or other dispute resolution remedy under the procedures and pursuant to the deadlines set forth in Section 13. If a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO does not initiate a good faith negotiation or other dispute resolution remedy within the time period set forth in Section 13, the Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO will be deemed to have validated each Recalculation Settlement Statement T+33M. Once validated, a Recalculation Settlement Statement T+33M will be binding on the Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO that it relates to.

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11.29.8.4.8 Unscheduled Recalculation Settlement Statements

Each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO may submit disputes regarding Incremental Changes on an Unscheduled Recalculation Settlement Statement issued pursuant to Section 11.29.7.3 no later than twenty-two (22) Business Days after the publication date of

the Unscheduled Recalculation Settlement Statement. A dispute must only be based on Incremental Changes between the Unscheduled Recalculation Settlement Statement and prior applicable Recalculation Settlement Statement. Valid disputes regarding data appearing on an Unscheduled Recalculation Settlement Statement will be reflected on a later Recalculation Settlement Statement. If a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO disagrees with the CAISO's resolution of a dispute regarding data appearing on an Unscheduled Recalculation Settlement Statement, it may initiate dispute resolution under Section 13 of the CAISO Tariff pursuant to the deadlines set forth in Section 13. If a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO does not initiate dispute resolution under Section 13 of the CAISO Tariff within the time period set forth in Section 13, the Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO will be deemed to have validated each Unscheduled Recalculation Settlement Statement T+9M.

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11.29.9.3 Accounts of the Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs

Each Scheduling Coordinator, CRR Holder, Black Start Generator, and Participating TO shall establish and maintain at all times a Settlement Account at a commercial bank located in the United States and reasonably acceptable to the CAISO which can effect money transfers via Fedwire and, at its option, may also maintain an account capable of ACH transfers where payments to and from the CAISO Clearing Account shall be made in accordance with this CAISO Tariff. Scheduling Coordinators, CRR Holders, and Black Start Generators may, but will not be required to, maintain separate accounts for receipts and payments. Each Scheduling Coordinator, CRR Holder, and Black Start Generator shall notify the CAISO of its account details and of any changes to those details in accordance with the provisions of its Scheduling Coordinator Agreement, CRR Entity Agreement, or Black Start Agreement. Participating TOs will notify the CAISO of their Settlement Account details in accordance with Section 2.2.1 of their Transmission Control Agreement and may notify the CAISO from time to time of any changes by giving at

least seven (7) days written notice before the new account becomes operational.

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11.31 Intertie Schedules Decline Charges

The Decline Potential Charge shall apply to Intertie transactions as discussed below. The Decline Potential Charge does not apply to FMM Schedules of Economic Bids, dynamic transfers, and Variable Energy Resources located outside the CAISO Balancing Authority Area that have been qualified to use the forecast of their output produced by the CAISO as specified in Section 4.8.2.1.2.

- (a) HASP Block Intertie Schedules: Any HASP Block Intertie Schedule for an Energy import when the HASP Block Intertie Schedule is not delivered for any reason (with no exceptions based on the circumstances of a particular failure to deliver), to the extent the decline is made prior to the start of the applicable FMM interval. The Decline Potential Charge - Exports shall apply to any HASP Block Intertie Schedule for an Energy export when the HASP Block Intertie Schedule is not delivered for any reason (with no exceptions based on the circumstances of a particular failure to deliver), to the extent the decline is made prior to the start of the applicable FMM interval. The Decline Potential Charge will not apply if the decline is made after the applicable E-tag deadline, as defined in Section 30.6.2.
- (b) Economic Hourly Block Bid with Intra-Hour Option: Imports and exports accepted in an HASP Block Intertie Schedule that are incremental to Day-Ahead Schedules are subject to the Decline Potential Charge to the extent the decline is made prior to the start of the applicable FMM interval. The Decline Potential Charge will not apply if the decline is made after the applicable E-tag deadline, as defined in Section 30.6.2. To the extent the incremental import or export schedule in HASP is curtailed through the FMM, for the 15-minute FMM interval in which the resource follows the CAISO Dispatch Instructions will not be subject to the Decline Potential Charge.
- (c) Variable Energy Resources outside CAISO Balancing Authority Area Using Own Forecast: Imports from Variable Energy Resources using their own forecast are subject

to the Decline Potential Charge to the extent the resource over-forecasts over the month as discussed below. For each Trading Hour, the CAISO compares the maximum 15-minute FMM Schedule (that is based on the forecast submitted 37.5 minutes prior to flow) to the maximum 15-minute advisory schedule from the Hour-Ahead Scheduling Process (based upon the hourly forecast received 75 minutes prior to flow) and calculates the differences between the two. These hourly differences are summed over the month. If the maximum advisory schedule exceeds the actual financially binding schedule by the relevant threshold over the course of the month, the Decline Potential Charge applies.

- (d) Decline Potential Charge: For any Settlement Interval, the Decline Potential Charge - Imports or Decline Potential Charge - Exports, as the case may be, shall equal the MWh quantity of the import or export not delivered multiplied by the greater of \$10/MWh or fifty percent (50%) of the FMM LMP. The Decline Potential Charge - Imports and Decline Potential Charge - Exports will be calculated for each HASP Block Intertie Schedule or VER Self-Schedule that is not delivered, provided that only the Decline Monthly Charge - Imports and Decline Monthly Charge - Exports shall be payable by the Scheduling Coordinator as described in Section 11.31.1.

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12.5.1 Under-Secured and Non-Compliant Market Participants

The CAISO may take action under this Section 12.5.1 against a Market Participant if its Estimated Aggregate Liability, as calculated by the CAISO, at any time exceeds its Aggregate Credit Limit, or if a Market Participant fails to satisfy all of the minimum participation requirements set forth in Section 12.1. However, before taking action against a Market Participant based on failure to comply with Section 12.1(a) or 12.1(b)(i)-(iii), the CAISO must first notify the Market Participant of the failure and allow it thirty (30) days after notification to cure the failure. The CAISO may take any or all of the following actions:

- (a) The CAISO may withhold a pending payment distribution.
- (b) The CAISO may limit trading, which may include rejection of Bids, including Self-

Schedules, rejection or cancellation of Inter-SC Trades in their entirety (i.e., both sides of the Inter-SC Trade) at any time, and/or limiting other CAISO Market activity, including limiting eligibility to participate in a CRR Allocation or CRR Auction. In such case, the CAISO shall notify the Market Participant of its action and the Market Participant shall not be entitled to participate in the CAISO Markets or CRR Auctions or submit further Bids, including Self-Schedules, or otherwise participate in the CAISO Markets until the Market Participant posts an additional Financial Security Amount that is sufficient to ensure that the Market Participant's Aggregate Credit Limit is at least equal to its Estimated Aggregate Liability.

- (c) The CAISO may require the Market Participant to post an additional Financial Security Amount in lieu of an Unsecured Credit Limit for a period of time.
- (d) The CAISO may restrict, suspend, or terminate the Market Participant's CRR Entity Agreement or any other service agreement.
- (e) The CAISO may resell the CRR Holder's CRRs in whole or in part, including any Long Term CRRs, in a subsequent CRR Auction or bilateral transaction, as appropriate.
- (f) The CAISO will not implement the transfer of a CRR if the transferee or transferor has an Estimated Aggregate Liability in excess of its Aggregate Credit Limit.

In addition, the CAISO may restrict or suspend a Market Participant's right to submit further Bids, including Self-Schedules, or require the Market Participant to increase its Financial Security Amount if at any time such Market Participant's potential additional liability for imbalance energy and other CAISO charges is determined by the CAISO to be excessive by comparison with the likely cost of the amount of Energy reflected in Bids or Self-Schedules submitted by the Market Participant.

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16.11 Inter-Balancing Authority Area ETC Self-Schedule Bid Changes

Changes to ETC Self-Schedules that occur during the CAISO's Real-Time Market that involve changes to CAISO Balancing Authority Area imports or exports with other Balancing Authority Areas (that is, inter-

Balancing Authority Area changes to ETC Self-Schedules) will be allowed and will be recorded by the CAISO based upon notification received from the Scheduling Coordinator representing the holder of the Existing Rights. The Scheduling Coordinator representing the holder of the Existing Right must notify the CAISO of any such changes to external import/export in submitted ETC Self-Schedules. The Scheduling Coordinator representing the holder of the Existing Right must notify the CAISO of Real-Time Market changes to external import/export Interchange Schedules in submitted ETC Self-Schedules, by telephone. The timing and content of any such notification must be consistent with the TRTC Instructions previously submitted to the CAISO by the Responsible PTO. The CAISO will manually adjust or update the FMM Schedule for the Scheduling Coordinator to conform with the other Balancing Authority Area's net ETC Self-Schedule in Real-Time, and the notifying Scheduling Coordinator will be responsible for and manage any resulting Energy imbalance. These FMM Instructed Imbalance Energy deviations will be priced and charged to the Scheduling Coordinator representing the holder of Existing Rights in accordance with the FMM LMP.

16.12 Intra-Balancing Authority Area ETC Self-Schedule Changes

Changes to ETC Self-Schedules that occur during the CAISO's Real-Time processes that do not involve changes to CAISO Balancing Authority Area imports or exports with other Balancing Authority Areas (that is, intra-Balancing Authority Area changes to Schedules) will be allowed and will give rise to FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy. The imbalance energy will be priced and charged to the Scheduling Coordinator representing the holder of Existing Rights in accordance with the relevant FMM or RTD LMP.

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17.3.3 Settlement Treatment of Valid TOR Self-Schedules

The resulting valid TOR Self-Schedules shall have the following Settlement treatment:

- (1) The CAISO will apply the TOR Settlement treatment in Sections 11.2.1.5 and 11.5.7.
- (2) The CAISO shall base the Marginal Cost of Losses on LMP differentials at the Points of Receipt and Points of Delivery identified in the valid TOR Self-Schedule; provided,

however, that if a specific loss percentage exists in an applicable agreement between the TOR holder and the CAISO or an existing agreement between the TOR holder and a Participating TO, the CAISO will apply the IFM and RTM Marginal Cost of Losses Credit as provided in Sections 11.2.1.7 and 11.5.7.2. In any case in which the TOR holder has an existing agreement regarding its TORs with either the CAISO or a Participating TO, the provisions of the agreement shall prevail over any conflicting provisions of this Section 17.3.3(2). Where the provisions of this Section 17.3.3(2) do not conflict with the provisions of the agreement, the provisions of this Section 17.3.3(2) shall apply to the subject TORs.

- (3) The CAISO will assess only charges applicable to Ancillary Services, imbalance energy, Transmission Losses, Flexible Ramping Product, and Grid Management Charges for the use of a TOR and will not assess charges for neutrality, Unaccounted For Energy, transmission Access Charges, Minimum Load Costs, or other charges that might otherwise be applicable to the Demand or exports served solely over the TOR. The CAISO will assess charges applicable to Ancillary Services for the use of a TOR only to the extent that the CAISO must procure Ancillary Services for the TOR holder because Ancillary Services are not self-provided by the TOR holder. The CAISO will assess charges and provide payments for TOR Self-Schedules pursuant to the rules specified in Sections 11.2.1.5 and 11.5.7.2. The CAISO will assess charges applicable to imbalance energy for the use of a TOR only if the CAISO must procure imbalance energy for the TOR holder. The CAISO will assess Grid Management Charges for the use of a TOR only in accordance with the provisions of Section 11.22 and Appendix F, Schedule 1.
- (4) The holders of TORs will not be entitled to an allocation of revenues from the CAISO, including Access Charge revenues; provided that the Scheduling Coordinator for the TOR holder shall be allocated the applicable amount of IFM Marginal Losses Surplus Credit in accordance with the provisions of Section 11.2.1.6, except for any TOR Self-Schedule that received the IFM Marginal Cost of Losses Credit.

- (5) Parties with TORs shall continue to pay for Transmission Losses or Ancillary Services requirements in accordance with any Existing Contracts applicable to those TORs as they may be modified or changed in accordance with the terms of the Existing Contract. Any affected Participating TOs shall continue to provide Transmission Losses and any other Ancillary Services to the holder of a TOR subject to an Existing Contract as may be required by the Existing Contract. As described in Section 17.3.3(3) above, the CAISO will charge Scheduling Coordinators submitting the TOR Self-Schedule the charges applicable to Transmission Losses, Ancillary Services, and imbalance energy in accordance with the CAISO Tariff (e.g., the Transmission Losses Charge based on the Marginal Cost of Losses), and any shortfall or surplus between the CAISO charges and the provisions of any applicable Existing Contract shall be settled bilaterally between the Existing Contract parties or through the relevant TO Tariff. To enable holders of TORs to determine whether the CAISO's calculations result in any associated shortfall or surplus and to enable the parties to the Existing Contracts to settle the differences bilaterally or through the relevant TO Tariff, the CAISO shall calculate and provide the Scheduling Coordinator's Settlements the amounts paid for the MCL for the amounts of MWh submitted with a valid TOR Self-Schedule. Each Participating TO will be responsible for recovering any deficits or crediting any surpluses associated with differences in Transmission Losses and Transmission Loss requirements and/or Ancillary Services requirements, through its bilateral arrangements or its Transmission Owner Tariff.

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17.6 Inter-Balancing Authority Area TOR Self-Schedule Bid Changes

Changes to TOR Self-Schedules that occur during the CAISO's Real-Time Market that involve changes to CAISO Balancing Authority Area imports or exports with other Balancing Authority Areas (that is, inter-Balancing Authority Area changes to TOR Self-Schedules) will be allowed and will be recorded by the

CAISO based upon notification received from the Scheduling Coordinator representing the holder of the TOR. The Scheduling Coordinator representing the holder of the TOR must notify the CAISO of any such changes to external import/export in submitted TOR Self-Schedules. The Scheduling Coordinator representing the holder of the TOR must notify the CAISO of Real-Time Market changes to external import/export Interchange Schedules in submitted TOR Self-Schedules, by telephone. The timing and content of any such notification must be consistent with the TRTC Instructions previously submitted to the CAISO by the Non-Participating TO. The CAISO will manually adjust or update the FMM Schedule for the Scheduling Coordinator to conform with the other Balancing Authority Area's net TOR Self-Schedule in Real-Time, and the notifying Scheduling Coordinator will be responsible for and manage any resulting Energy imbalance. These imbalance energy deviations will be priced and charged to the Scheduling Coordinator representing the holder of the TOR in accordance with the relevant FMM or RTD LMP.

17.7 Intra-Balancing Authority Area TOR Self-Schedule Changes

Changes to TOR Self-Schedules that occur during the CAISO's Real-Time processes that do not involve changes to CAISO Balancing Authority Area imports or exports with other Balancing Authority Areas (that is, intra-Balancing Authority Area changes to Schedules) will be allowed and will give rise to FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy. These imbalance energy deviations will be priced and charged to the Scheduling Coordinator representing the holder of the TOR in accordance with the relevant FMM or RTD LMP.

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27.5.1.2 [Not Used]

27.5.1.2.1 [Not Used]

27.5.1.2.2 [Not Used]

27.5.1.2.3 [Not Used]

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27.5.3.2.2 Information Needed to Determine Application of MEEA-Specific Pricing in any Settlement Interval or Settlement Period

If an MEEA signatory submits a Bid in the CAISO Market and seeks to obtain an MEEA-specific LMP for an interchange transaction, the CAISO must be capable of verifying what portion (output in MWh) of the resources identified in the MEEA, if any, were dispatched to implement the interchange transaction. To the extent that the resources identified in the MEEA, or portion thereof, were dispatched and operated for purposes other than the interchange transaction submitted in the CAISO Market, the Schedule or imbalance energy associated with the Bid submitted and cleared in the CAISO Market will not receive an MEEA-specific LMP, and will instead receive the default IBAA price specified in Appendix C, Section I.1.1. The CAISO will establish Resource IDs that are to be used only to submit Bids, including Self-Schedules, for the purpose of obtaining MEEA-specific pricing. MEEA signatories may obtain and use other Resource IDs to submit Bids, including Self-Schedules, that are not covered by an MEEA. Prior to obtaining and settling Resource IDs under the terms of the MEEA, the relevant Scheduling Coordinator shall attest that use of the Resource ID shall mean that the MEEA signatory dispatched a resource identified in an MEEA to support the MEEA interchange transaction. This attestation shall be executed under oath by an officer of the MEEA with knowledge of the MEEA signatory's operations. By actually using such Resource IDs, the Scheduling Coordinator represents that MEEA resources are dispatched to support such Bids, including Self-Schedules. The CAISO may challenge the use of these Resource IDs and conduct an audit under Section 27.5.3.7.

In connection with any such audit, the MEEA signatory shall support its certification with information demonstrating that an MEEA signatory resource was dispatched to support the interchange transaction. This information may include, but is not limited to, NERC tags, OASIS transmission service data, day-ahead load and resource plans, power purchase agreements or contracts demonstrating use of the California Oregon Transmission Project as well as marginal cost information. An MEEA signatory, however, is not required to provide marginal cost information to the CAISO to support its self-certification and may support its self-certification with other information, including information identified in the preceding sentence. The MEEA signatory shall provide data in a format that the WECC accepts or other

commonly used format. For any Settlement Interval or Period for which the CAISO challenges the use of Resource IDs under an MEEA, the CAISO shall apply MEEA pricing to the Settlement Interval or Period pending resolution of the challenge.

In addition, in the event that there is a Dynamic Resource-Specific System Resource in the IBAA, the MEEA may further provide that the MEEA signatory in control of such resource may also obtain pricing under the MEEA for imports to the CAISO Balancing Authority Area from the Dynamic Resource-Specific System Resource. For any portion of an interchange transaction for which the MEEA Entity has not self-certified that the resources were used to support interchange transactions, the default IBAA price specified in Appendix C, Section I.1.1 will apply for the corresponding volume and time period.

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27.8.3 Changes in Status and Configurations of Resource

Scheduling Coordinators may seek modifications to the Multi-Stage Generating Resource attributes listed below consistent with the process and timing requirements specified in Section 27.8.1 and the additional requirements discussed below in this Section 27.8.3:

- (1) Registration and qualification of a Generating Unit as a Multi-Stage Generating Resource.
- (2) Changes to the MSG Configurations attributes, which include:
 - a. addition of new MSG Configurations;
 - b. removal of an existing MSG Configuration;
 - c. a change in the physical units supporting the MSG Configuration;
 - d. a change to the MSG Configuration Start Up and Shut Down flags;
 - e. adding or removing an MSG Transition to the Transition Matrix;
 - f. a material change in the Transition Times contained in the Master File, which consists of a change that more than doubles the Transition Times or reduces it to less than half; and
 - g. a material change to the maximum Ramp Rate of the MSG Configuration(s)

contained in the Master File, which consists of a change that more than doubles the maximum Ramp Rate or reduces it to less than half.

When transitioning to implement these changes across the midnight hour, for any Real-Time Market run in which the changes specified in this Section 27.8.3 are to take effect within the time horizon of any of the Real-Time Market runs, the CAISO will Schedule, Dispatch, or award resources consistent with either the prior or new status and definitions, as appropriate, and required by any Real-Time conditions regardless of the resource's state scheduled or awarded in the immediately preceding Day-Ahead Market. A Scheduling Coordinator may unregister a Generating Unit from its Multi-Stage Generating Resource status subject to the timing requirements for Master File changes, and such changes are not subject to the timing requirements in Section 27.8.3. Changes to the attributes listed above in this Section may take effect, including the registration of new Multi-Stage Generating Resources, provided Scheduling Coordinators have previously followed the registration process requirements listed in Section 27.8.1. Changes to these attributes may only be made every sixty (60) days after the day on which any such changes have taken effect.

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29.10 Metering and Settlement Data

- (a) **Telemetry Requirements.** The EIM Entity shall ensure that each EIM Resource and non-participating resource in an EIM Entity Balancing Authority Area that is not a Generating Unit or is a Generating Unit with a rated capacity of 10 MW or greater (including each aggregated resource with a total rated capacity of 10 MW or greater) and each EIM Intertie has telemetry meeting the requirements of the Business Practice Manual for the Energy Imbalance Market.
- (b) **Metering for Settlement Purposes.** The EIM Entity shall ensure that each EIM Participating Resource and non-participating resource in an EIM Entity Balancing Authority Area becomes either a CAISO Metered Entity or a Scheduling Coordinator Metered Entity and complies with the requirements of Section 10 except as provided in

Section 29.10(c).

- (c) **Exception to Requirements of Section 10.3.9.** In the absence of metering standards set by a Local Regulatory Authority, EIM Participating Resources and non-participating resources in an EIM Entity Balancing Authority Area may qualify as Scheduling Coordinator Metered Entities without the need for third party certification if the CAISO determines that the applicable metering standards meet or exceed the standards for CAISO Metered Entities.
- (d) **Interchange Meter Data.** Metering for Settlement purposes is required for all EIM Interties.
- (e) **EIM Energy Imbalance with an External Balancing Authority Area.** For each EIM External Intertie Bid that clears the FMM resulting in a 15-minute EIM External Intertie schedule –
 - (1) the EIM Entity Scheduling Coordinator must submit to the CAISO the corresponding hourly transmission profile and 15-minute Energy profiles from the respective E-Tags, which must reflect the Point of Receipt and Point of Delivery that was declared in the FMM Bid submittal, at least 20 minutes before the start of the Operating Hour; and
 - (2) the EIM Entity Scheduling Coordinator must provide an updated Energy profile to the extent required by Section 30.5.7.

29.11 Settlements and Billing for EIM Market Participants

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- (n) **EIM Transfers and Settlement for Contingency Reserve Obligations.** The CAISO shall allocate Operating Reserve Obligations to EIM Entity Scheduling Coordinators for EIM Transfers as follows -
 - (1) EIM Entity Scheduling Coordinators will receive a payment equal to three (3) percent of the hourly MW EIM Transfer into the CAISO Balancing Authority Area multiplied by the hourly user rate for Spinning Reserves and Non-Spinning Reserves, as calculated per Section 11.10.3.3 and 11.10.4.3, respectively; and

- (2) EIM Entity Scheduling Coordinators will receive a charge equal to three (3) percent of the hourly MW EIM Transfer out of the CAISO Balancing Authority Area multiplied by the hourly user rate for Spinning Reserves and Non-Spinning Reserves, as calculated per Section 11.10.3.3 and 11.10.4.3, respectively.

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29.34 EIM Operations

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- (I) **EIM Resource Plan Evaluation.**
 - (1) **Requirement.** The EIM Base Schedules for resources included in the EIM Resource Plan must balance the Demand Forecast for each EIM Entity Balancing Authority Area.
 - (2) **Insufficient Supply.** An EIM Resource Plan shall be deemed to have insufficient Supply if the sum of EIM Base Schedules from non-participating resources and the sum of the highest quantity offers in the Energy Bid range from EIM Participating Resources, including Interchange with other Balancing Authority Areas, is less than the total Demand Forecast that the EIM Entity Scheduling Coordinator has decided to use for the associated EIM Entity Balancing Authority Area.
 - (3) **Excess Supply.** An EIM Resource Plan shall be deemed to have excessive Supply if the sum of EIM Base Schedules from non-participating resources and the sum of the lowest quantity Bids in the Energy Bid range from EIM Participating Resources is greater than the total Demand Forecast that the EIM Entity Scheduling Coordinator has decided to use for the associated EIM Entity Balancing Authority Area.
 - (4) **Additional Hourly Capacity Requirements.**
 - (A) **In General.** If the CAISO determines under the procedures set forth in

the Business Practice Manual for the Energy Imbalance Market that a Balancing Authority Area in the EIM Area has historically high import or export schedule changes between forty minutes and twenty minutes before the start of the Trading Hour, the CAISO will add to the Balancing Authority Area in the EIM Area's capacity requirements an additional requirement.

- (B) **Additional Capacity Requirement.** On a monthly basis, according to procedures set forth in the Business Practice Manual for the Energy Imbalance Market, the CAISO will calculate for each Balancing Authority Area in the EIM Area histograms of the percentage of the difference between imports and exports scheduled at forty minutes before the start of the Trading Hour and the final imports and exports at twenty minutes before the start of the Trading Hour based on the submitted E-Tags at those times and calculate additional upward and downward requirements for the capacity test component of the resource sufficiency evaluation.

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30.5.2.4 Supply Bids for System Resources

In addition to the common elements listed in Section 30.5.2.1, Supply Bids for System Resources shall also contain: Start-Up Costs; and Minimum Load Costs. Resource-Specific System Resources are subject to the Proxy Cost methodology or the Registered Cost methodology for Start-Up Costs and Minimum Load Costs as provided in Section 30.4, and Transaction ID as created by the CAISO. Other System Resources are not eligible to recover Start-Up Costs and Minimum Load Costs. Resource-Specific System Resources are eligible to participate in the Day-Ahead Market on an equivalent basis as Generating Units and are not obligated to participate in RUC or the RTM if the resource did not receive a Day-Ahead Schedule unless the resource is a Resource Adequacy Resource. If the Resource-Specific System Resource is a Resource Adequacy Resource, the Scheduling Coordinator for the resource is

obligated to make it available to the CAISO Market as prescribed by Section 40.6. Dynamic Resource-Specific System Resources are also eligible to participate in RTM on an equivalent basis as Generating Units. The quantity (in MWh) of Energy categorized as Interruptible Imports (non-firm imports) can only be submitted through Self-Schedules in the Day-Ahead Market and cannot be incrementally increased in the RTM. Bids submitted to the Day-Ahead Market for ELS Resources will be applicable for two days after they have been submitted and cannot be changed the day after they have been submitted.

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30.5.2.7.1 Regulation Up or Regulation Down Bid Information

In the case of Regulation Up or Regulation Down, the Ancillary Services Bid or submission to self-provide must also contain: (a) the upward and downward range of generating capacity over which the resource is willing to provide Regulation in ten (10) minutes; (b) the Bid price of the capacity reservation, stated separately for Regulation Up and Regulation Down (\$/MW); and (c) the Bid price (\$) of the Mileage stated separately for Regulation Up and Regulation Down. For submissions to self-provide Regulation Up or Regulation Down, the price for the capacity reservation shall be \$0/MWh and the price for Mileage shall be \$0. In the case of Regulation Up or Regulation Down from Dynamic System Resources, the Ancillary Services Bid must also contain the Contract Reference Number, if applicable. Scheduling Coordinators may include inter-temporal opportunity costs in their Regulation capacity bids, but these inter-temporal opportunity costs must be verifiable. Ancillary Services Bids submitted to the Day-Ahead or Real-Time Market for Regulation need not be accompanied by an Energy Supply Bid that covers the Ancillary Services capacity being offered. A Regulation Down Bid will be erased unless there is an Energy Supply Bid or Energy Self-Schedule at a level that would permit the resource to provide Regulation Down to its lower Regulation Limit. A submission to self-provide Regulation Down will be erased unless there is an Energy Self-Schedule at a level that would permit the resource to provide Regulation Down to its lower Regulation Limit. A Regulation Up Bid will be erased unless there is an Energy Supply Bid or Energy Self-Schedule at a level that would permit the resource to provide Regulation Up within its Regulation Limit. A submission to self-provide Regulation Up will be erased unless there is an Energy Self-Schedule

at a level that would permit the resource to provide Regulation Up within its Regulation Limit.

30.5.2.7.2 Spinning Reserve Capacity Bid Information

In the case of Spinning Reserve capacity, the Ancillary Services Bid must also contain: (a) MW of additional capability synchronized to the system, immediately responsive to system frequency, and available within ten (10) minutes; (b) Bid price of capacity reservation; and (c) an indication whether the capacity reserved would be available to supply imbalance energy only in the event of the occurrence of an unplanned Outage, a Contingency or an imminent or actual System Emergency (Contingency Flag).

In the case of Spinning Reserve capacity from System Resources, the Ancillary Services Bid must also contain: (a) Schedule ID (NERC ID number); and (b) a Contract Reference Number, if applicable.

Ancillary Services Bids and Submissions to Self-Provide an Ancillary Services submitted to the Real-Time Market for Spinning Reserves must also submit an Energy Bid that covers the Ancillary Services capacity being offered into the Real-Time Market.

30.5.2.7.3 Non-Spinning Reserve Capacity

In the case of Non-Spinning Reserve, the Ancillary Service Bid must also contain: (a) the MW capability available within ten (10) minutes; (b) the Bid price of the capacity reservation; (c) time of synchronization following notification (minutes); and (d) an indication whether the capacity reserved would be available to supply imbalance energy only in the event of the occurrence of an unplanned Outage, a Contingency or an imminent or actual System Emergency (Contingency Flag). In the case of Non-Spinning Reserve Capacity from System Resources, the Ancillary Services Bid must also contain: (a) Schedule ID (NERC ID number); and (b) a Contract Reference Number, if applicable. In the case of Non-Spinning Reserve Capacity from Participating Load within the CAISO Balancing Authority Area, the Ancillary Service Bid must also contain: (a) a Load identification name and Location Code; (b) Demand reduction available within ten (10) minutes, (c) time to interruption following notification (minutes); and (d) maximum allowable curtailment duration (hour). In the case of Aggregated Participating Load, and Proxy Demand Resources, Scheduling Coordinators must submit Bids using a Generating Unit, Physical Scheduling Plant Resource ID, or Resource ID for the Proxy Demand Resource for the Demand reduction capacity of the Aggregated Participating Load through a Bid to provide Non-Spinning Reserve or a Submission to Self-Provide an Ancillary Service for Non-Spinning Reserve. Ancillary Services Bids and Submissions to Self-Provide an

Ancillary Services submitted to the Real-Time Market for Non-Spinning Reserves must also submit an Energy Bid that covers the Ancillary Services capacity being offered into the Real-Time Market.

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30.5.7 E-Tag Rules and Treatment of Intertie Schedules

In addition to complying with all generally applicable E-Tagging requirements, Scheduling Coordinators must submit their E-tags consistent with the requirements specified in this Section 30.5.7. If a Scheduling Coordinator receives an intra-hour Schedule change, then the Scheduling Coordinator must, by twenty minutes before the start of the FMM interval to which the Schedule change applies, ensure that an updated energy profile reflects the change. Absent extenuating circumstances, the CAISO automatically updates Energy profiles on E-tags for Energy Schedules that change from HASP to the FMM within a Trading Hour. In performing this service for a Scheduling Coordinator, the CAISO does not assume any responsibility for compliance with any E-tag requirements or obligations to which the Scheduling Coordinator is subject. The changed energy profile will apply for the balance of the operating hour unless it is subsequently changed by a further updated energy profile.

30.5.7.1 Self-Scheduled Hourly Blocks

By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of Self-Scheduled Hourly Blocks. The transmission profile must be greater than or equal to the Energy profile, and the Energy profile must equal the Self-Scheduled Hourly Block. The CAISO may modify the Energy profile due to Reliability related curtailments.

30.5.7.2 Variable Energy Resource Self-Schedule

By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of a Variable Energy Resource Self-Schedule. The transmission profile must be greater than or equal to the Energy profile, and the Energy profile must equal the Variable Energy Resource Self-Schedule. The CAISO may modify the Energy profile due to Reliability related curtailments.

30.5.7.3 Economic Hourly Bid

By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-

Tag in support of an Economic Hourly Block Bid. The transmission profile must be greater than or equal to the Energy profile, and the Energy profile must equal the Economic Hourly Block Bid as awarded through HASP. The CAISO may modify the Energy profile due to Reliability related curtailments.

30.5.7.4 Economic Hourly Block Bid with Intra-Hour Option

By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of an Economic Hourly Block Bid. The transmission profile must be greater than or equal to the Energy profile, and the Energy profile must equal the Economic Hourly Block Bid as awarded through HASP. The CAISO may modify the Energy profile due to Reliability related curtailments. In the case of an intra-hour redispatch from the FMM, the CAISO may increment or decrement the Energy profile to correspond to the intra-hour redispatch.

30.5.7.5 FMM Economic Bid

By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of a FMM Economic Bid. The transmission profile must be greater than or equal to the maximum bid-in capacity for the Trading Hour, and the Energy profile must equal the MWs awarded for the first FMM interval of the Operating Hour. If the Scheduling Coordinator intends to limit its participation in the FMM to the quantity in the HASP advisory energy schedule (including zero), the Scheduling Coordinator may update its transmission profile to the maximum amount it wants to make available to the FMM prior to the start of the binding FMM optimization, which is no earlier than thirty-seven and a half minutes before the applicable Trading Hour. If the Scheduling Coordinator does not have a transmission profile greater than or equal to its advisory Energy schedule, then the CAISO will limit the schedule for Energy in the FMM so that it does not exceed amounts greater than what is listed in the transmission profile. Cleared FMM Economic Bids are eligible for Bid Cost Recovery as specified in Section 11.8.

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30.6.2 Bidding and Scheduling of RDRRs

Unless otherwise specified in the CAISO Tariff and applicable Business Practice Manuals, and subject to Section 30.6.3, the CAISO will treat Bids for Energy on behalf of Reliability Demand Response Resources

like Bids for Energy on behalf of other types of supply resources. A Scheduling Coordinator for a Demand Response Provider representing a Reliability Demand Response Resource may submit Energy Bids for the Reliability Demand Response Resource only in the Day-Ahead Market and in the Real-Time Market, but may not submit Energy Self-Schedules for the Reliability Demand Response Resource, may not Self-Provide Ancillary Services from the Reliability Demand Response Resource, and may not submit RUC Availability Bids or Ancillary Service Bids for the Reliability Demand Response Resource. The Demand Response Provider's Demand Response Services for Reliability Demand Response Resources will be bid separately and independently from the LSE's underlying Demand Bid.

30.6.2.1 Bidding and Scheduling of RDRRs in the Real-Time Market

30.6.2.1.1 Limitations on Obligation to Bid in the Real-Time Market

Within each Reliability Demand Response Services Term, any capacity of a Reliability Demand Response Resource that remains uncommitted after the Day-Ahead Market shall be bid in the Real-Time Market in order to be available to provide Demand Response Services in Real-Time until such time as the Reliability Demand Response Resource has reached the RDRR Availability Limit for the Reliability Demand Response Services Term. Within each Reliability Demand Response Services Term, any capacity of a Reliability Demand Response Resource that remains uncommitted after the Day-Ahead Market may be (but is not required to be) bid in the Real-Time Market in order to be available to provide Demand Response Services in Real-Time after the Reliability Demand Response Resource has reached the RDRR Availability Limit during the Reliability Demand Response Services Term.

30.6.2.1.2 Real-Time Dispatch Options

For purposes of bidding and scheduling in the Real-Time Market, each Scheduling Coordinator for a Demand Response Provider representing a Reliability Demand Response Resource shall select either the Marginal Real-Time Dispatch Option or the Discrete Real-Time Dispatch Option prior to the start of the initial Reliability Demand Response Services Term applicable to the Reliability Demand Response Resource. The selection for each Reliability Demand Response Resource shall remain in effect until such time as the Scheduling Coordinator for the Reliability Demand Response Resource chooses to change its selection from the Marginal Real-Time Dispatch Option to the Discrete Real-Time Dispatch Option or vice versa, in which case the change in selection shall go into effect at the start of the next Reliability Demand

Response Services Term applicable to the Reliability Demand Response Resource. A Reliability Demand Response Resource that is subject to either the Marginal Real-Time Dispatch Option or the Discrete Real-Time Dispatch Option shall have Minimum Load Costs of zero (0) dollars registered in the Master File.

30.6.2.1.2.1 Marginal Real-Time Dispatch Option

A Reliability Demand Response Resource that is subject to the Marginal Real-Time Dispatch Option:

- (a) May submit either a single-segment Bid or a multi-segment bid in the Real-Time Market that must be at least ninety-five (95) percent of the applicable maximum Bid price and can be no greater than one hundred (100) percent of the applicable maximum Bid price set forth in Section 39.6.1.1.
- (b) Shall be dispatched as a marginal resource if it is dispatched by the CAISO.

30.6.2.1.2.2 Discrete Real-Time Dispatch Option

A Reliability Demand Response Resource that is subject to the Discrete Real-Time Dispatch Option:

- (a) May submit only a single-segment Bid in the Real-Time Market that must be at least ninety-five (95) percent of the applicable maximum Bid price and can be no greater than one hundred (100) percent of the applicable maximum Bid price set forth in Section 39.6.1.1.
- (b) Shall be dispatched as a discrete (non-marginal) resource if it is dispatched by the CAISO.

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34.1.1 Day-Ahead Market Results as Inputs to the Real-Time Market

All of the Real-Time Market processes utilize results produced by the Day-Ahead Market for each Trading Hour of the Trading Day, including the combined commitments contained in the Day-Ahead Schedules, Day-Ahead Ancillary Services Awards, and RUC Awards. These DAM results are inputs to the RTM. The transactions associated with DAM results are settled based on the relevant DAM prices, and are not deemed performed in the Real-Time Market.

