

November 18, 2015

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

**Re: California Independent System Operator Corporation
Compliance Filing to Reconcile Overlapping
Commission-Approved Tariff Records**

Docket No. ER16-____-000

Dear Secretary Bose:

The California Independent System Operator Corporation (“CAISO”) submits this compliance filing to reconcile overlapping tariff records in the Commission’s eTariff system in order to reflect the sum of revisions to the same sections of the CAISO tariff that the Commission has already accepted in different proceedings. The CAISO does not propose any changes to any Commission-approved tariff language in this filing and no stakeholder has raised any concerns regarding the filing. The CAISO requests that the Commission accept each of the reconciled tariff records contained in this filing effective as of the latest effective date previously approved by the Commission for the relevant tariff record.

I. Background

As part of its stakeholder process to identify potential clarifications to its tariff, the CAISO has identified a number of instances where CAISO tariff records on file in the Commission’s eTariff system, although individually they accurately reflect revisions to tariff sections approved by the Commission in the successive proceedings in which they were filed, do not accurately reflect the cumulative result of the Commission’s orders across those proceedings. Such situations typically arise due to the chronological sequence in which those records are filed in various dockets and then acted on by the Commission. From the time the CAISO files a tariff amendment to the time the Commission issues an order accepting it as of a specified effective date, several months or more may pass,

especially if the Commission conditions its acceptance on the filing of revisions to certain portions of the original proposed amendment language in a compliance filing. Given these timeframes, it is necessary on occasion for the CAISO to file tariff amendments in which some of the proposed tariff revisions include changes that affect tariff records that are the subject of already pending tariff amendment proceedings that have not yet been resolved.

To provide a concrete example, on July 30, 2013, the CAISO submitted a tariff amendment in Docket No. ER13-2063-000 to revise the tariff provisions on registration of multi-stage generating (MSG) resources (the original MSG amendment). Then on October 17, 2013, while the original MSG amendment was pending before the Commission, the CAISO submitted a supplemental MSG amendment in Docket No. ER13-2063-001 that included proposed revisions to some of the tariff language proposed in the original MSG amendment. The Commission accepted both MSG amendments in an order issued on March 20, 2014, to be effective April 1, 2014.¹ Subsequently, the CAISO filed and the Commission accepted a petition for limited tariff waiver to suspend the effectiveness of the tariff revisions until May 1, 2014.² Among the tariff records affected by the MSG amendments was that for revised tariff section 30.5.1. However, on November 26, 2013 (*i.e.*, while the MSG amendments were still pending), the CAISO submitted another tariff amendment, in Docket No. ER14-480, that included tariff changes required by Commission Order No. 764 (the Order 764 amendment). The Order 764 amendment also affected the tariff record for section 30.5.1, and because the MSG amendments were still pending at the time the Order 764 amendment was filed, the Order 764 amendment did not include the MSG amendments' proposed revisions to that section. Thus, when the Commission accepted the Order 764 amendment in an order issued on March 20, 2014, to be effective May 1, 2014,³ the accepted tariff record for section 30.5.1 did not include the MSG amendment changes.

Although the revisions for both the MSG amendments and the Order 764 amendment have been accepted by the Commission and are now in effect, the Commission's eTariff page reflects only the Order 764 amendment language in what it shows as the currently effective tariff record for those sections.⁴ Because

¹ *Cal. Indep. Sys. Operator Corp.*, 146 FERC ¶ 61,191 (2014).

² *Cal. Indep. Sys. Operator Corp.*, 147 FERC ¶ 61,029 (2014).

³ *Cal. Indep. Sys. Operator Corp.*, 146 FERC ¶ 61,204 (2014).

⁴ When a tariff record has been revised multiple times, the eTariff page shows the accepted version of the record with the latest effective date as the currently effective version. When there is more than one accepted version of a tariff record with the same effective date, the eTariff page shows the one with the highest Effective Priority Order (EPO) value among those with that effective date as the currently effective record. Since the tariff records in both the

no filed tariff record includes the accepted revisions from both amendment proceedings, the eTariff page cannot display a tariff record that includes all of the currently effective language for those sections. The purpose of this compliance filing is to rectify such situations by submitting conformed tariff records that reflect the effect of tariff revisions that have been approved for the same tariff sections in different proceedings, but have never been included in a single tariff record before because of such chronological overlaps between proceedings.

II. Compliance Filing

The CAISO submits this compliance filing to ensure that the eTariff system reflects all approved tariff amendments, and that the records on the system are consistent with the conformed tariff posted on the CAISO website. This filing satisfies the specific requirements of the Commission orders in the proceedings that accepted the provisions included in the conformed tariff records filed herewith. The CAISO does not propose any changes to Commission-approved tariff language in this filing.

Attachment A to this filing contains a key to the overlapping tariff records the CAISO is proposing to reconcile. Attachment A is divided into five columns. Column 1 identifies each specific tariff section whose eTariff records are being reconciled in this filing. Column 2 explains the nature of the overlap between different tariff record versions of each tariff section in different proceedings that gave rise to the need to file such reconciliations to ensure that the effective tariff records on file fully reflect all accepted language. Columns 3 and 4 reproduce the marked tariff redline revisions from the filings that gave rise to the overlap with respect to each tariff section, whereby one accepted version of that section came to take precedence as the currently effective eTariff version, with Column 3 showing the redline revisions from the inadvertently “superseded” filing, and Column 4 showing the redline revisions from the “superseding” filing. Finally, Column 5 shows the redline changes proposed in this filing to the tariff record currently shown as effective in the eTariff system, in order to make sure that all accepted tariff language is included in the effective tariff record. In some cases, the tariff section as rendered in Column 5 includes underlying language not shown in either of the two overlapping versions; this occurs in cases where the Commission accepted additional revisions to the section subsequent to the original occurrence of the overlap. In most cases, the redlined text in Column 5 tracks the redline text shown in the “superseded” accepted version in Column 3.

above-referenced proceedings both had an effective date of May 1, 2014, and the Order 764 amendment records were assigned a higher EPO value than the MSG amendment records, the Order 764 amendment records are shown as effective, and the MSG amendment records are shown as superseded.

The CAISO posted the document contained in Attachment A on its website for stakeholder review and comment on September 29, 2015, and held a web conference meeting with stakeholders on October 13, 2015, at which the CAISO made a presentation explaining the rationale for this filing, took questions from stakeholders, and addressed written stakeholder comments. The CAISO resolved the few questions raised by stakeholders during the meeting.⁵

Attachment B to this filing contains the marked redline tariff sections showing the revisions necessary to the effective tariff records currently on file in order to fully reflect all accepted language in those sections. Attachment C to this filing contains the clean tariff sections showing the full text of the reconciled tariff records once all the conforming changes made by this filing are incorporated.