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34.1.6.3 [Not Used]

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34.5.3 Real-Time Manual Dispatch

RTMD mode of operation for RTD is a merit-order run activated upon CAISO Operator request as a backup process in case the normal RTED process fails to converge. The RTMD run will provide the CAISO Operator a list of resources and quantity of MW available for Dispatch in merit-order based on Operational Ramp Rate but otherwise ignores Transmission Losses and Transmission Constraints. The CAISO Operator may dispatch resources from the list by identifying the quantity of FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is required for the system and/or directly selecting resources from the merit order taking into consideration actual operating conditions. After Dispatches have been selected, reviewed and accepted by the CAISO Operator, Dispatch Instructions will be communicated in accordance with Section 6.3. While the RTMD mode is being used for Dispatch a uniform five-minute MCP will be produced for all PNodes based on the merit order Dispatch. Until RTMD is actually run and RTMD-based Dispatch Instructions are issued after RTED fails to converge, all five-minute Dispatch Interval LMPs will be set to the last LMP at each Node produced by the last RTED run that converged.

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34.8 Dispatch Instructions to Units, Participating Loads, PDRs, and RDRRs

The CAISO may issue Dispatch Instructions covering:

- (a) Ancillary Services;
- (b) Energy, which may be used for:

- (i) Congestion relief;
- (ii) provision of imbalance energy; or
- (c) agency operation of Generating Units, Participating Loads, Proxy Demand Resources, or Interconnection schedules, for example:
 - (i) output or Demand that can be Dispatched to meet Applicable Reliability Criteria;
 - (ii) Generating Units that can be Dispatched for Black Start;
 - (iii) Generating Units that can be Dispatched to maintain governor control regardless of their Energy schedules;
- (d) the operation of voltage control equipment applied on Generating Units as described in this CAISO Tariff;
- (e) MSS Load following instructions provided to the CAISO, which the CAISO incorporates to create their Dispatch Instructions;
- (f) Dispatch necessary to respond to a System Emergency or imminent emergency;
- (g) Transition Instructions;
- (h) Dispatch of Reliability Demand Response Resources pursuant to Section 34.22; or
- (i) Uncertainty Awards.

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34.11.3 Transmission-Related Modeling Limitations

The CAISO may also manually Dispatch resources in addition to or instead of resources with a Day-Ahead Schedule or dispatched by the RTM optimization software, during or prior to the Real-Time as appropriate, to address transmission-related modeling limitations in the Full Network Model.

Transmission-related modeling limitations for the purposes of Exceptional Dispatch, including for settlement of such Exceptional Dispatch as described in Section 11.5.6, shall consist of any FNM modeling limitations that arise from transmission maintenance, lack of Voltage Support at proper levels as well as incomplete or incorrect information about the transmission network, for which the Participating TOs have primary responsibility. The CAISO shall also manually Dispatch resources under this Section

34.11.3 in response to system conditions including threatened or imminent reliability conditions for which the timing of the Real-Time Market optimization and system modeling are either too slow or incapable of bringing the CAISO Controlled Grid back to reliable operations in an appropriate time-frame based on the timing and physical characteristics of available resources to the CAISO. All reliability-based Exceptional Dispatch Instructions for Reliability Demand Response Resources, including for testing, will be issued under this Section 34.11.3.

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34.13.2 Failure to Conform to Dispatch Instructions

In the event that, in carrying out the Dispatch Instruction, an unforeseen problem arises (relating to plant operations or equipment, personnel or the public safety), the recipient of the Dispatch Instruction must notify the CAISO or, in the case of a Generator, the relevant Scheduling Coordinator immediately. The relevant Scheduling Coordinator shall notify the CAISO of the problem immediately. If a resource is unavailable or incapable of responding to a Dispatch Instruction, or fails to respond to a Dispatch Instruction in accordance with its terms, the resource shall be considered to be non-conforming to the Dispatch Instruction unless the resource has notified the CAISO of an event that prevents it from performing its obligations within thirty (30) minutes of the onset of such event through a submission in the CAISO's outage management system pursuant to Section 9. Notification of non-compliance via the Automated Dispatch System (ADS) will not supplant nor serve as the official notification mechanism to the CAISO. If the resource is considered to be non-conforming as described above, the Scheduling Coordinator for the resource concerned shall be subject to Uninstructed Imbalance Energy as specified in Section 11.5.2. This applies whether any Ancillary Services concerned are contracted or Self-Provided. For a Non-Dynamic System Resource Dispatch Instruction prior to the Trading Hour, the Scheduling Coordinator shall inform the CAISO of its ability to conform to a Dispatch Instruction via ADS. The Non-Dynamic System Resource has the option to accept, partially accept, or decline the Dispatch Instruction, but in any case must respond within the timeframe specified in a Business Practice Manual. The Non-Dynamic System Resource can change its response within the indicated timeframe. If a Non-Dynamic

System Resource does not respond within the indicated timeframe, the Dispatch Instruction will be considered accepted.

When a resource demonstrates that it is not following Dispatch Instructions, the RTM will no longer assume that the resource will ramp from its current output level. The RTM assumes the resource to be “non-compliant” if it is deviating its five (5)-minute Ramping capability for more than N intervals by a magnitude determined by the CAISO based on its determination that it is necessary to improve the calculation of the expected imbalance energy as further defined in the BPM. When a resource is identified as “non-compliant,” RTM will set the Dispatch operating target for that resource equal to its actual output in the Market Clearing software such that the persistent error does not cause excessive AGC action and consequently require CAISO to take additional action to comply with reliability requirements. Such a resource will be considered to have returned to compliance when the resource’s State Estimator or telemetry value (whichever is applicable) is within the above specified criteria. During the time when the resource is “non-compliant,” the last applicable Dispatch target shall be communicated to the Scheduling Coordinator as the Dispatch operating target. The last applicable Dispatch target may be (i) the last Dispatch operating target within the current Trading Hour that was instructed prior to the resource becoming “non-compliant;” or (ii) the Day-Ahead Schedule; or (iii) awarded Self-Schedule Hourly Block depending on whether the resource submitted a Bid and the length of time the resource was “non-compliant;” or (iv) for a Dynamic System Resource or a Pseudo-Tie Generating Unit that is an Eligible Intermittent Resource, the most recently available telemetry for the actual output. During the time the resource is deemed to be “non-compliant” the CAISO will suspend the resource’s eligibility for Ancillary Services and Uncertainty Awards.

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34.17.1 Resource Constraints

The SCED shall enforce the following resource physical constraints:

- (a) Minimum and maximum operating resource limits. Outages and limitations due to transmission clearances shall be reflected in these limits. The more restrictive operating

or regulating limit shall be used for resources providing Regulation so that the SCED shall not Dispatch them outside their Regulating Range.

- (b) **Forbidden Operating Regions.** When ramping in the Forbidden Operating Region, the implicit ramp rate will be used as determined based on the time it takes for the resource to cross its Forbidden Operating Region. A resource can only be ramped through a Forbidden Operating Region after being dispatched into a Forbidden Operating Region. The CAISO will not Dispatch a resource within its Forbidden Operating Regions in the Real-Time Market, except that the CAISO may Dispatch the resource through the Forbidden Operating Region in the direction that the resource entered the Forbidden Operating Region at the maximum applicable Ramp Rate over consecutive Dispatch Intervals. A resource with a Forbidden Operating Region cannot provide Ancillary Services in a particular fifteen (15) minute Dispatch Interval unless that resource can complete its transit through the relevant Forbidden Operating Region within that particular Dispatch Interval.
- (c) **Operational Ramp Rates and Start-Up Times.** The Operational Ramp Rate for resources shall be used as the basis for all Dispatch Instructions, provided that the Dispatch Operating Point for resources that are providing Regulation remains within their applicable Regulating Range. The Regulating Range will limit the Ramping of Dispatch Instructions issued to resources that are providing Regulation. The Ramp Rate for Non-Dynamic System Resources cleared in the FMM will not be observed. Rather, the ramp of the Non-Dynamic System Resource will respect inter-Balancing Authority Area Ramping conventions established by WECC. Ramp Rates for Dynamic System Resources will be observed like Participating Generators in the RTD. Each Energy Bid shall be Dispatched only up to the amount of imbalance energy that can be provided within the Dispatch Interval based on the Operational Ramp Rate. The Dispatch Instruction shall consider the relevant Start-Up Time as, if the resource is off-line, the relevant Operational Ramp Rate function, and any other resource constraints or prior commitments such as Schedule changes across hours and previous Dispatch

Instructions. The Start-Up Time shall be determined from the Start-Up Time function and when the resource was last shut down. The Start-Up Time shall not apply if the corresponding resource is on-line or expected to start.

- (d) Maximum number of daily Start-Ups. The SCED shall not cause a resource to exceed its daily maximum number of Start-Ups.
- (e) Minimum Run Time and Down Time. The SCED shall not start up off-line resources before their Minimum Down Time expires and shall not shut down on-line resources before their Minimum Run Time expires. For Multi-Stage Generating Resources these requirements shall be observed both for the Generating Unit and MSG Configuration.
- (f) Operating (Spinning and Non-Spinning) Reserve. The SCED shall Dispatch Spinning and Non-Spinning Reserve subject to the limitations set forth in Section 34.18.2.
- (g) Non-Dynamic System Resources. If Dispatched, each Non-Dynamic System Resource flagged for hourly pre-dispatch in the next Trading Hour shall be Dispatched to operate at a constant level over the entire Trading Hour. The HASP shall perform the hourly pre-dispatch for each Trading Hour once prior to the Operating Hour. The hourly pre-dispatch shall not subsequently be revised by the SCED and the resulting HASP Block Intertie Schedules are financially binding and are settled pursuant to Section 11.5.
- (h) Daily Energy use limitation to the extent that Energy limitation is expressed in a resource's Bid. If the Energy Limits are violated for purposes of Exceptional Dispatches for System Reliability, the Bid will be settled as provided in Section 11.5.6.1.

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34.17.4 Inter-Hour Dispatch of Resources with Real-Time Energy Bids

Dispatch Instructions associated with the ramp between the Real-Time Market Bid in one hour and the Real-Time Market Bid in the immediately succeeding Trading Hour shall be determined optimally by the SCED if the CAISO has Bids for either or both relevant Operating Hours. For any Operating Hour(s) for which Bids have been submitted Dispatch Instructions will be optimized such that the Dispatch Operating

Point is within the Bid range(s). For any Operating Hour without submitted Bids, Dispatch Instructions will be optimized such that the Dispatch Operating Point conforms to the Schedule within the Operating Hour. Energy resulting from the Standard Ramp shall be deemed Standard Ramping Energy and will be settled in accordance with Section 11.5.1. Energy resulting from any ramp extending beyond the Standard Ramp will be deemed Ramping Energy Deviation and will be settled in accordance with Section 11.5.1. Energy delivered or consumed as a result of CAISO Dispatch of a resource's Energy Bid in one Operating Hour to a Dispatch Operating Point such that the resource cannot return to its successive Operating Hour Schedule or to an infra-marginal operating point by the beginning of the next Operating Hour is Residual Imbalance Energy and shall be settled as RTD Instructed Imbalance Energy as provided for in Section 11.5.1 and also may be eligible for recovery of its applicable Energy Bid Costs in accordance with Section 11.8. Similarly, Energy delivered or consumed as a result of CAISO Dispatch of a resource's Energy Bid in a future Operating Hour to a Dispatch Operating Point different from its current Operating Point prior to the end of the current Operating Hour is also considered Residual Imbalance Energy and shall be settled as RTD Instructed Imbalance Energy as provided for in Section 11.5.1 and also may be eligible for recovery of its applicable Energy Bid Costs in accordance with Section 11.8. When Ramping Energy Deviation and Residual Imbalance Energy coexist within a given Dispatch Interval, the Ramping Energy Deviation shall be the portion of RTD Instructed Imbalance Energy that is produced or consumed within the Schedule-change band defined by the accepted RTM Bids of the two consecutive Settlement Periods; the Residual Imbalance Energy shall be the portion of RTD Instructed Imbalance Energy that is produced or consumed outside the Schedule-change band.

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34.17.6 Intra-Hour Exceptional Dispatches

For the special case where an Exceptional Dispatch begins in the new hour and the rules above would result in the violation of the resource's inter-temporal constraint(s), the following rules are applied and the Energy is settled as FMM Exceptional Dispatch or RTD Exceptional Dispatch Energy as described in Section 11.5.6.

- (a) If the ramp time is greater than one hour or greater than what can be achieved when RTM receives the constraint, RTM starts the ramp at the earliest possible time and continues Ramping the resource in the new Trading Hour.
- (b) If the ramp time results in starting the ramp less than ten (10) minutes before the start of the hour, RTM instead starts the ramp at ten (10) minutes before the start of the hour and ramps the resource at a uniform rate so that it meets the constraint by the start time of the Exceptional Dispatch.
- (c) If the new hour's Day-Ahead Schedule is beyond the Exceptional Dispatch constraint, RTM resumes the basic Ramping rules after the Exceptional Dispatch constraint is met, but limits the Ramp Rate as necessary to ensure that the resource does not complete its ramp before ten (10) minutes after the hour.

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34.20.1 General Principles

FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy shall be paid or charged at the applicable FMM or RTD LMP. Uninstructed Imbalance Energy shall be paid or charged the applicable RTD LMP. These prices are determined using the Dispatch Interval LMPs. The Dispatch Interval LMPs shall be based on the Bid of the marginal Generating Units, System Units, Participating Loads, Reliability Demand Response Resources, and Proxy Demand Resources dispatched by the CAISO to increase or reduce Demand or Energy output in each Dispatch Interval as provided in Section 34.20.2.1.

The CAISO will respond to the Dispatch Instructions issued by the SCED to the extent practical in the time available and acting in accordance with Good Utility Practice. The CAISO will record the reasons for any variation from the Dispatch Instructions issued by the SCED.

34.20.2 Determining Real-Time LMPs

34.20.2.1 Dispatch Interval Real-Time LMPs

34.20.2.2 Computation

For each Dispatch Interval, the CAISO will compute updated imbalance energy needs and will Dispatch Generating Units, System Units, Dynamic System Resources, Participating Load, Reliability Demand Response Resources, and Proxy Demand Resources according to the CAISO's SCED during that time period to meet imbalance energy requirements. The RTM transactions will be settled at the Dispatch Interval LMPs in accordance with Section 11.5.

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34.22 Real-Time Dispatch of RDRRs

The CAISO may issue an Exceptional Dispatch Instruction for the Reliability Demand Response Resource for reliability or to perform a test as provided in Section 34.11.3. An entity other than the CAISO that has a contractual or tariff-based right to do so may dispatch a Reliability Demand Response Resource in Real-Time in order to (1) mitigate a local transmission or distribution system emergency pursuant to applicable state or local programs, contracts, or regulatory requirements not set forth in the CAISO Tariff or (2) perform a test. If an entity other than the CAISO dispatches a Reliability Demand Response Resource in Real-Time in order to mitigate a local transmission or distribution system emergency or perform a test, the Scheduling Coordinator for the Demand Response Provider representing the Reliability Demand Response Resource shall immediately inform the CAISO, through the CAISO's Outage reporting system, that such dispatch has occurred or will occur and the MW amount of the dispatch.

34.22.1 Testing of RDRRs

The CAISO may issue one (1) unannounced Exceptional Dispatch Instruction per year to each Reliability Demand Response Resource pursuant to Section 34.11.2 in order to test the availability and performance of the Reliability Demand Response Resource. The Demand Response Provider representing the Reliability Demand Response Resource may also test its Reliability Demand Response Resources in

coordination with the CAISO. Any Demand Response Provider initiated testing will not trigger any CAISO settlement. The CAISO will share the results of all tests of the Reliability Demand Response Resource with the applicable Local Regulatory Authority. All tests of the Reliability Demand Response Resource shall count toward its RDRR Availability Limit. If, prior to the performance of a CAISO unannounced yearly test, the Reliability Demand Response Resource provides Demand Response Services in that year, its provision of Demand Response Services will eliminate the need for that year's test. Testing of Reliability Demand Response Resources will be conducted as described in the applicable Operating Procedure or Business Practice Manual.

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39.10.1 Measures for Resources Eligible for Supplemental Revenues

In all cases where a resource is subject to Mitigation Measures under Section 39.10, and the resource is eligible for supplemental revenues pursuant to Section 39.10.3, FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy delivered by the resource shall be settled as set forth in either Section 11.5.6.7.1 or Section 11.5.6.7.3, whichever is applicable.

39.10.2 Resources Not Eligible for Supplemental Revenues

In all cases where a resource is subject to Mitigation Measures under Section 39.10, and the resource is not eligible for supplemental revenues pursuant to Section 39.10.3, FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy delivered by the resource shall be settled as set forth in either Section 11.5.6.7.2 or Section 11.5.6.7.3, whichever is applicable.

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39.10.5 Calculation of Exceptional Dispatch Supplemental Revenues

The amount of Exceptional Dispatch supplemental revenues accrued by a resource within any 30-day period as defined in Section 39.10.4 shall be a running total of the sum of supplemental revenues received during that 30-day period. The calculation of supplemental revenues accrued by a resource

within a 30-day period is based on the higher of (a) the Energy Bid price for the resource minus the Default Energy Bid price for the resource or (b) the relevant FMM or RTD LMP minus the Default Energy Bid price for the resource. The greater of (a) or (b) is multiplied by the amount of Energy provided by the resource under Exceptional Dispatch, and the results of that multiplication are summed across the successive hours of the 30-day period. Once the resource has reached the limit on supplemental revenues described in Section 39.10.4 based on the calculation above, then the Settlement for the resource will be as provided in Section 11.5.6.7.2 and the resource will not be eligible for additional supplemental revenues for the rest of the 30-day period.

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Appendix A

Master Definition Supplement

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- Ancillary Services Obligation or AS Obligation

A Scheduling Coordinator's hourly obligation for Regulation Down, Regulation Up, Spinning Reserves, and Non-Spinning Reserves calculated pursuant to Sections 11.10.2.1.3, 11.10.2.2.2, 11.10.3.3, and 11.10.4.3, respectively.

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- Dispatch Interval LMP

The price of imbalance energy determined at each Dispatch Interval in accordance with Section 11.5.4.

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- Dispatch Operating Point

The expected operating point of a resource that has received a Dispatch Instruction. The resource is expected to operate at the Dispatch Operating Point after completing the Dispatch Instruction, taking into account any relevant Ramp Rate and time delays. Energy expected to be produced or consumed above or below the Day-Ahead Schedule in response to a Dispatch Instruction constitutes FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy. For resources that have not received a Dispatch

Instruction, the Dispatch Operating Point defaults to the corresponding Day-Ahead Schedule.

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- Dynamic Scheduling Host Balancing Authority Operating Agreement

An agreement entered into between the CAISO and a Balancing Authority governing the terms of dynamic scheduling between the two Balancing Authorities where one of the Balancing Authorities is designated as the Host Balancing Authority in accordance with the Dynamic Scheduling Protocol set forth in Appendix M, a pro forma version of which agreement is set forth in Appendix B.9.

* * * * *

- FMM Instructed Imbalance Energy or FMM IIE

The accounted for energy resulting from the difference between a resource's Day-Ahead Schedules or EIM Base Schedules and FMM Schedules determined pursuant to Section 11.5.1.1.

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- [Not Used]

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- [Not Used]

* * * * *

- [Not Used]

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- Ramping Energy Deviation

The portion of RTD Instructed Imbalance Energy produced or consumed due to deviation from the Standard Ramp because of ramp constraints, Start-Up, or Shut-Down. Ramping Energy Deviation may overlap with Standard Ramping Energy, and both Standard Ramping Energy and Ramping Energy Deviation may overlap with Day-Ahead Scheduled Energy, but not with any other Real-Time imbalance energy types. Ramping Energy Deviation may be composed of two parts: a) the part that overlaps with Standard Ramping Energy whenever the DOP crosses the Standard Ramping Energy region; and b) the part that does not overlap with Standard Ramping Energy. The latter part of Ramping Energy Deviation consists only of extra-marginal FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy contained within the hourly schedule change band and not attributed to Exceptional Dispatch or derates.

Ramping Energy Deviation does not apply to Non-Dynamic System Resources (including Resource-Specific System Resources). Ramping Energy Deviation is settled as described in Section 11.5.1.

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- Residual Imbalance Energy

Extra-marginal RTD Instructed Imbalance Energy produced or consumed at the start or end of a Trading Hour outside the hourly schedule-change band and not attributed to Exceptional Dispatch. Residual Imbalance Energy is due to a Dispatch Instruction in the previous Trading Hour or a Dispatch Instruction in the next Trading Hour. Residual Imbalance Energy may overlap only with Day-Ahead Scheduled Energy. Residual Imbalance Energy does not apply to Non-Dynamic System Resources (including Resource-Specific System Resources). Residual Imbalance Energy is settled as described in Section 11.5.5 and it is not included in BCR as described in Section 11.8.4.

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- RTD Imbalance Energy

The deviation of Supply or Demand from FMM Schedule, positive or negative, as measured by metered Generation, or Real-Time Interchange Schedules. RTD Imbalance Energy is composed of RTD Instructed Imbalance Energy and Uninstructed Imbalance Energy, or in the case of metered Load from the Day-Ahead Schedule, as applicable, as Uninstructed Imbalance Energy.

* * * * *

- RTD Instructed Imbalance Energy or RTD IIE

The accounted for energy resulting from the difference between Dispatch Instructions and the Day-Ahead Schedules and EIM Base Schedules that have not already been accounted for as FMM Instructed Imbalance Energy determined pursuant to Section 11.5.1.2.

* * * * *

- RTD Optimal Energy

Any remaining RTD Instructed Imbalance Energy after accounting for all other RTD Instructed Imbalance Energy subtypes. RTD Optimal Energy does not overlap with FMM Optimal Energy Standard Ramping Energy, Ramping Energy Deviation, Residual Imbalance Energy, RTD Minimum Load Energy, RTD Derate Energy, and RTD Exceptional Dispatch Energy, but it may overlap with Day-Ahead Scheduled

Energy, and MSS Load Following Energy. RTD Optimal Energy is indexed against the relevant Energy Bid and sliced by service type, depending on the AS capacity allocation on the Energy Bid. RTD Optimal Energy is also divided into RTD Overlapping Optimal Energy and RTD Non-Overlapping Optimal Energy. Any RTD Optimal Energy slice below or above the Energy Bid has no associated Energy Bid price, and it is not included in BCR as described in Section 11.5.1.1.

* * * * *

- [Not Used]

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- Standard Ramping Energy

RTD Instructed Imbalance Energy produced or consumed in the first two and the last two Dispatch Intervals due to hourly schedule changes. Standard Ramping Energy is a schedule deviation along a linear symmetric twenty (20)-minute ramp (Standard Ramp) across hourly boundaries. Standard Ramping Energy is always present when there is an hourly schedule change, including resource Start-Ups and Shut-Downs. Standard Ramping Energy does not apply to Non-Dynamic System Resources (including Resource-Specific System Resources) and is not subject to Settlement as described in Section 11.5.1.

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- Uninstructed Imbalance Energy or UIE

The portion of RTD Imbalance Energy that is not RTD Instructed Imbalance Energy.

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Appendix F Rate Schedules

Schedule 1

Grid Management Charge

Part A - Monthly Calculation of Grid Management Charge (GMC)

The GMC consists of the following separate service charges: (1) the Market Services Charge; (2) the System Operations Charge; and (3) the CRR Services Charge. The GMC revenue requirement, determined in accordance with Part C of this Schedule 1, shall be allocated to the service charges specified in Part A of this Schedule 1 as follows: thirty-two (32) percent to Market Services; sixty-six (66) percent to System Operations; and two (2) percent to CRR Services. Starting in 2017 and every three (3) years thereafter, the CAISO will conduct an updated cost of service study, in consultation with stakeholders and using costs from the previous year. In conducting each cost of service study, the CAISO will recalculate the three service charge percentages and the rates for the fees and charges that constitute the Grid Management Charge as set forth in Section 11.22, as well as the EIM Administrative

Charge. If, based on the cost of service study results, the service category revenue requirement allocation percentages or the level of fees and charges have changed, the CAISO will submit tariff amendments to reflect such changes pursuant to Section 205 of the FPA.

1. The rate for the Market Services Charge will be calculated by dividing the annual GMC revenue requirement allocated to this service category by the forecast annual gross absolute value of MW per hour of Ancillary Services capacity awarded in the Day-Ahead and Real-Time Markets, MWh of Energy cleared in the Day-Ahead market, Virtual Demand Award, Virtual Supply Award, and FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy, less the forecast annual gross absolute value of such Energy as may be excluded for a load following MSS pursuant to an MSS agreement, Standard Ramping Energy, Regulation Energy, Ramping Energy Deviation, Residual Imbalance Energy, Exceptional Dispatch Energy and Operational Adjustments for the Day-Ahead and Real-Time.
2. The rate for the System Operations Charge will be calculated by dividing the annual GMC revenue requirement allocated to this service category by forecast annual gross absolute value of MWh of real-time energy flows on the ISO Controlled Grid, net of amounts excluded pursuant to Part E of this Schedule.
3. The rate for the CRR Services Charge will be calculated by dividing the annual GMC revenue requirement allocated to this service category by the forecast annual sum of awarded MW of CRRs per hour.

The rates for the foregoing charges shall be adjusted automatically each year, effective January 1 for the following twelve (12) months, in the manner set forth in Part D of this Schedule.

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Schedule 3

Regional Access Charge and Wheeling Access Charge

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10. Disbursement of Regional Access Charge Revenues.

10.1 Regional Access Charge revenues shall be calculated for disbursement to each Participating TO and Approved Project Sponsor on a monthly basis as follows:

- (a) the amount determined in accordance with Section 26.1.2 of the CAISO Tariff ("Billed RAC").
- (b)
 - (i) for a Participating TO that is a UDC or MSS Operator and has Gross Load in its TO Tariff in accordance with Appendix F, Schedule 3, Section 9, then calculate the amount each UDC or MSS Operator would have paid and the Participating TO would have received by multiplying the Regional Utility-Specific Rates for the Participating TO whose Regional Transmission Facilities served such UDC and MSS Operator times the actual Gross Load of such UDCs and MSS Operators; or
 - (ii) for a Non-Load-Serving Participating TO and Approved Project Sponsors, then calculate the Non-Load-Serving Participating TO's or Approved Project Sponsor's portion of the total Billed RAC in subsection (a) based on the ratio of the Non-

Load-Serving Participating TO's and Approved Project Sponsors Regional Transmission Revenue Requirement to the sum of all Participating TOs' and Approved Project Sponsor's Regional Revenue Requirements.

- (c) if the total Billed RAC in subsection (a) received by the CAISO less the total dollar amounts calculated in subsection (b)(i) and subsection (b)(ii) is different from zero, the CAISO shall allocate the positive or negative difference among those Participating TOs that are subject to the calculations in subsection (b)(i) based on the ratio of each Participating TO's Regional Transmission Revenue Requirement to the sum of all of those Participating TOs' Regional Transmission Revenue Requirements that are subject to the calculations in subsection (b)(i). This monthly distribution amount is the "RAC Revenue Adjustment."
- (d) the sum of the RAC revenue share determined in subsection (b) and the RAC Revenue Adjustment in subsection (c) will be the monthly disbursement to the Participating TO.

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Schedule 6

CPM SCHEDULES FOR CPM DESIGNATIONS UNDER SECTION 43A

Monthly CPM Capacity Payment

The monthly CPM Capacity Payment shall be calculated in accordance with Section 43A.7.1.

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Appendix L Method to Assess Available Transfer Capability

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L.2 ATC Algorithm

The ATC algorithm is a calculation used to determine the transfer capability remaining in the physical transmission network and available for further commercial activity over and above already committed uses. The CAISO posts the ATC values in megawatts (MW) to OASIS in conjunction with the Market Close for the Day-Ahead Market and Real-Time Market process.

The following OASIS ATC algorithms are used to implement the CAISO ATC calculation for the ATC rated path (Transmission Interface):

ATC Calculation For Imports:

$$ATC = TTC - CBM - TRM - AS \text{ from Imports} - \text{Net Energy Flow} - \text{Hourly Unused TR Capacity.}$$

ATC Calculation For Exports:

$$ATC = TTC - CBM - TRM - \text{Net Energy Flow} - \text{Hourly Unused TR Capacity.}$$

ATC		ATC MW	Available Transfer Capability, in MW, per Transmission Interface and path direction.
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Hourly Unused TR Capacity		USAGE_MW	The sum of any unscheduled existing transmission commitments (scheduled transmission rights capacity for ETC or TOR), in MW, per path direction.
Scheduled Net Energy from Imports/Exports (Net Energy Flow)		ENE_IMPORT MW	Total hourly net Energy flow for a specified Transmission Interface.
AS from Imports		AS_IMPORT MW	Ancillary Services scheduled, in MW, as imports over a specified Transmission Interface.
TTC		TTC MW	Hourly Total Transfer Capability of a specified Transmission Interface, per path direction, with consideration given to known Transmission Constraints and operating limitations.
CBM		CBM MW	Hourly Capacity Benefit Margin, in MW, for a specified Transmission Interface, per Path Direction.
TRM		TRM MW	Hourly Transmission Reliability Margin, in MW, for a specified Transmission Interface, per path direction.

L.7 Traditional Planning Methodology to Protect Against Violating Operating Limits

After performing Contingency analysis studies, the CAISO next develops the transfer capability and develops procedures, Nomograms, RMR Generation requirements, or other Transmission Constraints to ensure that transfer capabilities respect operating limits.

Appendix M

Dynamic Scheduling Protocol (DSP)

1.5 OPERATING AND SCHEDULING REQUIREMENTS

1.5.1 For any Operating Hour for which Ancillary Services (and associated Energy) is scheduled dynamically to the CAISO from the System Resource, firm transmission service must be reserved across the entire Dynamic Schedule transmission path external to the CAISO Balancing Authority

- Area. For any Operating Hour for which only Energy is scheduled dynamically to the CAISO from the System Resource, transmission service must be reserved across the entire Dynamic Schedule transmission path external to the CAISO Balancing Authority Area, or must be available within the Operating Hour, sufficient to support the Schedule and Dispatch of the System Resource. In the event that the System Resource has not established a sufficient transmission reservation prior to the Operating Hour, and will not be able to use additional transmission within the Operating Hour, to support Dispatch up to its maximum available capacity, a derate must be reported in the CAISO's Outage management system to limit its Dispatch to its available transmission.
- 1.5.2** All Dynamic Schedules associated with Dynamic System Resources must be electronically tagged (by use of an E-Tag).
 - 1.5.3** Formal inter-Balancing Authority Area Dynamic Schedules may be issued only by the Dynamic System Resource's Host Balancing Authority Area and must be routed through the EMSs of any Intermediary Balancing Authority Area, if requested by the Balancing Authority for the Intermediary Balancing Authority Area.
 - 1.5.4** The CAISO will procure (or allow for self-provision of) Operating Reserves and Regulation for Loads served by imports from Dynamic System Resources, unless otherwise agreed to or as reflected in the Dynamic Scheduling Host Balancing Authority Operating Agreement.
 - 1.5.5** All Energy Interchange Schedules associated with dynamically scheduled imports of Spinning Reserve and Non-Spinning Reserve will be afforded similar treatment (i.e., resource contingent firm).
 - 1.5.6** The dynamic signal must be integrated over time by the Host Balancing Authority Area for every Operating Hour.
 - 1.5.7** Notwithstanding any Dispatches of the System Resource in accordance with the CAISO Tariff, the CAISO shall have the right to issue operating orders as defined in Section 37.2.1.1 of the CAISO Tariff to the System Resource either directly or through the Host Balancing Authority Area for emergency or contingency reasons, or to ensure the CAISO's compliance with operating requirements based on WECC or NERC requirements and policies (e.g., WECC's Unscheduled Flow Reduction Procedure). However, such operating orders may be issued only within the range of the CAISO-accepted Energy and Ancillary Services, Bids for a given Operating Hour (or the applicable "sub-hour" interval).
 - 1.5.8** If there is no Dynamic Schedule in the CAISO's Day-Ahead Market or RTM, the dynamic signal must be at "zero" ("0") except when in response to CAISO's Dispatch Instructions associated with accepted Ancillary Services or Energy Bids.
 - 1.5.9** The Scheduling Coordinator for the Dynamic System Resource must have the ability to override the associated Dynamic Schedule in order to respond to the operating orders of the CAISO or the Host Balancing Authority.
 - 1.5.10** Unless the Dynamic System Resource (1) is implemented as a directly-telemetered Load following functionality, (2) is base-loaded Regulatory Must-Take Generation, (3) responds to a CAISO intra-hour Dispatch Instruction, or (4) is an Eligible Intermittent Resource, the Dynamic Schedule representing such resource must follow WECC-approved practice of 20-minute ramps centered at the top of the hour. The CAISO does not provide any special Settlements treatment nor offer any CAISO Tariff exemptions for dynamic Load following functionalities.
 - 1.5.11** In Real-Time the Dynamic Schedule may not exceed the CAISO's Dispatch Operating Point. The Dispatch Operating Point represents not only the estimated Dynamic System Resource's Energy but also, in combination with any Ancillary Service Award that has not been dispatched as Energy, the transmission reservation on the associated CAISO Intertie.

- 1.5.12 Only one Dynamic System Resource may be associated with any one physical generating resource, unless the CAISO approves an implementation plan to establish multiple Dynamic System Resources for that generating resource.
- 1.5.13 If the Scheduling Coordinator for the Dynamic System Resource desires to participate in CAISO's Regulation market, all provisions of the CAISO's Standards for Imports of Regulation, or any successor CAISO standards regarding the technical arrangements for imports of Regulation posted on the CAISO Website, shall apply.

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1.7 COMPLIANCE, LOSSES, AND FINANCIAL SETTLEMENTS

- 1.7.1 Energy delivered in association with Dynamic System Resources will be subject to all provisions of the CAISO's imbalance energy markets (just as is the case with CAISO intra- Balancing Authority Area Generating Units of Participating Generators).
- 1.7.2 Dynamically scheduled and delivered Ancillary Services will be subject to the CAISO's compliance monitoring and remedies, just as any CAISO intra-Balancing Authority Area Generating Units of Participating Generators.
- 1.7.3 All Day-Ahead Market and RTM submitted Dynamic Schedules shall be subject to CAISO Congestion Management and as such may not exceed their transmission reservations in Real-Time (with the exception of intra-hour Dispatch Instructions of the Energy associated with accepted Ancillary Services Bids or Dispatch Instructions for imbalance energy).
- 1.7.4 All Dynamic Schedules and delivered Energy shall be subject to the standard CAISO Transmission Loss calculation as described in Section 27.5.1.1 and Appendix C of the CAISO Tariff.
- 1.7.5 Any transmission losses attributed to the Dynamic Schedule on transmission system(s) external to the CAISO Balancing Authority Area will be the responsibility of the owner(s)/operator(s) of the Dynamic System Resource.
- 1.7.6 Responsible Scheduling Coordinators will be able to report derates affecting the Dynamic System Resource through the CAISO's Outage management system.
- 1.7.7 Should there be any need or requirement, whether operational or procedural, for the CAISO to make Real-Time adjustments to the CAISO's inter-Balancing Authority Area Interchange Schedules (to include curtailments), Dynamic Schedules shall be treated in the same manner as similarly situated and/or effective static CAISO Interchange Schedules.

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2. DYNAMIC SCHEDULES OF EXPORTS OF ENERGY FROM GENERATING UNITS IN THE CAISO BALANCING AUTHORITY AREA

* * * * *

2.5 OPERATING AND SCHEDULING REQUIREMENTS

- 2.5.1 All Dynamic Schedules associated with exports of Energy from a Generating Unit must be electronically tagged (by use of an E-Tag).
- 2.5.2 Formal inter-Balancing Authority Area Dynamic Schedules of the export of Energy from a Generating Unit may be issued only by the CAISO as the Host Balancing Authority Area and must be routed through the EMSs of any Intermediary Balancing Authority Area, if requested by

the Intermediary Balancing Authority Area.