The CAISO requests that the Commission accept each of the reconciled tariff records contained in this filing effective as of the latest effective date previously approved by the Commission for the relevant tariff record.

III. Communications

Correspondence and other communications regarding this filing should be directed to:

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⁵ Materials related to the stakeholder process that resulted in this filing are available on the CAISO website at <http://www.caiso.com/informed/Pages/StakeholderProcesses/TariffClarificationsFiling.aspx>.

Subsequent to the stakeholder meeting, the table in Attachment A was revised to eliminate several tariff sections whose overlaps had been resolved by other filings.

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IV. 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.

V. Conclusion

For the reasons explained above, the CAISO respectfully requests that the Commission accept this compliance filing as submitted.

Respectfully submitted,

/s/ Sidney L. Mannheim

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Attachment A – Explanatory Table Showing Marked Tariff Language from Overlapping Filings

Compliance Filing to Reconcile Overlapping Commission-Approved Tariff Records

November 18, 2015

California Independent System Operator Corporation

TARIFF OVERLAP FILING – EXPLANATORY TABLE SHOWING MARKED TARIFF LANGUAGE FROM OVERLAPPING FILINGS

Section	Explanation of Tariff Overlap	[1] Marked Tariff language from filing with earlier effective date (or lower eTariff Record Priority value in the event both filings have the same effective date)	[2] Marked Tariff language from filing with later effective date (or higher eTariff Record Priority value in the event both filings have the same effective date)	[3] Marked Tariff language from [1] added to currently effective tariff record
4.6	Version 6.0.0 of the tariff record for Section 4.6 as filed with the Regulatory Amendment, Sept. 17, 2012, Docket No. ER12-2634, did not include the changes to this section reflected in Version 4.0.0 as filed with the Regulation Energy Management Amendment, Aug. 22, 2011, Docket No. ER11-4353-000, and accepted by FERC Order Nov. 30, 2011 (137 FERC ¶ 61,165) (because Version 5.0.0 as filed Mar. 7, 2012 in Docket No. ER12-1226 delayed effective date to Nov. 27, 2012, per FERC letter Order Apr. 2, 2012.)	<p>4.6 Relationship Between CAISO And Generators</p> <p>The CAISO shall not accept Bids for any Generating Unit interconnected to the electric grid within the CAISO Balancing Authority Area otherwise than through a Scheduling Coordinator. The CAISO shall further not be obligated to accept Bids from Scheduling Coordinators relating to Generation from any Generating Unit interconnected to the electric grid within the CAISO Balancing Authority Area unless the relevant Generator undertakes in writing, by entering into a Participating Generator Agreement, QF PGA, or Metered Subsystem Agreement with the CAISO, to comply with all applicable provisions of this CAISO Tariff as they may be amended from time to time, including, without limitation, the applicable provisions of this Section 4.6 and Section 7.7. <u>The CAISO shall not accept Bids from Scheduling Coordinators relating to Generation from a Non-Generator Resource unless the resource owner or operator undertakes in writing, by entering into a Participating Generator Agreement and Participating Load Agreement, to comply with all applicable provisions of this CAISO Tariff as they may be amended from time to time including, without limitation, the applicable provisions of this Section 4.6 and Section 7.7.</u></p>	<p>4.6 Relationship Between CAISO And Generators</p> <p>The CAISO shall not accept Bids for any Generating Unit interconnected to the electric grid within the CAISO Balancing Authority Area (which includes a Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area) otherwise than through a Scheduling Coordinator. The CAISO shall further not be obligated to accept Bids from Scheduling Coordinators relating to Generation from any Generating Unit interconnected to the electric grid within the CAISO Balancing Authority Area (which includes a Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area) unless the relevant Generator undertakes in writing, by entering into a Participating Generator Agreement <u>or, if eligible to enter such an agreement under the applicable terms of the CAISO tariff, QFa Net Scheduled</u> PGA, Pseudo-Tie Participating Generator Agreement, or Metered Subsystem Agreement, with the CAISO, to comply with all applicable provisions of this CAISO Tariff as they may be amended from time to time, including, without limitation, the applicable provisions of this Section 4.6 and Section 7.7.</p>	<p>4.6 Relationship Between CAISO And Generators</p> <p>The CAISO shall not accept Bids for any Generating Unit interconnected to the electric grid within the CAISO Balancing Authority Area (which includes a Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area) otherwise than through a Scheduling Coordinator. The CAISO shall further not be obligated to accept Bids from Scheduling Coordinators relating to Generation from any Generating Unit interconnected to the electric grid within the CAISO Balancing Authority Area (which includes a Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area) unless the relevant Generator undertakes in writing, by entering into a Participating Generator Agreement or, if eligible to enter such an agreement under the applicable terms of the CAISO tariff, a Net Scheduled PGA, Pseudo-Tie Participating Generator Agreement, or Metered Subsystem Agreement, with the CAISO to comply with all applicable provisions of this CAISO Tariff as they may be amended from time to time, including, without limitation, the applicable provisions of this Section 4.6 and Section 7.7. <u>The CAISO shall not accept Bids from Scheduling Coordinators relating to Generation from a Non-Generator Resource unless the resource owner or operator undertakes in writing, by entering into a Participating Generator Agreement and Participating Load Agreement, to comply with all applicable provisions of this CAISO Tariff as they may be amended from time to time including, without limitation, the applicable provisions of this Section 4.6 and Section 7.7.</u></p>

Section	Explanation of Tariff Overlap	[1] Marked Tariff language from filing with earlier effective date (or lower eTariff Record Priority value in the event both filings have the same effective date)	[2] Marked Tariff language from filing with later effective date (or higher eTariff Record Priority value in the event both filings have the same effective date)	[3] Marked Tariff language from [1] added to currently effective tariff record
6.5.2.3.6	Version 3.0.0 of the tariff record for Section 6.5.2 as filed with Tariff Clarification Amendment Compliance filing, Apr. 8, 2011, Docket No. ER11-2574-002, and later versions did not include the addition of this section reflected in Version 1.0.0 as filed with the Convergence Bidding Compliance filing, Nov. 15, 2010, Docket No. ER11-2128, and accepted by FERC Order Jan. 31, 2011 (134 FERC ¶ 61,070).	<p><u>6.5.2.3.6 Virtual Bid Reference Prices</u></p> <p><u>The CAISO will publish Virtual Bid Reference Prices prior to the applicable reference period for the Virtual Bid Reference Prices.</u></p>	N/A [Version 3.0.0 of the tariff record for Section 6.5.2 ends with Section 6.5.2.3.5]	<p><u>6.5.2.3.6 Virtual Bid Reference Prices</u></p> <p><u>The CAISO will publish Virtual Bid Reference Prices prior to the applicable reference period for the Virtual Bid Reference Prices.</u></p>