- 2.5.3** The Balancing Authority receiving the Dynamic Schedule of the export of Energy from the CAISO Balancing Authority Area is responsible for Operating Reserves and Regulation for Loads served by such exports of Energy, unless the receiving Balancing Authority and the CAISO otherwise agree as reflected in the Dynamic Scheduling Host Balancing Authority Operating Agreement.
- 2.5.4** The dynamic signal must be integrated over time by the CAISO for every Operating Hour.
- 2.5.5** Notwithstanding any Dispatches of the Generating Unit in accordance with the CAISO Tariff, the CAISO shall have the right to issue operating orders as defined in Section 37.2.1.1 of the CAISO Tariff to the Generating Unit either directly or through the receiving Balancing Authority Area for emergency or contingency reasons, or to ensure the CAISO's compliance with operating requirements based on WECC or NERC requirements and policies (e.g., WECC's Unscheduled Flow Reduction Procedure). However, such operating orders may be issued only within the range of the CAISO-accepted Energy Bids for a given Operating Hour (or the applicable "sub-hour" interval).
- 2.5.6** If there is no Dynamic Schedule in the CAISO's Day-Ahead Market or RTM, the dynamic signal must be at "zero" ("0").
- 2.5.7** The Scheduling Coordinator for a Dynamic Schedule of an export of Energy from a Generating Unit must have the ability to override the associated Dynamic Schedule in order to respond to the operating orders of the CAISO or the Host Balancing Authority.
- 2.5.8** Unless the Dynamic Schedule of an export of Energy from a Generating Unit (1) is implemented as a directly-telemetered load following functionality, (2) is base-loaded Regulatory Must-Take Generation, (3) responds to an intra-hour dispatch instruction from the receiving Balancing Authority, or (4) is an Eligible Intermittent Resource, the Dynamic Schedule representing such resource must follow WECC-approved practice of 20-minute ramps centered at the top of the hour. The CAISO does not provide any special Settlements treatment nor offer any CAISO Tariff exemptions for dynamic load following functionalities.
- 2.5.9** In Real-Time the Dynamic Schedule may not exceed the CAISO's Dispatch Operating Point, which reflects the dynamic signal received by the CAISO from the Balancing Authority receiving the dynamically-scheduled Energy. The CAISO's Dispatch Operating Point represents not only the estimated Energy from the Generating Unit for export but also the transmission reservation on the associated CAISO Intertie.
- 2.5.10** Only one Dynamic Schedule may be associated with any one physical Generating Unit, unless the CAISO approves an implementation plan to establish multiple Dynamic Schedules for that Generating Unit.

2.6 Compliance, Losses, and Financial Settlements

- 2.6.1** Energy delivered in association with a Dynamic Schedule of an export of Energy from a Generating Unit will be subject to all provisions of the CAISO's imbalance energy markets (just as is the case with CAISO intra-Balancing Authority Area Generating Units of Participating Generators).
- 2.6.2** All Day-Ahead Market and RTM submitted Dynamic Schedules shall be subject to CAISO Congestion Management and as such may not exceed their transmission reservations in Real-Time (with the exception of intra-hour Dispatch Instructions for imbalance energy issued by the CAISO and responses to the dynamic signal from the Balancing Authority receiving the Dynamic Schedule of the export of Energy).

- 2.6.3** All Dynamic Schedules and delivered Energy shall be subject to the standard CAISO Transmission Loss calculation as described in Section 27.5.1.1 and Appendix C of the CAISO Tariff.
- 2.6.4** Any transmission losses attributed to the Dynamic Schedule on transmission system(s) external to the CAISO Balancing Authority Area will be the responsibility of the owner(s)/operator(s) of the Generating Unit associated with a Dynamic Schedule of an export of Energy.
- 2.6.5** Should there be any need or requirement, whether operational or procedural, for the CAISO to make Real-Time adjustments to the CAISO's inter-Balancing Authority Area Interchange Schedules (to include curtailments), Dynamic Schedules shall be treated in the same manner as similarly situated and/or effective static CAISO Interchange Schedules.

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Appendix Q

Eligible Intermittent Resources Protocol (EIRP)

* * * * *

2.2.5 Information Requirements for Participating Intermittent Resource Export Fee

In order for the CAISO to administer, implement and calculate the Participating Intermittent Resource Export Fee, each Participating Intermittent Resource jointly with, and through, its Scheduling Coordinator must provide the CAISO with the following information and documents under the schedule and conditions set forth in this section.

The CAISO will maintain the confidentiality of all information and documents received under this section in accordance with CAISO Tariff Section 20 et seq.

- (a) A certification, in the form set forth in a Business Practice Manual, signed by an officer of the Participating Intermittent Resource and its Scheduling Coordinator, identifying each contract to sell Energy or capacity from the Participating Intermittent Resource, including for each such contract, the counterparty, start and end dates, delivery point(s), quantity in MW, other temporal terms, i.e., seasonal or hourly limitations.

The certification must be updated by resubmission to the CAISO (1) upon a request to modify the composition of the Participating Intermittent Resource under Section 2.4.2 of this EIRP; or (2) within ten (10) calendar days of final execution of a new contract or any change in counterparty, start and end dates, delivery point(s), quantity in MW, or other temporal terms, as described above, for any prior certified contract. All other contractual changes will not trigger the obligation for recertification.

- (b) Copies of all contracts, including changes, identified in the above-referenced certification; however, price information may be redacted from the contracts provided.

Each Participating Intermittent Resource, as of November 1, 2006, must initially provide the information requested by this Section 2.2.5 in accordance with a Market Notice provided by the CAISO to Participating Intermittent Resources. All other Eligible Intermittent Resources must satisfy this Section 2.2.5 in order to become a Participating Intermittent Resource after November 1, 2006.

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3.1.1 Wind Generation Meteorological Station Requirements

Each wind Eligible Intermittent Resource must install and maintain equipment required by the CAISO to support accurate power generation forecasting and the communication of such forecast, meteorological, and other required data to the CAISO consistent with the timeframes specified in this Eligible Intermittent Resource Protocol.

3.1.1.1 Each wind Eligible Intermittent Resource shall install a minimum of one meteorological station to measure barometric pressure, temperature, wind speed and direction. If a wind Eligible Intermittent Resource has a rated capacity of five (5) MW or greater, the Eligible Intermittent Resource shall install a minimum of two meteorological stations to measure barometric pressure, temperature, wind speed and direction. If an Eligible Intermittent Resource, as part of compliance with any other contractual or regulatory requirement outside of this Eligible Intermittent Resource Protocol, provides data from more than the two required meteorological stations to an entity other than the CAISO, then the Eligible Intermittent Resource must also submit data from any additional meteorological station to the CAISO.

3.1.1.2 Each wind Eligible Intermittent Resource shall locate its meteorological station(s) on the windward side of the wind farm. Each wind Eligible Intermittent Resource must install one meteorological station at the average hub height of the wind turbines. Hub height is the distance from the ground to the center of the turbine axis. If a second meteorological station is required, then it may be so co-located with the primary station, then the second station shall be installed below the primary station. The approximate distance separating the primary station and the secondary station shall be an average of one (1) rotator blade length. Where placement of the meteorological station(s) in accordance with this Eligible Intermittent Resource Protocol would reduce production or violate a local, state, or federal statute, regulation or ordinance, the CAISO, in coordination with any applicable forecast service provider, will coordinate with the Eligible Intermittent Resource to identify an acceptable placement of the meteorological station.

3.1.1.3 The use of SODAR¹ and/or LIDAR² equipment may be an acceptable substitute for wind direction and velocity only after obtaining prior agreement from the CAISO.

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3.1.3 Designated Turbines

For any wind eligible Intermittent Resource, designated turbines are required to improve forecast accuracy within a wind park. The CAISO shall identify a designated turbine, from which the Eligible Intermittent Resource shall provide nacelle wind speed and wind direction every four seconds. Wind EIRs with a PGA or NS PGA that are operating or have final regulatory approvals to construct as of [[the effective date of this change]] that have wind turbines without nacelle anemometers need not comply with the requirements of this section for Designated Turbines. However, when the wind EIR repowers or replaces a portion of its existing wind turbines, then the Wind EIR must become compliant with the requirements of this section for Designated Turbines.

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5.3 [Not Used]

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7 PROGRAM MONITORING

The CAISO shall monitor the operation of these rules, and will in particular seek to eliminate any gaming opportunities provided by the flexibility provided Participating Intermittent Resources to self-select participation on an hourly basis.

Participating Intermittent Resources are expected to bid, schedule, and otherwise perform in good faith, and not seek to act strategically in a manner that causes financial gain through systematic behavior, where such gain results solely from the settlement accommodations provided under CAISO Tariff Section 11.12.

If requirements specified in this EIRP are not met, then Participating Intermittent Resource certification may be revoked pursuant to Section 2.4.5 of this EIRP. Any patterns of strategic behavior by Participating Intermittent Resources will be tracked, and the statistical significance of such deviations will be used by the CAISO to evaluate whether changes in the rules defined in this EIRP are appropriate.

The CAISO will monitor the impact of rules for Participating Intermittent Resources on FMM or RTD imbalance energy and Regulation costs to the CAISO.

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Appendix Q

Eligible Intermittent Resources Protocol (EIRP)

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2.2.5 Information Requirements for Participating Intermittent Resource Export Fee

In order for the CAISO to administer, implement and calculate the Participating Intermittent Resource Export Fee, each Participating Intermittent Resource jointly with, and through, its Scheduling Coordinator must provide the CAISO with the following information and documents under the schedule and conditions set forth in this section.

The CAISO will maintain the confidentiality of all information and documents received under this section in accordance with CAISO Tariff Section 20 et seq.

- (a) A certification, in the form set forth in a Business Practice Manual, signed by an officer of the Participating Intermittent Resource and its Scheduling Coordinator, identifying each contract to sell Energy or capacity from the Participating Intermittent Resource, including for each such contract, the counterparty, start and end dates, delivery point(s), quantity in MW, other temporal terms, i.e., seasonal or hourly limitations.

The certification must be updated by resubmission to the CAISO (1) upon a request to modify the composition of the Participating Intermittent Resource under Section 2.4.2 of this EIRP; or (2) within ten (10) calendar days of final execution of a new contract or any change in counterparty, start and end dates, delivery point(s), quantity in MW, or other temporal terms, as described above, for any prior certified contract. All other contractual changes will not trigger the obligation for recertification.

- (b) Copies of all contracts, including changes, identified in the above-referenced certification; however, price information may be redacted from the contracts provided.

Each Participating Intermittent Resource, as of November 1, 2006, must initially provide the information requested by this Section 2.2.5 in accordance with a Market Notice provided by the CAISO to Participating Intermittent Resources. All other Eligible Intermittent Resources must satisfy this Section 2.2.5 in order to become a Participating Intermittent Resource after November 1, 2006.

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3 COMMUNICATIONS

3.1 Forecast Data

The CAISO may require various data relevant to forecasting Energy from the Eligible Intermittent Resource to be telemetered to the CAISO, including appropriate operational data, meteorological data or other data reasonably necessary to forecast Energy.

In order for the CAISO to forecast Energy, an Eligible Intermittent Resource must provide the CAISO with MW production data and meteorological data as outlined in this Eligible Intermittent Resources Protocol. This data must be collected for a minimum of thirty (30) consecutive days and be of sufficient quality as determined by a CAISO to produce a state of the art forecast.

3.1.1 Wind Generation Meteorological Station Requirements

Each wind Eligible Intermittent Resource must install and maintain equipment required by the CAISO to support accurate power generation forecasting and the communication of such forecast, meteorological, and other required data to the CAISO consistent with the timeframes specified in this Eligible Intermittent Resource Protocol.

3.1.1.1 Each wind Eligible Intermittent Resource shall install a minimum of one meteorological station to measure barometric pressure, temperature, wind speed and direction. If a wind Eligible Intermittent Resource has a rated capacity of five (5) MW or greater, the Eligible Intermittent Resource shall install a minimum of two meteorological stations to measure barometric pressure, temperature, wind speed and direction. If an Eligible Intermittent Resource, as part of compliance with any other contractual or regulatory requirement outside of this Eligible Intermittent Resource Protocol, provides data from more than the two required meteorological stations to an entity other than the CAISO, then the Eligible Intermittent Resource must also submit data from any additional meteorological station to the CAISO.

3.1.1.2 Each wind Eligible Intermittent Resource shall locate its meteorological station(s) on the windward side of the wind farm. Each wind Eligible Intermittent Resource must install one meteorological station at the average hub height of the wind turbines. Hub height is the distance from the ground to the center of the turbine axis. If a second meteorological station is required, then it may be so co-located with the primary station, then the second station shall be installed below the primary station. The approximate distance separating the primary station and the secondary station shall be an average of one (1) rotator blade length. Where placement of the meteorological station(s) in accordance with this Eligible Intermittent Resource Protocol would reduce production or violate a local, state, or federal statute, regulation or ordinance, the CAISO, in coordination with any applicable forecast service provider, will coordinate with the Eligible Intermittent Resource to identify an acceptable placement of the meteorological station.

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3.1.3 Designated Turbines

For any wind eligible Intermittent Resource, designated turbines are required to improve forecast accuracy within a wind park. The CAISO shall identify a designated turbine, from which the Eligible Intermittent Resource shall provide nacelle wind speed and wind direction every four seconds. Wind EIRs with a PGA or NS PGA that are operating or have final regulatory approvals to construct as of [[the effective date of this change]] that have wind turbines without nacelle anemometers need not comply with the requirements of this section for Designated Turbines. However, when the wind EIR repowers or replaces a portion of its existing wind turbines, then the Wind EIR must become compliant with the requirements of this section for Designated Turbines.

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5 SCHEDULING AND SETTLEMENT

5.1 Schedules

For all Generating Units that comprise the Participating Intermittent Resources shall comply with the Bidding and scheduling rules specified in Sections 4.8, 30, 31, and 34.

5.2 Settlement

After a Participating Intermittent Resource is certified, Settlement shall be determined for each Settlement Period based on consistency of Bids submitted on behalf of such Participating Intermittent Resource with the rules specified in the CAISO Tariff and this EIRP.

5.3 [Not Used]

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7 PROGRAM MONITORING

The CAISO shall monitor the operation of these rules, and will in particular seek to eliminate any gaming opportunities provided by the flexibility provided Participating Intermittent Resources to self-select participation on an hourly basis.

Participating Intermittent Resources are expected to bid, schedule, and otherwise perform in good faith, and not seek to act strategically in a manner that causes financial gain through systematic behavior, where such gain results solely from the settlement accommodations provided under CAISO Tariff Section 11.12.

If requirements specified in this EIRP are not met, then Participating Intermittent Resource certification may be revoked pursuant to Section 2.4.5 of this EIRP. Any patterns of strategic behavior by Participating Intermittent Resources will be tracked, and the statistical significance of such deviations will be used by the CAISO to evaluate whether changes in the rules defined in this EIRP are appropriate.

The CAISO will monitor the impact of rules for Participating Intermittent Resources on FMM or RTD imbalance energy and Regulation costs to the CAISO.

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Attachment C – Marked Tariff

Tariff Clarifications Amendment

California Independent System Operator Corporation

~~4.6.3.5 [Not Used]—Participating Generator with a Net Scheduled PGA~~

~~A Participating Generator that is eligible for and has entered into a Net Scheduled Participating Generator Agreement shall be subject to the provisions of this Section 4.6.3.5, as reflected in the terms of the Net Scheduled PGA.~~

~~4.6.3.5.1—Revenue Metering for a Net Scheduled Generating Unit~~

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

~~4.6.3.5.2—Telemetry for a Net Scheduled Generating Unit~~

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

~~4.6.3.5.3—Market and Settlement Processes for a Net Scheduled Generating Unit~~

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

~~4.6.3.5.4—Operating Requirements for a Net Scheduled Generating Unit~~

~~A Participating Generator that has entered into a Net Scheduled PGA shall abide by CAISO Tariff provisions regarding the CAISO's ability to dispatch or curtail Generation from the Net Scheduled Generating Units listed in its Net Scheduled PGA. The CAISO shall only dispatch or curtail a Net Scheduled Generating Unit of the Participating Generator: (a) to the extent the Participating Generator~~

~~bids Energy or Ancillary Services from the Net Scheduled Generating Unit into the CAISO Markets or the Energy is otherwise available to the CAISO under Section 40, subject to the restrictions on operating orders set forth below; or (b) if the CAISO must dispatch or curtail the Net Scheduled Generating Unit in order to respond to an existing or imminent System Emergency or condition that would compromise CAISO Balancing Authority Area integrity or reliability as provided in Sections 7 and 7.6.1.~~

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

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

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4.8.1 Bidding and Settlement

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

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4.8.2 Forecasting

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4.8.2.1.1 Use of Own Forecast

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

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4.8.3 ~~[Not Used] PIRP Protective Measures~~

4.8.3.1 ~~Request for PIRP Protective Measures~~

4.8.3.1.1 ~~Timing~~

~~Participating Intermittent Resources or Qualifying Facilities that wish to qualify for PIRP Protective Measures pursuant to Section 4.8.3.2 within the three-year transition period must complete their election for PIRP Protective Measures no later than thirty (30) days after the effective date of this Section 4.8.3.~~

4.8.3.1.2 ~~Materials Submitted with Request~~

~~For a resource to qualify for PIRP Protective Measures, within thirty (30) days from the effective date of this Section, responsible parties must submit affidavits as described in either Section 4.8.3.1.2.1 or Section 4.8.3.1.2.2. The CAISO reserves the right to audit the representations made in the affidavits by giving written notice at least ten (10) Business Days in advance of the date that the CAISO wishes to initiate such audit, with completion of the audit occurring within 60 days of such notice. The audit shall be for the limited purposes of verifying that the Participating Intermittent Resource and counterparty to the relevant contract has represented the terms specified in the affidavit accurately. Upon request of the CAISO as part of such audit, the Participating Intermittent Resource or counterparty providing the affidavits specified below shall provide information to support its certification under Sections 4.8.3.1.2.1 or Section 4.8.3.1.2.2, as appropriate. Each party will be responsible for its own expenses related to any audit.~~

4.8.3.1.2.1 ~~Physical Limitations~~

~~A Participating Intermittent Resource or Qualifying Facility requesting PIRP Protective Measures because of physical limitations, as specified in Section 4.8.3.2.2.1, must submit a sworn affidavit by a representative of the Participating Intermittent Resource or Qualifying Facility, who is authorized to bind the resource legally and financially. The affidavit must state that the resource meets the criteria specified in Section 4.8.3.2.1 and 4.8.3.2.2.1. The sworn affidavit must also state that the relevant party agrees that during the term of the three-year transition period, the party will engage in a good faith effort to upgrade the facility in order to address the limitations specified in Section 4.8.3.2.2.1.~~

4.8.3.1.2.2 ~~Contractual Limitations~~

~~A Participating Intermittent Resource or Qualifying Facility requesting PIRP Protective Measures because~~

~~of contractual limitations as specified in Section 4.8.3.2.2.2, must submit a sworn affidavit by a representative of the Participating Intermittent Resource or Qualifying Facility, who that is authorized to bind the resource legally and financially. The affidavit must state that the resource is subject to a contract that meets the criteria specified in Sections 4.8.3.2.1 and 4.8.3.2.2.2. The Participating Intermittent Resource or Qualifying Facility must serve their affidavit electronically to the counterparty to the applicable contract on the same day the affidavit is submitted to the CAISO. A representative of the counterparty to the applicable existing bilateral agreement that is authorized to legally and financially bind the counterparty may also submit a sworn affidavit stating that the resource is subject to a contract that meets the criteria specified in Sections 4.8.3.2.1 and 4.8.3.2.2.2. The counterparty must serve the affidavit electronically on the Participating Intermittent Resource or Qualifying Facility on the same day the affidavit is submitted to the CAISO. Each party's respective affidavit must state that during the term of the three-year transition period, the party will engage in a good faith effort with the counterparty to address the existing contractual limitation specified in Section 4.8.3.2.2.2. In the event that the counterparty submits no affidavits within the thirty days, the CAISO deems the counterparty to have acquiesced to the request by the representative of the Participating Intermittent Resource, except if the Participating Intermittent Resource fails to serve the counterparty with the required documents within the prescribed time. If the counterparty later successfully demonstrates through a formal complaint filed at the Federal Energy Regulatory Commission that the Participating Intermittent Resource failed to serve the counterparty with the relevant materials as described in this Section, the CAISO will deny, and if appropriate reverse, any PIRP Protective Measures afforded to the requesting party. To the extent that the counterparty instead submits an affidavit by a representative of the company that is fully authorized to legally and financially bind the company stating that the resource's contract does not meet the criteria in Sections 4.8.3.2.1 and 4.8.3.2.2.2, the affidavit must also state that the Participating Intermittent Resource shall not suffer any economic or other repercussions under the contract and because of the terms of the contract were the resource to participate fully in the CAISO Market, including through the submission of Economic Bid for economic curtailment. The representative of the Participating Intermittent Resource may choose to withdraw its request in light of the counterparty's affidavit or pursue resolution of a contractual dispute through a dispute resolution process specified in the relevant contract, or if none is~~

available, through the process specified in Section 13 of the CAISO Tariff, or through any dispute resolution process available through the Federal Energy Regulatory Commission. During the term that the contract is in dispute, the resource will be subject to PIRP Protective Measures provided it meets all the other criteria specified in this Section 4.8.3. Upon resolution of the dispute, if the dispute resolution process yields a conclusion that the contract is not eligible for PIRP Protective Measures, the resource will resume its status as a Participating Intermittent Resource not subject to PIRP Protective Measures. The CAISO will unwind the Protective Measures provided to the affected Scheduling Coordinator and will process such resettlement charges or payments through the existing resettlement procedures specified in Section 11.29.7. The CAISO will take all reasonable and necessary steps to include the resettlement on the next Recalculation Statement. In unwinding the Protective Measures received, any Scheduling Coordinator that received a payment for the PIRP Protective Measures under the contract in dispute will receive a charge in the amount of the payment previously received plus any interest that may apply under Section 11.29.10.2. Similarly, any Scheduling Coordinator that received a charge due to the provision of the PIRP Protective Measures under the contract in dispute will receive a payment in the amount of the payment previously received plus any interest that may apply under Section 11.29.10.2.

4.8.3.2 Criteria

Participating Intermittent Resources or Qualifying Facilities that are registered as such on the day that this Section 4.8.3 becomes effective may qualify for PIRP Protective Measures if they meet the criteria specified below. Fulfilling such criteria is a requirement in addition to providing the affidavits described in Section 4.8.3.1.2. Qualifying Facilities whose capacity exceeds twenty (20) MW on the day this tariff section becomes effective may qualify if they meet the criteria specified below. Such Qualifying Facilities that elect and qualify for PIRP Protective Measures must also be qualified as a Participating Intermittent Resource for the term over which they are to receive the PIRP Protective Measures.

4.8.3.2.1 Exposure to Real-Time Imbalance Energy

The Participating Intermittent Resource, or Qualifying Facility upon expiration of its Qualifying Facility contract with a Utility Distribution Company, either: (1) is subject to an existing bilateral agreement for power purchases from the affected resource, such as a power purchase agreement, that is in effect the day this Section becomes effective, and such agreement in its totality requires that the resource owner

~~directly or indirectly is subject to Real-Time Imbalance Energy Settlement in the CAISO Market; or (2) is not subject to any bilateral agreement for power purchases from the affected resource on the day this section becomes effective and, therefore, the resource is itself subject to Real-Time Imbalance Energy Settlement in the CAISO Market.~~

~~4.8.3.2.2 Ability to Curtail~~

~~The affected resource must also meet one of the two criteria below:~~

~~4.8.3.2.2.1 Physical Limitation~~

~~More than fifty (50) percent of the Participating Intermittent Resource or Qualifying Facility is composed of technology that is unable to curtail output and cannot be made to do so without significant investment. Participating Intermittent Resources that only lack Dispatch, control, and telemetry or metering that require upgrades to be able to respond will not qualify. Participating Intermittent Resources that require production facility investments, such as turbine replacements, will qualify.~~

~~4.8.3.2.2.2 Contractual Limitation~~

~~The resource is subject to an existing bilateral agreement for power purchases, such as a power purchase agreement, that is in effect on the date on which this Section become effective, and that prohibits the resource from curtailing its output (not including times when they are ordered to do so by the CAISO or an affected Utility Distribution Company for reliability reasons).~~

~~4.8.3.3 Term of PIRP Protective Measures~~

~~The PIRP Protective Measures for a specific Participating Intermittent Resource shall be in effect until the earlier date of (1) three years after the effective date of this Section, or (2) the execution between the Participating Intermittent Resource owner and its counterparty of a new or amended power purchase agreement (or similar contract for services) that addresses their Imbalance Energy settlement.~~

~~4.8.3.4 Posting~~

~~The CAISO will post on its Website the names of the Participating Intermittent Resources that have elected, and subsequently been qualified, to receive PIRP Protective Measures.~~

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4.13.4 Performance Evaluation Methodologies for PDRs and RDRRs

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4.13.4.2 Metering Generator Output Methodology

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

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

for the minimum number of hours described above, the Generator Output Baseline will be set at zero ~~the calculation will instead include Meter Data for the hours on which the Proxy Demand Resource was subject to an Outage or previously provided Demand Response Services (other than capacity awarded for AS or RUC) pursuant to a Bid at or above the net benefits test set forth in Section 30.6.3, or the Reliability Demand Response Resource was subject to an Outage as described in the Business Practice Manual or previously provided Demand Response Services, and for which the amount of totalized load was highest during the hours when the Demand Response Services were provided in the forty-five (45) calendar days prior to the Trading Day.~~

- (b) The baseline amount of Energy provided by the behind-the-meter generation will be calculated on the simple hourly average of the collected Meter Data.
- (c) In calculating the Generator Output Baseline pursuant to 4.13.4.2(a), the Meter Data must be set to zero in any Settlement Interval in which the behind-the-meter generation is charging.
- (d) In any Settlement Interval where the behind-the-meter generation is exporting Energy (i.e., where the behind-the-meter generation Energy output exceeds its location Demand), the Meter Data will consist of the Energy output of the behind-the-meter generation up to, but not including, the output greater than its facility Demand that would represent an export of Energy from that location.

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6.5.3.2 Public Market Information

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

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

- (a) Total Day-Ahead Schedules (MWh) for total Supply and Demand by TAC Area and for the entire CAISO Balancing Authority Area;
- (b) Total Day-Ahead Schedules (MWh) of imports and exports by Transmission Interface;
- (c) Total Day-Ahead AS Awards by AS Region and AS type;
- (d) RUC Prices by PNode and APNodes, RUC Forecast Demand for each RUC Zone, hourly RUC Capacity from Generation, and hourly RUC Capacity from imports for each TAC Area and the entire CAISO Balancing Authority Area;
- (e) Day-Ahead LMP for Energy for each PNode and APNode, including the Energy, MCC and MCL components;
- (f) Day-Ahead ASMP by AS Region and AS type;
- (g) Day-Ahead mitigation indicator;
- (h) CAISO Forecast of CAISO Demand for each TAC Area and the entire CAISO Balancing Authority Area;
- (i) Shadow Prices of binding Transmission Constraints and an indication of whether the Transmission Constraints were binding because of the base operating conditions or a Contingency, and if caused by a Contingency, the identity of the specific Contingency; and
- (j) Total Day-Ahead system Marginal Losses in MWh and Marginal Cost of Losses for each Trading Hour of the next Trading Day.

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

6.5.3.2.4 ~~**[Not Used] External Unscheduled Flow Metric**~~

~~Three Business Days after the applicable Trading Day the CAISO will post the aggregate accuracy metric calculated as specified in Section 27.5.1.2. If the CAISO must suspend the consideration of external unscheduled flow in the Day-Ahead Market, the CAISO will notify Market Participants as soon as~~

~~practicable prior to implementing the suspension. The CAISO will also notify Market Participants as soon as practicable prior to reinstating its consideration of external unsecheduled flow in the Day-Ahead Market.~~

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8.4.1 Operating Characteristics Required to Provide AS

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8.4.1.2 Regulation Energy Management

The CAISO will make Regulation Energy Management available to Scheduling Coordinators for Non-Generator Resources located within the CAISO Balancing Authority Area that require Energy from the Real-Time Market to offer their full capacity as Regulation. A Scheduling Coordinator for a resource using Regulation Energy Management may submit a Regulation Bid for capacity (MW) of up to four (4) times the maximum Energy (MWh) the resource can generate or curtail for fifteen (15) minutes after issuance of a Dispatch Instruction. In the Real-Time Market, a Scheduling Coordinator for a resource using Regulation Energy Management will ~~produce~~produce ~~Imbalance Energy~~ as needed to satisfy the sixty (60) minute continuous Energy requirement for Regulation Awards in the Day-Ahead Market.

Scheduling Coordinators may request to use Regulation Energy Management for these Non-Generator Resources by submitting a request to certify such a resource to provide Regulation using Regulation Energy Management. The owner or operator of a Resource using Regulation Energy Management must execute both a Participating Generator Agreement and/or Participating Load Agreement and may provide only Regulation in the CAISO Market. A resource using Regulation Energy Management may not provide Energy other than Energy associated with Regulation. Scheduling Coordinators for Resources using Regulation Energy Management may define a Ramp Rate for operating as Generation and a Ramp Rate for operating as Load, respectively. These resources shall comply with the requirements to provide Regulation as specified in this Section 8, Appendix K, and the CAISO's Operating Procedures, including the requirement to undergo a market simulation using Regulation Energy Management as part of the certification procedure.

Scheduling Coordinators for resources using Regulation Energy Management shall register these resources in the Master File. Scheduling Coordinators may only submit Bids for Regulation Up and Regulation Down and Mileage for these resources. Scheduling Coordinators may not submit Energy Bids, Energy Self-Schedules, Residual Unit Commitment Bids, or Ancillary Service Bids other than Regulation and Mileage for these resources. Scheduling Coordinators may not submit any type of commitment costs as part of their Regulation Up and Regulation Down Bids for resources using Regulation Energy Management, including Start-Up Cost, Minimum Load Costs, Pumping Cost or Pump Shut-Down Costs, or Transition Cost. All other bidding rules for Regulation set forth in Section 30 shall apply to resources using Regulation Energy Management.

The CAISO will settle Dispatches from resources using Regulation Energy Management as ~~Instructed Imbalance E~~nergy. The portion of Demand of Non-Generator Resources using Regulation Energy Management that is dispatched as Regulation in any Settlement Interval shall not be considered Measured Demand for purposes of allocating payments and charges pursuant to Section 11 during that Settlement Interval.

The CAISO shall control the resource's operating set point through its Energy Management System with the objective of maintaining the resource's operating set point at its preferred operating point. In the Day-Ahead Market and FMM, the procurement of Regulation from resources using Regulation Energy Management will not be constrained by the resource's MWh limit to generate, curtail the consumption of, or consume Energy continuously. In the Real-Time Dispatch, the CAISO will base the Dispatches on the resource's capability to provide Regulation. When the resource has a physical MWh limit, the CAISO will observe the resource's MWh constraint during Real-Time Dispatch and will assess whether the CAISO can support the resource's self-provided Regulation capacity or Regulation award with Real-Time Market Dispatches. To the extent the CAISO determines in the Integrated Forward Market or FMM that the MWh constraint of resources using Regulation Energy Management limits the capability of the CAISO, through Real-time Dispatch, to support these resources' self-provided Regulation capacity or Regulation awards, the CAISO may disqualify resources using Regulation Energy Management on a pro rata basis across the System Region from providing Regulation, which shall result in the rescission of the disqualified portion of the resources' self-provided or awarded Regulation capacity payments.

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8.6.2 Right to Self-Provide

Each Scheduling Coordinator may choose to self-provide all, or a portion, of its Regulation Up, Regulation Down, Spinning Reserve, and Non-Spinning Reserve obligations in the IFM, and, to the extent needed to satisfy the CAISO's additional requirement, the Real-Time Market, from resources eligible for self-provision, as may be permissible for any given Ancillary Service in these respective markets. The right to self-provide Ancillary Services from capacity that is under a contractual obligation to provide Energy, including but not limited to capacity subject to an RMR Contract and local Resource Adequacy Resources, shall be conditional; self-provision of Ancillary Services from such capacity will only be permitted to the extent that capacity is not needed for Energy as a result of the MPM process described in this CAISO Tariff. To self-provide Ancillary Services a Scheduling Coordinator must provide the CAISO with a Submission to Self-Provide an Ancillary Service. Both Ancillary Service Bids and Submissions to Self-Provide an Ancillary Service can be provided to the CAISO for the same Ancillary Service and for the same hour in the same market. To the extent the Submission to Self-Provide an Ancillary Service is from a resource that is a Partial Resource Adequacy Resource, and Energy is needed, including for purposes under Section 31.3.1.3, from that resource the CAISO shall only disqualify the self-provision of Ancillary Services from the portion of the resource's capacity that has must-offer obligation, provided that the Scheduling Coordinator has not submitted an Energy Bid for the capacity that is not subject to a must-offer obligation. The CAISO will treat resources subject to Resource Adequacy requirements consistently with and such resources must comply with the bidding requirements in Section 40.6. If there is an Energy Bid submitted for the capacity of a Partial Resource Adequacy Resource that is not subject to a must-offer obligation the CAISO may disqualify the Submission to Self-Provide an Ancillary Service for the portion of the resources capacity that is not under a must-offer obligation consistent with the principles of co-optimization under the CAISO Tariff.

Prior to evaluating Ancillary Service Bids, the CAISO will determine whether Submissions to Self-Provide Ancillary Services are feasible with regard to resource operating characteristics and regional constraints and are qualified to provide the Ancillary Services in the markets for which they were submitted.

If the total Submissions to Self-Provide Ancillary Services exceed the maximum regional requirement for the relevant Ancillary Service in an Ancillary Service Region, the submissions that would otherwise be accepted by the CAISO as feasible and qualified will be awarded on a pro-rata basis among the suppliers offering to self-provide the Ancillary Service up to the amount of the Ancillary Services requirement. If a regional constraint imposes a limit on the total amount of Regulation Up, Spinning Reserve, and Non-Spinning Reserve, and the total self-provision of these Ancillary Services in that region exceeds that limit, Self-Provided AS are qualified pro rata from higher to lower quality service in three tiers: Regulation Up first, followed by Spinning Reserve, and then by Non-Spinning Reserve. Submissions to Self-Provide Ancillary Services in excess of the maximum regional requirement for the relevant Ancillary Service in an Ancillary Service Region will not be accepted and qualified by the CAISO as Self-Provided Ancillary Services.

The CAISO shall schedule Self-Provided Ancillary Services to the extent qualified in the IFM and the RTM and Dispatch Self-Provided Ancillary Services in the Real-Time. To the extent that a Scheduling Coordinator self-provides Regulation Up, Regulation Down, Spinning Reserve, and Non-Spinning Reserve, the CAISO shall correspondingly reduce the quantity of the Ancillary Services it procures from Bids submitted in the IFM and the Real-Time Market. ~~To the extent a Scheduling Coordinator's Self-Provided Ancillary Service for a particular Ancillary Service is greater than the Scheduling Coordinator's obligation for that particular Ancillary Service in a Settlement Interval, the Scheduling Coordinator will receive the user rate for the Self-Provided Ancillary Service for the amount of the Self-Provided Ancillary Service in excess of the Scheduling Coordinator's obligation.~~

Scheduling Coordinators may trade Ancillary Services so that any Scheduling Coordinator may reduce its Ancillary Services Obligation through purchase of Ancillary Services capacity from another Scheduling Coordinator, or self-provide in excess of its obligation to sell Ancillary Services to another Scheduling Coordinator.

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11.1.4 CAISO Estimates for Initial Settlement Statement T+3B

Notwithstanding any other provisions of the CAISO Tariff, Initial Settlement Statement T+3B shall be solely based on CAISO Estimated Settlement Quality Meter Data for metered Demand, metered Generation, and Demand Response. CAISO Estimated Settlement Quality Meter Data shall be calculated as follows:

- (a) CAISO Estimated Settlement Quality Meter Data for metered Generation will be based on total Expected Energy ~~and dispatch of the resource as calculated in the Real Time Market and as modified by any applicable corrections to the Dispatch Operating Point for the resource.~~
- (b) CAISO Estimated Settlement Quality Meter Data for metered Demand, including Non-Participating TO demand will be based on Scheduled Demand by the appropriate LAP. This value will be increased by fifteen (15) percent if the total actual system Demand in Real Time, as determined by the CAISO each hour, is greater than the total Scheduled Demand by more than fifteen (15) percent. CAISO Estimated Settlement Quality Meter Demand for Participating Load will not be increased by fifteen (15) percent.
- (c) CAISO Estimated Settlement Quality Meter Data for Demand Response will be calculated using the same method as set forth in Section 11.1.4(a) for metered Generation. The Proxy Demand Response Default Load Adjustment will not be estimated or applied for purposes of calculating Initial Settlement Statement T+3B.
- (d) To estimate net load for a Metered Subsystem, the CAISO will apply a monthly historical based net/gross ratio to the MSS's estimated gross load. The historical monthly ratio shall be specific to each MSS Operator and shall be calculated as the sum of each entity's monthly actual net load divided by the sum of each entity's monthly actual gross load, of the previous year.
- (e) The CAISO will estimate E-Tag for Interchange Schedules for System Resources based on total Expected Energy, and for EIM Transfer system resources based on Dispatch Instructions.

(f) ~~The~~ CAISO will not estimate Unaccounted For Energy under Section 11.5.3, ~~the rescission of payments for Regulation Up and Regulation Down Capacity under Section 8.10.8.6, Real-Time Imbalance Energy Offset adjustment under Section 11.5.4.1(c), allocation of RTM Bid Cost Up-lift adjustment under Section 11.8.6.3.2(vi),~~ or MSS deviation payments under 11.7.1 for purposes of calculating Initial Settlement Statement T+3B.

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11.2.3 IFM Energy Charges and Payments for Metered Subsystems

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11.2.3.1.2 IFM Payments for MSS Supply under Gross Energy Settlements

The CAISO shall pay Scheduling Coordinators that submit Bids for MSS Operators that have selected or are subject to gross Energy Settlement an amount equal to the product of the MWh quantity of Supply from the MSS in its Day-Ahead Schedule at the corresponding PNode and the applicable ~~Resource-Specific Settlement Interval-IFM~~ LMP ~~at that PNode~~.

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11.4 Black Start Settlements

Payments for Black Start capability shall consist of any payments under any Black Start Agreement. If the Energy price and Start-Up Costs are not specified in the Black Start Agreement, the Black Start Energy will be paid as an Exceptional Dispatch in accordance with Section 11.5.6.1 and ~~the commitment costs for~~ the resource will be ~~entitled-eligible for~~ Bid Cost Recovery under Section 11.8. Black Start Energy resulting from a performance test shall also be paid as an Exceptional Dispatch in accordance with Section 11.5.6.1. RMR Units providing Black Start are compensated in accordance with the RMR Contract rather than this Section 11.4.

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11.4.2 Black Start Capability

The CAISO shall allocate payments for Black Start capability under a Black Start Agreement as Reliability Services Costs to the Participating Transmission Owner in whose ~~Service-TAC~~ Area where the Black Start Unit is located.

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11.5 Real-Time Market Settlements

The CAISO shall calculate and account for ~~Imbalance E~~energy for each Dispatch Interval and settle ~~Imbalance E~~energy in the Real-Time Market for each Settlement Interval for each resource within the CAISO Balancing Authority Area and all System Resources dispatched in Real-Time. There are ~~four (4)~~ two categories of ~~Imbalance E~~energy: FMM Instructed Imbalance Energy, ~~and~~ RTD ~~Instructed~~ Imbalance Energy, ~~Uninstructed Imbalance Energy, and Unaccounted For Energy.~~ ~~RTD Imbalance Energy consists of RTD IIE and UFE.~~ FMM Instructed Imbalance Energy includes all Energy associated with the FMM Schedule. FMM Instructed Imbalance Energy is settled pursuant to Section 11.5.1.1, including any Energy related with HASP Intertie Block Schedules cleared through the FMM. RTD Instructed Imbalance Energy is settled pursuant to Section 11.5.1.2, ~~and Uninstructed Imbalance Energy~~ is settled pursuant to Section 11.5.2, ~~and Unaccounted For Energy is settled pursuant to Section 11.5.3.~~ ~~In addition, the CAISO shall settle UFE as part of the Real-Time Market Settlements.~~ To the extent that the sum of the Settlements Amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, ~~and Uninstructed Imbalance Energy, and Unaccounted For Energy~~ does not equal zero, the CAISO will assess charges or make payments for the resulting differences to all Scheduling Coordinators based on a pro rata share of their Measured Demand for the relevant Settlement Interval, as further described in Section 11.5.4. FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy due to Exceptional Dispatches, as well as the allocation of related costs, including Excess Costs Payments, are ~~is~~ settled as described in Section 11.5.6. The CAISO shall reverse RTM Congestion Charges for valid

and balanced ETC and TOR Self-Schedules as described in Section 11.5.7. The CAISO will settle Energy for emergency assistance as described in Section 11.5.8.

11.5.1 Imbalance Energy Settlements

11.5.1.1 FMM Instructed Imbalance Energy

For each Settlement Interval, FMM Instructed Imbalance Energy consists of the following types of Energy: (1) FMM Optimal Energy; (2) FMM Minimum Load Energy; (3) FMM Exceptional Dispatch Energy; (4) FMM Derate Energy; and (5) FMM Pumping Energy. Payments and charges for FMM Instructed Imbalance Energy attributable to each resource in each Settlement Interval shall be settled by debiting or crediting, as appropriate, the specific Scheduling Coordinator's FMM IIE Settlement Amount. The FMM IIE Settlement Amounts for FMM Optimal Energy, FMM Minimum Load Energy, FMM Derate Energy, and FMM Pumping Energy shall be calculated as the product of the sum of all of these types of Energy and the FMM LMP. For MSS Operators that have elected net Settlement, the FMM IIE Settlement Amounts for Energy dispatched through the FMM optimization shall be calculated as the product of the FMM MSS Price and the sum of the following types of Energy: FMM Minimum Load Energy from System Units dispatched in FMM, FMM Derate Energy, and FMM Pumping Energy. For MSS Operators that have elected gross Settlement, regardless of whether that entity has elected to follow its Load or to participate in RUC, the FMM Instructed Imbalance Energy for such entities is settled similarly to non-MSS entities as provided in this Section 11.5.1.1. The remaining FMM IIE Settlement Amounts for Exceptional Dispatches are settled pursuant to Section 11.5.6.

11.5.1.2 RTD Instructed Imbalance Energy Settlements

For each Settlement Interval, RTD Instructed Imbalance Energy consists of the following types of Energy: (1) RTD Optimal Energy; (2) Residual Imbalance Energy; (3) RTD Minimum Load Energy; (4) RTD Exceptional Dispatch Energy; (5) Regulation Energy; (6) Standard Ramping Energy; (7) Ramping Energy Deviation; (8) RTD Derate Energy; (9) MSS Load Following Energy; (10) RTD Pumping Energy; and (11) Operational Adjustments. Payments and charges for RTD Instructed Imbalance Energy attributable to each resource in each Settlement Interval shall be settled by debiting or crediting, as appropriate, the specific Scheduling Coordinator's RTD IIE Settlement Amount. The RTD IIE Settlement Amounts for the Standard Ramping Energy shall be zero. The RTD IIE Settlement Amounts for RTD Optimal Energy,

RTD Minimum Load Energy, Regulation Energy, Ramping Energy Deviation, RTD Derate Energy, and RTD Pumping Energy shall be calculated as the product of the sum of all of these types of Energy and the RTD LMP. For MSS Operators that have elected net Settlement, the RTD IIE Settlement Amounts for Energy dispatched through the RTD optimization shall be calculated as the product of the RTD MSS Price and the sum of the following types of Energy: RTD Minimum Load Energy from System Units dispatched in Real-Time, Regulation Energy, Ramping Energy Deviation, RTD Derate Energy, MSS Load Following Energy, and RTD Pumping Energy. For MSS Operators that have elected gross Settlement, regardless of whether that entity has elected to follow its Load or to participate in RUC, the RTD Instructed Imbalance Energy for such entities is settled similarly to non-MSS entities as provided in this Section 11.5.1.2. The remaining RTD IIE Settlement Amounts are determined as follows: (1) RTD IIE Settlement Amounts for Residual Imbalance Energy are determined pursuant to Section 11.5.5.; and (2) RTD IIE Settlement Amounts for Exceptional Dispatches are settled pursuant to Section 11.5.6.

11.5.2 Uninstructed Imbalance Energy

Scheduling Coordinators shall be paid or charged a UIE Settlement Amount for each LAP, PNode or Scheduling Point for which the CAISO calculates an Uninstructed Imbalance Energy quantity for each Settlement Interval. Uninstructed Imbalance Energy quantities are calculated for each resource that has a Day-Ahead Schedule, Dispatch Instruction, Real-Time Interchange Export Schedule or Metered Quantity. For MSS Operators electing gross Settlement, regardless of whether that entity has elected to follow its Load or to participate in RUC, the Uninstructed Imbalance Energy for such entities is settled similarly to how Uninstructed Imbalance Energy for non-MSS entities is settled as provided in this Section 11.5.2. The CAISO shall account for Uninstructed Imbalance Energy every five minutes based on the resource's Dispatch Instruction. For all resources, including Generating Units, System Units of MSS Operators that have elected gross Settlement, Physical Scheduling Plants, System Resources, Distributed Energy Resource Aggregations and all Participating Load, Reliability Demand Response Resources, and Proxy Demand Resources, the UIE Settlement Amount is calculated for each Settlement Interval as the product of its Uninstructed Imbalance Energy MWh quantity and the applicable RTD LMP. The UIE Settlement Amount for non-Participating Load and MSS Demand under gross Settlement is settled as described in Section 11.5.2.2. For MSS Operators that have elected net Settlement, the UIE

Settlement Amount is calculated for each Settlement Interval as the product of its Uninstructed Imbalance Energy quantity and ~~its Real-Time Settlement Interval-RTD~~ MSS Price.

11.5.2.1 Resource Specific Tier 1 UIE Settlement Interval Price

The Resource-Specific Tier 1 UIE Settlement Interval Price is calculated as the resource's total FMM IIE Settlement Amount and RTD IIE Settlement Amount, calculated pursuant to Sections 11.5.1.1 and 11.5.1.2 for that Settlement Interval divided by its total FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy quantity (MWh) calculated pursuant to Sections 11.5.1.1 and 11.5.1.2.

11.5.2.2 Hourly Real-Time Demand Settlement

The Default LAP Hourly Real-Time Price will apply to CAISO Demand and MSS Demand under net Settlement of ~~Imbalance E~~energy, except for CAISO Demand not settled at the Default LAP as provided in Section 30.5.3.2, and per the methodology as may be further defined in the Business Practice Manuals. For each Settlement Interval, the differences between the Day-Ahead Scheduled CAISO Demand and Metered Demand (MWh) is settled at the Default LAP Hourly Real-Time Price or the Custom LAP Hourly Real-Time Price, as appropriate. For each Default LAP, the CAISO calculates the applicable Default LAP Hourly Real-Time Price as the weighted average LMP of the four Default LAP FMM LMPs and the twelve (12) five-minute Default LAP RTD LMPs. The CAISO calculates the weighted average LMP for each Default LAP as the summation of the weighted average SMEC, the weighted average MCC, and the weighted average MCL for that Default LAP. The CAISO calculates the weighted average SMEC, MCC, and MCL for each applicable Trading Hour based on the four applicable Default LAP FMM SMECs, MCCs, and MCLs, respectively, and the twelve (12) applicable Default LAP RTD SMECs, MCCs, and MCLs, respectively. For each Custom LAP, the CAISO calculates the applicable Custom LAP Hourly Real-Time Price as the weighted average LMP of the four Custom LAP FMM LMPs and the twelve (12) five-minute Custom LAP RTD LMPs. The CAISO calculates the weighted average LMP for each Custom LAP as the summation of the weighted average SMEC, the weighted average MCC, and the weighted average MCL for that Custom LAP. The CAISO calculates the weighted average SMEC, MCC, and MCL for each applicable Trading Hour based on the four applicable Custom LAP FMM SMECs, MCCs, and

MCLs, respectively, and the twelve (12) applicable Custom LAP RTD SMECs, MCCs, and MCLs, respectively. In calculating the weighted average SMEC, MCC, and MCL for each hour for either the Default LAPs or Custom LAPs, the CAISO determines the weights based on the difference between Day-Ahead Schedules at the applicable LAP and the CAISO Forecast of CAISO Demand used in the FMM multiplied by the relevant FMM LMP at the applicable LAP plus the difference between the CAISO Forecast of CAISO Demand used in the FMM and the CAISO Forecast of CAISO Demand used in the RTD multiplied by the relevant RTD LMP at the applicable LAP divided by the sum of the difference between Day-Ahead Schedules at the applicable LAP and the CAISO Forecast of CAISO Demand used in the FMM plus the difference between the CAISO Forecast Of CAISO Demand used in the FMM and the CAISO Forecast Of CAISO Demand used in the RTD. Furthermore, the Default LAP Hourly Real-Time Prices and the Custom LAP Hourly Real-Time Prices will be bounded by the maximum ~~positive-LMP~~ and the lowest ~~negative-LMP~~ and its components, for the applicable Trading Hour from those relevant intervals at the relevant LAP. If the calculated price exceeds the upper boundary or is below the lower boundary, then the Default LAP Hourly Real-Time Price or the Custom LAP Hourly Real-Time Price, as appropriate, instead will be calculated based on a weighted average price with the weightings based on gross deviations (absolute value of each deviation).

The Default LAP Hourly Real-Time Prices and the Custom LAP Hourly Real-Time Prices are further determined by the requirements in Section 27.2.2.2.1 and 27.2.2.2.2, respectively.

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11.5.2.4 Adjustment to Metered Load to Settle Uninstructed Imbalance Energy

For the purpose of settling Uninstructed Imbalance Energy of a Scheduling Coordinator representing a Load Serving Entity, the amount of Demand Response Energy Measurement delivered by a Proxy Demand Resource or Reliability Demand Response Resource that is also served by that Load Serving Entity and that is paid a Market Clearing Price below the threshold Market Clearing Price set forth in Section 30.6.3.1 will be added to the metered load quantity of the Load Serving Entity's Scheduling Coordinator's Load Resource ID with which the Proxy Demand Resource or Reliability Demand

Response Resource is associated.

11.5.3 Unaccounted for Energy (UFE)

For each Settlement Interval, the CAISO will calculate Unaccounted For Energy for each utility Service Area for which the IOU or Local Publicly Owned Electric Utility has requested separate Unaccounted For Energy calculation and has met the requirements applicable to a CAISO Metered Entity. The Unaccounted For Energy will be settled ~~as Imbalance Energy~~ at the ~~Default applicable~~ LAP Hourly Real-Time Price calculated for each utility Service Area for which Unaccounted For Energy is calculated separately. Unaccounted For Energy will be allocated to each Scheduling Coordinator based on the ratio of its metered CAISO Demand within the relevant utility Service Area for which Unaccounted For Energy is calculated separately to total metered CAISO Demand within that utility Service Area. Unaccounted For Energy charges will not be estimated or included on Initial Settlement Statement T+3B.

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11.5.4.2 Allocations of Non-Zero Amounts of the Sum of FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed Imbalance Energy, Unaccounted For Energy, the Real-Time Ancillary Services Congestion Revenues and Real-Time Virtual Awards Settlements

The CAISO will first compute (1) the Real-Time Congestion Offset and allocate it to all Scheduling Coordinators, based on Measured Demand, excluding Demand associated with ETC or TOR Self-Schedules for which a RTM Congestion Credit was provided as specified in Section 11.5.7, and excluding Demand associated with ETC, Converted Right, or TOR Self-Schedules for which an IFM Congestion Credit was provided as specified in Section 11.2.1.5; and (2) the Real-Time Marginal Cost of Losses Offset and allocate it to all Scheduling Coordinators based on Measured Demand, excluding Demand associated with TOR Self-Schedules for which a RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.5.7.2, and excluding Demand associated with TOR Self-Schedules for which an IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.2.1.7. For Scheduling Coordinators for MSS operators that have

elected to Load follow or net settlement, or both, the Real-Time Marginal Cost of Losses Offset will be allocated based on their MSS Aggregation Net Measured Demand excluding Demand associated with TOR Self-Schedules for which a RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.5.7.2, and excluding Demand associated with TOR Self-Schedules for which an IFM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules was provided as specified in Section 11.2.1.7. For Scheduling Coordinators for MSS Operators regardless of whether the MSS Operator has elected gross or net Settlement, the CAISO will allocate the Real-Time Congestion Offset based on the MSS Aggregation Net Non-ETC/TOR Measured Demand. To the extent that the sum of the Settlement amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed Imbalance Energy, Unaccounted For Energy, the Real-Time Ancillary Services Congestion revenues and Virtual Awards settlements in the Real-Time Market in accordance with Section 11.3, less Real-Time Congestion Offset, and less the Real-Time Marginal Cost of Losses Offset, does not equal zero, the CAISO will assess charges or make payments for the resulting differences to all Scheduling Coordinators, including Scheduling Coordinators for MSS Operators that are not Load following MSSs and have elected gross Settlement, based on a pro rata share of their Measured Demand for the relevant Settlement Interval. For Scheduling Coordinators for MSS Operators that have elected net Settlement, the CAISO will assess charges or make payments for the resulting non-zero differences of the sum of the Settlement amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Energy, the Real-Time Ancillary Services Congestion Revenues and Virtual Awards settlements in the Real-Time Market in accordance with Section 11.3, less Real-Time Congestion Offset and less the Real-Time Marginal Cost of Losses Offset, based on their MSS Aggregation Net Measured Demand. For Scheduling Coordinators for MSS Operators that have elected Load following, the CAISO will not assess any charges or make payments for the resulting non-zero differences of the sum of the Settlement amounts for FMM Instructed Imbalance Energy, RTD Instructed Imbalance Energy, RTD Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted For Energy, the Real-Time Ancillary Services Congestion Revenues and Virtual Awards settlements in the Real-Time Market in accordance with Section 11.3, less Real-Time Congestion Offset and less the Real-Time Marginal Cost of Losses Offset.

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11.5.6 Settlement Amounts for RTD Instructed Imbalance Energy from Exceptional Dispatch

For each Settlement Interval, the RTD IIE Settlement Amount from each type of Exceptional Dispatch described in Section 34.11 is calculated as the sum of the products of the relevant FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy quantity for the Settlement Interval and the relevant FMM or RTD LMP Settlement price for each type of Exceptional Dispatch as further described in this Section 11.5.6. For MSS Operators the Settlement for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy from Exceptional Dispatches is conducted in the same manner, regardless of any MSS elections (net/gross Settlement, Load following or opt-in/opt-out of RUC). Except for the Settlement price, Exceptional Dispatches to perform Ancillary Services testing, to perform PMax testing, and to perform pre-commercial operation testing for Generating Units are otherwise settled in the same manner as provided in Section 11.5.6.1. Notwithstanding any other provisions of this Section 11.5.6, the Exceptional Dispatch Settlement price that is applicable in circumstances in which the CAISO applies Mitigation Measures to Exceptional Dispatch of resources pursuant to Section 39.10 shall be calculated as set forth in Section 11.5.6.7.

11.5.6.1 Settlement for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy from Exceptional Dispatches used for System Emergency Conditions, for a Market Disruption, to Mitigate Overgeneration Conditions or to Prevent or Relieve Imminent System Emergencies

The Exceptional Dispatch Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered as a result of an Exceptional Dispatch for System Emergency conditions, for a Market Disruption, to mitigate Overgeneration conditions, or to prevent or relieve an imminent System Emergency, including forced Start-Ups and Shut-Downs, is the higher of the (a) applicable FMM or RTD LMP; (b) the Energy Bid price; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price; or (d) the negotiated price as applicable to System Resources. Costs for

incremental Energy for this type of Exceptional Dispatch are settled in two payments: (1) incremental Energy is first settled at the applicable FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; and (2) the incremental Energy Bid Cost in excess of the applicable FMM or RTD LMP at the relevant Location is settled pursuant to Section 11.5.6.1.1. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is delivered as a result of an Exceptional Dispatch Instruction for a Market Disruption, or to prevent or relieve a System Emergency, is the minimum of (a) the FMM or RTD LMP;³⁷ (b) the Energy Bid price subject to Section 39.6.1.4;³⁷ (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price;³⁷ or (d) the negotiated price as applicable to System Resources. All Energy costs for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with this type of Exceptional Dispatch are included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2.

11.5.6.1.1 Settlement of Excess Cost Payments for Exceptional Dispatches used for System Emergency Conditions, for a Market Disruption, and to Avoid an Imminent System Emergency

The Excess Cost Payment for incremental Exceptional Dispatches used for emergency conditions, for a Market Disruption, or to avoid an imminent System Emergency is calculated for each resource for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.1 for the applicable Exceptional Dispatch at the FMM or RTD LMP and delivered Exceptional Dispatch quantity at one of the following three costs: (1) the resource's Energy Bid Cost;³⁷ (2) the Default Energy Bid cost;³⁷ or (3) the Energy cost at the negotiated price, as applicable for System Resources, for the relevant Exceptional Dispatch.

11.5.6.2 Settlement of Instructed Imbalance Energy from Exceptional Dispatches Caused by Modeling Limitations

The Exceptional Dispatch Settlement price for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion as a result of a transmission-related modeling limitation in the FNM as described in

Section 34.11.3 is the maximum of (a) the FMM or RTD LMP;³⁷ (b) the Energy Bid price;³⁷ (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price;³⁷ or (d) the negotiated price as applicable to System Resources. Costs for incremental Energy for this type of Exceptional Dispatch are settled in two payments: (1) incremental Energy is first settled at the FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; and (2) the incremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the minimum of (a) the FMM or RTD LMP;³⁷ (b) the Energy Bid price;³⁷ (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price;³⁷ or (d) the negotiated price as applicable to System Resources. Costs for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with this type of Exceptional Dispatch are settled in two payments: (1) decremental Energy is first settled at the FMM or RTD LMP and included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2; and (2) the decremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3.

11.5.6.2.1 [Not Used]

11.5.6.2.2 [Not Used]

11.5.6.2.3 Settlement of Excess Cost Payments for Exceptional Dispatches used for Transmission-Related Modeling Limitations

The Excess Cost Payment for Exceptional Dispatches used for transmission-related modeling limitations as described in Section 34.11.3 is calculated for each resource for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.2.1 ~~or 11.5.6.2.2~~ for the applicable delivered Exceptional Dispatch quantity at the FMM or RTD LMP and one of the following three costs: (1) the resource's Energy Bid Cost;³⁷ (2) the Default Energy Bid cost;³⁷ or (3) the Energy cost at the negotiated price, as applicable for System Resources, for the relevant Exceptional Dispatch.

11.5.6.2.4 Exceptional Dispatches for Non-Transmission-Related Modeling Limitations

The Exceptional Dispatch Settlement price for incremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion that is not a result of a transmission-related modeling limitation in the FNM as described in Section 34.11.3 is the maximum of the (a) FMM or RTD LMP₁₇; (b) Energy Bid price₁₇; (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price₁₇; or (d) the negotiated price as applicable to System Resources. All costs for incremental Energy for this type of Exceptional Dispatch will be included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2. The Exceptional Dispatch Settlement price for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy for this type of Exceptional Dispatch is the minimum of the (a) FMM or RTD LMP₁₇; (b) Energy Bid Price₁₇; (c) Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price₁₇; or (d) negotiated price as applicable to System Resources. All costs for decremental FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with this type of Exceptional Dispatch are included in the total FMM IIE Settlement Amount or RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2.

11.5.6.2.5 Allocation of Exceptional Dispatch Excess Cost Payments

11.5.6.2.5.1 Allocation of Exceptional Dispatch Excess Cost Payments to PTOs

The total Excess Cost Payments calculated pursuant to Section 11.5.6.2.3 for the FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy from Exceptional Dispatches instructed as a result of a transmission-related modeling limitation in the FNM as described in Section 34.~~119~~.3 in that Settlement Interval shall be charged to the Participating Transmission Owner in whose PTO Service Territory the transmission-related modeling limitation as described in Section 34.~~119~~.3 is located. If the modeling limitation affects more than one Participating TO, the Excess Cost Payments shall be allocated in proportion to the Transmission Revenue Requirements of the affected Participating TOs with PTO Service Territories. Costs allocated to Participating TOs under this section shall constitute Reliability

Services Costs.

11.5.6.2.5.2 Allocation of Exceptional Dispatch Costs to Scheduling Coordinators

Excess Cost Payments for the Exceptional Dispatches used for emergency conditions and to avoid Market Disruption and System Emergencies as determined pursuant to Section 11.5.6.1.1 shall be charged to Scheduling Coordinators as follows in a two-step process. First, each Scheduling Coordinator's charge shall be the lesser of:

- (i) the pro rata share of total Excess Cost Payment based upon the ratio of each Scheduling Coordinator's Net Negative Uninstructed Deviations to the total system Net Negative Uninstructed Deviations; or
- (ii) the amount obtained by multiplying the Scheduling Coordinator's Net Negative Uninstructed Deviation for each Settlement Interval and a weighted average price. The weighted average price is equal to the total Excess Cost Payments to be allocated divided by the MWh of FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy associated with the Excess Cost Payment.

Second, any remaining unallocated costs shall be allocated to all Scheduling Coordinators pro-rata based on their Measured Demand. For a Scheduling Coordinator of an MSS Operator that has elected to follow Load, allocation of this second category of Excess Cost Payments will be based on net metered MSS Demand. In addition, to the extent the Exceptional Dispatches are made to resolve congestion internal to the MSS, the Scheduling Coordinator for such an MSS will also be subject to these two categories of Excess Cost Payments.

A Scheduling Coordinator shall be exempt from the first category of the Excess Cost Payment allocation for a Settlement Interval if the Scheduling Coordinator has sufficient incremental Energy Bids from physically available resources in the Real-Time Market for Energy to cover its Net Negative Uninstructed Deviation in the given Settlement Interval and the prices of such Energy Bids do not exceed the applicable maximum Bid level as set forth in Section 39.

11.5.6.3 Settlement for Instructed Imbalance Energy from Exceptional Dispatches for RMR Units

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11.5.6.3.2 Allocation of Costs from Exceptional Dispatch Calls to Condition 2 RMR Units

- (a) All costs associated with Energy provided by a Condition 2 RMR Unit operating other than according to a RMR Dispatch shall be allocated ~~like other Instructed Imbalance Energy~~ in accordance with Section 11.5.4.2.
- (b) Start-Up Costs for Condition 2 RMR Units providing service outside the RMR Contract shall be treated similar to costs under Section 11.5.6.2.5.2.

11.5.6.4 Settlement of Instructed Imbalance Energy from Exceptional Dispatches for Testing

The Exceptional Dispatch Settlement price for incremental FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy that is consumed or delivered as a result of an Exceptional Dispatch for purposes of Ancillary Services testing, periodic testing, including PMax testing, or pre-commercial operation testing for Generating Units is the maximum of the FMM or RTD LMP or the Default Energy Bid price. All Energy costs for these types of Exceptional Dispatch will be included in the FMM IIE Settlement Amount and RTD Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2.

11.5.6.5 Settlement of RTD-Instructed Imbalance Energy from Black Start

Unless otherwise specified in a Black Start Agreement, all FMM IIE Settlement Amounts or RTD IIE Settlement Amounts associated with Black Start receive the Exceptional Dispatch Settlement price as provided in Section 11.5.6.1, but the costs are allocated pursuant to Section 11.4.

11.5.6.6 Settlement of Instructed Imbalance Energy from Exceptional Dispatches for Real-Time ETC and TOR Self-Schedules

The Exceptional Dispatch Settlement price for FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy from Real-Time ETC and TOR Self-Schedules shall be the FMM or RTD LMP. The FMM IIE Settlement Amount and RTD IIE Settlement Amount for this type of Exceptional Dispatch shall be calculated as the product of the sum of all of these types of Energy and the FMM or RTD LMP. All Energy costs for these types of Exceptional Dispatches will be included in the FMM IIE Settlement Amount and RTD IIE Settlement Amount described in Sections 11.5.1.1 and 11.5.1.2.

11.5.6.7 Settlement of FMM or RTD Exceptional Dispatch Energy

11.5.6.7.1 Settlement of FMM or RTD Exceptional Dispatch Energy from Exceptional Dispatches of Resources Eligible for Supplemental Revenues

Except as specified in Section 11.5.6.7.3, the Exceptional Dispatch Settlement price for the FMM Exceptional Dispatch or RTD Exceptional Dispatch Energy delivered by a resource that satisfies all of the criteria set forth in Section 39.10.1 shall be the higher of (a) the resource's Energy Bid price or (b) the FMM or RTD LMP.

11.5.6.7.2 Settlement of FMM or RTD Exceptional Dispatch Energy from Exceptional Dispatches of Resources Not Eligible for Supplemental Revenues

Except as specified in Section 11.5.6.7.3, the Exceptional Dispatch Settlement price for the FMM Exceptional Dispatch or RTD Exceptional Dispatch Energy delivered by a resource that satisfies all of the criteria set forth in Section 39.10.2 shall be the higher of (a) the Default Energy Bid price or (b) the Resource-Specific Settlement Interval LMP.

11.5.6.7.3 Exception to the Other Provisions of Section 11.5.6.7

~~Notwithstanding any other provisions of this Section 11.5.6.7, i~~f the Energy Bid price for a resource that satisfies all of the criteria set forth in Sections 39.10.1 or 39.10.2 is lower than the Default Energy Bid price for the resource, and the FMM or RTD LMP is lower than both the Energy Bid price for the resource and the Default Energy Bid price for the resource, the Exceptional Dispatch Settlement price for the FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy delivered by the resource shall be the Energy Bid price for the resource.

11.5.7 Congestion Credit and Marginal Cost of Losses Credit

11.5.7.1 RTM Congestion Credit for ETCs and TORs

The CAISO shall not apply charges or payments to Scheduling Coordinators related to the MCC associated with all Points of Receipt and Points of Delivery pairs associated with valid and balanced ETC Self-Schedules or TOR Self-Schedules after the Day-Ahead Market. The balanced portion for each ETC or TOR contract for each Settlement Interval will be based on the difference between: (1) the minimum of (a) the total Demand, (b) the total ETC or TOR Supply Self-Schedule submitted in RTM, including

changes after twenty (20) minutes before the applicable Trading Hour if such change is permitted by the Existing Contract, or (c) the Existing Contract maximum capacity as specified in the TRTC Instructions; and (2) the valid and balanced portion of the Day-Ahead Schedule. In determining the balanced portions, the CAISO evaluates the amounts based on the following variables: (a) for exports and imports, the CAISO shall use the schedule quantity specified in the Interchange schedule used for check out between CAISO and other Balancing Authority Areas; (b) for CAISO Demand, the CAISO shall use the metered CAISO Demand associated with the applicable ETC or TOR; and (c) for all Generation the CAISO shall use the quantity specified in the Dispatch Instructions. For each Scheduling Coordinator, the CAISO shall determine for each Settlement Interval the applicable RTM Congestion Credit for FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy, which can be positive or negative, as the sum of the product of the relevant MWh quantity and the applicable weighted average MCC at each Point of Receipt and Point of Delivery associated with the valid and balanced portions of that Scheduling Coordinator's ETC or TOR Self-Schedules. The weights in the two markets will be based on the absolute values of the (a) deviation of the FMM Schedule or the CAISO Forecast Of CAISO Demand used in the FMM from Day-Ahead Schedules and (b) deviation of the RTD schedule or the CAISO Forecast Of CAISO Demand used in the RTD from Day-Ahead Schedules.

11.5.7.2 RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules

For all Points of Receipt and Points of Delivery pairs associated with a valid and balanced TOR Self-Schedule submitted to the RTM pursuant to an existing agreement between the TOR holder and either the CAISO or a Participating TO as specified in Section 17.3.3, the CAISO shall not impose any charge or make any payment to the Scheduling Coordinator related to the MCL associated with such TOR Self-Schedules and will instead impose any applicable charges for losses as specified in the existing agreement between the TOR holder and either the CAISO or a Participating TO applicable to the relevant TOR. In any case in which the TOR holder has an existing agreement regarding its TORs with either the CAISO or a Participating TO, the provisions of the agreement shall prevail over any conflicting provisions of this Section 11.5.7.2. Where the provisions of this Section 11.5.7.2 do not conflict with the provisions of the agreement, the provisions of this Section 11.5.7.2 shall apply to the subject TORs. The balanced portion of the TOR Self-Schedule after the Day-Ahead Market is the same balanced quantity mentioned

in this Section 11.5.7.2 for the TOR Self-Schedule. For each Scheduling Coordinator, the CAISO shall determine for each Settlement Interval the applicable RTM Marginal Cost of Losses Credit for Eligible TOR Self-Schedules for FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy, which can be positive or negative, as the sum of the product of the relevant MWh quantity and the weighted average MCL at each of the eligible Points of Receipt and Points of Delivery associated with the valid and balanced portions of that Scheduling Coordinator's TOR Self-Schedules. The weights in the two markets will be based on the absolute values of the: (a) deviation of the FMM Schedule or the CAISO Forecast Of CAISO Demand used in the FMM from Day-Ahead Schedules; and (b) deviation of the RTD schedule or the CAISO Forecast Of CAISO Demand used in the RTD from Day-Ahead Schedules. For losses that the CAISO shall charge pursuant to Section 17.3.3, the specific loss charge amount shall be the product of: (a) the specific loss percentage as may be specified in an applicable agreement between the TOR holder and the CAISO or an existing agreement between the TOR holder and a Participating TO; (b) the weighted average SMEC price from the FMM and RTD markets with weights based on the absolute values of (1) deviation of FMM schedule or CAISO Forecast Of CAISO Demand used in the FMM from Day-Ahead Schedules and (2) deviation of RTD schedule or CAISO Forecast Of CAISO Demand used in the RTD from Day-Ahead Schedules; and (c) the balanced contract quantity mentioned in Section 11.5.7.1.

11.5.8 Settlement for Emergency Assistance

This Section 11.5.8 shall apply to Settlement for emergency assistance provided to or by the CAISO. In any case in which the CAISO has entered into an agreement regarding emergency assistance, which agreement has been accepted by FERC, the provisions of the agreement shall prevail over any conflicting provisions of this Section 11.5.8. Where the provisions of this Section 11.5.8 do not conflict with the provisions of the FERC-accepted agreement, the provisions of this Section 11.5.8 shall apply to the subject emergency assistance.

11.5.8.1 Settlement for Energy Purchased by the CAISO for System Emergency Conditions, to Avoid Market Disruption, or to Prevent or Relieve Imminent System Emergencies, Other than Exceptional Dispatch Energy

The Settlement price for Energy that is delivered to the CAISO from a utility in another Balancing

Authority Area as a result of a CAISO request pursuant to Section 42.1.5 or any other provision for assistance in System Emergency conditions, to avoid a Market Disruption, or to prevent or relieve an imminent System Emergency, other than Energy from an Exceptional Dispatch, shall be either (i) a negotiated price agreed upon by the CAISO and the seller or (ii) a price established by the seller for such emergency assistance in advance, as may be applicable. In the event no Settlement price is established prior to the delivery of the emergency Energy, the default Settlement price shall be the simple average of the relevant FMM and RTD LMPs at the applicable Scheduling Point, plus all other charges applicable to imports to the CAISO Balancing Authority Area, as specified in the CAISO Tariff. If the default Settlement price is determined by the seller not to compensate the seller for the value of the emergency Energy delivered to the CAISO, then the seller shall have the opportunity to provide the CAISO with cost support information demonstrating that a higher price is justified. The cost support information must be provided in writing to the CAISO within thirty (30) days following the date of the provision of emergency assistance. The CAISO shall have the discretion to pay that higher price based on the seller's justification of this higher price. The CAISO will provide notice of its determination whether to pay such a higher price within thirty (30) days after receipt of the cost support information. Any dispute regarding the CAISO's determination whether to pay a higher price for emergency assistance based on cost support information shall be subject to the CAISO ADR Procedures. Payment by the CAISO for such emergency assistance will be made in accordance with the Settlement process, billing cycle, and payment timeline set forth in the CAISO Tariff. The costs for such emergency assistance, including the payment of a price based on cost support information, will be settled in two payments: (1) the costs will first be settled at the simple average of the relevant Dispatch Interval LMPs and included in the total FMM IIE Settlement Amount and RTD IIE Settlement Amount as described in Sections 11.5.1.1 and 11.5.1.2-4; and (2) costs in excess of the simple average of the relevant Dispatch Interval LMPs plus other applicable charges will be settled in accordance with Section 11.5.8.1.1. The allocation of the FMM IIE Settlement Amount and RTD IIE Settlement ~~a~~Amounts settled in accordance with Sections 11.5.1.1 and 11.5.1.2 will be settled according to Section 11.5.4.2.