Section	Explanation of Tariff Overlap	[1] Marked Tariff language from filing with earlier effective date (or lower eTariff Record Priority value in the event both filings have the same effective date)	[2] Marked Tariff language from filing with later effective date (or higher eTariff Record Priority value in the event both filings have the same effective date)	[3] Marked Tariff language from [1] added to currently effective tariff record
8.2.2	Version 2.0.0 of the tariff record for Section 8.2.2 as filed with Scarcity Pricing Compliance filing, Aug. 23, 2010, Docket No. ER10-2293, did not include the changes to this section reflected in Version 1.0.0 as filed with the Non Generating Resource Amendment, July 12, 2010, Docket No. ER10-1755, and accepted by FERC Order Sept. 10, 2010 (132 FERC ¶ 61,211).	<p>8.2.2 Time-Frame for Revising Ancillary Service Standards</p> <p>The CAISO shall periodically undertake a review of the CAISO Controlled Grid operation to determine any revision to the Ancillary Services standards to be used in the CAISO Balancing Authority Area. At a minimum the CAISO shall conduct such reviews to accommodate revisions to NERC and WECC reliability standards, including any requirements of the NRC. The CAISO may adjust the Ancillary Services standards temporarily to take into account, among other things, variations in system conditions, Real-Time Dispatch constraints, contingencies, and voltage and dynamic stability assessments. Where practicable, the CAISO will provide notice, via the CAISO Website, of any temporary adjustments to Ancillary Service standards by 6:00 p.m. two (2) days ahead of the Operating Day to which the adjustment will apply. Periodic reviews by the CAISO may include, but are not limited to: (a) analysis of the deviation between actual and forecast Demand; (b) analysis of patterns of unplanned Generating Unit<u>resource</u> Outages; (c) analysis of compliance with NERC and WECC reliability standards, including any requirements of the NRC; (d) analysis of operation during system disturbances; (e) analysis of patterns of shortfalls between Day-Ahead Schedules and actual Generation and Demand; and (f) analysis of patterns of unplanned transmission Outages.</p>	<p>8.2.2 Time-Frame for Revising Ancillary Service Standards</p> <p>The CAISO shall periodically undertake a review of the CAISO Controlled Grid operation to determine any revision to the Ancillary Services standards to be used in the CAISO Balancing Authority Area. At a minimum the CAISO shall conduct such reviews to accommodate revisions to NERC and WECC <u>Reliability Standards and any requirements of the NRC.</u> If the CAISO modifies its Ancillary Services standards, including its rules to determine minimum procurement requirements for Ancillary Services, the CAISO will notify Market Participants.<u>reliability standards, including any requirements of the NRC.</u> The CAISO may adjust the Ancillary Services standards temporarily to take into account, among other things, variations in system conditions, Real-Time Dispatch constraints, contingencies, and voltage and dynamic stability assessments. Where practicable, the CAISO will provide notice, via the CAISO Website, of any temporary adjustments to Ancillary Service standards by 6:00 p.m. two (2) days ahead of the Operating Day to which the adjustment will apply. Periodic reviews by the CAISO may include, but are not limited to: (a) analysis of the deviation between actual and forecast Demand; (b) analysis of patterns of unplanned Generating Unit Outages; (c) analysis of compliance with NERC and WECC <u>Reliability Standards and reliability standards, including</u> any requirements of the NRC; (d) analysis of operation during system disturbances; (e) analysis of patterns of shortfalls between Day-Ahead Schedules and actual Generation and Demand; and (f) analysis of patterns of unplanned transmission Outages.</p>	<p>8.2.2 Time-Frame for Revising Ancillary Service Standards</p> <p>The CAISO shall periodically undertake a review of the CAISO Controlled Grid operation to determine any revision to the Ancillary Services standards to be used in the CAISO Balancing Authority Area. At a minimum the CAISO shall conduct such reviews to accommodate revisions to NERC and WECC Reliability Standards and any requirements of the NRC. If the CAISO modifies its Ancillary Services standards, including its rules to determine minimum procurement requirements for Ancillary Services, the CAISO will notify Market Participants. The CAISO may adjust the Ancillary Services standards temporarily to take into account, among other things, variations in system conditions, Real-Time Dispatch constraints, contingencies, and voltage and dynamic stability assessments. Where practicable, the CAISO will provide notice, via the CAISO Website, of any temporary adjustments to Ancillary Service standards by 6:00 p.m. two (2) days ahead of the Operating Day to which the adjustment will apply. Periodic reviews by the CAISO may include, but are not limited to: (a) analysis of the deviation between actual and forecast Demand; (b) analysis of patterns of unplanned Generating Unit<u>resource</u> Outages; (c) analysis of compliance with NERC and WECC Reliability Standards and any requirements of the NRC; (d) analysis of operation during system disturbances; (e) analysis of patterns of shortfalls between Day-Ahead Schedules and actual Generation and Demand; and (f) analysis of patterns of unplanned transmission Outages.</p>