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11.5.8.2 Settlement for Energy Supplied by the CAISO in Response to a Request for Emergency Assistance

The Settlement price for emergency Energy that is delivered by the CAISO to a utility in another Balancing Authority Area in response to a request for emergency assistance shall be the simple average of the relevant Dispatch Interval LMPs at the applicable Scheduling Point, which shall serve as the effective market price for that Energy, plus all other charges applicable to exports from the CAISO Balancing Authority Area, as specified in the CAISO Tariff and will be included in the total FMM IIE Settlement Amount and RTD IIE Settlement Amount as described in Sections 11.5.1.1 and 11.5.1.2 and will be allocated according to Section 11.5.4.2. Such price may be estimated prior to delivery and finalized in the Settlement process. The CAISO will establish a Scheduling Coordinator account, if necessary, for the purchaser for the sole purpose of facilitating the Settlement of such emergency assistance. Payment to the CAISO for such emergency assistance shall be made in accordance with the Settlement process, billing cycle, and payment timeline set forth in the CAISO Tariff.

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11.7.1 MSS Load Following Deviation Penalty

For MSS Operators that have elected to follow their Load as described in Section 4.9.13.2, the Scheduling Coordinator for a Load following MSS Operator shall pay amounts for: (i) excess MSS Generation supplied to the CAISO Markets and (ii) excess MSS Load relying on CAISO Markets and not served by MSS generating resources. The revenue received from these payments will be used as an offset to the CAISO's Grid Management Charge. The payments due from a Scheduling Coordinator will be calculated as follows:

11.7.1.1 If the metered Generation resources and imports into the MSS exceed: (i) the metered Demand and exports from the MSS; and (ii) Energy expected to be delivered by the Scheduling Coordinator for the MSS in response to the CAISO's Dispatch Instructions and/or Regulation Set Point signals issued by the CAISO's AGC by more than the MSS Deviation Band, then the payment for excess Energy outside of

the MSS Deviation Band shall be rescinded and Scheduling Coordinator for the MSS Operator will pay the CAISO an amount equal to one hundred percent (100%) of the product of the highest LMP paid to the MSS Operator for its Generation in the Settlement Interval and the amount of the [FMM Instructed Imbalance Energy and RTD Instructed](#) Imbalance Energy that is supplied in excess of the MSS Deviation Band.

11.7.1.2 If metered Generation resources and imports into the MSS are insufficient to meet: (i) the metered Demand and exports from the MSS; and (ii) Energy expected to be delivered by the Scheduling Coordinator for the MSS in response to the CAISO's Dispatch Instructions and/or Regulation Set Point signals issued by the CAISO's AGC by more than the MSS Deviation Band, then the Scheduling Coordinator for the MSS Operator shall pay the CAISO an amount equal to the product of the Default LAP price for the Settlement Interval and two hundred percent (200%) of the shortfall that is outside of the MSS Deviation Band. The payment in the previous sentence is in addition to the charges for the [FMM Instructed Imbalance Energy and RTD Instructed](#) Imbalance Energy that serves the excess MSS Demand that may be applicable under Section 11.5.

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11.8.4 RTM Bid Cost Recovery Amount

For purposes of determining the RTM Unrecovered Bid Cost Uplift Payments as determined in Section 11.8.5, and for the purposes of allocation of Net RTM Bid Cost Uplift as described in Section 11.8.6.6 the CAISO shall calculate the RTM Bid Cost Shortfall or the RTM Bid Cost Surplus as the algebraic difference between the RTM Bid Cost and the RTM Market Revenues for each Settlement Interval. The RTM Bid Costs shall be calculated pursuant to Section 11.8.4.1. The RTM Market Revenues shall be calculated pursuant to Section 11.8.4.2. The Energy subject to RTM Bid Cost Recovery is the [FMM Instructed Imbalance Energy or RTD](#) Instructed Imbalance Energy described in Section 11.5.1, excluding Standard Ramping Energy, Residual Imbalance Energy, [FMM Exceptional Dispatch Energy or RTD](#) Exceptional Dispatch Energy, [FMM Derate Energy or RTD](#) Derate Energy, Ramping Energy Deviation, Regulation Energy and MSS Load Following Energy regardless of whether the Energy is from the FMM or RTD, and

is subject to the application of the Real-Time Performance Metric as described in Section 11.8.4.4 and the Persistent Deviation Metric described in Section 11.17.

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11.8.4.1.1 RTM Start-Up Cost

For each Settlement Interval of the applicable Real-Time Market Commitment Period, the Real-Time Market Start-Up Cost shall consist of the Start-Up Cost of the Bid Cost Recovery Eligible Resource submitted to the CAISO for the Real-Time Market divided by the number of Settlement Intervals in the applicable Real-Time Market Commitment Period. For each Settlement Interval, only the Real-Time Market Start-Up Cost in a CAISO Real-Time Market Commitment Period is eligible for Bid Cost Recovery. The CAISO will determine the RTM Start-Up Cost for a Multi-Stage Generating Resource based on the MSG Configuration committed by the CAISO in RTM. The following rules shall be applied in sequence and shall qualify the Real-Time Market Start-Up Cost in a Real-Time Market Commitment Period:

- (a) The Real-Time Market Start-Up Cost is zero if there is a Real-Time Market Self-Commitment Period within the Real-Time Market Commitment Period.
- (b) The Real-Time Market Start-Up Cost is zero if the Bid Cost Recovery Eligible Resource has been manually pre-dispatched under an RMR Contract or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule or Real-Time Market anywhere within that Real-Time Market Commitment Period.
- (c) The Real-Time Market Start-Up Cost is zero if the Bid Cost Recovery Eligible Resource is started within the Real-Time Market Commitment Period pursuant to an Exceptional Dispatch issued in accordance with Section 34.119.2 to: (1) perform Ancillary Services testing; (2) perform pre-commercial operation testing for Generating Units; or (3) perform PMax testing.
- (d) The Real-Time Market Start-Up Cost is zero if there is no Real-Time Market Start-Up at the start of that Real-Time Market Commitment Period because the Real-Time Market Commitment Period is the continuation of an IFM or RUC Commitment Period from the

previous Trading Day.

- (e) If a Real-Time Market Start-Up is terminated in the Real-Time within the applicable Real-Time Market Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource is starting up, the Real-Time Market Start-Up Cost is prorated by the ratio of the Start-Up Time before termination over the Real-Time Market Start-Up Time.
- (f) The Real-Time Market Start-Up Cost shall be qualified if an actual Start-Up occurs within that Real-Time Market Commitment Period. An actual Start-Up is detected when the relevant metered Energy in the applicable Settlement Interval(s) indicates the unit is Off before the time the resource is instructed to be On as specified in its Start Up Instruction and is On in the Settlement Interval that falls within the CAISO Real-Time Market Commitment Period. The CAISO will determine whether the resource is On for this purpose based on whether its metered Energy is at or above the resource's Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3. The CAISO will determine that the Multi-Stage Generating Resource is On based on the MSG Configuration that the CAISO has committed in the Real-Time Market.
- (g) The Real-Time Market Start-Up Cost for a Real-Time Market Commitment Period shall be qualified if an actual Start-Up occurs earlier than the start of the Real-Time Market Start-Up, if the relevant Start-Up is still within the same Trading Day and the Bid Cost Recovery Eligible Resource actually stays on until the Real-Time Market Start-Up, otherwise the Start-Up Cost is zero for the Real-Time Market Commitment Period.
- (h) For Short-Start Units, the first Start-Up Costs within a CAISO IFM Commitment Period are qualified IFM Start-Up Costs as described above in Section 11.8.2.1.1(g~~h~~). For subsequent Start-Ups of Short-Start Units after the CAISO Shuts Down a resource and then the CAISO issues a Start-Up Instruction pursuant to a CAISO RTM Commitment within the CAISO IFM Commitment Period, the Start-Up Costs shall be qualified as Real-Time Start-Up costs, provided that the resource actually Shut-Down and Started-Up based on CAISO Shut-Down and Start-Up Instructions.

11.8.4.1.2 RTM Minimum Load Cost

The RTM Minimum Load Cost is the Minimum Load Cost of the Bid Cost Recovery Eligible Resource submitted to the CAISO for the Real-Time Market, as adjusted pursuant to Section 30.7.10.2, if applicable, divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RTM Minimum Load Cost in a CAISO RTM Commitment Period is eligible for Bid Cost Recovery. The RTM Minimum Load Cost for any Settlement Interval is zero if: (1) the Settlement Interval is included in a RTM Self-Commitment Period for the Bid Cost Recovery Eligible Resource; (2) the Bid Cost Recovery Eligible Resource has been manually dispatched under an RMR Contract or the resource has been flagged as an RMR Dispatch in the Day-Ahead Schedule or the Real-Time Market in that Settlement Interval; (3) for all resources that are not Multi-Stage Generating Resources, that Settlement Interval is included in an IFM or RUC Commitment Period; or (4) the Bid Cost Recovery Eligible Resource is committed pursuant to Section 34.119.2 for the purpose of performing Ancillary Services testing, pre-commercial operation testing for Generating Units, or PMax testing. A resource's RTM Minimum Load Costs for Bid Cost Recovery purposes are subject to the application of the Real-Time Performance Metric as specified in Section 11.8.4.4. For Multi-Stage Generating Resources, the commitment period is further determined based on application of Section 11.8.1.3. For all Bid Cost Recovery Eligible Resources that the CAISO Shuts Down, either through an Exceptional Dispatch or an Economic Dispatch through the Real-Time Market, from its Day-Ahead Schedule that was also from a CAISO commitment, the RTM Minimum Load Costs will include negative Minimum Load Costs for Energy between the Minimum Load as registered in the Master File, or if applicable, as modified pursuant to Section 9.3.3, and zero (0) MWhs.

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11.8.4.1.5 RTM Energy Bid Cost

For any Settlement Interval, the RTM Energy Bid Cost for the Bid Cost Recovery Eligible Resource except Participating Loads shall be computed as the sum of the products of each RTD Instructed

Imbalance Energy (~~HE~~)-portion, except Standard Ramping Energy, Residual Imbalance Energy, FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy, FMM Derate Energy or RTD Derate Energy, MSS Load Following Energy, Ramping Energy Deviation and Regulating Energy, with the relevant Energy Bid prices, the Default Energy Bid price, or the Locational Marginal Price, if any, as further described in Section 11.17, for each Dispatch Interval in the Settlement Interval. For Settlement Intervals for which the Bid Cost Recovery Eligible Resource is ramping up to or down from a ratered Minimum Load that was increased pursuant to Section 9.3.3 for the Real-Time Market, the RTM Energy incurred by the ramping will be classified as FMM Derate Energy or RTD Derate Energy and will not be included in Bid Cost Recovery. For a Bid Cost Recovery Eligible Resource that is ramping up to or down from an Exceptional Dispatch, the relevant Energy Bid Cost related to the Energy caused by ramping will be settled on the same basis as the Energy Bid used in the Settlement of the Exceptional Dispatch that led to the ramping. The RTM Energy Bid Cost for a Bid Cost Recovery Eligible Resource, including Participating Loads and Proxy Demand Response Resources, for a Settlement Interval is subject to the Real-Time Performance Metric as described in Section 11.8.4.4 and the Persistent Deviation Metric as described in Section 11.17. Any Uninstructed Imbalance Energy in excess of FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy is also not eligible for Bid Cost Recovery. For a Multi-Stage Generating Resource the CAISO will determine the RTM Energy Bid Cost based on the Generating Unit level.

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11.8.4.3.1 MSS Elected Gross Settlement

For an MSS Operator that has elected gross Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the RTM Bid Cost and RTM Market Revenue of the ~~Real-Time~~ RTD Instructed Imbalance Energy subject to Bid Cost Recovery is determined for each resource in the same way these amounts are determined for a non-MSS resource pursuant to the rules specified in Section 11.8.4. The RTM Bid Cost Shortfall or Surplus for Energy and Ancillary Services in total is determined for each Trading Hour of the RTM over the Trading Day by taking the algebraic difference between the RTM

Bid Cost and RTM Market Revenue.

11.8.4.3.2 MSS Elected Net Settlement

For MSS entities that have elected net Settlement regardless of other MSS optional elections (i.e., Load following or not, or RUC opt-in or out), unlike non-MSS resources, the RUC and RTM Bid Cost Shortfall or Surplus is treated at the MSS level and not at the resource specific level, and is calculated as the RUC and RTM Bid Cost Shortfall or Surplus of all BCR Eligible Resources within the MSS. In calculating the Energy RTM Market Revenue for all the resources within the MSS as provided in Section 11.8.4.2, the CAISO will use the FM MMSS Price or the RTD MSS Price, as applicable~~Real-Time Settlement Interval MSS Price~~. The RUC and RTM Bid Cost Shortfall and Surplus for Energy, RUC Availability and Ancillary Services are first calculated separately for the MSS for each Settlement Interval of the Trading Day, with qualified Start-Up Cost, qualified Minimum Load Cost and qualified Multi-Stage Generator transition cost included into the RUC and RTM Bid Cost Shortfalls and Surpluses of Energy calculation. The MSS's overall RUC and RTM Bid Cost Shortfall or Surplus is then calculated as the algebraic sum of the RUC and RTM Bid Cost Shortfall or Surplus for Energy and the RUC and RTM Bid Cost Shortfall or Surplus AS for each Settlement Interval.

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11.9.1 Physical Trades

Inter-SC Trades of Energy in the Day-Ahead Market will be settled separately from Inter-SC Trades of Energy in the RTM. Both the Day-Ahead and RTM Inter-SC Trades of Energy will be settled on an hourly basis and the two respective Settlement amounts between the two parties for each market shall net to zero. All MWh quantities of Physical Trades submitted to the CAISO for Settlement in the Day-Ahead Market that are confirmed through the Physical Trade post market confirmation as provided in Section 28.1.6.3 shall be settled at the Day-Ahead LMP at the relevant PNode. All MWh quantities of Physical Trades that are reduced during the Physical Trade post market confirmation shall be settled at the relevant Existing Zone (EZ) Generation Trading Hub price. All MWh quantities of Physical Trades submitted to the CAISO for Settlement in the RTM that are confirmed through the Physical Trade post

market confirmation pursuant to Section 28.16.64.3 shall be settled at the simple average of the four FMM LMPs at the relevant Pricing Node. All MWh quantities of Physical Trades submitted for Settlement in RTM that are reduced during the Physical Trade post market confirmation shall be settled at the FMM price for the EZ Generation Trading Hub.

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11.10.1.2.1 Congestion Charges

If a Scheduling Coordinator, including a Scheduling Coordinator for a Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area, receives an Ancillary Services Award or provides a qualified Self-Provided Ancillary Service at a congested Scheduling Point, the CAISO will charge or pay the Scheduling Coordinator for Congestion. The charge or payment for Congestion at such locations is equal to the simple average of the fifteen (15) minute applicable intertie constraint Shadow Price over the applicable Trading Hour at the location of the Ancillary Service Award, multiplied by the quantity of Ancillary Services Award or the capacity of the qualified Self-Provided Ancillary Service for the Settlement Period. No such charge or payment for Congestion will apply when the Scheduling Coordinator provides Ancillary Services from HASP Block Intertie Schedules at Scheduling Points pursuant to the CAISO Tariff rules that apply to Existing Rights and Transmission Ownership Rights.

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11.10.1.4 Voltage Support

The total payments for each Scheduling Coordinator for Voltage Support in any Settlement Period shall be the sum of the opportunity costs of limiting Energy output to enable reactive energy production in response to a CAISO instruction. The opportunity cost shall be calculated based on the product of the Energy amount that would have cleared the market at the price of the ~~Resource-Specific Settlement Interval-FMM or RTD~~ LMP minus the higher of the Energy Bid price or the Default Energy Bid price. If applicable, Scheduling Coordinators shall also receive any payments under any long-term contracts

due for the Settlement Period. FMM Exceptional Dispatches or RTD Exceptional Dispatches for incremental or decremental Energy needed for Voltage Support procured through Exceptional Dispatch pursuant to Section 34.119.2 will be paid and settled in accordance with Section 11.5.6. RMR Units providing Voltage Support are compensated in accordance with the RMR Contract rather than this Section 11.10.1.4.

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11.10.2 Settlement for User Charges for Ancillary Services

The CAISO shall determine a separate hourly user rate for Regulation Down Reserve, Regulation Up Reserve, Spinning Reserve, and Non-Spinning Reserve purchased for each Settlement Period. The hourly user rates for Regulation Down, Regulation Up, Spinning Reserve, and Non-Spinning Reserve include the cost incurred by the CAISO across the Day-Ahead Market and the Real-Time Market to procure this service. In computing the user rate for each service the quantity (MW) and costs of any substituting Ancillary Service will be treated as if they are costs and MW associated with the Ancillary Service need they are being used to fulfill. Each rate will be charged to Scheduling Coordinators on a volumetric basis applied to each Scheduling Coordinator's obligation for the specific Ancillary Service concerned which it has not self-provided, as adjusted by any Inter-SC Trades of Ancillary Services. Each Scheduling Coordinator's obligation for Regulation Down Reserve, Regulation Up Reserve, Spinning Reserve, and Non-Spinning Reserve shall be calculated in accordance with this Section 11.10.2, notwithstanding any adjustment to the quantities of each Ancillary Service purchased by the CAISO in accordance with Section 8.2.3.5.

Ancillary Services Obligations for an individual Scheduling Coordinator (before taking into account Self-Provided Ancillary Services) or Inter-SC Trades of Ancillary Services may be negative. Credits for such negative obligations will be in accordance with the rates calculated in this Section 11.10.2, except that a Scheduling Coordinator's credit shall be reduced pro rata to the extent the sum of the negative obligations of all Scheduling Coordinators with the negative Ancillary Services Obligation (before self-provision or Inter-SC Trade) exceeds the obligation of all Scheduling Coordinators with positive obligation net of Self-

Provided Ancillary Services, as specified in Section 11.10.5 in any Settlement Period, the net procurement quantity of Regulation Up, Regulation Down, Spinning Reserve, or Non-Spinning Reserve purchased by the CAISO in the Day-Ahead Market and the Real-Time Market due to the operation of Section 8.2.3.5 is zero (0), then the user rate for that Ancillary Service type will be zero (0). With respect to each Settlement Period, in addition to the user rates determined in accordance with this Section 11.10.2, each Scheduling Coordinator shall be charged an additional amount equal to its proportionate share, based on total purchases by Scheduling Coordinators of Regulation Down, Regulation Up, Spinning Reserve, and Non-Spinning Reserve of the amount, if any, by which (i) the total payments to Scheduling Coordinators pursuant to this Section 11.10.2 for the Day-Ahead Market and the Real-Time Market, exceed (ii) the total amounts charged to Scheduling Coordinators pursuant to this Section 11.10.2, for the Day-Ahead Market and the Real-Time Market. If total amounts charged to Scheduling Coordinators exceed the total payments to Scheduling Coordinators, each Scheduling Coordinator will be refunded its proportionate share, based on total purchases by Scheduling Coordinators of Regulation Down, Regulation Up, Spinning Reserve, and Non-Spinning Reserve.

With respect to each Settlement Period, in addition to Ancillary Service charges at the applicable user rates determined in accordance with this Section 11.10.2, each Scheduling Coordinator shall be charged additional neutrality adjustment amounts for each Ancillary Service type pursuant to Sections 11.10.2.1.4, 11.10.2.2.3, 11.10.3.43, and 11.10.4.43 and a neutrality adjustment amount for upward Ancillary Service types pursuant to Section 11.14.

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11.10.3 Spinning Reserves

11.10.3.1 Spinning Reserves Obligation

The charges a Scheduling Coordinator must pay for Spinning Reserves for each Settlement Period of the Trading Day are based upon the product of the Scheduling Coordinator's hourly obligation for Spinning Reserves (MW) and the hourly user rate for Spinning Reserves (\$/MW).

If the Scheduling Coordinator's Operating Reserve Obligation (before self-provision or Inter-SC Trade of

Spinning Reserve or Non-Spinning Reserve) is negative, the SC may be entitled to a credit rather than a charge. In that case, the quantity of the SC's negative Operating Reserve Obligation (before self-provision and Inter-SC Trade) shall be multiplied by the Negative Operating Reserve Obligation Credit Adjustment Factor (NOROCAF) computed for the Trading Hour as specified in Section 11.10.5.

11.10.3.24 Hourly User Rate for Spinning Reserves

The hourly user rate for Spinning Reserves is the ratio of: (1) the sum of the portion of Spinning Reserve Cost used to meet the spin requirement and the portion of Regulation Up cost that can substitute for Spinning Reserve and (2) the Net Procurement quantity of Spinning Reserves by the CAISO (\$/MW).

The cost of Regulation Up substituting for Spinning Reserve is the user rate for Regulation Up multiplied by the quantity of Regulation Up used to satisfy the Spinning Reserve requirement.

The CAISO's Spinning Reserve Cost is equal to: (i) the revenues paid to the suppliers of the total awarded Spinning Reserve capacity in the Day-Ahead Market, HASP, and Real-Time Market, minus, (ii) the payments rescinded due to either the failure to conform to Dispatch Instructions or the unavailability of the Spinning Reserves under Section 8.10.8. The Net Procurement of Spinning Reserves is equal to: (i) the amount (MWs) of total awarded Spinning Reserve capacity in the Day-Ahead Market, HASP, and Real-Time Market, minus, (ii) the Spinning Reserve capacity associated with payments rescinded pursuant to any of the provisions of Section 8.10.8. The amount (MW) of awarded Spinning Reserve capacity includes the amounts (MW) associated with any Regulation Up Reserve capacity used as Spinning Reserve under Section 8.2.3.5.

11.10.3.32 Hourly Net Obligation for Spinning Reserves

Each Scheduling Coordinator's hourly net obligation for Spinning Reserves is determined as follows: the Scheduling Coordinator's total Ancillary Services Obligation for Operating Reserve for the hour multiplied by the ratio of the CAISO's total Ancillary Services Obligation for Spinning Reserves in the hour to the CAISO's total Operating Reserve Obligations in the hour (and if negative, multiplied by NOROCAF), reduced by the accepted Self-Provided Ancillary Services for Spinning Reserves, plus or minus any Spinning Reserve Obligations for the hour acquired or sold through Inter-SC Trades of Ancillary Services. The Scheduling Coordinator's total Operating Reserve Obligation for the hour is the sum of six (6) percent of its CAISO Demand and three (3) percent of its Energy for exports from the CAISO Balancing Authority

Area (excluding export Dynamic Schedules); less three (3) percent of its Energy from imports into the CAISO Balancing Authority Area (excluding import Dynamic Schedules). The Scheduling Coordinator's total Operating Reserve Obligation for the applicable Trading Hour may be less than zero (0) only if the resulting credit supports an Inter-SC Trade of Ancillary Services or the credit results from the portion of Operating Reserve Obligation associated with Energy from imports. The CAISO does not apply Self-Provided Ancillary Services to reduce a Scheduling Coordinator's total Operating Reserve Obligation for the applicable Trading Hour below zero (0).

11.10.3.43 Spinning Reserve Neutrality Adjustment

For each Settlement Period, the difference between the Spinning Reserve net requirement at the hourly Spinning Reserve user rate determined in Section 11.10.3.24 and the total revenue collected from all Scheduling Coordinators in the Spinning Reserve charge pursuant to Section 11.10.3.32 shall be allocated to all Scheduling Coordinators in proportion to their Spinning Reserve obligation quantity. The Spinning Reserve net requirement is the Real-Time Spinning Reserve requirement net of the sum of effective qualified Spinning Reserve self-provision over all resources.

11.10.4 Non-Spinning Reserves

11.10.4.1 Non-Spinning Reserves Obligations

The charges an SC must pay for Non-Spinning Reserves for each Settlement Period of the Trading Day are based upon the product of SC's hourly obligation for Non-Spinning Reserves (MWs) and the hourly user rate for Non-Spinning Reserves (\$/MW).

If the Scheduling Coordinator's Operating Reserve Obligation (before self-provision or Inter-SC Trade of Spinning Reserve or Non-Spinning Reserve) is negative, the Scheduling Coordinator may be entitled to a credit rather than a charge. In that case, the quantity of the Scheduling Coordinator's negative Non-Spinning Reserve Obligation (before self-provision and Inter-SC Trade) shall be multiplied by the Negative Operating Reserve Obligation Credit Adjustment Factor (NOROCAF) computed for the Trading Hour as specified in Section 11.10.5.

11.10.4.24 Hourly User Rate Non-Spinning Reserves

The hourly user rate for Non-Spinning Reserves is calculated as the ratio of: (i) the sum of the portion of the Non-Spinning Reserve Cost used to meet the Non-Spinning requirement and a portion of the

Regulation Up and Spinning Reserve costs that can substitute for Non-Spinning Reserve and (ii) the Net Procurement quantity of Non-Spinning Reserves by the CAISO (\$/MW). The CAISO's Non-Spinning Reserve Cost includes the costs associated with any Regulation Up Reserve or Spinning Reserve capacity used as Non-Spinning Reserve under Section 8.2.3.5.

The CAISO's Non-Spinning Reserve Cost is equal to: (i) the revenues paid to the suppliers of the total awarded Non-Spinning Reserve capacity in the Day-Ahead Market and Real-Time Market, minus, (ii) the payments rescinded due to either the failure to conform to CAISO Dispatch Instructions or the unavailability of the Non-Spinning Reserves under Section 8.10.8. The Net Procurement of Non-Spinning Reserves is equal to: (i) the amount (MWs) of total awarded Non-Spinning Reserve capacity in the Day-Ahead Market and Real-Time Market, minus, (ii) the Non-Spinning Reserve capacity associated with payments rescinded pursuant to any of the provisions of Section 8.10.8. The amount (MW) of awarded Non-Spinning Reserve capacity includes the amounts (MW) associated with any Regulation Up Reserve or Spinning Reserve capacity used as Non-Spinning Reserve under Section 8.2.3.5.

11.10.4.32 Hourly Net Obligation for Non-Spinning Reserves

Each Scheduling Coordinator's hourly net obligation for Non-Spinning Reserves is determined as follows: the product of the Scheduling Coordinator's total Ancillary Services Obligation for Operating Reserve for the hour (and if negative, multiplied by NOROCAF) multiplied by the ratio of the CAISO's total Ancillary Services Obligation for Non-Spinning Reserves in the hour to the CAISO's total Operating Reserve obligations in the hour, reduced by the accepted Self-Provided Ancillary Services for Non-Spinning Reserves, plus or minus any Non-Spinning Reserve Obligations for the hour acquired or sold through Inter-SC Trades of Ancillary Services. The Scheduling Coordinator's total Operating Reserve Obligation for the hour is the sum of six (6) percent of its CAISO Demand and three (3) percent of its Energy for exports from the CAISO Balancing Authority Area (excluding export Dynamic Schedules); less three (3) percent of its Energy from imports into the CAISO Balancing Authority Area (excluding import Dynamic Schedules). The Scheduling Coordinator's total Operating Reserve Obligation for the applicable Trading Hour may be less than zero (0) only if the resulting credit supports an Inter-SC Trade of Ancillary Services or the credit results from the portion of Operating Reserve Obligation associated with Energy from imports. The CAISO does not apply Self-Provided Ancillary Services to reduce a Scheduling

Coordinator's total Operating Reserve Obligation for the applicable Trading Hour below zero (0).

11.10.4.43 Non-Spinning Reserve Neutrality Adjustment

For each Settlement Period, the difference between the Non-Spinning Reserve net requirement at the hourly Non-Spinning Reserve user rate determined in Section 11.10.4.24 and the total revenue collected from all Scheduling Coordinators in the Non-Spinning Reserve charge pursuant to Section 11.10.4.32 shall be allocated to all Scheduling Coordinators in proportion to their Non-Spinning Reserve Obligation quantity. The Non-Spinning Reserve net requirement is the Real-Time Non-Spinning Reserve requirement net of the sum of effective qualified Non-Spinning Reserve self-provision over all resources.

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11.10.6 Upward Ancillary Services Neutrality Adjustment

For each Settlement Period the difference between the upwards Ancillary Service cost and the ~~product sum~~ of the total Ancillary Services ~~obligation and neutrality adjustments net requirements at the relevant Ancillary Service user rate~~ will be allocated to all Scheduling Coordinators in proportion to their upward Ancillary Service Obligation (before taking into consideration the Inter-SC Trades of Ancillary Services). The CAISO shall exclude EIM Transfers between the CAISO and an EIM Entity from the calculation of the upwards Ancillary Service Obligation for this neutrality adjustment. The upwards Ancillary Service cost is the sum of the ~~upward Ancillary Services payments made pursuant to Regulation Up, Spinning Reserve and Non-Spinning Reserve cost described in~~ Sections 11.10.1.12.2.1, 11.10.1.2, and 11.10.3.1 and ~~4.10.4.1. The total upward Ancillary Services obligation and neutrality adjustments net requirement is~~ the sum of the ~~requirements in Sections 11.10.2.2.2, 11.10.2.2.3, 11.10.3.1, 11.10.3.4, 11.10.4.1, and 11.10.4.4~~ ~~Real-Time Regulation Up net requirement in Section 11.10.2.2.3, Spinning Reserve net requirement in Section 11.10.3.3 and Non-Spinning Reserve net requirement in Section 11.10.4.3.~~

* * * * *

11.10.9.3 Rescission of Payments for Undelivered Ancillary Service Capacity

If the total metered output of a Generating Unit, Participating Load, System Unit or System Resource is insufficient to supply the amount of FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with a Dispatch Instruction issued in accordance with awarded or self-provided Spinning Reserves or awarded or self-provided Non-Spinning Reserves in any Settlement Interval, then the capacity payment associated with the difference between the scheduled amount of each Ancillary Service for which insufficient Energy was delivered and the actual output attributed to the response to the Dispatch Instruction shall be rescinded. If, after the issuance of a Dispatch Instruction associated with Non-Spinning Reserves, the actual response of a Proxy Demand Resource is insufficient to supply the amount of FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy associated with a Dispatch Instruction issued in accordance with awarded or self-provided Non-Spinning Reserves, then the capacity payment associated with the difference between the scheduled amount and the actual amount attributed to the response to the Dispatch Instruction (as established pursuant to the applicable Business Practice Manual) shall be rescinded. However, no capacity payment shall be rescinded if the shortfall in the metered output of the Generating Unit, Participating Load, Proxy Demand Resource, System Unit, or System Resource is less than a deadband amount published by the CAISO on the CAISO Website at least twenty-four hours prior to the Settlement Interval. For any Settlement Interval with respect to which no deadband amount has been published by the CAISO, the deadband amount shall be zero MWh.

* * * * *

11.12.1 ~~[Not Used] Settlement of PIRP Protective Measures~~

~~The provisions in this Section 11.12.1 and its subsections will be in effect as of the day this Section becomes effective and the CAISO will implement these measures no later than twelve months after the effective date of this section.~~

11.12.1.1 ~~Hourly Settlement~~

~~Scheduling Coordinators that represent Participating Intermittent Resources that have been qualified for PIRP Protective Measures pursuant to Section 4.8.3 will be subject to the following Settlement requirements. The CAISO will first settle the market outcomes for the Participating Intermittent Resources subject to PIRP Protective Measures consistent with the rules specified in Section 11.~~

~~11.12.1.2 PIRP Protective Measures Monthly Adjustments~~

~~At the end of the month, the CAISO will calculate the PIRP Protective Measures monthly resettlement, which it will base on the forecast established for the Participating Intermittent Resource 90 minutes prior to the applicable Trading Hour. For each month the CAISO will calculate the PIRP Protective Measures Settlement Amount as the total of: (1) the sum of the product of the 90 minute MWh amounts, for each hour of the month multiplied by the simple average of the RTD LMP for the applicable Trading Hour; and (2) the product of (a) the monthly netted MWh quantities under PIRP Protective Measures, which is the sum of the hourly differences between the ninety (90) minute MWh amounts and the Participating Intermittent Resource's 5 minute metered MWhs, and (b) the resource's monthly weighted average RTD LMP, where the weights are the metered Generation quantities associated with each RTD LMP. If the Scheduling Coordinator submits an Economic Bid or Self-Schedule to the Real-Time Market, the resource will be disqualified from PIRP Protective Measures for the remaining term that the PIRP Protective Measures are otherwise intended to apply. The disqualification will be in effect as of the Trading Day for which the Scheduling Coordinators submitted the Economic Bid. The CAISO will take the necessary steps to implement that disqualification and will make any necessary Settlement adjustments consistent with the change in status. In addition, for the intervals in which the Scheduling Coordinator submitted an Economic Bid for a the resource while it was still qualified as a resource subject to PIRP Protective Measures, the resource will not be eligible for any Bid Cost Recovery related payments for such Economic Bids.~~

~~11.12.1.3 Use of Inter-Scheduling Coordinator Trades for Energy~~

~~To the extent a Participating Intermittent Resource that is subject to PIRP Protective Measures is contractually required to make use of the CAISO's Inter-Scheduling Coordinator Trade for Energy to effectuate payment transfers with its contractual counterparty, the Scheduling Coordinator may select a flag in its Master File to indicate its election to settle of any Physical or Converted Physical Inter-~~

~~Scheduling Coordinator Trades for Energy submitted for the Participating Intermittent Resource at the Participating Intermittent Resource location as follows; the Inter Scheduling Coordinator Trades will settle at the hourly simple average of the RTD LMP of the PNode at the affected PIR location. Financial Inter Scheduling Coordinator Trades for Energy will not be eligible for such treatment.~~

11.12.2 ~~[Not Used] Allocation of PIRP Protective Measures Costs/Revenues~~

~~For each month, the CAISO will calculate the difference between the charges and payments made to the Scheduling Coordinator for each Participating Intermittent Resource under its Settlement as specified in Sections 11, and the PIRP Protective Measurement resettlement amounts. The CAISO will charge or credit the differences to the Scheduling Coordinator and will allocate a corresponding credit or charge to all Scheduling Coordinators in proportion to each Scheduling Coordinator's aggregate Net Negative Uninstructed Deviations in that month relative to the aggregate Net Negative Uninstructed Deviations for all Scheduling Coordinators in the CAISO Balancing Authority Area in that month.~~

11.12.3 Payment of Participating Resource Fees

11.12.3.1 Forecasting Fee

A fee to defray the costs of the implementation of the forecasting service for Eligible Intermittent Resources shall be assessed to Scheduling Coordinators for Eligible Intermittent Resources as specified in Schedule 4 of Appendix F.

11.12.3.2 [Not Used]

11.12.3.3 ~~[Not Used] Participating Intermittent Resource Export Fee~~

~~A Participating Intermittent Resource Export Fee will be levied to Participating Intermittent Resources that have elected for PIRP Protective Measures in accordance with Section 5.3 of Appendix Q and Schedule 4 of Appendix F.~~

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11.17.1.2 Persistent Deviation Adjustments

The ISO will apply the following rules to evaluate the resource's performance relative to the Persistent Deviation Metric Threshold and will apply the Persistent Deviation Metric as specified below.

11.17.1.2.1 Rule 1

If six (6) or fewer Settlement Intervals out of the previous twenty-four (24) Settlement Intervals are flagged pursuant to the rules in Section 11.17.1.1, then: (a) the RTM Energy Bid Costs will be based on the applicable Energy Bid price as specified in Section 11.8.4.1.5, and (b) Residual Imbalance Energy will be settled based on the reference hour Energy Bid as specified in Section 11.5.5.

11.17.1.2.2 Rule 2

If seven (7) or more Settlement Intervals of the previous twenty-four (24) Settlement Intervals are flagged as exceeding the Persistent Deviation Metric Threshold, then for all the previous twenty-four (24) Settlement Intervals in the two-hour window: (a) the RTM Energy Bid Costs specified in Section 11.8.4.1.5 (i) for FMM Optimal Energy or RTD Optimal Energy above the Day-Ahead Scheduled Energy will be based on the lesser of the applicable Default Energy Bid price, the applicable Energy Bid price, as mitigated, or the applicable FMM or RTD ~~Locational Marginal Price~~; and (ii) for FMM Optimal Energy or RTD Optimal Energy below the Day-Ahead Scheduled Energy will be based on the greater of the applicable Default Energy Bid price, the applicable Energy Bid price, as mitigated, or the applicable FMM or RTD ~~Locational Marginal Price~~; and (b) Residual Imbalance Energy as specified in Section 11.5.5 (i) for Residual Imbalance Energy above the Day-Ahead Scheduled Energy will be based on the lesser of the applicable Default Energy Bid price, the relevant Energy Bid Price, as mitigated, or the applicable RTD ~~Locational Marginal Price~~; and (ii) Residual Imbalance Energy below the Day-Ahead Scheduled Energy will be based on the greater of the applicable Default Energy Bid price, the relevant Energy Bid Price, or the applicable RTD ~~Locational Marginal Price~~.

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11.17.2.2 Disqualification Based on ADS Shut-Down Instruction

In the event that the CAISO issues a binding Shut-Down Instruction through ADS, a resource will not be eligible for recovery of RTM or RUC Minimum Load Costs from the point of the Shut-Down Instruction forward for the duration of the resource's registered Minimum Down Time. If a resource ignores the binding Shut-Down Instruction and it has a Day-Ahead Schedule, the resource is not eligible for IFM

Minimum Load Cost recovery as specified in Section 11.8.2.1.23 for the minimum of: 1) the resource's Minimum Down Time; and 2) the IFM Commitment Period.

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11.20.4 Process for Invoicing NERC/WECC Charges

With regard to the NERC/WECC Charges to be assessed by the WECC for each NERC/WECC Charge Assessment Year, the following processes shall apply:

- (a) The CAISO will issue a Market Notice that will include the total of all Scheduling Coordinators' NERC/WECC Metered Demand for the calendar year two years prior to the NERC/WECC Charge Assessment Year. On or after the date on which the CAISO issues this Market Notice, the CAISO will notify each Scheduling Coordinator in writing of the Scheduling Coordinator's NERC/WECC Metered Demand for the calendar year two years prior to the NERC/WECC Charge Assessment Year. Each Scheduling Coordinator shall have sixty (60) calendar days from the date the CAISO provides it with this notification in writing to raise any disputes concerning the CAISO's calculation of the Scheduling Coordinator's NERC/WECC Metered Demand for the calendar year two years prior to the NERC/WECC Charge Assessment Year.
- (b) The CAISO will report to the WECC the total of all Scheduling Coordinators' NERC/WECC Metered Demand for the calendar year two years prior to the NERC/WECC Charge Assessment Year, including any adjustments to the calculation of NERC/WECC Metered Demand for that year made by the CAISO in response to disputes raised by Scheduling Coordinators pursuant to Section 11.20.4(a). The report will also include any adjustments to the calculation of NERC/WECC Metered Demand, based on decisions by the WECC to permit such adjustments, that the CAISO has time to reflect in the report and that the WECC provides to the CAISO in a written statement in accordance with the CAISO-WECC Billing Services Agreement. This report shall facilitate the WECC's calculation of actual NERC/WECC Charges to be invoiced to the

CAISO for the NERC/WECC Charge Assessment Year.

- (c) The CAISO will issue a Market Notice setting forth the Preliminary NERC/WECC Charge Rate for the NERC/WECC Charge Assessment Year.
- (d) By August 31 of the year preceding the NERC/WECC Charge Assessment Year, the CAISO will issue Preliminary NERC/WECC Charge Invoices for the NERC/WECC Charge Assessment Year.
- (e) Within five (5) Business Days after receipt of the WECC's invoice to the CAISO setting forth the assessment of NERC/WECC Charges for the NERC/WECC Charge Assessment Year, the CAISO shall issue a Market Notice setting forth the Final NERC/WECC Charge Rate for the NERC/WECC Charge Assessment Year. The Final NERC/WECC Charge Rate for the NERC/WECC Charge Assessment Year shall be based on (i) the total NERC/WECC Charges for the NERC/WECC Charge Assessment Year that were invoiced to the CAISO by the WECC, divided by (ii) the total of all Scheduling Coordinators' NERC/WECC Metered Demand including any adjustments to the calculation of NERC/WECC Metered Demand as reported to the WECC pursuant to Section 11.20.4(b), and including any additional adjustments to the calculation of NERC/WECC Metered Demand, based on decisions by the WECC to permit such adjustments, that the WECC provides to the CAISO in a written statement in accordance with the CAISO-WECC Billing Services Agreement.
- (f) Within fifteen (15) Business Days after receipt of the WECC invoice to the CAISO setting forth the assessment for NERC/WECC Charges for the NERC/WECC Charge Assessment Year, the CAISO will issue Final NERC/WECC Charge Invoices that allocate NERC/WECC Charges for the NERC/WECC Charge Assessment Year to Scheduling Coordinators based on (i) each Scheduling Coordinator's NERC/WECC Metered Demand as adjusted pursuant to Sections 11.20.4(b) and 11.20.4(e) and pursuant to any additional adjustments that the WECC provides to the CAISO in a written statement in accordance with the CAISO-WECC Billing Services Agreement, multiplied by (ii) the Final NERC/WECC Charge Rate for the NERC/WECC Charge Assessment Year. If and to the

extent that a Scheduling Coordinator has not already paid all of the NERC/WECC Charges for the NERC/WECC Charge Assessment Year that it is required to pay, the Scheduling Coordinator's Final NERC/WECC Charge Invoice will show the amount the Scheduling Coordinator is still required to pay. If and to the extent that a Scheduling Coordinator has already paid in excess of the NERC/WECC Charges for the NERC/WECC Charge Assessment Year that the Scheduling Coordinator is required to pay, the Scheduling Coordinator's Final NERC/WECC Charge Invoice will show the amount the Scheduling Coordinator will be credited.

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11.21.1 CAISO Demand and Exports

If the CAISO corrects an LMP in the upward direction pursuant to Section 35 that impacts Demand in the Day-Ahead Market and the FMM such that either a portion of or the entire cleared CAISO Demand or export Economic Bid curve becomes uneconomic, then the CAISO will calculate and apply the Price Correction Derived LMP for settlement of day-ahead CAISO Demand and exports in Sections 11.2.1.2, 11.2.1.3, and 11.2.1.4, and FMM exports in Section 11.54.1.1. The CAISO shall not calculate and apply a Price Correction Derived LMP for settlement of exports that are part of a Schedule that results from Bids submitted in violation of Section 30.5.5. The CAISO will calculate a Price Correction Derived LMP for each affected CAISO Demand and exports as follows: the total cleared MWhs of CAISO Demand or exports in the Day-Ahead Schedule or FMM Schedule, as applicable, multiplied by the corrected LMP, minus the make-whole payment amount, all of which is divided by the total cleared MWhs of CAISO Demand or export in the Day-Ahead Schedule or FMM Schedule, as applicable. The make-whole payment amount will be calculated on an hourly basis determined by the area between the Scheduling Coordinator's CAISO Demand or Export Bid curve and the corrected LMP, which is calculated as the MWhs for each of the cleared bid segments in the Day-Ahead Schedule or FMM Schedule for the affected resource, multiplied by the maximum of zero or the corrected LMP minus the bid segment price. For the purpose of this calculation, the CAISO will not factor in a make-whole payment amount for Self-

Scheduled CAISO Demand or exports. Any non-zero amounts in revenue collected as a result of the application of the Price Correction Derived LMP will be captured through the calculation of the IFM Congestion Charge reflected in Section 11.2.4.1 and the allocation of non-zero amounts of the sum of FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy, Uninstructed Imbalance Energy, and Unaccounted for Energy in accordance with Section 11.5.4.

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11.29 CAISO as Counterparty; Billing and Payment

- (a) The CAISO shall be the contracting counterparty, in its own name and right, to each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO for any purchase or sale of any product or service, or for any other transaction, that is financially settled by the CAISO under the CAISO Tariff, except under the following circumstances:
 - (i) The CAISO shall not be the contracting counterparty for transactions that procure Station Power for a Generating Unit located in Mexico or for transactions that procure Energy or Ancillary Services within Mexico; for such transactions, the CAISO will not act as principal but instead as agent for and on behalf of the relevant Scheduling Coordinators.
 - (ii) The provisions of this Section 11.29 will not apply to the billing and payment of transactions associated with Trading Days that occurred prior to September 1, 2012. Billing and payment of such transactions shall be governed by the terms of the tariff effective on the Trading Days.
 - (iii) The CAISO's status as contracting counterparty is not intended to affect the tax-exempt status of transmission facilities or entitlements subject to the CAISO's operational control.

Bids for Supply submitted by a Scheduling Coordinator for any resource funded by Municipal Tax Exempt Debt are not, and shall not be construed or deemed to be, a sale to the CAISO or other transaction that is financially settled by the CAISO to the extent

that the load serving entity that holds entitlements to the resource for which such Bids for Supply are submitted is using its entitlements to serve native load during that interval. For purposes of this subsection only, a load serving entity is using its entitlements to a resource to serve native load under the following conditions: A) For a Load Serving Entity that is serving demand inside the CAISO Balancing Authority Area, if the total MW volume of such Bids for Supply that clear in any settlement interval is less than or equal to the metered CAISO Demand for that settlement interval for the Load Serving Entity that holds entitlements to the resources for which such Bids for Supply are submitted, or B) for load serving entities that serve demand outside of the CAISO Balancing Authority Area by wheeling through or exporting from the CAISO Balancing Authority Area, if the total MW volume of such Bids for Supply that clear in any settlement interval is less than or equal to the total of wheel throughs or exports that are used to serve the native load for the load serving entity that holds entitlements to the resources for which such Bids for Supply are submitted during that settlement interval. Nothing in the two preceding sentences shall affect credit requirements under Section 12 of the CAISO Tariff or settlements charges or credits issued pursuant to any section of the CAISO tariff. The details of such Bids for Supply may be included in Settlement Statements by the CAISO for purposes of calculating settlement charges and credits other than for Supply.

- (b) The purchase or sale of any products or service, or any other transaction, ~~that~~ which is financially settled by CAISO under this CAISO Tariff shall be deemed to occur within the State of California. To the extent permitted by applicable law, any warranties provided by the sellers to the CAISO of such products or services, whether express, implied or statutory, are hereby passed to the Business Associates who purchase such products or services from the CAISO on a “pass through basis” and to the extent not passed through, any such warranties are hereby assigned by the CAISO to the purchasing Business Associates. Sellers to the CAISO and Business ~~Customers~~ Associates acknowledge that warranties on such products are limited to that offered by the seller to CAISO and will exist, if at all, solely between the seller to the CAISO and the purchasing Business

Associate. AS BETWEEN THE PURCHASING BUSINESS ASSOCIATE AND THE CAISO AS COUNTERPARTY, NO EXPRESS OR IMPLIED WARRANTIES ARE MADE BY THE CAISO REGARDING THE PRODUCTS AND SERVICES SOLD BY THE CAISO AS COUNTERPARTY, AND ANY SUCH PRODUCTS AND SERVICES ARE PROVIDED ON AN "AS IS" AND "AS AVAILABLE" BASIS. THE CAISO MAKES NO WARRANTY OR REPRESENTATION THAT THE PRODUCTS OR SERVICES WILL BE UNINTERRUPTED OR ERROR FREE. PURCHASING BUSINESS ASSOCIATES HEREBY WAIVE, AND THE CAISO HEREBY DISCLAIMS, ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT. THE CAISO DOES NOT WARRANT THAT THE PRODUCTS AND SERVICES OFFERED WILL MEET CUSTOMER'S REQUIREMENTS. NO ORAL OR WRITTEN INFORMATION OR ADVICE GIVEN BY THE CAISO OR ANY AUTHORIZED REPRESENTATIVE OF THE CAISO SHALL CREATE A WARRANTY OR IN ANY WAY INCREASE THE SCOPE OF ANY PASS THROUGH OR ASSIGNED WARRANTY. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES IN CERTAIN CIRCUMSTANCES, SO THE ABOVE EXCLUSION APPLIES ONLY TO THE EXTENT PERMITTED BY APPLICABLE LAW.

- (c) The CAISO will calculate for each charge the amounts payable by the relevant Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO for each Settlement Period of the Trading Day, and the amounts payable to that Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO for each charge for each Settlement Period of that Trading Day and shall arrive at a net amount payable for each charge by or to that Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO for each charge for that Trading Day. Each of these net amounts will appear in the Settlement Statements that the CAISO will provide to the relevant Scheduling Coordinator, CRR Holder, Black Start Generator or Participating TO.
- (d) The components of the Grid Management Charge will be included in an Initial Settlement

Statement T+3B, and any Recalculation Settlement Statement with the other types of charges referred to in Section 11.

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11.29.8.4.6 Dispute of Recalculation Settlement Statement T+33M

Each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO may submit disputes regarding Incremental Changes in a Recalculation Settlement Statement T+33M, including the CAISO's implementation of a prior accepted dispute contained in a Recalculation Settlement Statement T+33M, no later than twenty-two (22) Business Days after the publication date of a Recalculation Settlement Statement T+33M. A dispute must only be based on: (i) Incremental Changes between the immediately preceding Recalculation Settlement Statement for the given Trading Day and Recalculation Settlement Statement T+33M; (ii) Meter Data issues identified through the audit process; or (iii) any good faith negotiation or dispute resolution settlement. Valid disputes regarding data appearing on a Recalculation Settlement Statement T+33M will be reflected on the Recalculation Settlement Statement T+36M. If a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO disagrees with the CAISO's resolution of a dispute regarding data appearing on a Recalculation Settlement Statement T+33M, it may initiate a good faith negotiation or other dispute resolution remedy under the procedures and pursuant to the deadlines set forth in Section 13. If a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO does not initiate a good faith negotiation or other dispute resolution remedy within the time period set forth in Section 13, the Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO will be deemed to have validated each Recalculation Settlement Statement T+33M. Once validated, a Recalculation Settlement Statement T+33M will be binding on the Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO that it relates to.

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11.29.8.4.8 **Unscheduled Recalculation Settlement Statements**

Each Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO may submit disputes regarding Incremental Changes on an Unscheduled Recalculation Settlement Statement issued pursuant to Section 11.29.7.3 no later than twenty-two (22) Business Days after the publication date of the Unscheduled Recalculation Settlement Statement. A dispute must only be based on Incremental Changes between the Unscheduled Recalculation Settlement Statement and prior applicable Recalculation Settlement Statement. Valid disputes regarding data appearing on an Unscheduled Recalculation Settlement Statement will be reflected on a later Recalculation Settlement Statement. If a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO disagrees with the CAISO’s resolution of a dispute regarding data appearing on an Unscheduled Recalculation Settlement Statement, it may initiate dispute resolution under Section 13 of the CAISO Tariff pursuant to the deadlines set forth in Section 13. If a Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO does not initiate dispute resolution under Section 13 of the CAISO Tariff within the time period set forth in Section 13, the Scheduling Coordinator, CRR Holder, Black Start Generator, or Participating TO will be deemed to have validated each Unscheduled Recalculation Settlement Statement T+55B9M.

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11.29.9.3 **Accounts of the Scheduling Coordinators, CRR Holders, Black Start Generators, and Participating TOs**

Each Scheduling Coordinator, CRR Holder, Black Start Generator, and Participating TO shall establish and maintain at all times a Settlement Account at a commercial bank located in the United States and reasonably acceptable to the CAISO which can effect money transfers via Fedwire and, at its option, may also maintain an account capable of ACH transfers where payments to and from the CAISO Clearing Account shall be made in accordance with this CAISO Tariff. Scheduling Coordinators, CRR Holders, and Black Start Generators may, but will not be required to, maintain separate accounts for receipts and

payments. Each Scheduling Coordinator, CRR Holder, and Black Start Generator shall notify the CAISO of its account details and of any changes to those details in accordance with the provisions of its Scheduling Coordinator Agreement, CRR Entity Agreement, or ~~Interim~~-Black Start Agreement. Participating TOs will notify the CAISO of their Settlement Account details in accordance with Section 2.2.1 of their Transmission Control Agreement and may notify the CAISO from time to time of any changes by giving at least seven (7) days written notice before the new account becomes operational.

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11.31 Intertie Schedules Decline Charges

The Decline Potential Charge shall apply to Intertie transactions as discussed below. The Decline Potential Charge does not apply to FMM Schedules of Economic Bids, ~~D~~dynamic ~~T~~ransfers, and Variable Energy Resources located outside the CAISO Balancing Authority Area that have been qualified to use the forecast of their output produced by the CAISO as specified in Section 4.8.2.1.2.

- (a) HASP Block Intertie Schedules: Any HASP Block Intertie Schedule for an Energy import when the HASP Block Intertie Schedule is not delivered for any reason (with no exceptions based on the circumstances of a particular failure to deliver), to the extent the decline is made prior to the start of the applicable FMM interval. The Decline Potential Charge - Exports shall apply to any HASP Block Intertie Schedule for an Energy export when the HASP Block Intertie Schedule is not delivered for any reason (with no exceptions based on the circumstances of a particular failure to deliver), to the extent the decline is made prior to the start of the applicable FMM interval. The Decline Potential Charge will not apply if the decline is made after the applicable E-tag deadline, as defined in Section 30.6.2.
- (b) Economic Hourly Block Bid with Intra-Hour Option: Imports and exports accepted in an HASP Block Intertie Schedule that are incremental to Day-Ahead Schedules are subject to the Decline Potential Charge to the extent the decline is made prior to the start of the applicable FMM interval. The Decline Potential Charge will not apply if the decline is

made after the applicable E-tag deadline, as defined in Section 30.6.2. To the extent the incremental import or export schedule in HASP is curtailed through the FMM, for the 15-minute FMM interval in which the resource follows the CAISO Dispatch Instructions will not be subject to the Decline Potential Charge.

- (c) Variable Energy Resources outside CAISO Balancing Authority Area Using Own Forecast: Imports from Variable Energy Resources using their own forecast are subject to the Decline Potential Charge to the extent the resource over-forecasts over the month as discussed below. For each Trading Hour, the CAISO compares the maximum 15-minute FMM Schedule (that is based on the forecast submitted 37.5 minutes prior to flow) to the maximum 15-minute advisory schedule from the Hour-Ahead Scheduling Process (based upon the hourly forecast received 75 minutes prior to flow) and calculates the differences between the two. These hourly differences are summed over the month. If the maximum advisory schedule exceeds the actual financially binding schedule by the relevant threshold over the course of the month, the Decline Potential Charge applies.
- (d) Decline Potential Charge: For any Settlement Interval, the Decline Potential Charge - Imports or Decline Potential Charge - Exports, as the case may be, shall equal the MWh quantity of the import or export not delivered multiplied by the greater of \$10/MWh or fifty percent (50%) of the FMM LMP. The Decline Potential Charge - Imports and Decline Potential Charge - Exports will be calculated for each HASP Block Intertie Schedule or VER Self-Schedule that is not delivered, provided that only the Decline Monthly Charge - Imports and Decline Monthly Charge - Exports shall be payable by the Scheduling Coordinator as described in Section 11.31.1.

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12.5.1 Under-Secured and Non-Compliant Market Participants

The CAISO may take action under this Section 12.5.1 against a Market Participant if its Estimated Aggregate Liability, as calculated by the CAISO, at any time exceeds its Aggregate Credit Limit, or if a

Market Participant fails to satisfy all of the minimum participation requirements set forth in Section 12.1. However, before taking action against a Market Participant based on failure to comply with Section 12.1(a) or 12.1(b)(i)-(iii), the CAISO must first notify the Market Participant of the failure and allow it thirty (30) days after notification to cure the failure. The CAISO may take any or all of the following actions:

- (a) The CAISO may withhold a pending payment distribution.
- (b) The CAISO may limit trading, which may include rejection of Bids, including Self-Schedules, rejection or cancellation of Inter-SC Trades in their entirety (i.e., both sides of the Inter-SC Trade) at any time, and/or limiting other CAISO Market activity, including limiting eligibility to participate in a CRR Allocation or CRR Auction. In such case, the CAISO shall notify the Market Participant of its action and the Market Participant shall not be entitled to participate in the CAISO Markets or CRR Auctions or submit further Bids, including Self-Schedules, or otherwise participate in the CAISO Markets until the Market Participant posts an additional Financial Security Amount that is sufficient to ensure that the Market Participant's Aggregate Credit Limit is at least equal to its Estimated Aggregate Liability.
- (c) The CAISO may require the Market Participant to post an additional Financial Security Amount in lieu of an Unsecured Credit Limit for a period of time.
- (d) The CAISO may restrict, suspend, or terminate the Market Participant's CRR Entity Agreement or any other service agreement.
- (e) The CAISO may resell the CRR Holder's CRRs in whole or in part, including any Long Term CRRs, in a subsequent CRR Auction or bilateral transaction, as appropriate.
- (f) The CAISO will not implement the transfer of a CRR if the transferee or transferor has an Estimated Aggregate Liability in excess of its Aggregate Credit Limit.

In addition, the CAISO may restrict or suspend a Market Participant's right to submit further Bids, including Self-Schedules, or require the Market Participant to increase its Financial Security Amount if at any time such Market Participant's potential additional liability for ~~4~~ imbalance ~~E~~energy and other CAISO charges is determined by the CAISO to be excessive by comparison with the likely cost of the amount of Energy reflected in Bids or Self-Schedules submitted by the Market Participant.

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16.11 Inter-Balancing Authority Area ETC Self-Schedule Bid Changes

Changes to ETC Self-Schedules that occur during the CAISO's Real-Time Market that involve changes to CAISO Balancing Authority Area imports or exports with other Balancing Authority Areas (that is, inter-Balancing Authority Area changes to ETC Self-Schedules) will be allowed and will be recorded by the CAISO based upon notification received from the Scheduling Coordinator representing the holder of the Existing Rights. The Scheduling Coordinator representing the holder of the Existing Right must notify the CAISO of any such changes to external import/export in submitted ETC Self-Schedules. The Scheduling Coordinator representing the holder of the Existing Right must notify the CAISO of Real-Time Market changes to external import/export Interchange Schedules in submitted ETC Self-Schedules, by telephone. The timing and content of any such notification must be consistent with the TRTC Instructions previously submitted to the CAISO by the Responsible PTO. The CAISO will manually adjust or update the FMM Schedule for the Scheduling Coordinator to conform with the other Balancing Authority Area's net ETC Self-Schedule in Real-Time, and the notifying Scheduling Coordinator will be responsible for and manage any resulting Energy imbalance. These FMM Instructed Imbalance Energy deviations will be priced and charged to the Scheduling Coordinator representing the holder of Existing Rights in accordance with the FMM LMP.

16.12 Intra-Balancing Authority Area ETC Self-Schedule Changes

Changes to ETC Self-Schedules that occur during the CAISO's Real-Time processes that do not involve changes to CAISO Balancing Authority Area imports or exports with other Balancing Authority Areas (that is, intra-Balancing Authority Area changes to Schedules) will be allowed and will give rise to FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy ~~deviations~~. These ~~Imbalance Energy deviations~~ will be priced and charged to the Scheduling Coordinator representing the holder of Existing Rights in accordance with the Real-Time-relevant FMM or RTD LMP.

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17.3.3 Settlement Treatment of Valid TOR Self-Schedules

The resulting valid TOR Self-Schedules shall have the following Settlement treatment:

- (1) The CAISO will apply the TOR Settlement treatment in Sections 11.2.1.5 and 11.5.7.
- (2) The CAISO shall base the Marginal Cost of Losses on LMP differentials at the Points of Receipt and Points of Delivery identified in the valid TOR Self-Schedule; provided, however, that if a specific loss percentage exists in an applicable agreement between the TOR holder and the CAISO or an existing agreement between the TOR holder and a Participating TO, the CAISO will apply the IFM and RTM Marginal Cost of Losses Credit as provided in Sections 11.2.1.7 and 11.5.7.2. In any case in which the TOR holder has an existing agreement regarding its TORs with either the CAISO or a Participating TO, the provisions of the agreement shall prevail over any conflicting provisions of this Section 17.3.3(2). Where the provisions of this Section 17.3.3(2) do not conflict with the provisions of the agreement, the provisions of this Section 17.3.3(2) shall apply to the subject TORs.
- (3) The CAISO will assess only charges applicable to Ancillary Services, ~~H~~imbalance ~~E~~nergy, Transmission Losses, Flexible Ramping Product, and Grid Management Charges for the use of a TOR and will not assess charges for neutrality, Unaccounted For Energy, transmission Access Charges, Minimum Load Costs, or other charges that might otherwise be applicable to the Demand or exports served solely over the TOR. The CAISO will assess charges applicable to Ancillary Services for the use of a TOR only to the extent that the CAISO must procure Ancillary Services for the TOR holder because Ancillary Services are not self-provided by the TOR holder. The CAISO will assess charges and provide payments for TOR Self-Schedules pursuant to the rules specified in Sections 11.2.1.5 and 11.5.7.2. The CAISO will assess charges applicable to ~~H~~imbalance ~~E~~nergy for the use of a TOR only if the CAISO must procure ~~H~~imbalance ~~E~~nergy for the TOR holder. The CAISO will assess Grid Management Charges for the use of a TOR only in accordance with the provisions of Section 11.22 and Appendix F, Schedule 1.

- (4) The holders of TORs will not be entitled to an allocation of revenues from the CAISO, including Access Charge revenues; provided that the Scheduling Coordinator for the TOR holder shall be allocated the applicable amount of IFM Marginal Losses Surplus Credit in accordance with the provisions of Section 11.2.1.6, except for any TOR Self-Schedule that received the IFM Marginal Cost of Losses Credit.
- (5) Parties with TORs shall continue to pay for Transmission Losses or Ancillary Services requirements in accordance with any Existing Contracts applicable to those TORs as they may be modified or changed in accordance with the terms of the Existing Contract. Any affected Participating TOs shall continue to provide Transmission Losses and any other Ancillary Services to the holder of a TOR subject to an Existing Contract as may be required by the Existing Contract. As described in Section 17.3.3(3) above, the CAISO will charge Scheduling Coordinators submitting the TOR Self-Schedule the charges applicable to Transmission Losses, Ancillary Services, and ~~imbalance~~ ~~E~~energy in accordance with the CAISO Tariff (e.g., the Transmission Losses Charge based on the Marginal Cost of Losses), and any shortfall or surplus between the CAISO charges and the provisions of any applicable Existing Contract shall be settled bilaterally between the Existing Contract parties or through the relevant TO Tariff. To enable holders of TORs to determine whether the CAISO's calculations result in any associated shortfall or surplus and to enable the parties to the Existing Contracts to settle the differences bilaterally or through the relevant TO Tariff, the CAISO shall calculate and provide the Scheduling Coordinator's Settlements the amounts paid for the MCL for the amounts of MWh submitted with a valid TOR Self-Schedule. Each Participating TO will be responsible for recovering any deficits or crediting any surpluses associated with differences in Transmission Losses and Transmission Loss requirements and/or Ancillary Services requirements, through its bilateral arrangements or its Transmission Owner Tariff.

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17.6 Inter-Balancing Authority Area TOR Self-Schedule Bid Changes

Changes to TOR Self-Schedules that occur during the CAISO's Real-Time Market that involve changes to CAISO Balancing Authority Area imports or exports with other Balancing Authority Areas (that is, inter-Balancing Authority Area changes to TOR Self-Schedules) will be allowed and will be recorded by the CAISO based upon notification received from the Scheduling Coordinator representing the holder of the TOR. The Scheduling Coordinator representing the holder of the TOR must notify the CAISO of any such changes to external import/export in submitted TOR Self-Schedules. The Scheduling Coordinator representing the holder of the TOR must notify the CAISO of Real-Time Market changes to external import/export Interchange Schedules in submitted TOR Self-Schedules, by telephone. The timing and content of any such notification must be consistent with the TRTC Instructions previously submitted to the CAISO by the Non-Participating TO. The CAISO will manually adjust or update the FMM Schedule for the Scheduling Coordinator to conform with the other Balancing Authority Area's net TOR Self-Schedule in Real-Time, and the notifying Scheduling Coordinator will be responsible for and manage any resulting Energy imbalance. These ~~h~~imbalance ~~E~~energy deviations will be priced and charged to the Scheduling Coordinator representing the holder of the TOR in accordance with the relevant FMM or RTD LMP.

17.7 Intra-Balancing Authority Area TOR Self-Schedule Changes

Changes to TOR Self-Schedules that occur during the CAISO's Real-Time processes that do not involve changes to CAISO Balancing Authority Area imports or exports with other Balancing Authority Areas (that is, intra-Balancing Authority Area changes to Schedules) will be allowed and will give rise to ~~h~~imbalance ~~E~~energy deviations. These ~~h~~imbalance ~~E~~energy deviations will be priced and charged to the Scheduling Coordinator representing the holder of the TOR in accordance with the ~~Real-Time~~relevant FMM or RTD LMP.

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27.5.1.2 ~~**[Not Used] Accuracy Metric for Modeled External Unscheduled Flow in the Day-Ahead Market**~~

27.5.1.2.1 ~~**[Not Used] Accuracy Metric**~~

~~For each Day Ahead Market, the CAISO will calculate the external unscheduled flow accuracy metric as described further in this Section 27.5.1.2. The accuracy metric is a comparison of the magnitude of the difference between the following two amounts under two scenarios: 1) the actual unscheduled flows on the Interties caused by external Balancing Authority Area generation, load, and interchanges; and 2) the CAISO's modeled Day Ahead external unscheduled flow on the Interties per hour in MW. In the first scenario, the CAISO models the external unscheduled flow impacts of external Balancing Authority Area schedules in the Day Ahead Market. In the second scenario, the CAISO does not model these flow impacts. For purposes of the accuracy metric, the external unscheduled flow is defined as the flow impact over the CAISO Interties of supply, demand, and area to area net scheduled interchanges between external Balancing Authority Areas. The external unscheduled flow will be derived based on a power flow solution and will be calculated separately for the Day Ahead and actual network conditions on an average hourly basis for each Intertie. For the Day Ahead, the CAISO will rerun a solved case and isolate the flow impact of external Balancing Authority Areas, if modeled, to derive the modeled external unscheduled flow. For the actual network conditions, the CAISO will use the actual external area to area net scheduled Interchange and the State Estimator solution to capture the actual supply, demand, and topology, and will isolate the flow impact of external Balancing Authority Areas to derive the actual external unscheduled flow. To calculate the external unscheduled flow accuracy metric, the CAISO will compare the Day Ahead modeled external unscheduled flow and the actual external unscheduled flow for each of the scenarios. For the first scenario, the CAISO will take the difference per Intertie, per Trading Hour of the actual external unscheduled flow and the modeled Day Ahead external unscheduled flow. For the second scenario, the CAISO will also take the difference per Intertie, per Trading Hour of the actual external unscheduled flow and the modeled Day Ahead external unscheduled flow. Under the second scenario, the modeled Day Ahead external unscheduled flow is zero, so the resulting difference is the absolute value of the actual external unscheduled flow. The CAISO will sum the absolute value of~~

~~these sets of differences under the two scenarios.~~

27.5.1.2.2 [Not Used]Accuracy Metric Threshold and Suspension

~~To determine whether or not the CAISO has met the accuracy metric, the CAISO calculates the accuracy metric on an Intertie basis per Trading Hour and then sums the absolute value of the differences per Intertie, per Trading Hour across all Interties and all Trading Hours to calculate a three-week rolling average per the scenarios described in Section 27.5.1.2.1. The CAISO excludes from the accuracy metric the impact of the following unforeseen Real-Time events: the loss of direct current transmission lines, unexpected outages of generators over 1,000 MW, or a derate of over 1,000 MW at any Intertie. If the three-week rolling average of the aggregated accuracy metric shows that the magnitude of the difference under the first scenario is greater than the magnitude of the difference under the second scenario, as described in Section 27.5.1.2.1, the CAISO will suspend its consideration of external unscheduled flow due to external Balancing Authority Area schedules in the Day-Ahead Market by disabling the impact of the net-scheduled interchange between external Balancing Authority Areas. The suspension will be in place until the CAISO demonstrates that the three-week rolling average of the aggregated accuracy metric under the first scenario is less than it is under the second scenario. Even when the accuracy metric threshold is met, if the CAISO determines that the consideration of the external unscheduled flow is hampering the CAISO's ability to operate the system reliably, the CAISO may elect to suspend the consideration of the unscheduled flow in the Day-Ahead Market until it has determined that considering the external unscheduled flow no longer hampers its ability to operate the system reliably. Any suspension and return of the CAISO's consideration of external unscheduled flow in the Day-Ahead Market will be conducted as soon as practicable, consistent with and as permitted by the CAISO Markets timelines and the CAISO's processes. During any period of suspension, the CAISO will continue to calculate the accuracy metric offline and will base its reinstatement of external unscheduled flow consideration in the Day-Ahead Market on the accuracy metric being met based on the three-week rolling average.~~

27.5.1.2.3 [Not Used]Sunset

~~Section 27.5.1.2 and its subsections will no longer be effective, if the CAISO has not failed the metric described therein for twelve (12) consecutive months after the first twelve months that this section is~~

~~effective.~~

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27.5.3.2.2 Information Needed to Determine Application of MEEA-Specific Pricing in any Settlement Interval or Settlement Period

If an MEEA signatory submits a Bid in the CAISO Market and seeks to obtain an MEEA-specific LMP for an interchange transaction, the CAISO must be capable of verifying what portion (output in ~~megawatt hours~~MWh) of the resources identified in the MEEA, if any, were dispatched to implement the interchange transaction. To the extent that the resources identified in the MEEA, or portion thereof, were dispatched and operated for purposes other than the interchange transaction submitted in the CAISO Market, the Schedule or ~~Imbalance~~ Energy associated with the Bid submitted and cleared in the CAISO Market will not receive an MEEA-specific LMP, and will instead receive the default IBAA price specified in Appendix C, Section ~~G~~I.1.1. The CAISO will establish Resource IDs that are to be used only to submit Bids, including Self-Schedules, for the purpose of obtaining MEEA-specific pricing. MEEA signatories may obtain and use other Resource IDs to submit Bids, including Self-Schedules, that are not covered by an MEEA. Prior to obtaining and settling Resource IDs under the terms of the MEEA, the relevant Scheduling Coordinator shall attest that use of the Resource ID shall mean that the MEEA signatory dispatched a resource identified in an MEEA to support the MEEA interchange transaction. This attestation shall be executed under oath by an officer of the MEEA with knowledge of the MEEA signatory's operations. By actually using such Resource IDs, the Scheduling Coordinator represents that MEEA resources are dispatched to support such Bids, including Self-Schedules. The CAISO may challenge the use of these Resource IDs and conduct an audit under Section 27.5.3.7.

In connection with any such audit, the MEEA signatory shall support its certification with information demonstrating that an MEEA signatory resource was dispatched to support the interchange transaction. This information may include, but is not limited to, NERC tags, OASIS transmission service data, day-ahead load and resource plans, power purchase agreements or contracts demonstrating use of the California Oregon Transmission Project as well as marginal cost information. An MEEA signatory, however, is not required to provide marginal cost information to the CAISO to support its self-certification

and may support its self-certification with other information, including information identified in the preceding sentence. The MEEA signatory shall provide data in a format that the WECC accepts or other commonly used format. For any Settlement Interval or Period for which the CAISO challenges the use of Resource IDs under an MEEA, the CAISO shall apply MEEA pricing to the Settlement Interval or Period pending resolution of the challenge.

In addition, in the event that there is a Dynamic Resource-Specific System Resource in the IBAA, the MEEA may further provide that the MEEA signatory in control of such resource may also obtain pricing under the MEEA for imports to the CAISO Balancing Authority Area from the Dynamic Resource-Specific System Resource. For any portion of an interchange transaction for which the MEEA Entity has not self-certified that the resources were used to support interchange transactions, the default IBAA price specified in Appendix C, Section G.1.1 will apply for the corresponding volume and time period.

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27.8.3 Changes in Status and Configurations of Resource

Scheduling Coordinators may seek modifications to the Multi-Stage Generating Resource attributes listed below consistent with the process and timing requirements specified in Section 27.8.1 and the additional requirements discussed below in this Section 27.8.3:

- (1) Registration and qualification of a Generating Unit as a Multi-Stage Generating Resource.
- (2) Changes to the MSG Configurations attributes, which include:
 - a. addition of new MSG Configurations;
 - b. removal of an existing MSG Configuration;
 - c. a change in the physical units supporting the MSG Configuration;
 - d. a change to the MSG Configuration Start Up and Shut Down flags;
 - e. adding or removing an MSG Transition to the Transition Matrix;
 - f. a material change in the Transition Times contained in the Master File, which consists of a change that more than doubles the Transition Times or reduces it to

less than half; and

- g. a material change to the maximum Ramp Rate of the MSG Configuration(s) contained in the Master File, which consists of a change that more than doubles the maximum Ramp Rate or reduces it to less than half.