Section	Explanation of Tariff Overlap	[1] Marked Tariff language from filing with earlier effective date (or lower eTariff Record Priority value in the event both filings have the same effective date)	[2] Marked Tariff language from filing with later effective date (or higher eTariff Record Priority value in the event both filings have the same effective date)	[3] Marked Tariff language from [1] added to currently effective tariff record
8.4.5	Version 1.0.0 of the tariff record for Section 8.4.5 as filed with the Non Generating Resource Amendment, July 12, 2010, Docket No. ER10-1755, did not include the changes to this section reflected in Version 2.0.0 (with an earlier effective date) as filed with the Proxy Demand Resource Compliance filing, Sept. 13, 2010, ER10-2623, and accepted by FERC Order Jan. 4, 2011 (134 FERC ¶ 61,004) (which order was erroneously issued in Docket No. ER10-2621)	<p>8.4.5 Communication Equipment</p> <p>Unless otherwise authorized by the CAISO, all Scheduling Coordinators wishing to submit an Ancillary Service Bid must have the capability to submit to and receive information from the CAISO’s secure communication system. In addition, they must be capable of receiving Dispatch Instructions electronically and they must provide the CAISO with a telephone number, or fax number through which Dispatch Instructions for each Generating Unit, System Unit, <u>Participating Load, Proxy Demand Resource, Load and System Resource</u> may be given if necessary. The CAISO will determine which method of communication is appropriate; provided that the CAISO will consult with the Scheduling Coordinator, if time permits, and will consider the method of communication then utilized by such Scheduling Coordinator; provided further, that the CAISO shall make the final determination as to the additional communication methods. Participating Generators, owners or operators of <u>Participating Loads</u>, and operators of System Units or System Resources whose resources are scheduled, bid in or under contract, shall ensure that there is a twenty-four (24) hour personal point of contact with the CAISO for the Generating Unit, System Unit, <u>Participating Load or System Resource. Scheduling Coordinators representing Proxy Demand Resources that are scheduled, bid in or under contract shall ensure that there is a twenty-four (24) hour personal point of contact with the CAISO for the Proxy Demand Resource.</u> A Participating Generator, or provider of Curtailable Demand wishing to offer any Ancillary Service must provide a direct ring down voice communications circuit (or a dedicated telephone line available twenty-four (24) hours a day every day of the year) between the control room operator for the Generating Unit or Curtailable Demand providing the Ancillary Service and the CAISO Control Center. Each Participating Generator must also provide an alternate method of voice communications with the CAISO from the control room in addition to the direct communication link required above. Operators of Dynamic System Resources from which Dynamic Schedules or Bids are submitted to the CAISO shall provide communications links meeting CAISO</p>	<p>8.4.5 Communication Equipment</p> <p>Unless otherwise authorized by the CAISO, all Scheduling Coordinators wishing to submit an Ancillary Service Bid must have the capability to submit to and receive information from the CAISO’s secure communication system. In addition, they must be capable of receiving Dispatch Instructions electronically and they must provide the CAISO with a telephone number, or fax number through which Dispatch Instructions for each <u>resourceGenerating Unit, System Unit, Load and System Resource</u> may be given if necessary. The CAISO will determine which method of communication is appropriate; provided that the CAISO will consult with the Scheduling Coordinator, if time permits, and will consider the method of communication then utilized by such Scheduling Coordinator; provided further, that the CAISO shall make the final determination as to the additional communication methods. <u>Ancillary Service Providers Participating Generators, owners or operators of Loads, and operators of System Units or System Resources</u> whose resources are scheduled, bid in or under contract, shall ensure that there is a twenty-four (24) hour personal point of contact with the CAISO for the <u>resource. An Ancillary Service ProviderGenerating Unit, System Unit, Load or System Resource. A Participating Generator or provider of Curtailable Demand</u> wishing to offer any Ancillary Service must provide a direct ring down voice communications circuit (or a dedicated telephone line available twenty-four (24) hours a day every day of the year) between the control room operator for the <u>resourceGenerating Unit or Curtailable Demand</u> providing the Ancillary Service and the CAISO Control Center. Each <u>Ancillary Service ProviderParticipating Generator</u> must also provide an alternate method of voice communications with the CAISO from the control room in addition to the direct communication link required above. Operators of Dynamic System Resources from which Dynamic Schedules or Bids are submitted to the CAISO shall provide communications links meeting CAISO standards for dynamic imports from System Resources. <u>Ancillary Service Providers whose resources provideParticipating Generators and operators of System</u></p>	<p>8.4.5 Communication Equipment</p> <p>Unless otherwise authorized by the CAISO, all Scheduling Coordinators wishing to submit an Ancillary Service Bid must have the capability to submit to and receive information from the CAISO’s secure communication system. In addition, they must be capable of receiving Dispatch Instructions electronically and they must provide the CAISO with a telephone number, or fax number through which Dispatch Instructions for each resource may be given if necessary. The CAISO will determine which method of communication is appropriate; provided that the CAISO will consult with the Scheduling Coordinator, if time permits, and will consider the method of communication then utilized by such Scheduling Coordinator; provided further, that the CAISO shall make the final determination as to the additional communication methods. Ancillary Service Providers whose resources are scheduled, bid in or under contract, shall ensure that there is a twenty-four (24) hour personal point of contact with the CAISO for the resource. <u>Scheduling Coordinators representing Proxy Demand Resources that are scheduled, bid in or under contract shall ensure that there is a twenty-four (24) hour personal point of contact with the CAISO for the Proxy Demand Resource.</u> An Ancillary Service Provider wishing to offer any Ancillary Service must provide a direct ring down voice communications circuit (or a dedicated telephone line available twenty-four (24) hours a day every day of the year) between the control room operator for the resource providing the Ancillary Service and the CAISO Control Center. Each Ancillary Service Provider must also provide an alternate method of voice communications with the CAISO from the control room in addition to the direct communication link required above. Operators of Dynamic System Resources from which Dynamic Schedules or Bids are submitted to the CAISO shall provide communications links meeting CAISO standards for dynamic imports from System Resources. Ancillary Service Providers whose resources provide Regulation shall also provide communication links meeting CAISO standards for direct digital control. Operators of System Resources providing Regulation shall provide communications links meeting CAISO standards for imports</p>

		<p>standards for dynamic imports from System Resources. Participating Generators and operators of System Units providing Regulation shall also provide communication links meeting CAISO standards for direct digital control. Operators of System Resources providing Regulation shall provide communications links meeting CAISO standards for imports of Regulation. If any communication system becomes unavailable, the relevant Participating Generators, operators of System Units, <u>Participating Loads, Proxy Demand Resources, Loads</u> and System Resources and the CAISO shall take immediate action to identify the cause of the interruption and to restore the communication system. A Scheduling Coordinator that has provided a Submission to Self-Provide an Ancillary Service, or has submitted a Bid to provide or contracted for Ancillary Services, shall ensure that the Generating Unit, System Unit, <u>Participating Load, Proxy Demand Resource, Load</u> or System Resource concerned is able to receive and implement Dispatch Instructions.</p>	<p>Units providing Regulation shall also provide communication links meeting CAISO standards for direct digital control. Operators of System Resources providing Regulation shall provide communications links meeting CAISO standards for imports of Regulation. If any communication system becomes unavailable, the relevant <u>Ancillary Service Provider Participating Generators, operators of System Units, Loads and System Resources</u> and the CAISO shall take immediate action to identify the cause of the interruption and to restore the communication system. A Scheduling Coordinator that has provided a Submission to Self-Provide an Ancillary Service, or has submitted a Bid to provide or contracted for Ancillary Services, shall ensure that the <u>resourceGenerating Unit, System Unit, Load or System Resource</u> concerned is able to receive and implement Dispatch Instructions.</p>	<p>of Regulation. If any communication system becomes unavailable, the relevant Ancillary Service Provider and the CAISO shall take immediate action to identify the cause of the interruption and to restore the communication system. A Scheduling Coordinator that has provided a Submission to Self-Provide an Ancillary Service, or has submitted a Bid to provide or contracted for Ancillary Services, shall ensure that the resource concerned is able to receive and implement Dispatch Instructions.</p>
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Section	Explanation of Tariff Overlap	[1] Marked Tariff language from filing with earlier effective date (or lower eTariff Record Priority value in the event both filings have the same effective date)	[2] Marked Tariff language from filing with later effective date (or higher eTariff Record Priority value in the event both filings have the same effective date)	[3] Marked Tariff language from [1] added to currently effective tariff record
8.9	<p>This section is affected by two overlap occurrences resulting in the absence of accepted tariff language from tariff records. First, Version 2.0.0 as filed with Multi-Stage Generating Resource Compliance filing, Sept. 8, 2010, Docket ER10-2560, did not include the changes to this section (highlighted in yellow in Col. 1) reflected in Version 1.0.0 as filed with the Non Generating Resource Amendment, July 12, 2010, Docket ER10-1755, as accepted by FERC Order Sept. 10, 2010 (132 FERC ¶ 61,211). Second, Version 5.0.0 as filed with the CAISO MSG Delay of Implementation Amendment, Nov. 12, 2010, Docket ER11-2106, did not include the changes to this section (highlighted in blue in Col. 1) reflected in Version 4.0.0 as filed with the Proxy Demand Resource Compliance filing, Sept. 13, 2010, ER10-2623, and accepted by FERC Order Jan. 4, 2011 (134 FERC ¶ 61,004) (erroneously issued in Docket ER10-2621).</p>	<p>8.9, Verification, Compliance Testing, And Auditing</p> <p>Availability of contracted and Self-Provided Ancillary Services and RUC Capacity shall be verified by the CAISO by unannounced testing of Generating Units, Loads and System Resources<u>resources</u>, by auditing of response to CAISO Dispatch Instructions, and by analysis of the appropriate Meter Data, or Interchange Schedules. The CAISO may test the capability of any Generating Unit, System Unit, System Resource, external import of a System Resource, Participating Load, or reactive device<u>resource</u> providing Ancillary Services or RUC Capacity. Participating Generators, owners or operators of Participating Loads, Scheduling Coordinators representing owners or operators of Proxy Demand Resources, operators of System Units or System Resources, owners or operators of reactive devices and Scheduling Coordinators shall notify the CAISO immediately whenever they become aware that an Ancillary Service or RUC Capacity is not available in any way. All Participating Generators, owners or operators of Loads, operators of System Units or System Resources and owners or operators of reactive devices<u>Ancillary Service Providers</u> shall check, monitor and/or test their system and related equipment routinely to assure availability of the committed Ancillary Services and RUC Capacity. These requirements apply to Ancillary Services whether the Ancillary Services are contracted or self-provided. For a duration specified by the CAISO, the CAISO may suspend the technical eligibility certificate of a Scheduling Coordinator for a resource<u>Generating Unit, System Unit, Load or System Resource</u>, which repeatedly fails to perform. The CAISO shall develop measures to discourage repeated non-performance on the part of both bidders and self-providers.</p>	<p>8.9, Verification, Compliance Testing, And Auditing</p> <p>Availability of contracted and Self-Provided Ancillary Services and RUC Capacity shall be verified by the CAISO by unannounced testing of Generating Units, Loads and System Resources, by auditing of response to CAISO Dispatch Instructions, and by analysis of the appropriate Meter Data, or Interchange Schedules. The CAISO may test the capability of any Generating Unit, System Unit, System Resource, external import of a System Resource, Participating Load, or reactive device providing Ancillary Services or RUC Capacity. Participating Generators, owners or operators of Participating Loads, operators of System Units or System Resources, owners or operators of reactive devices and Scheduling Coordinators shall notify the CAISO immediately whenever they become aware that an Ancillary Service or RUC Capacity is not available in any way. All Participating Generators, owners or operators of Loads, operators of System Units or System Resources and owners or operators of reactive devices shall check, monitor and/or test their system and related equipment routinely to assure availability of the committed Ancillary Services and RUC Capacity. These requirements apply to Ancillary Services whether the Ancillary Services are contracted or self-provided. For a duration specified by the CAISO, the CAISO may suspend the technical eligibility certificate of a Scheduling Coordinator for a Generating Unit, System Unit, Load or System Resource, which repeatedly fails to perform. The CAISO shall develop measures to discourage repeated non-performance on the part of both bidders and self-providers. <u>Further, all of these requirements apply to each MSG Configuration.</u></p>	<p>8.9 Verification, Compliance Testing, And Auditing</p> <p>Availability of contracted and Self-Provided Ancillary Services shall be verified by the CAISO by unannounced testing of Generating Units, Loads and System Resources<u>resources</u>, by auditing of response to CAISO Dispatch Instructions, and by analysis of the appropriate Meter Data, or Interchange Schedules. The CAISO may test the capability of any Generating Unit, System Unit, System Resource, external import of a System Resource, Participating Load, or reactive device<u>resource</u> providing Ancillary Services. Participating Generators, owners or operators of Participating Loads, Scheduling Coordinators representing owners or operators of Proxy Demand Resources, operators of System Units or System Resources, owners or operators of reactive devices and Scheduling Coordinators shall notify the CAISO immediately whenever they become aware that an Ancillary Service is not available in any way. All Participating Generators, owners or operators of Loads, operators of System Units or System Resources and owners or operators of reactive devices<u>Ancillary Service Providers</u> shall check, monitor and/or test their system and related equipment routinely to assure availability of the committed Ancillary Services. These requirements apply to Ancillary Services whether the Ancillary Services are contracted or self-provided. For a duration specified by the CAISO, the CAISO may suspend the technical eligibility certificate of a Scheduling Coordinator for a resource<u>Generating Unit, System Unit, Load or System Resource</u>, which repeatedly fails to perform. The CAISO shall develop measures to discourage repeated non-performance on the part of both bidders and self-providers. Further, all of these requirements apply to each MSG Configuration.</p>