When transitioning to implement these changes across the midnight hour, for any Real-Time Market run in which the changes specified in this Section 27.8.3 are to take effect within the ~~T~~ime ~~H~~orizon of any of the Real-Time Market runs, the CAISO will Schedule, Dispatch, or award resources consistent with either the prior or new status and definitions, as appropriate, and required by any Real-Time conditions regardless of the resource's state scheduled or awarded in the immediately preceding Day-Ahead Market. A Scheduling Coordinator may unregister a Generating Unit from its Multi-Stage Generating Resource status subject to the timing requirements for Master File changes, and such changes are not subject to the timing requirements in Section 27.8.3. Changes to the attributes listed above in this Section may take effect, including the registration of new Multi-Stage Generating Resources, provided Scheduling Coordinators have previously followed the registration process requirements listed in Section 27.8.1. Changes to these attributes may only be made every sixty (60) days after the day on which any such changes have taken effect.

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29.10 Metering and Settlement Data

- (a) **Telemetry Requirements.** The EIM Entity shall ensure that each EIM Resource and non-participating resource in an EIM Entity Balancing Authority Area that is not a Generating Unit or is a Generating Unit with a rated capacity of 10 MW or greater (including each aggregated resource with a total rated capacity of 10 MW or greater) and each EIM Intertie has telemetry meeting the requirements of the Business Practice Manual for the Energy Imbalance Market.
- (b) **Metering for Settlement Purposes.** The EIM Entity shall ensure that each EIM Participating Resource and non-participating resource in an EIM Entity Balancing

Authority Area becomes either a CAISO Metered Entity or a Scheduling Coordinator Metered Entity and complies with the requirements of Section 10 except as provided in Section 29.10(c).

- (c) **Exception to Requirements of Section 10.3.9.** In the absence of metering standards set by a Local Regulatory Authority, EIM Participating Resources and non-participating resources in an EIM Entity Balancing Authority Area may qualify as Scheduling Coordinator Metered Entities without the need for third party certification if the CAISO determines that the applicable metering standards meet or exceed the standards for CAISO Metered Entities.
- (d) **Interchange Meter Data.** Metering for Settlement purposes is required for all EIM Interties.
- (e) **EIM Energy Imbalance with an External Balancing Authority Area.** For each EIM External Intertie Bid that clears the FMM resulting in a 15-minute EIM External Intertie schedule –
 - (1) the EIM Entity Scheduling Coordinator must submit to the CAISO the corresponding hourly transmission profile and 15-minute Energy profiles from the respective E-Tags, which must reflect the Point of Receipt and Point of Delivery that was declared in the FMM Bid submittal, at least 20 minutes before the start of the Operating Hour; and
 - (2) the EIM Entity Scheduling Coordinator must provide an updated Energy profile to the extent required by Section 30.~~5.76-2~~.

29.11 Settlements and Billing for EIM Market Participants

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- (n) **EIM Transfers and Settlement for Contingency Reserve Obligations.** The CAISO shall allocate Operating Reserve Obligations to EIM Entity Scheduling Coordinators for EIM Transfers as follows -
 - (1) EIM Entity Scheduling Coordinators will receive a payment equal to three (3) percent of the hourly MW EIM Transfer into the CAISO Balancing Authority Area

- multiplied by the hourly user rate for Spinning Reserves and Non-Spinning Reserves, as calculated per Section 11.10.3.32 and 11.10.4.32, respectively; and
- (2) EIM Entity Scheduling Coordinators will receive a charge equal to three (3) percent of the hourly MW EIM Transfer out of the CAISO Balancing Authority Area multiplied by the hourly user rate for Spinning Reserves and Non-Spinning Reserves, as calculated per Section 11.10.3.32 and 11.10.4.32, respectively.

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29.34 EIM Operations

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- (I) **EIM Resource Plan Evaluation.**
- (1) **Requirement.** The EIM Base Schedules for resources included in the EIM Resource Plan must balance the Demand Forecast for each EIM Entity Balancing Authority Area.
- (2) **Insufficient Supply.** An EIM Resource Plan shall be deemed to have insufficient Supply if the sum of EIM Base Schedules from non-participating resources and the sum of the highest quantity offers in the Energy Bid range from EIM Participating Resources, including Interchange with other Balancing Authority Areas, is less than the total Demand Forecast that the EIM Entity Scheduling Coordinator has decided to use for the associated EIM Entity Balancing Authority Area.
- (3) **Excess Supply.** An EIM Resource Plan shall be deemed to have excessive Supply if the sum of EIM Base Schedules from non-participating resources and the sum of the lowest quantity Bids in the Energy Bid range from EIM Participating Resources is greater than the total Demand Forecast that the EIM Entity Scheduling Coordinator has decided to use for the associated EIM Entity Balancing Authority Area.

(4) **Additional Hourly Capacity Requirements.**

(A) **In General.** If the CAISO determines under the procedures set forth in the Business Practice Manual for the Energy Imbalance Market that a Balancing Authority Area in the EIM Area has historically high import or export schedule changes between forty minutes and twenty minutes before the start of the Trading Hour, the CAISO will add to the Balancing Authority Area in the EIM Area's capacity requirements an additional requirement.

(B) **Additional Capacity Requirement.** On a monthly basis, according to procedures set forth in the Business Practice Manual for the Energy Imbalance Market, the CAISO will calculate for each Balancing Authority Area in the EIM Area histograms of the percentage of the difference between imports and exports scheduled at forty minutes before the start of the Trading Hour and the final imports and exports at twenty minutes before the start of the Trading Hour based on the submitted E-Tags at those times and calculate additional upward and downward requirements for the capacity test component of the resource sufficiency evaluation.

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30.5.2.4 Supply Bids for System Resources

In addition to the common elements listed in Section 30.5.2.1, Supply Bids for System Resources shall also contain: Start-Up Costs; and Minimum Load Costs. Resource-Specific System Resources are subject to the Proxy Cost methodology or the Registered Cost methodology for Start-Up Costs and Minimum Load Costs as provided in Section 30.4, and Transaction ID as created by the CAISO. Other System Resources are not eligible to recover Start-Up Costs and Minimum Load Costs. Resource-Specific System Resources are eligible to participate in the Day-Ahead Market on an equivalent basis as

Generating Units and are not obligated to participate in RUC or the RTM if the resource did not receive a Day-Ahead Schedule unless the resource is a Resource Adequacy Resource. If the Resource-Specific System Resource is a Resource Adequacy Resource, the Scheduling Coordinator for the resource is obligated to make it available to the CAISO Market as prescribed by Section 40.6. Dynamic Resource-Specific System Resources are also eligible to participate in ~~the HASP and~~ RTM on an equivalent basis as Generating Units. The quantity (in MWh) of Energy categorized as Interruptible Imports (non-firm imports) can only be submitted through Self-Schedules in the Day-Ahead Market and cannot be incrementally increased in the ~~HASP or~~ RTM. Bids submitted to the Day-Ahead Market for ELS Resources will be applicable for two days after they have been submitted and cannot be changed the day after they have been submitted.

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30.5.2.7.1 Regulation Up or Regulation Down Bid Information

In the case of Regulation Up or Regulation Down, the Ancillary Services Bid or submission to self-provide must also contain: (a) the upward and downward range of generating capacity over which the resource is willing to provide Regulation in ten (10) minutes; (b) the Bid price of the capacity reservation, stated separately for Regulation Up and Regulation Down (\$/MW); and (c) the Bid price (\$) of the Mileage stated separately for Regulation Up and Regulation Down. For submissions to self-provide Regulation Up or Regulation Down, the price for the capacity reservation shall be \$0/MWh and the price for Mileage shall be \$0. In the case of Regulation Up or Regulation Down from Dynamic System Resources, the Ancillary Services Bid must also contain the Contract Reference Number, if applicable. Scheduling Coordinators may include inter-temporal opportunity costs in their Regulation capacity bids, but these inter-temporal opportunity costs must be verifiable. Ancillary Services Bids submitted to the Day-Ahead or Real-Time Market for Regulation need not be accompanied by an Energy Supply Bid that covers the Ancillary Services capacity being offered. A Regulation Down Bid will be erased unless there is an Energy Supply Bid or Energy Self-Schedule at a level that would permit the resource to provide Regulation Down to its lower Regulation Limit. A submission to self-provide Regulation Down will be erased unless there is an Energy Self-Schedule at a level that would permit the resource to provide Regulation Down to its lower

Regulation Limit. A Regulation Up Bid will be erased unless there is an Energy Supply Bid or Energy Self-Schedule at a level that would permit the resource to provide Regulation Up within its Regulation Limit. A submission to self-provide Regulation Up will be erased unless there is an Energy Self-Schedule at a level that would permit the resource to provide Regulation Up within its Regulation Limit.

30.5.2.7.2 Spinning Reserve Capacity Bid Information

In the case of Spinning Reserve capacity, the Ancillary Services Bid must also contain: (a) MW of additional capability synchronized to the system, immediately responsive to system frequency, and available within ten (10) minutes; (b) Bid price of capacity reservation; and (c) an indication whether the capacity reserved would be available to supply imbalance energy only in the event of the occurrence of an unplanned Outage, a Contingency or an imminent or actual System Emergency (Contingency Flag).

In the case of Spinning Reserve capacity from System Resources, the Ancillary Services Bid must also contain: (a) Schedule ID (NERC ID number); and (b) a Contract Reference Number, if applicable.

Ancillary Services Bids and Submissions to Self-Provide an Ancillary Services submitted to the Real-Time Market for Spinning Reserves must also submit an Energy Bid that covers the Ancillary Services capacity being offered into the Real-Time Market.

30.5.2.7.3 Non-Spinning Reserve Capacity

In the case of Non-Spinning Reserve, the Ancillary Service Bid must also contain: (a) the MW capability available within ten (10) minutes; (b) the Bid price of the capacity reservation; (c) time of synchronization following notification (minutes); and (d) an indication whether the capacity reserved would be available to supply imbalance energy only in the event of the occurrence of an unplanned Outage, a Contingency or an imminent or actual System Emergency (Contingency Flag).

In the case of Non-Spinning Reserve Capacity from System Resources, the Ancillary Services Bid must also contain: (a) Schedule ID (NERC ID number); and (b) a Contract Reference Number, if applicable.

In the case of Non-Spinning Reserve Capacity from Participating Load within the CAISO Balancing Authority Area, the Ancillary Service Bid must also contain: (a) a Load identification name and Location Code; (b) Demand reduction available within ten (10) minutes, (c) time to interruption following notification (minutes); and (d) maximum allowable curtailment duration (hour). In the case of Aggregated Participating Load, and Proxy Demand Resources, Scheduling Coordinators must submit Bids using a Generating Unit, Physical Scheduling

Plant Resource ID, or Resource ID for the Proxy Demand Resource for the Demand reduction capacity of the Aggregated Participating Load through a Bid to provide Non-Spinning Reserve or a Submission to Self-Provide an Ancillary Service for Non-Spinning Reserve. Ancillary Services Bids and Submissions to Self-Provide an Ancillary Services submitted to the Real-Time Market for Non-Spinning Reserves must also submit an Energy Bid that covers the Ancillary Services capacity being offered into the Real-Time Market.

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30.5.7.130-6.2 E-Tag Rules and Treatment of Inertie Schedules

In addition to complying with all generally applicable E-Tagging requirements, Scheduling Coordinators must submit their E-tags consistent with the requirements specified in this Section 30.5.7. If a Scheduling Coordinator receives an intra-hour Schedule change, then the Scheduling Coordinator must, by twenty minutes before the start of the FMM interval to which the Schedule change applies, ensure that an updated energy profile reflects the change. Absent extenuating circumstances, the CAISO automatically updates Energy profiles on E-tags for Energy Schedules that change from HASP to the FMM within a Trading Hour. In performing this service for a Scheduling Coordinator, the CAISO does not assume any responsibility for compliance with any E-tag requirements or obligations to which the Scheduling Coordinator is subject. The changed energy profile will apply for the balance of the operating hour unless it is subsequently changed by a further updated energy profile.

30.5.7.130-6.2.1 Self-Scheduled Hourly Blocks

By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of Self-Scheduled Hourly Blocks. The transmission profile must be greater than or equal to the Energy profile, and the Energy profile must equal the Self-Scheduled Hourly Block. The CAISO may modify the Energy profile due to Reliability related curtailments.

30.5.7.230-6.2.2 Variable Energy Resource Self-Schedule

By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of a Variable Energy Resource Self-Schedule. The transmission profile must be greater

than or equal to the Energy profile, and the Energy profile must equal the Variable Energy Resource Self-Schedule. The CAISO may modify the Energy profile due to Reliability related curtailments.

30.5.7.330-6-2-3 Economic Hourly Bid

By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of an Economic Hourly Block Bid. The transmission profile must be greater than or equal to the Energy profile, and the Energy profile must equal the Economic Hourly Block Bid as awarded through HASP. The CAISO may modify the Energy profile due to Reliability related curtailments.

30.5.7.430-6-2-4 Economic Hourly Block Bid with Intra-Hour Option

By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of an Economic Hourly Block Bid. The transmission profile must be greater than or equal to the Energy profile, and the Energy profile must equal the Economic Hourly Block Bid as awarded through HASP. The CAISO may modify the Energy profile due to Reliability related curtailments. In the case of an intra-hour redispatch from the FMM, the CAISO may increment or decrement the Energy profile to correspond to the intra-hour redispatch.

30.5.7.530-6-2-5 FMM Economic Bid

By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of a FMM Economic Bid. The transmission profile must be greater than or equal to the maximum bid-in capacity for the Trading Hour, and the Energy profile must equal the MWs awarded for the first FMM interval of the Operating Hour. If the Scheduling Coordinator intends to limit its participation in the FMM to the quantity in the HASP advisory energy schedule (including zero), the Scheduling Coordinator may update its transmission profile to the maximum amount it wants to make available to the FMM prior to the start of the binding FMM optimization, which is no earlier than thirty-seven and a half minutes before the applicable Trading Hour. If the Scheduling Coordinator does not have a transmission profile greater than or equal to its advisory Energy schedule, then the CAISO will limit the schedule for Energy in the FMM so that it does not exceed amounts greater than what is listed in the transmission profile. Cleared FMM Economic Bids are eligible for Bid Cost Recovery as specified in Section 11.8.

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30.6.2 Bidding and Scheduling of RDRRs

Unless otherwise specified in the CAISO Tariff and applicable Business Practice Manuals, and subject to Section 30.6.3, the CAISO will treat Bids for Energy on behalf of Reliability Demand Response Resources like Bids for Energy on behalf of other types of supply resources. A Scheduling Coordinator for a Demand Response Provider representing a Reliability Demand Response Resource may submit Energy Bids for the Reliability Demand Response Resource only in the Day-Ahead Market and in the Real-Time Market, but may not submit Energy Self-Schedules for the Reliability Demand Response Resource, may not Self-Provide Ancillary Services from the Reliability Demand Response Resource, and may not submit RUC Availability Bids or Ancillary Service Bids for the Reliability Demand Response Resource. The Demand Response Provider's Demand Response Services for Reliability Demand Response Resources will be bid separately and independently from the LSE's underlying Demand Bid.

30.6.2.1 Bidding and Scheduling of RDRRs in the Real-Time Market

30.6.2.1.1 Limitations on Obligation to Bid in the Real-Time Market

Within each Reliability Demand Response Services Term, any capacity of a Reliability Demand Response Resource that remains uncommitted after the Day-Ahead Market shall be bid in the Real-Time Market in order to be available to provide Demand Response Services in Real-Time until such time as the Reliability Demand Response Resource has reached the RDRR Availability Limit for the Reliability Demand Response Services Term. Within each Reliability Demand Response Services Term, any capacity of a Reliability Demand Response Resource that remains uncommitted after the Day-Ahead Market may be (but is not required to be) bid in the Real-Time Market in order to be available to provide Demand Response Services in Real-Time after the Reliability Demand Response Resource has reached the RDRR Availability Limit during the Reliability Demand Response Services Term.

30.6.2.1.2 Real-Time Dispatch Options

For purposes of bidding and scheduling in the Real-Time Market, each Scheduling Coordinator for a Demand Response Provider representing a Reliability Demand Response Resource shall select either the Marginal Real-Time Dispatch Option or the Discrete Real-Time Dispatch Option prior to the start of the initial Reliability Demand Response Services Term applicable to the Reliability Demand Response

Resource. The selection for each Reliability Demand Response Resource shall remain in effect until such time as the Scheduling Coordinator for the Reliability Demand Response Resource chooses to change its selection from the Marginal Real-Time Dispatch Option to the Discrete Real-Time Dispatch Option or vice versa, in which case the change in selection shall go into effect at the start of the next Reliability Demand Response Services Term applicable to the Reliability Demand Response Resource. A Reliability Demand Response Resource that is subject to either the Marginal Real-Time Dispatch Option or the Discrete Real-Time Dispatch Option shall have Minimum Load Costs of zero (0) dollars registered in the Master File.

30.6.2.1.2.1 Marginal Real-Time Dispatch Option

A Reliability Demand Response Resource that is subject to the Marginal Real-Time Dispatch Option:

- (a) May submit either a single-segment Bid or a multi-segment bid in the Real-Time Market that must be at least ninety-five (95) percent of the applicable maximum Bid price and can be no greater than one hundred (100) percent of the applicable maximum Bid price set forth in Section 39.6.1.1.
- (b) Shall be dispatched as a marginal resource if it is dispatched by the CAISO.

30.6.2.1.2.2 Discrete Real-Time Dispatch Option

A Reliability Demand Response Resource that is subject to the Discrete Real-Time Dispatch Option:

- (a) May submit only a single-segment Bid in the Real-Time Market that must be at least ninety-five (95) percent of the applicable maximum Bid price and can be no greater than one hundred (100) percent of the applicable maximum Bid price set forth in Section 39.6.1.1.
- (b) Shall be dispatched as a discrete (non-marginal) resource if it is dispatched by the CAISO.

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34.1.1 Day-Ahead Market Results as Inputs to the Real-Time Market

All of the Real-Time Market processes utilize results produced by the Day-Ahead Market for each Trading Hour of the Trading Day, including the combined commitments contained in the Day-Ahead Schedules, Day-Ahead Ancillary Services Awards, and RUC Awards. ~~Although the RTM utilizes such~~ These DAM results ~~as an are~~ inputs to the RTM, ~~and t~~he transactions associated with ~~these~~ DAM results are settled based on the relevant DAM prices, ~~such transactions and~~ are not deemed performed ~~until in~~ the Real-Time Market.

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34.1.6.3 ~~Participating Intermittent Resources under PIRP Protective Measures~~

~~For Participating Intermittent Resources that have elected PIRP Protective Measures, the CAISO will use a Self-Schedule of MWhs that is equal to the MWhs specified in the output forecast for that resource created by the CAISO ninety (90) minutes before the applicable Trading Hour to clear the resource in the RTM.~~

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34.5.3 Real-Time Manual Dispatch

RTMD mode of operation for RTD is a merit-order run activated upon CAISO Operator request as a backup process in case the normal RTED process fails to converge. The RTMD run will provide the CAISO Operator a list of resources and quantity of MW available for Dispatch in merit-order based on Operational Ramp Rate but otherwise ignores Transmission Losses and Transmission Constraints. The CAISO Operator may dispatch resources from the list by identifying the quantity of FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy that is required for the system and/or directly selecting resources from the merit order taking into consideration actual operating conditions. After Dispatches have been selected, reviewed and accepted by the CAISO Operator, Dispatch Instructions

will be communicated in accordance with Section 6.3. While the RTMD mode is being used for Dispatch a uniform five-minute MCP will be produced for all PNodes based on the merit order Dispatch. Until RTMD is actually run and RTMD-based Dispatch Instructions are issued after RTED fails to converge, all five-minute Dispatch Interval LMPs will be set to the last LMP at each Node produced by the last RTED run that converged.

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34.8 Dispatch Instructions to Units, Participating Loads, PDRs, and RDRRs

The CAISO may issue Dispatch Instructions covering:

- (a) Ancillary Services;
- (b) Energy, which may be used for:
 - (i) Congestion relief;
 - (ii) provision of imbalance Eenergy; or
- (c) agency operation of Generating Units, Participating Loads, Proxy Demand Resources, or Interconnection schedules, for example:
 - (i) output or Demand that can be Dispatched to meet Applicable Reliability Criteria;
 - (ii) Generating Units that can be Dispatched for Black Start;
 - (iii) Generating Units that can be Dispatched to maintain governor control regardless of their Energy schedules;
- (d) the operation of voltage control equipment applied on Generating Units as described in this CAISO Tariff;
- (e) MSS Load following instructions provided to the CAISO, which the CAISO incorporates to create their Dispatch Instructions;
- (f) Dispatch necessary to respond to a System Emergency or imminent emergency;
- (g) Transition Instructions;
- (h) Dispatch of Reliability Demand Response Resources pursuant to Section 34.4822; or
- (i) Uncertainty Awards.

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34.11.3 Transmission-Related Modeling Limitations

The CAISO may also manually Dispatch resources in addition to or instead of resources with a Day-Ahead Schedule or dispatched by the RTM optimization software, during or prior to the Real-Time as appropriate, to address transmission-related modeling limitations in the Full Network Model.

Transmission-related modeling limitations for the purposes of Exceptional Dispatch, including for settlement of such Exceptional Dispatch as described in Section 11.5.6, shall consist of any FNM modeling limitations that arise from transmission maintenance, lack of Voltage Support at proper levels as well as incomplete or incorrect information about the transmission network, for which the Participating TOs have primary responsibility. The CAISO shall also manually Dispatch resources under this Section 34.11.3 in response to system conditions including threatened or imminent reliability conditions for which the timing of the Real-Time Market optimization and system modeling are either too slow or incapable of bringing the CAISO Controlled Grid back to reliable operations in an appropriate time-frame based on the timing and physical characteristics of available resources to the CAISO. All reliability-based Exceptional Dispatch Instructions for Reliability Demand Response Resources, including for testing, will be issued under this Section 34.11.3.

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34.13.2 Failure to Conform to Dispatch Instructions

In the event that, in carrying out the Dispatch Instruction, an unforeseen problem arises (relating to plant operations or equipment, personnel or the public safety), the recipient of the Dispatch Instruction must notify the CAISO or, in the case of a Generator, the relevant Scheduling Coordinator immediately. The relevant Scheduling Coordinator shall notify the CAISO of the problem immediately. If a resource is unavailable or incapable of responding to a Dispatch Instruction, or fails to respond to a Dispatch Instruction in accordance with its terms, the resource shall be considered to be non-conforming to the

Dispatch Instruction unless the resource has notified the CAISO of an event that prevents it from performing its obligations within thirty (30) minutes of the onset of such event through a submission in the CAISO's outage management system pursuant to Section 9 ~~log entry~~. Notification of non-compliance via the Automated Dispatch System (ADS) will not supplant nor serve as the official notification mechanism to the CAISO. If the resource is considered to be non-conforming as described above, the Scheduling Coordinator for the resource concerned shall be subject to Uninstructed Imbalance Energy as specified in Section 11.5.2 ~~and Uninstructed Deviation Penalties as specified in Section 11.23~~. This applies whether any Ancillary Services concerned are contracted or Self-Provided. For a Non-Dynamic System Resource Dispatch Instruction prior to the Trading Hour, the Scheduling Coordinator shall inform the CAISO of its ability to conform to a Dispatch Instruction via ADS. The Non-Dynamic System Resource has the option to accept, partially accept, or decline the Dispatch Instruction, but in any case must respond within the timeframe specified in a Business Practice Manual. The Non-Dynamic System Resource can change its response within the indicated timeframe. If a Non-Dynamic System Resource does not respond within the indicated timeframe, the Dispatch Instruction will be considered accepted. ~~A decline of such a Non-Dynamic System Resource for a Dispatch Instruction received at least forty (40) minutes prior to the Trading Hour will be subject to Uninstructed Deviation Penalties as specific in Section 11.23. A decline of such a Non-Dynamic System Resource for a Dispatch Instruction received less than forty (40) minutes prior to the Trading Hour will not be subject to Uninstructed Deviation Penalties. A Non-Dynamic System Resource that only partially accepts a Dispatch Instruction is subject to Uninstructed Deviation Penalties for the portion of the Dispatch Instruction that is declined.~~

When a resource demonstrates that it is not following Dispatch Instructions, the RTM will no longer assume that the resource will ramp from its current output level. The RTM assumes the resource to be "non-compliant" if it is deviating its five (5)-minute Ramping capability for more than N intervals by a magnitude determined by the CAISO based on its determination that it is necessary to improve the calculation of the expected ~~l~~ imbalance ~~E~~ energy as further defined in the BPM. When a resource is identified as "non-compliant," RTM will set the Dispatch operating target for that resource equal to its actual output in the Market Clearing software such that the persistent error does not cause excessive AGC action and consequently require CAISO to take additional action to comply with reliability

requirements. Such a resource will be considered to have returned to compliance when the resource's State Estimator or telemetry value (whichever is applicable) is within the above specified criteria. During the time when the resource is "non-compliant," the last applicable Dispatch target shall be communicated to the Scheduling Coordinator as the Dispatch operating target. The last applicable Dispatch target may be (i) the last Dispatch operating target within the current Trading Hour that was instructed prior to the resource becoming "non-compliant," or (ii) the Day-Ahead Schedule or (iii) awarded Self-Schedule Hourly Block depending on whether the resource submitted a Bid and the length of time the resource was "non-compliant," or (iv) for a Dynamic System Resource or a Pseudo-Tie Generating Unit that is an Eligible Intermittent Resource, the most recently available telemetry for the actual output. During the time the resource is deemed to be "non-compliant" the CAISO will suspend the resource's eligibility for Ancillary Services and Uncertainty Awards.

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34.17.1 Resource Constraints

The SCED shall enforce the following resource physical constraints:

- (a) Minimum and maximum operating resource limits. Outages and limitations due to transmission clearances shall be reflected in these limits. The more restrictive operating or regulating limit shall be used for resources providing Regulation so that the SCED shall not Dispatch them outside their Regulating Range.
- (b) Forbidden Operating Regions. When ramping in the Forbidden Operating Region, the implicit ramp rate will be used as determined based on the time it takes for the resource to cross its Forbidden Operating Region. A resource can only be ramped through a Forbidden Operating Region after being dispatched into a Forbidden Operating Region. The CAISO will not Dispatch a resource within its Forbidden Operating Regions in the Real-Time Market, except that the CAISO may Dispatch the resource through the Forbidden Operating Region in the direction that the resource entered the Forbidden Operating Region at the maximum applicable Ramp Rate over consecutive Dispatch

Intervals. A resource with a Forbidden Operating Region cannot provide Ancillary Services in a particular fifteen (15) minute Dispatch Interval unless that resource can complete its transit through the relevant Forbidden Operating Region within that particular Dispatch Interval.

- (c) Operational Ramp Rates and Start-Up Times. The Operational Ramp Rate for resources shall be used as the basis for all Dispatch Instructions, provided that the Dispatch Operating Point for resources that are providing Regulation remains within their applicable Regulating Range. The Regulating Range will limit the Ramping of Dispatch Instructions issued to resources that are providing Regulation. The Ramp Rate for Non-Dynamic System Resources cleared in the FMM will not be observed. Rather, the ramp of the Non-Dynamic System Resource will respect inter-Balancing Authority Area Ramping conventions established by WECC. Ramp Rates for Dynamic System Resources will be observed like Participating Generators in the RTD. Each Energy Bid shall be Dispatched only up to the amount of Δ imbalance E_{energy} that can be provided within the Dispatch Interval based on the Operational Ramp Rate. The Dispatch Instruction shall consider the relevant Start-Up Time as, if the resource is off-line, the relevant Operational Ramp Rate function, and any other resource constraints or prior commitments such as Schedule changes across hours and previous Dispatch Instructions. The Start-Up Time shall be determined from the Start-Up Time function and when the resource was last shut down. The Start-Up Time shall not apply if the corresponding resource is on-line or expected to start.
- (d) Maximum number of daily Start-Ups. The SCED shall not cause a resource to exceed its daily maximum number of Start-Ups.
- (e) Minimum Run Time and Down Time. The SCED shall not start up off-line resources before their Minimum Down Time expires and shall not shut down on-line resources before their Minimum Run Time expires. For Multi-Stage Generating Resources these requirements shall be observed both for the Generating Unit and MSG Configuration.

- (f) Operating (Spinning and Non-Spinning) Reserve. The SCED shall Dispatch Spinning and Non-Spinning Reserve subject to the limitations set forth in Section 34.18.23.
- (g) Non-Dynamic System Resources. If Dispatched, each Non-Dynamic System Resource flagged for hourly pre-dispatch in the next Trading Hour shall be Dispatched to operate at a constant level over the entire Trading Hour. The HASP shall perform the hourly pre-dispatch for each Trading Hour once prior to the Operating Hour. The hourly pre-dispatch shall not subsequently be revised by the SCED and the resulting HASP Block Intertie Schedules are financially binding and are settled pursuant to Section 11.54.
- (h) Daily Energy use limitation to the extent that Energy limitation is expressed in a resource's Bid. If the Energy Limits are violated for purposes of Exceptional Dispatches for System Reliability, the Bid will be settled as provided in Section 11.5.6.1.

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34.17.4 Inter-Hour Dispatch of Resources with Real-Time Energy Bids

Dispatch Instructions associated with the ramp between the Real-Time Market Bid in one hour and the Real-Time Market Bid in the immediately succeeding Trading Hour shall be determined optimally by the SCED if the CAISO has Bids for either or both relevant Operating Hours. For any Operating Hour(s) for which Bids have been submitted Dispatch Instructions will be optimized such that the Dispatch Operating Point is within the Bid range(s). For any Operating Hour without submitted Bids, Dispatch Instructions will be optimized such that the Dispatch Operating Point conforms to the Schedule within the Operating Hour. Energy resulting from the Standard Ramp shall be deemed Standard Ramping Energy and will be settled in accordance with Section 11.5.1. Energy resulting from any ramp extending beyond the Standard Ramp will be deemed Ramping Energy Deviation and will be settled in accordance with Section 11.5.1. Energy delivered or consumed as a result of CAISO Dispatch of a resource's Energy Bid in one Operating Hour to a Dispatch Operating Point such that the resource cannot return to its successive Operating Hour Schedule or to an infra-marginal operating point by the beginning of the next Operating

Hour is Residual Imbalance Energy and shall be settled as RTD Instructed Imbalance Energy as provided for in Section 11.5.1 and also may be eligible for recovery of its applicable Energy Bid Costs in accordance with Section 11.8. Similarly, Energy delivered or consumed as a result of CAISO Dispatch of a resource's Energy Bid in a future Operating Hour to a Dispatch Operating Point different from its current Operating Point prior to the end of the current Operating Hour is also considered Residual Imbalance Energy and shall be settled as RTD Instructed Imbalance Energy as provided for in Section 11.5.1 and also may be eligible for recovery of its applicable Energy Bid Costs in accordance with Section 11.8. When Ramping Energy Deviation and Residual Imbalance Energy coexist within a given Dispatch Interval, the Ramping Energy Deviation shall be the portion of RTD Instructed Imbalance Energy that is produced or consumed within the Schedule-change band defined by the accepted RTM Bids of the two consecutive Settlement Periods; the Residual Imbalance Energy shall be the portion of RTD Instructed Imbalance Energy that is produced or consumed outside the Schedule-change band.

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34.17.6 Intra-Hour Exceptional Dispatches

For the special case where an Exceptional Dispatch begins in the new hour and the rules above would result in the violation of the resource's inter-temporal constraint(s), the following rules are applied and the Energy is settled as FMM Exceptional Dispatch or RTD Exceptional Dispatch Energy as described in Section 11.5.6.

- (a) If the ramp time is greater than one hour or greater than what can be achieved when RTM receives the constraint, RTM starts the ramp at the earliest possible time and continues Ramping the resource in the new Trading Hour.
- (b) If the ramp time results in starting the ramp less than ten (10) minutes before the start of the hour, RTM instead starts the ramp at ten (10) minutes before the start of the hour and ramps the resource at a uniform rate so that it meets the constraint by the start time of the Exceptional Dispatch.
- (c) If the new hour's Day-Ahead Schedule is beyond the Exceptional Dispatch constraint,

RTM resumes the basic Ramping rules after the Exceptional Dispatch constraint is met, but limits the Ramp Rate as necessary to ensure that the resource does not complete its ramp before ten (10) minutes after the hour.

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34.20.1 General Principles

FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy shall be paid or charged at the applicable FMM or RTD LMP. ~~and~~ Uninstructed Imbalance Energy shall be paid or charged the applicable ~~FMM or~~ RTD LMP. These prices are determined using the Dispatch Interval LMPs. The Dispatch Interval LMPs shall be based on the Bid of the marginal Generating Units, System Units, Participating Loads, Reliability Demand Response Resources, and Proxy Demand Resources dispatched by the CAISO to increase or reduce Demand or Energy output in each Dispatch Interval as provided in Section 34.20.2.1.

The CAISO will respond to the Dispatch Instructions issued by the SCED to the extent practical in the time available and acting in accordance with Good Utility Practice. The CAISO will record the reasons for any variation from the Dispatch Instructions issued by the SCED.

34.20.2 Determining Real-Time LMPs

34.20.2.1 Dispatch Interval Real-Time LMPs

34.20.2.2 Computation

For each Dispatch Interval, the CAISO will compute updated ~~h~~ imbalance ~~E~~ energy needs and will Dispatch Generating Units, System Units, Dynamic System Resources, Participating Load, Reliability Demand Response Resources, and Proxy Demand Resources according to the CAISO's SCED during that time period to meet ~~h~~ imbalance ~~E~~ energy requirements. The RTM transactions will be settled at the Dispatch Interval LMPs in accordance with Section 11.5.

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34.2234.18 Real-Time Dispatch of RDRRs

The CAISO may issue an Exceptional Dispatch Instruction for the Reliability Demand Response Resource for reliability or to perform a test as provided in Section 34.119.3. An entity other than the CAISO that has a contractual or tariff-based right to do so may dispatch a Reliability Demand Response Resource in Real-Time in order to (1) mitigate a local transmission or distribution system emergency pursuant to applicable state or local programs, contracts, or regulatory requirements not set forth in the CAISO Tariff or (2) perform a test. If an entity other than the CAISO dispatches a Reliability Demand Response Resource in Real-Time in order to mitigate a local transmission or distribution system emergency or perform a test, the Scheduling Coordinator for the Demand Response Provider representing the Reliability Demand Response Resource shall immediately inform the CAISO, through the CAISO's Outage reporting system, that such dispatch has occurred or will occur and the MW amount of the dispatch.

34.22.134.18.1 Testing of RDRRs

The CAISO may issue one (1) unannounced Exceptional Dispatch Instruction per year to each Reliability Demand Response Resource pursuant to Section 34.119.2 in order to test the availability and performance of the Reliability Demand Response Resource. The Demand Response Provider representing the Reliability Demand Response Resource may also test its Reliability Demand Response Resources in coordination with the CAISO. Any Demand Response Provider initiated testing will not trigger any CAISO settlement. The CAISO will share the results of all tests of the Reliability Demand Response Resource with the applicable Local Regulatory Authority. All tests of the Reliability Demand Response Resource shall count toward its RDRR Availability Limit. If, prior to the performance of a CAISO unannounced yearly test, the Reliability Demand Response Resource provides Demand Response Services in that year, its provision of Demand Response Services will eliminate the need for that year's test. Testing of Reliability Demand Response Resources will be conducted as described in the applicable Operating Procedure or Business Practice Manual.

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39.10.1 Measures for Resources Eligible for Supplemental Revenues

In all cases where a resource is subject to Mitigation Measures under Section 39.10, and the resource is eligible for supplemental revenues pursuant to Section 39.10.3, FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy delivered by the resource shall be settled as set forth in either Section 11.5.6.7.1 or Section 11.5.6.7.3, whichever is applicable.

39.10.2 Resources Not Eligible for Supplemental Revenues

In all cases where a resource is subject to Mitigation Measures under Section 39.10, and the resource is not eligible for supplemental revenues pursuant to Section 39.10.3, FMM Exceptional Dispatch Energy or RTD Exceptional Dispatch Energy delivered by the resource shall be settled as set forth in either Section 11.5.6.7.2 or Section 11.5.6.7.3, whichever is applicable.

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39.10.5 Calculation of Exceptional Dispatch Supplemental Revenues

The amount of Exceptional Dispatch supplemental revenues accrued by a resource within any 30-day period as defined in Section 39.10.4 shall be a running total of the sum of supplemental revenues received during that 30-day period. The calculation of supplemental revenues accrued by a resource within a 30-day period is based on the higher of (a) the Energy Bid price for the resource minus the Default Energy Bid price for the resource or (b) the Resource-Specific Settlement Interval-relevant FMM or RTD LMP minus the Default Energy Bid price for the resource. The greater of (a) or (b) is multiplied by the amount of Energy provided by the resource under Exceptional Dispatch, and the results of that multiplication are summed across the successive hours of the 30-day period. Once the resource has reached the limit on supplemental revenues described in Section 39.10.4 based on the calculation above, then the Settlement for the resource will be as provided in Section 11.5.6.7.2 and the resource will not be eligible for additional supplemental revenues for the rest of the 30-day period.