Section	Explanation of Tariff Overlap	[1] Marked Tariff language from filing with earlier effective date (or lower eTariff Record Priority value in the event both filings have the same effective date)	[2] Marked Tariff language from filing with later effective date (or higher eTariff Record Priority value in the event both filings have the same effective date)	[3] Marked Tariff language from [1] added to currently effective tariff record
8.9.2	Version 2.0.0 of the tariff record for Section 8.9.2 as filed with Multi-Stage Generating Resource Compliance filing, September 8, 2010, Docket No. ER10-2560, and later versions did not include the changes to this section reflected in Version 1.0.0 as filed with the Non Generating Resource Amendment, July 12, 2010, Docket No. ER10-1755, and accepted by FERC Order Sept. 10, 2010 (132 FERC ¶ 61,211).	<p>8.9.2 Compliance Testing for Regulation</p> <p>The CAISO may test the capability of any resource<u>Generating Unit or System Resource</u> providing Regulation by using the CAISO EMS to move that resource's<u>Generating Unit's or System Resource's</u> output over the full range of its Regulation capacity within a ten <u>(10)</u> minute period.</p>	<p>8.9.2 Compliance Testing for Regulation</p> <p>The CAISO may test the capability of any Generating Unit or System Resource providing Regulation by using the CAISO EMS to move that Generating Unit's or System Resource's output over the full range of its Regulation capacity within a ten-minute period. <u>For a Multi-Stage Generating Resource the full range of Regulation capacity is evaluated at the applicable MSG Configuration.</u></p>	<p>8.9.2 Compliance Testing for Regulation</p> <p>The CAISO may test the capability of any Generating Unit or System Resource<u>resource</u> providing Regulation by using the CAISO EMS to move that Generating Unit's or System Resource's<u>resource's</u> output over the full range of its Regulation capacity within a ten <u>-(10)</u> minute period. For a Multi-Stage Generating Resource the full range of Regulation capacity is evaluated at the applicable MSG Configuration.</p>
8.10.2	Version 2.0.0 of the tariff record for Section 8.10.2 as filed with Multi-Stage Generating Resource Compliance filing, September 8, 2010, Docket No. ER10-2560, and later versions did not include the changes to this section reflected in Version 1.0.0 as filed with the Non Generating Resource Amendment, July 12, 2010, Docket No. ER10-1755, and accepted by FERC Order Sept. 10, 2010 (132 FERC ¶ 61,211).	<p>8.10.2 Spinning Reserve</p> <p>The CAISO shall test the Spinning Reserve capability of a resource<u>Generating Unit, System Unit or System Resource</u> by issuing unannounced Dispatch Instructions requiring the resource<u>Generating Unit, System Unit or System Resource</u> to ramp up to its ten (10) minute capability. The CAISO shall measure the response of the resource<u>Generating Unit, System Unit or System Resource</u> to determine compliance with requirements. Such tests may not necessarily occur on the hour. The Scheduling Coordinator for the resource<u>Generating Unit, System Unit or System Resource</u> shall be paid pursuant to Section 11.5.6.</p>	<p>8.10.2 Spinning Reserve</p> <p>The CAISO shall test the Spinning Reserve capability of a Generating Unit, System Unit or System Resource by issuing unannounced Dispatch Instructions requiring the Generating Unit, System Unit or System Resource to ramp up to its ten (10) minute capability. The CAISO shall measure the response of the Generating Unit, System Unit or System Resource to determine compliance with requirements. Such tests may not necessarily occur on the hour. The Scheduling Coordinator for the Generating Unit, System Unit or System Resource shall be paid pursuant to Section 11.5.6. <u>For a Multi-Stage Generating Resource the range of Spinning capacity evaluated is the range for the applicable MSG Configuration.</u></p>	<p>8.10.2 Spinning Reserve</p> <p>The CAISO shall test the Spinning Reserve capability of a Generating Unit, System Unit or System Resource<u>resource</u> by issuing unannounced Dispatch Instructions requiring the Generating Unit, System Unit or System Resource<u>resource</u> to ramp up to its ten (10) minute capability. The CAISO shall measure the response of the Generating Unit, System Unit or System Resource<u>resource</u> to determine compliance with requirements. Such tests may not necessarily occur on the hour. The Scheduling Coordinator for the Generating Unit, System Unit or System Resource<u>resource</u> shall be paid pursuant to Section 11.5.6. For a Multi-Stage Generating Resource the range of Spinning capacity evaluated is the range for the applicable MSG Configuration.</p>

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8.10.3	Version 2.0.0 of the tariff record for Section 8.10.3 as filed with Multi-Stage Generating Resource Compliance filing, September 8, 2010, Docket No. ER10-2560, and later versions did not include the changes to this section reflected in Version 1.0.0 as filed with the Non Generating Resource Amendment, July 12, 2010, Docket No. ER10-1755, and accepted by FERC Order Sept. 10, 2010 (132 FERC ¶ 61,211).	<p>8.10.3 Non-Spinning Reserve</p> <p>The CAISO may test the Non-Spinning Reserve capability of a resource<u>Generating Unit, System Unit or System Resource</u> by issuing unannounced Dispatch Instructions requiring the resource<u>Generating Unit, System Unit or System Resource</u> to come on line and ramp up or to reduce Demand to its certified capacity within ten (10) minutes<u>minute capability</u>. The CAISO shall measure the response of the resource<u>Generating Unit, System Unit or System Resource</u> or Load to determine compliance with requirements. The Scheduling Coordinator for the resource<u>Generating Unit, System Unit, Load or System Resource</u> shall be paid pursuant to Section 11.5.6.</p>	<p>8.10.3 Non-Spinning Reserve</p> <p>The CAISO may test the Non-Spinning Reserve capability of a Generating Unit, Load, System Unit or System Resource by issuing unannounced Dispatch Instructions requiring the Generating Unit, Load, System Unit or System Resource to come on line and ramp up or to reduce Demand to its ten (10) minute capability. The CAISO shall measure the response of the Generating Unit, System Unit, System Resource or Load to determine compliance with requirements. The Scheduling Coordinator for the Generating Unit, System Unit, Load or System Resource shall be paid pursuant to Section 11.5.6. <u>For a Multi-Stage Generating Resource the range of Non-Spinning capacity evaluated is the range at the applicable MSG Configuration.</u></p>	<p>8.10.3 Non-Spinning Reserve</p> <p>The CAISO may test the Non-Spinning Reserve capability of a Generating Unit, Load, System Unit or System Resource<u>resource</u> by issuing unannounced Dispatch Instructions requiring the Generating Unit, Load, System Unit or System Resource<u>resource</u> to come on line and ramp up or to reduce Demand to its certified capacity within ten (10) minutes<u>capability</u>. The CAISO shall measure the response of the Generating Unit, System Unit, System Resource<u>resource</u> or Load to determine compliance with requirements. The Scheduling Coordinator for the Generating Unit, System Unit, Load or System Resource<u>resource</u> shall be paid pursuant to Section 11.5.6. For a Multi-Stage Generating Resource the range of Non-Spinning capacity evaluated is the range at the applicable MSG Configuration.</p>
8.10.8.2	Version 14.0.0 of the tariff record for Section 8.10.8.2 as filed with the Order 764 Market Changes Amendment, Nov. 26, 2013, Docket No. ER14-480, did not include the changes to this section reflected in Version 13.0.0 as filed with the Mandatory MSG Delay Amendment, Oct. 17, 2013, Docket ER13-2063-001, and accepted by FERC Order March 20, 2014 (146 FERC ¶ 61,191). As both versions of the section had the same effective date, Version 14.0.0 superseded Version 13.0.0 due to its higher eTariff Record Priority value.	<p>8.10.8.2 Rescission of Payments for Unavailable Ancillary Service Capacity</p> <p>If the CAISO determines that a Scheduling Coordinator has supplied Uninstructed Imbalance Energy to the CAISO during a Settlement Interval from the capacity of a resource that is obligated to supply Spinning Reserve or Non-Spinning Reserve to the CAISO, payments to the Scheduling Coordinator for the Ancillary Service capacity used to supply Uninstructed Imbalance Energy shall be eliminated to the extent of the deficiency, in accordance with the provisions of Section 11.10.9.2. For Multi-Stage Generating Resources that have supplied Uninstructed Imbalance Energy from capacity obligated to supply Spinning or Non-Spinning Reserves, the CAISO shall calculate the capacity for which payments will be rescinded at the Generating Unit or Dynamic Resource-Specific System Resource level, as applicable, and will use the MSG Configuration-specific Maximum Operating Limit.</p>	<p>8.10.8.2 Rescission of Payments for Unavailable Ancillary Service Capacity</p> <p>If the CAISO determines that a Scheduling Coordinator has supplied Uninstructed Imbalance Energy to the CAISO during a Settlement Interval from the capacity of a resource that is obligated to supply Spinning Reserve or Non-Spinning Reserve to the CAISO, payments to the Scheduling Coordinator for the Ancillary Service capacity used to supply Uninstructed Imbalance Energy shall be eliminated to the extent of the deficiency, in accordance with the provisions of Section 11.10.9.2. For Multi-Stage Generating Resources that have supplied Uninstructed Imbalance Energy from capacity obligated to supply Spinning or Non-Spinning Reserves, the CAISO shall calculate the capacity for which payments will be rescinded at the Generating Unit or Dynamic Resource-Specific System Resource level, as applicable, and will use the MSG Configuration-specific Maximum Operating Limit.</p>	<p>8.10.8.2 Rescission of Payments for Unavailable Ancillary Service Capacity</p> <p>If the CAISO determines that a Scheduling Coordinator has supplied Uninstructed Imbalance Energy to the CAISO during a Settlement Interval from the capacity of a resource that is obligated to supply Spinning Reserve or Non-Spinning Reserve to the CAISO, payments to the Scheduling Coordinator for the Ancillary Service capacity used to supply Uninstructed Imbalance Energy shall be eliminated to the extent of the deficiency, in accordance with the provisions of Section 11.10.9.2. For Multi-Stage Generating Resources that have supplied Uninstructed Imbalance Energy from capacity obligated to supply Spinning or Non-Spinning Reserves, the CAISO shall calculate the capacity for which payments will be rescinded at the Generating Unit or Dynamic Resource-Specific System Resource level, as applicable, and will use the MSG Configuration-specific Maximum Operating Limit.</p>

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11.5.2	<p>Version 8.0.0 of the tariff record for Section 11.5.2 as filed with the Order 764 Market Changes Amendment, Nov. 26, 2013, Docket No. ER14-480, did not include the changes to this section reflected in Version 7.0.0 as filed with the RDRR Compliance filing, August 19, 2013, Docket No. ER13-2192, and accepted by FERC Order March 28, 2014 (146 FERC ¶ 61,233). As both versions of the section had the same effective date, Version 8.0.0 superseded Version 7.0.0 due to its higher eTariff Record Priority value.</p>	<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 a UIE quantity. UIE 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 UIE for such entities is settled similarly to how UIE for non-MSS entities is settled as provided in this Section 11.5.2. The CAISO shall account for UIE in two categories: (1) Tier 1 UIE is accounted as the quantity deviation from the resource’s IIE; and (2) Tier 2 UIE is accounted as the quantity deviation from the resource’s Day-Ahead Schedule or as described in Section 11.5.2.4. For Generating Units, System Units of MSS Operators that have elected gross Settlement, Physical Scheduling Plants, System Resources and all Participating Load, <u>Reliability Demand Response Resources</u>, and Proxy Demand Resources, the Tier 1 UIE Settlement Amount is calculated for each Settlement Interval as the product of its Tier 1 UIE quantity and its Resource-Specific Tier 1 UIE Settlement Interval Price as calculated per Section 11.5.2.1, and the Tier 2 UIE Settlement Amount is calculated for each Settlement Interval as the product of its Tier 2 UIE quantity and the simple average of the relevant Dispatch Interval LMPs. The Tier 2 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 Tier 1 UIE Settlement Amount is calculated for each Settlement Interval as the product of its Tier 1 UIE quantity and its Real-Time Settlement Interval MSS Price, and the Tier 2 UIE Settlement Amount is calculated for each Settlement Interval as the product of its Tier 2 UIE quantity and the Real-Time Settlement Interval MSS Price.</p> <p style="text-align: center;">* * * *</p>	<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 a UIE quantity <u>for each Settlement Interval</u>. UIE 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 UIE for such entities is settled similarly to how UIE for non-MSS entities is settled as provided in this Section 11.5.2. The CAISO shall account for UIE in two categories: (1) Tier 1 UIE is accounted as the quantity deviation from every five minutes based on the resource’s IIE; and (2) Tier 2 UIE is accounted as the quantity deviation from the resource’s Day Ahead Schedule or as described in Section 11.2.5.4 <u>Dispatch Instruction</u>. For <u>all resources, including</u> Generating Units, System Units of MSS Operators that have elected gross Settlement, Physical Scheduling Plants, System Resources and all Participating Load and Proxy Demand Resources, the Tier 1 UIE Settlement Amount is calculated for each Settlement Interval as the product of its Tier 1 UIE <u>Mwh</u> quantity and its Resource-Specific Tier 1 UIE Settlement Interval Price as calculated per Section 11.5.2.1, and the Tier 2 UIE Settlement Amount is calculated for each Settlement Interval as the product of its Tier 2 UIE quantity and the simple average of the relevant Dispatch Interval LMPs <u>applicable RTD LMP</u>. The Tier 2 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 Tier 1 UIE Settlement Amount is calculated for each Settlement Interval as the product of its Tier 1 UIE quantity and its Real-Time Settlement Interval MSS Price, and the Tier 2 UIE Settlement Amount is calculated for each Settlement Interval as the product of its Tier 2 UIE quantity and the Real-Time Settlement Interval MSS Price.</p> <p style="text-align: center;">* * * *</p>	<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 a UIE quantity for each Settlement Interval. UIE 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 UIE for such entities is settled similarly to how UIE for non-MSS entities is settled as provided in this Section 11.5.2. The CAISO shall account for UIE 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 and all Participating Load, <u>Reliability Demand Response Resources</u>, and Proxy Demand Resources, the UIE Settlement Amount is calculated for each Settlement Interval as the product of its UIE 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 UIE quantity and its Real-Time Settlement Interval MSS Price.</p> <p style="text-align: center;">* * * *</p>