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Appendix A

Master Definition Supplement

* * * * *

- Ancillary Services Obligation or AS Obligation

A Scheduling Coordinator's hourly obligation for Regulation Down, Regulation Up, Spinning Reserves, and Non-Spinning Reserves calculated pursuant to Sections 11.10.2.1.3, 11.10.2.2.2, 11.10.3.32, and 11.10.4.32, respectively.

* * * * *

- Dispatch Interval LMP

The price of ~~Imbalance E~~nergy determined at each Dispatch Interval in accordance with Section 11.5.4.

* * * * *

- Dispatch Operating Point

The expected operating point of a resource that has received a Dispatch Instruction. The resource is expected to operate at the Dispatch Operating Point after completing the Dispatch Instruction, taking into account any relevant Ramp Rate and time delays. Energy expected to be produced or consumed above or below the Day-Ahead Schedule in response to a Dispatch Instruction constitutes FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy. For resources that have not received a Dispatch Instruction, the Dispatch Operating Point defaults to the corresponding Day-Ahead Schedule.

* * * * *

- Dynamic Scheduling Host Balancing Authority Operating Agreement

An agreement entered into between the CAISO and a ~~Host~~ Balancing Authority governing the terms of dynamic scheduling between the two Balancing Authorities where one of the Balancing Authorities is designated as the Host Balancing Authority ~~and the CAISO~~ in accordance with the Dynamic Scheduling Protocol set forth in Appendix M, a pro forma version of which agreement is set forth in Appendix B.9.

* * * * *

- FMM Instructed Imbalance Energy or (FMM IIE)

The accounted for energy resulting from the difference between a resource's portion of Imbalance Energy

~~resulting from~~ Day-Ahead Schedules or EIM Base Schedules and FMM Schedules determined pursuant to Section 11.5.1.1.

* * * * *

~~- [Not Used] IIE~~

~~Instructed Imbalance Energy~~

* * * * *

~~- [Not Used] IIE Settlement Amount~~

~~The payment due a Scheduling Coordinator for positive Instructed Imbalance Energy or the charge assessed on a Scheduling Coordinator for negative Instructed Imbalance Energy, as calculated pursuant to Section 11.5.1.~~

* * * * *

~~- [Not Used] PIRP Protective Measures~~

~~The temporary Settlement treatment delineated in Section 11.12.1 that is provided to Participating Intermittent Resources that qualify to receive such treatment under Section 4.8.1 and that complete their election to receive such treatment no later than thirty (30) days after the effective date of Section 4.8.1.~~

* * * * *

- Ramping Energy Deviation

The portion of RTD Instructed Imbalance Energy produced or consumed due to deviation from the Standard Ramp because of ramp constraints, Start-Up, or Shut-Down. Ramping Energy Deviation may overlap with Standard Ramping Energy, and both Standard Ramping Energy and Ramping Energy Deviation may overlap with Day-Ahead Scheduled Energy, but not with ~~no any~~ other Real-Time imbalance energy types~~IIE subtype~~. Ramping Energy Deviation may be composed of two parts: a) the part that overlaps with Standard Ramping Energy whenever the DOP crosses the Standard Ramping Energy region; and b) the part that does not overlap with Standard Ramping Energy. The latter part of Ramping Energy Deviation consists only of extra-marginal FMM Instructed Imbalance Energy or RTD Instructed Imbalance Energy contained within the hourly schedule change band and not attributed to Exceptional Dispatch or derates. Ramping Energy Deviation does not apply to Non-Dynamic System Resources (including Resource-Specific System Resources). Ramping Energy Deviation is settled as

described in Section 11.5.1, ~~and it is included in BCR only for market revenue calculations as provided in Section 11.8.1.4.5.~~

* * * * *

- Residual Imbalance Energy

Extra-marginal RTD Instructed Imbalance Energy produced or consumed at the start or end of a Trading Hour outside the hourly schedule-change band and not attributed to Exceptional Dispatch. Residual Imbalance Energy is due to a Dispatch Instruction in the previous Trading Hour or a Dispatch Instruction in the next Trading Hour. Residual Imbalance Energy may overlap only with Day-Ahead Scheduled Energy. Residual Imbalance Energy does not apply to Non-Dynamic System Resources (including Resource-Specific System Resources). Residual Imbalance Energy is settled as described in Section 11.5.5 and it is not included in BCR as described in Section 11.8.4.

* * * * *

- RTD Imbalance Energy

The deviation of Supply or Demand from FMM Schedule, positive or negative, as measured by metered Generation, ~~metered Load~~, or Real-Time Interchange Schedules. RTD Imbalance Energy is composed of RTD Instructed Imbalance Energy and Uninstructed Imbalance Energy, or in the case of metered Load from the Day-Ahead Schedule, as applicable, as Uninstructed Imbalance Energy.

* * * * *

- RTD Instructed Imbalance Energy ~~(or RTD IIE)~~

The ~~portion of Imbalance accounted for E~~energy resulting from the difference between Dispatch Instructions and the Day-Ahead Schedules and EIM Base Schedules that have not already been accounted for as FMM Schedules Instructed Imbalance Energy determined pursuant to Section 11.5.1.2.

* * * * *

- RTD Optimal Energy

Any remaining RTD Instructed Imbalance Energy after accounting for all other RTD Instructed Imbalance Energy subtypes. RTD Optimal Energy does not overlap with FMM Optimal Energy Standard Ramping Energy, Ramping Energy Deviation, Residual Imbalance Energy, RTD Minimum Load Energy, RTD Derate Energy, and RTD Exceptional Dispatch Energy, but it may overlap with Day-Ahead Scheduled

Energy, and MSS Load Following Energy. RTD Optimal Energy is indexed against the relevant Energy Bid and sliced by service type, depending on the AS capacity allocation on the Energy Bid. RTD Optimal Energy is also divided into RTD Overlapping Optimal Energy and RTD Non-Overlapping Optimal Energy. Any RTD Optimal Energy slice below or above the Energy Bid has no associated Energy Bid price, and it is not included in BCR as described in Section 11.5.1.1.

* * * * *

~~- [Not Used] Settlement Interval Penalty Location Real-Time LMP~~

~~The optimal Instructed Imbalance Energy weighted average of the individual Dispatch Interval Real-Time LMPs for the resources in a UDP Aggregation established pursuant to Appendix R.~~

* * * * *

- Standard Ramping Energy

RTD Instructed Imbalance Energy produced or consumed in the first two and the last two Dispatch Intervals due to hourly schedule changes. Standard Ramping Energy is a schedule deviation along a linear symmetric twenty (20)-minute ramp (Standard Ramp) across hourly boundaries. Standard Ramping Energy is always present when there is an hourly schedule change, including resource Start-Ups and Shut-Downs. Standard Ramping Energy does not apply to Non-Dynamic System Resources (including Resource-Specific System Resources) and is not subject to Settlement as described in Section 11.5.1.

* * * * *

- Uninstructed Imbalance Energy (or UIE)

The portion of RTD Imbalance Energy that is not RTD Instructed Imbalance Energy.

* * * * *

Appendix F Rate Schedules

Schedule 1

Grid Management Charge

Part A - Monthly Calculation of Grid Management Charge (GMC)

The GMC consists of the following separate service charges: (1) the Market Services Charge; (2) the System Operations Charge; and (3) the CRR Services Charge. The GMC revenue requirement, determined in accordance with Part C of this Schedule 1, shall be allocated to the service charges specified in Part A of this Schedule 1 as follows: thirty-two (32) percent to Market Services; sixty-six (66) percent to System Operations; and two (2) percent to CRR Services. Starting in 2017 and every three (3) years thereafter, the CAISO will conduct an updated cost of service study, in consultation with stakeholders and using costs from the previous year. In conducting each cost of service study, the CAISO will recalculate the three service charge percentages and the rates for the fees and charges that constitute the Grid Management Charge as set forth in Section 11.22, as well as the EIM Administrative Charge. If, based on the cost of service study results, the service category revenue requirement allocation percentages or the level of fees and charges have changed, the CAISO will submit tariff amendments to reflect such changes pursuant to Section 205 of the FPA.

1. The rate for the Market Services Charge will be calculated by dividing the annual GMC revenue requirement allocated to this service category by the forecast annual gross absolute value of MW per hour of Ancillary Services capacity awarded in the Day-Ahead and Real-Time Markets, MWh of Energy cleared in the Day-Ahead market, Virtual Demand Award, Virtual Supply Award, and FMM Instructed Imbalance Energy and RTD Instructed Imbalance Energy, less the forecast annual gross absolute value of such Energy as may be excluded for a load following MSS pursuant to an MSS agreement, Standard Ramping Energy, Regulation Energy, Ramping Energy Deviation, Residual Imbalance Energy, Exceptional Dispatch Energy and Operational Adjustments for the Day-Ahead and Real-Time.
2. The rate for the System Operations Charge will be calculated by dividing the annual GMC revenue requirement allocated to this service category by forecast annual gross absolute value of MWh of real-time energy flows on the ISO Controlled Grid, net of amounts excluded pursuant to Part E of this Schedule.
3. The rate for the CRR Services Charge will be calculated by dividing the annual GMC revenue requirement allocated to this service category by the forecast annual sum of awarded MW of CRRs per hour.

The rates for the foregoing charges shall be adjusted automatically each year, effective January 1 for the following twelve (12) months, in the manner set forth in Part D of this Schedule.

* * * * *

Schedule 3

Regional Access Charge and Wheeling Access Charge

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10. Disbursement of Regional Access Charge Revenues.

10.1 Regional Access Charge revenues shall be calculated for disbursement to each Participating TO and Approved Project Sponsor on a monthly basis as follows:

- (a) the amount determined in accordance with Section 26.1.2 of the CAISO Tariff (“Billed RAC”);
- (b)
 - (i) for a Participating TO that is a UDC or MSS Operator and has Gross Load in its TO Tariff in accordance with Appendix F, Schedule 3, Section 9, then calculate the amount each UDC or MSS Operator would have paid and the Participating TO would have received by multiplying the Regional Utility-Specific Rates for the Participating TO whose Regional Transmission Facilities served such UDC and MSS Operator times the actual Gross Load of such UDCs and MSS Operators; or
 - (ii) for a Non-Load-Serving Participating TO and Approved Project Sponsors, then calculate the Non-Load-Serving Participating TO's or Approved Project Sponsor's portion of the total Billed RAC in subsection (a) based on the ratio of the Non-Load-Serving Participating TO's and Approved Project Sponsors Regional Transmission Revenue Requirement to the sum of all Participating TO's and Approved Project Sponsor's Regional Revenue Requirements.
- (c) if the total Billed RAC in subsection (a) received by the CAISO less the total dollar amounts calculated in subsection (b)(i) and subsection (b)(ii) is different from zero, the CAISO shall allocate the positive or negative difference among those Participating TOs that are subject to the calculations in subsection (b)(i) based on the ratio of each Participating TO's Regional Transmission Revenue Requirement to the sum of all of those Participating TO's Regional Transmission Revenue Requirements that are subject to the calculations in subsection (b)(i). This monthly distribution amount is the “RAC Revenue Adjustment”;
- (d) the sum of the RAC revenue share determined in subsection (b) and the RAC Revenue Adjustment in subsection (c) will be the monthly disbursement to the Participating TO.

* * * * *

Schedule 6

CPM SCHEDULES FOR CPM DESIGNATIONS UNDER SECTION 43A

Monthly CPM Capacity Payment

The monthly CPM Capacity Payment shall be calculated ~~by multiplying the monthly shaping factor of 1/12 by the annual effective fixed CPM Capacity price per kW-year in accordance with Section 43A.7.1, unless the Scheduling Coordinator for the CPM Capacity resource has agreed to another price that has been determined in accordance with Section 43.7.2.~~

* * * * *

Appendix L Method to Assess Available Transfer Capability

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L.2 ATC Algorithm

The ATC algorithm is a calculation used to determine the transfer capability remaining in the physical transmission network and available for further commercial activity over and above already committed uses. The CAISO posts the ATC values in megawatts (MW) to OASIS in conjunction with the Market Close for the Day-Ahead Market and Real-Time Market process.

The following OASIS ATC algorithms are used to implement the CAISO ATC calculation for the ATC rated path (Transmission Interface):

ATC Calculation For Imports:

$$\text{ATC} = \text{TTC} - \text{CBM} - \text{TRM} - \text{AS from Imports} - \text{Net Energy Flow} - \text{Hourly Unused TR Capacity.}$$

ATC Calculation For Exports:

$$\text{ATC} = \text{TTC} - \text{CBM} - \text{TRM} - \text{Net Energy Flow} - \text{Hourly Unused TR Capacity.}$$

~~ATC Calculation For Internal Paths 15 and 26:~~

~~ATC = TTC - CBM - TRM - Net Energy Flow~~

ATC		ATC MW	Available Transfer Capability, in MW, per Transmission Interface and path direction.
Hourly Unused TR Capacity		USAGE_MW	The sum of any unscheduled existing transmission commitments (scheduled transmission rights capacity for ETC or TOR), in MW, per path direction.
Scheduled Net Energy from Imports/Exports (Net Energy Flow)		ENE_IMPORT MW	Total hourly net Energy flow for a specified Transmission Interface.
AS from Imports		AS_IMPORT MW	Ancillary Services scheduled, in MW, as imports over a specified Transmission Interface.
TTC		TTC MW	Hourly Total Transfer Capability of a specified Transmission Interface, per path direction, with consideration given to known <u>Transmission Constraints</u> and operating limitations.

CBM		CBM MW	Hourly Capacity Benefit Margin, in MW, for a specified Transmission Interface, per Path Direction.
TRM		TRM MW	Hourly Transmission Reliability Margin, in MW, for a specified Transmission Interface, per path direction.

* * * * *

L.7 Traditional Planning Methodology to Protect Against Violating Operating Limits

After performing Contingency analysis studies, the CAISO next develops the transfer capability and develops procedures, Nomograms, RMR Generation requirements, or other Transmission Constraints to ensure that transfer capabilities respect operating limits.

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Appendix M

Dynamic Scheduling Protocol (DSP)

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1.5 OPERATING AND SCHEDULING REQUIREMENTS

- 1.5.1 For any Operating Hour for which Ancillary Services (and associated Energy) is scheduled dynamically to the CAISO from the System Resource, firm transmission service must be reserved across the entire Dynamic Schedule transmission path external to the CAISO Balancing Authority Area. For any Operating Hour for which only Energy is scheduled dynamically to the CAISO from the System Resource, transmission service must be reserved across the entire Dynamic Schedule transmission path external to the CAISO Balancing Authority Area, or must be available within the Operating Hour, sufficient to support the Schedule and Dispatch of the System Resource. In the event that the System Resource has not established a sufficient transmission reservation prior to the Operating Hour, and will not be able to use additional transmission within the Operating Hour, to support Dispatch up to its maximum available capacity, a derate must be reported in the CAISO’s Outage management system to limit its Dispatch to its available transmission.
- 1.5.2 All Dynamic Schedules associated with Dynamic System Resources must be electronically tagged (by use of an E-Tag).
- 1.5.3 Formal inter-Balancing Authority Area Dynamic Schedules may be issued only by the Dynamic System Resource’s Host Balancing Authority Area and must be routed through the EMSs of any Intermediary Balancing Authority Area, if requested by the Balancing Authority for the Intermediary Balancing Authority Area.
- 1.5.4 The CAISO will procure (or allow for self-provision of) Operating Reserves and Regulation for Loads served by imports from Dynamic System Resources, unless otherwise agreed to or as reflected in the Dynamic Scheduling Host Balancing Authority Operating Agreement.

- 1.5.5 All Energy Interchange Schedules associated with dynamically scheduled imports of Spinning Reserve and Non-Spinning Reserve will be afforded similar treatment (i.e., resource contingent firm).
- 1.5.6 The dynamic signal must be integrated over time by the Host Balancing Authority Area for every Operating Hour.
- 1.5.7 Notwithstanding any Dispatches of the System Resource in accordance with the CAISO Tariff, the CAISO shall have the right to issue operating orders as defined in Section 37.2.1.1 of the CAISO Tariff to the System Resource either directly or through the Host Balancing Authority Area for emergency or contingency reasons, or to ensure the CAISO's compliance with operating requirements based on WECC or NERC requirements and policies (e.g., WECC's Unscheduled Flow Reduction Procedure). However, such operating orders may be issued only within the range of the CAISO-accepted Energy and Ancillary Services, Bids for a given Operating Hour (or the applicable "sub-hour" interval).
- 1.5.8 If there is no Dynamic Schedule in the CAISO's Day-Ahead Market or RTM, the dynamic signal must be at "zero" ("0") except when in response to CAISO's Dispatch Instructions associated with accepted Ancillary Services or Energy Bids.
- 1.5.9 The Scheduling Coordinator for the Dynamic System Resource must have the ability to override the associated Dynamic Schedule in order to respond to the operating orders of the CAISO or the Host Balancing Authority.
- 1.5.10 Unless the Dynamic System Resource (1) is implemented as a directly-telemetered Load following functionality, (2) is base-loaded Regulatory Must-Take Generation, (3) responds to a CAISO intra-hour Dispatch Instruction, or (4) is an Eligible Intermittent Resource, the Dynamic Schedule representing such resource must follow WECC-approved practice of 20-minute ramps centered at the top of the hour. The CAISO does not provide any special Settlements treatment nor offer any CAISO Tariff exemptions for dynamic Load following functionalities.
- 1.5.11 In Real-Time the Dynamic Schedule may not exceed the CAISO's Dispatch Operating Point. The Dispatch Operating Point represents not only the estimated Dynamic System Resource's Energy but also, in combination with any Ancillary Service Award that has not been dispatched as Energy, the transmission reservation on the associated CAISO Intertie.
- 1.5.12 Only one Dynamic System Resource may be associated with any one physical generating resource, unless the CAISO approves an implementation plan to establish multiple Dynamic System Resources for that generating resource.
- 1.5.13 If the Scheduling Coordinator for the Dynamic System Resource desires to participate in CAISO's Regulation market, all provisions of the CAISO's Standards for Imports of Regulation, or any successor CAISO standards regarding the technical arrangements for imports of Regulation posted on the CAISO Website, shall apply.

* * * * *

1.7 COMPLIANCE, LOSSES, AND FINANCIAL SETTLEMENTS

- 1.7.1 Energy delivered in association with Dynamic System Resources will be subject to all provisions of the CAISO's ~~Imbalance E~~energy markets, ~~including Uninstructed Deviation Penalties (UDP)~~ (just as is the case with CAISO intra- Balancing Authority Area Generating Units of Participating Generators).
- 1.7.2 Dynamically scheduled and delivered Ancillary Services will be subject to the CAISO's compliance monitoring and remedies, just as any CAISO intra-Balancing Authority Area Generating Units of Participating Generators.

- 1.7.3 All Day-Ahead Market and RTM submitted Dynamic Schedules shall be subject to CAISO Congestion Management and as such may not exceed their transmission reservations in Real-Time (with the exception of intra-hour Dispatch Instructions of the Energy associated with accepted Ancillary Services Bids or Dispatch Instructions for ~~imbalance~~ ~~Energy~~).
- 1.7.4 All Dynamic Schedules and delivered Energy shall be subject to the standard CAISO Transmission Loss calculation as described in Section 27.5.1.1 and Appendix C of the CAISO Tariff.
- 1.7.5 Any transmission losses attributed to the Dynamic Schedule on transmission system(s) external to the CAISO Balancing Authority Area will be the responsibility of the owner(s)/operator(s) of the Dynamic System Resource.
- 1.7.6 ~~A predetermined, mutually agreed, and achievable "PMax-like" fixed MW value will be established for every Dynamic System Resource to be used as the basis for the UDP calculation.~~ Responsible Scheduling Coordinators will be able to report de-rates affecting the Dynamic System Resource ~~via-through~~ the CAISO's ~~SLIC-OUTage~~ ~~reporting-management~~ system.
- 1.7.7 Should there be any need or requirement, whether operational or procedural, for the CAISO to make Real-Time adjustments to the CAISO's inter-Balancing Authority Area Interchange Schedules (to include curtailments), Dynamic Schedules shall be treated in the same manner as similarly situated and/or effective static CAISO Interchange Schedules.

* * * * *

2. DYNAMIC SCHEDULES OF EXPORTS OF ENERGY FROM GENERATING UNITS IN THE CAISO BALANCING AUTHORITY AREA

* * * * *

2.5 OPERATING AND SCHEDULING REQUIREMENTS

- 2.5.1 All Dynamic Schedules associated with exports of Energy from a Generating Unit must be electronically tagged (by use of an E-Tag).
- 2.5.2 Formal inter-Balancing Authority Area Dynamic Schedules of the export of Energy from a Generating Unit may be issued only by the CAISO as the Host Balancing Authority Area and must be routed through the EMSs of any Intermediary Balancing Authority Area, if requested by the Intermediary Balancing Authority Area.
- 2.5.3 The Balancing Authority receiving the Dynamic Schedule of the export of Energy from the CAISO Balancing Authority Area is responsible for Operating Reserves and Regulation for Loads served by such exports of Energy, unless the receiving Balancing Authority and the CAISO otherwise agree as reflected in the Dynamic Scheduling Host Balancing Authority Operating Agreement.
- 2.5.4 The dynamic signal must be integrated over time by the CAISO for every Operating Hour.
- 2.5.5 Notwithstanding any Dispatches of the Generating Unit in accordance with the CAISO Tariff, the CAISO shall have the right to issue operating orders as defined in Section 37.2.1.1 of the CAISO Tariff to the Generating Unit either directly or through the receiving Balancing Authority Area for emergency or contingency reasons, or to ensure the CAISO's compliance with operating requirements based on WECC or NERC requirements and policies (e.g., WECC's Unscheduled Flow Reduction Procedure). However, such operating orders may be issued only within the range of the CAISO-accepted Energy Bids for a given Operating Hour (or the applicable "sub-hour" interval).

- 2.5.6 If there is no Dynamic Schedule in the CAISO's Day-Ahead Market or RTM, the dynamic signal must be at "zero" ("0").
- 2.5.7 The Scheduling Coordinator for a Dynamic Schedule of an export of Energy from a Generating Unit must have the ability to override the associated Dynamic Schedule in order to respond to the operating orders of the CAISO or the Host Balancing Authority.
- 2.5.8 Unless the Dynamic Schedule of an export of Energy from a Generating Unit (1) is implemented as a directly-telemetered load following functionality, (2) is base-loaded Regulatory Must-Take Generation, (3) responds to an intra-hour dispatch instruction from the receiving Balancing Authority, or (4) is an Eligible Intermittent Resource, the Dynamic Schedule representing such resource must follow WECC-approved practice of 20-minute ramps centered at the top of the hour. The CAISO does not provide any special Settlements treatment nor offer any CAISO Tariff exemptions for dynamic load following functionalities.
- 2.5.9 In Real-Time the Dynamic Schedule may not exceed the CAISO's Dispatch Operating Point, which reflects the dynamic signal received by the CAISO from the Balancing Authority receiving the dynamically-scheduled Energy. The CAISO's Dispatch Operating Point represents not only the estimated Energy from the Generating Unit for export but also the transmission reservation on the associated CAISO Intertie.
- 2.5.10 Only one Dynamic Schedule may be associated with any one physical Generating Unit, unless the CAISO approves an implementation plan to establish multiple Dynamic Schedules for that Generating Unit.

2.6 Compliance, Losses, and Financial Settlements

- 2.6.1 Energy delivered in association with a Dynamic Schedule of an export of Energy from a Generating Unit will be subject to all provisions of the CAISO's ~~Imbalance E~~energy markets, including ~~Uninstructed Deviation Penalties (UDP)~~ (just as is the case with CAISO intra-Balancing Authority Area Generating Units of Participating Generators).
- 2.6.2 All Day-Ahead Market and RTM submitted Dynamic Schedules shall be subject to CAISO Congestion Management and as such may not exceed their transmission reservations in Real-Time (with the exception of intra-hour Dispatch Instructions for ~~Imbalance E~~energy issued by the CAISO and responses to the dynamic signal from the Balancing Authority receiving the Dynamic Schedule of the export of Energy).
- 2.6.3 All Dynamic Schedules and delivered Energy shall be subject to the standard CAISO Transmission Loss calculation as described in Section 27.5.1.1 and Appendix C of the CAISO Tariff.
- 2.6.4 Any transmission losses attributed to the Dynamic Schedule on transmission system(s) external to the CAISO Balancing Authority Area will be the responsibility of the owner(s)/operator(s) of the Generating Unit associated with a Dynamic Schedule of an export of Energy.
- 2.6.5 Should there be any need or requirement, whether operational or procedural, for the CAISO to make Real-Time adjustments to the CAISO's inter-Balancing Authority Area Interchange Schedules (to include curtailments), Dynamic Schedules shall be treated in the same manner as similarly situated and/or effective static CAISO Interchange Schedules.

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Appendix Q

Eligible Intermittent Resources Protocol (EIRP)

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2.2.5 Information Requirements ~~F~~for Participating Intermittent Resource Export Fee

In order for the CAISO to administer, implement and calculate the Participating Intermittent Resource Export Fee, each Participating Intermittent Resource jointly with, and through, its Scheduling Coordinator must provide the CAISO with the following information and documents under the schedule and conditions set forth in this section.

The CAISO will maintain the confidentiality of all information and documents received under this section in accordance with CAISO Tariff Section 20 et seq.

- (a) A certification, in the form set forth in a Business Practice Manual, signed by an officer of the Participating Intermittent Resource and its Scheduling Coordinator, identifying ~~(1) the PIR Export Percentage under Section 5.3.2 of this EIRP for resources that have elected PIRP Protective Measures, if any, and basis thereof, and (2)~~ each contract to sell Energy or capacity from the Participating Intermittent Resource, including for each such contract, the counterparty, start and end dates, delivery point(s), quantity in MW, other temporal terms, i.e., seasonal or hourly limitations.

The certification must be updated by resubmission to the CAISO (1) upon a request to modify the composition of the Participating Intermittent Resource under Section 2.4.2 of this EIRP; or (2) within ten (10) calendar days of final execution of a new contract or any change in counterparty, start and end dates, delivery point(s), quantity in MW, or other temporal terms, as described above, for any prior certified contract. All other contractual changes will not trigger the obligation for recertification.

- (b) Copies of all contracts, including changes, identified in the above-referenced certification; however, price information may be redacted from the contracts provided.

Each Participating Intermittent Resource, as of November 1, 2006, must initially provide the information requested by this Section 2.2.5 in accordance with a Market Notice provided by the CAISO to Participating Intermittent Resources. All other Eligible Intermittent Resources must satisfy this Section 2.2.5 in order to become a Participating Intermittent Resource after November 1, 2006.

* * * * *

3.1.1 Wind Generation Meteorological Station Requirements

Each wind Eligible Intermittent Resource must install and maintain equipment required by the CAISO to support accurate power generation forecasting and the communication of such forecast, meteorological, and other required data to the CAISO consistent with the timeframes specified in this Eligible Intermittent Resource Protocol.

- 3.1.1.1** Each wind Eligible Intermittent Resource shall install a minimum of one meteorological station to measure barometric pressure, temperature, wind speed and direction. If a wind Eligible Intermittent Resource has a rated capacity of five (5) MW or greater, the Eligible Intermittent Resource shall install a minimum of two meteorological stations to measure barometric pressure, temperature, wind speed and direction. If an Eligible Intermittent Resource, as part of compliance with any other contractual or regulatory requirement outside of this Eligible Intermittent Resource Protocol, provides data from more than the two required meteorological stations to an entity other than the CAISO, then the Eligible

Intermittent Resource must also submit data from any additional meteorological station to the CAISO.

3.1.1.2 Each wind Eligible Intermittent Resource shall locate its meteorological station(s) on the windward side of the wind farm. Each wind Eligible Intermittent Resource must install one meteorological station at the average hub height of the wind turbines. ~~The second meteorological station, if any, may be co-located on the primary meteorological station and installed approximately 30 meters below the average hub height.~~ Hub height is the distance from the ground to the center of the turbine axis. ~~If a second meteorological station is required, then it may be so co-located with the primary station, then the second station shall be installed below the primary station. The approximate distance separating the primary station and the secondary station shall be an average of one (1) rotator blade length.~~ Where placement of the meteorological station(s) in accordance with this Eligible Intermittent Resource Protocol would reduce production or violate a local, state, or federal statute, regulation or ordinance, the CAISO, in coordination with any applicable forecast service provider, will coordinate with the Eligible Intermittent Resource to identify an acceptable placement of the meteorological station.

3.1.1.3 The use of SODAR¹ and/or LIDAR² equipment may be an acceptable substitute for wind direction and velocity only after obtaining prior agreement from the CAISO.

* * * * *

3.1.3 Designated Turbines

For any wind eligible Intermittent Resource, designated turbines are required to improve forecast accuracy within a wind park. The CAISO shall identify a designated turbine, from which the Eligible Intermittent Resource shall provide nacelle wind speed and ~~generation-in-MWs-wind direction~~ every four seconds. ~~Wind EIRs with a PGA or NS PGA that are operating or have final regulatory approvals to construct as of [[the effective date of this change]] that have wind turbines without nacelle anemometers need not comply with the requirements of this section for Designated Turbines. However, when the wind EIR repowers or replaces a portion of its existing wind turbines, then the Wind EIR must become compliant with the requirements of this section for Designated Turbines.~~

* * * * *

5.3 ~~[Not Used] Participating Intermittent Resource Export Fee~~

~~The rules specified in this Section 5.3 and its subsection applies only to Participating Intermittent Resources that have elected PIRP Protective Measures and do not apply to resources that have not elected for such measures.~~

5.3.1 ~~Exemptions~~

~~After November 1, 2006, Participating Intermittent Resources shall be subject to the Participating Intermittent Resource Export Fee, as set forth in Schedule 4 of Appendix F, for Energy generated, except to the extent the Participating Intermittent Resource is exempt under one or more of the following conditions:~~

- ~~(a) — The owner of a Participating Intermittent Resource, as of November 1, 2006, utilizes the Energy generated from the Participating Intermittent Resource to meet its own Native Load outside the CAISO Balancing Authority Area. Should any Participating Intermittent Resource subject to this exemption increase its PMax set forth in the CAISO's Master File by modification under Section 2.4.2 of~~

~~this EIRP, the exemption will not apply to the added capacity unless exempt under another subsection of this Section 5.3.1.~~

~~If the Participating Intermittent Resource subject to this exemption changes ownership, the Participating Intermittent Resource Export Fee will apply, except where the prior exempt owner demonstrates that the entire output of the Participating Intermittent Resource continues to be delivered to the exempt owner under a power purchase agreement for the purpose of serving the prior exempt owner's Native Load. The exemption will then continue only for the period of the power purchase agreement as provided in accordance with Section 2.2.5 of this EIRP and cannot exceed the MW quantity originally exempted.~~

- ~~(b) — A Participating Intermittent Resource demonstrates in its certification under Section 2.2.5(a) of this EIRP an export contract with a starting term prior to November 1, 2006. An export contract is any power purchase agreement to sell Energy to any entity other than a Load Serving Entity with an obligation under law or franchise to serve Demand within the CAISO Balancing Authority Area.~~

~~The exemption will apply to any extension of the current export contract through an evergreen or other existing extension provision. The exemption terminates upon termination of the export contract. Should any Participating Intermittent Resource subject to this exemption increase its PMax set forth in the CAISO's Master File by modification under Section 2.4.2 of this EIRP, the exemption will apply only to Energy generated up to the contract quantity, unless the Participating Intermittent Resource demonstrates a basis for exemption under subsection (c) for the expanded capacity.~~

- ~~(c) — A Participating Intermittent Resource demonstrates in its certification under Section 2.2.5(a) of this EIRP a contract to sell Energy to a Load Serving Entity with Native Load within the CAISO Balancing Authority Area. Energy service providers with contractual obligations with customers within the CAISO Balancing Authority Area would be deemed a Load Serving Entity with an obligation to serve Native Load within the CAISO Balancing Authority Area.~~

~~The exemption will apply to any extension of the current contract through an evergreen or other existing extension provision. The exemption terminates upon termination of the contract. Should any Participating Intermittent Resource subject to this exemption increase its PMax set forth in the CAISO's Master File by modification under Section 2.4.2 of this EIRP, the exemption will continue to apply only to Energy generated up to the contract quantity unless the Participating Intermittent Resource demonstrates a basis for exemption under this subsection (c) for the expanded capacity.~~

5.3.2 — Participating Intermittent Resource Export Percentage

~~Based on the information required in Section 2.2.5 of this EIRP and application of the exemptions to the Participating Intermittent Resource Export Fee in Section 5.3.1 of this EIRP, the CAISO will determine a PIR Export Percentage for each Participating Intermittent Resource that will be calculated as the ratio of the Participating Intermittent Resource's PMax in the CAISO Master File minus the MW, subject to an exemption under Section 5.3.1 of this EIRP on a MW basis to the Participating Intermittent Resource's PMax in the CAISO Master File. For example, a Participating Intermittent Resource with a PMax of 100 MW and a contract with a CAISO Balancing Authority Area Load Serving Entity for 40 MW would have a PIR Export Percentage of $(100-40)/100 = 60\%$. A Participating Intermittent Resource with a PIR Export Percentage greater than zero (0) will be deemed an Exporting Participating Intermittent Resource. The CAISO will~~

~~notify the Participating Intermittent Resource and its Scheduling Coordinator of the facility's PIR Export Percentage. Any dispute regarding the CAISO's determination of the PIR Export Percentage shall be subject to the dispute resolution procedures under Section 13 of the CAISO Tariff.~~

~~5.3.3—Monthly Application of Participating Intermittent Resource Export Fee~~

~~Each month the CAISO will charge Exporting Participating Intermittent Resources the Participating Intermittent Resource Export Fee, as set forth in Schedule 4 of Appendix F.~~

~~5.3.4—Allocation of Credit for Participating Intermittent Resource Export Fees Received~~

~~Payments received by the CAISO from application of the Participating Intermittent Resource Export Fee in accordance with this Section 5.3 shall be allocated as a credit on a quarterly basis to Scheduling Coordinators with Net Negative Uninstructed Deviations in proportion to the to the amount of Net Negative Uninstructed Deviations that each Scheduling Coordinator was assessed for Participating Intermittent Resources Settlement charges for the applicable CAISO Charge Code during the prior quarter.~~

~~5.3.5—Recording of Exemptions and Notice of Termination~~

~~The CAISO will record any exemption period ending date, if applicable, for each Participating Intermittent Resource. At the conclusion of the exemption period, the CAISO will notify the Scheduling Coordinator for the Participating Intermittent Resource that the facility is no longer exempt from the Participating Intermittent Resource Export Fee.~~

~~5.3.6—Annual Confirmation~~

~~On December 31 of each calendar year, each Participating Intermittent Resource shall confirm in the form set forth in a Business Practice Manual, signed by an officer of the Participating Intermittent Resource, that the operations of the Participating Intermittent Resource are consistent with any certification(s) provided to the CAISO under Section 2.2.5 of this EIRP.~~

~~5.3.7—Audit Rights~~

~~In addition to the rights set forth in CAISO Tariff Section 4.6.9, the CAISO shall have the right to contact any counterparty to a contract relied upon under Section 5.3.1 of this EIRP for purposes of determining compliance with this EIRP.~~

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7 PROGRAM MONITORING

The CAISO shall monitor the operation of these rules, and will in particular seek to eliminate any gaming opportunities provided by the flexibility provided Participating Intermittent Resources to self-select participation on an hourly basis.

Participating Intermittent Resources are expected to bid, schedule, and otherwise perform in good faith, and not seek to act strategically in a manner that causes financial gain through systematic behavior, where such gain results solely from the settlement accommodations provided under CAISO Tariff Section 11.12.

If requirements specified in this EIRP are not met, then Participating Intermittent Resource certification may be revoked pursuant to Section 2.4.5 of this EIRP. Any patterns of strategic behavior by Participating Intermittent Resources will be tracked, and the statistical significance of such deviations will be used by the CAISO to evaluate whether changes in the rules defined in this EIRP are appropriate.

The CAISO will monitor the impact of rules for Participating Intermittent Resources on FMM or RTD imbalance Eenergy and Regulation costs to the CAISO.

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