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<p>11.8.2.1.5 11.8.2.1.6</p>	<p>Version 14.0.0 of the tariff record for Section 11.8.2 as filed with the Order 764 Market Changes Amendment, Nov. 26, 2013, Docket No. ER14-480, did not include the changes to these sections reflected in Version 13.0.0 as filed with the Mandatory MSG Delay Amendment, Oct. 17, 2013, Docket No. ER13-2063-001, and accepted by FERC Order March 20, 2014 (146 FERC ¶ 61,191). Version 14.0.0 did, however, include changes to these sections reflected in Version 12.0.0 of the tariff record as filed with the RIMPR1 Bid Cost Recovery Tariff Amendment, Sep. 25, 2013, Docket No. ER13-2452-000; the redline changes shown on the right in Column 2 are those made by the RIMPR1 Amendment.</p>	<p>11.8.2.1.5 IFM Energy Bid Cost For any Settlement Interval, the IFM Energy Bid Cost for Bid Cost Recovery Eligible Resources, except Participating Loads, shall be the integral of the relevant Energy Bid submitted to the IFM, if any, from the higher of the registered Bid Cost Recovery Eligible Resource’s Minimum Load and the Day-Ahead Total Self-Schedule up to the relevant MWh scheduled in the Day-Ahead Schedule, divided by the number of Settlement Intervals in a Trading Hour. The IFM Energy Bid Cost for Bid Cost Recovery Eligible Resources, except Participating Loads, and except for any portion of the Day-Ahead Schedule associated with an Energy Bid less than zero, for any Settlement Interval is set to zero for any portion of the Day-Ahead Schedule that is not delivered from the otherwise Bid Cost Recovery Eligible Resource that has metered Generation below its Day-Ahead Schedule; any portion of the Day-Ahead Schedule that is actually delivered remains eligible for IFM Energy Bid Cost Recovery. The delivered portions of the Day-Ahead Schedule for this calculation are determined using the Day-Ahead Metered Energy Adjustment Factor. The Day-Ahead Metered Energy Adjustment Factor is not applied to IFM Energy Bid Costs that associate with Energy Bids that are less than zero. The CAISO will determine the IFM Energy Bid Cost for a Multi-Stage Generating Resource at the Generating Unit or Dynamic Resource Specific System Resource level. The CAISO will determine the applicable net IFM Energy Bid Cost surplus or net IFM Energy Bid Cost shortfalls as described in Section 11.8.2.4.</p>	<p>11.8.2.1.5 IFM Energy Bid Cost For any Settlement Interval, the IFM Energy Bid Cost for Bid Cost Recovery Eligible Resources, except Participating Loads, shall be the integral of the relevant Energy Bid <u>used in submitted to</u> the IFM, if any, from the higher of the registered Bid Cost Recovery Eligible Resource’s Minimum Load and the Day-Ahead Total Self-Schedule up to the relevant MWh scheduled in the Day-Ahead Schedule, divided by the number of Settlement Intervals in a Trading Hour. The IFM Energy Bid Cost for Bid Cost Recovery Eligible Resources, except Participating Loads, and except for any portion of the Day-Ahead Schedule associated with an Energy Bid less than zero, for any Settlement Interval is set to zero for any portion of the Day-Ahead Schedule that is not delivered from the otherwise Bid Cost Recovery Eligible Resource that has metered Generation below its Day-Ahead Schedule; any portion of the Day-Ahead Schedule that is actually delivered remains eligible for IFM Energy Bid Cost Recovery. <u>The IFM Energy Bid Cost calculations are subject to delivered portions of the Day-Ahead Schedule for this calculation are determined using the application of the Day-Ahead Metered Energy Adjustment Factor, and the Persistent Deviation Metric pursuant to the rules specified in Section 11.8.2.5 and Section 11.17.2.3, respectively. In addition, if the CAISO commits a Bid Cost Recovery Eligible Resource in the Day-Ahead and receives a Day-Ahead Schedule and subsequently the CAISO de-commits the resource in the Real-Time Market, the IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. If the CAISO commits a Multi-Stage Generating Resource in the Day-Ahead Market and the resource receives a Day-Ahead Schedule and subsequently the CAISO de-commits the Multi-Stage Generating Resource to a lower MSG Configuration where its Minimum Load capacity in the Real-Time Market is lower than the CAISO IFM Commitment Period MSG Configuration’s Minimum Load, the resource’s IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. The Day-Ahead Metered Energy Adjustment Factor is not applied to IFM Energy Bid Costs that associate with Energy Bids that are</u></p>	<p>11.8.2.1.5 IFM Energy Bid Cost For any Settlement Interval, the IFM Energy Bid Cost for Bid Cost Recovery Eligible Resources, except Participating Loads, shall be the integral of the relevant Energy Bid used in the IFM, if any, from the higher of the registered Bid Cost Recovery Eligible Resource’s Minimum Load and the Day-Ahead Total Self-Schedule up to the relevant MWh scheduled in the Day-Ahead Schedule, divided by the number of Settlement Intervals in a Trading Hour. The IFM Energy Bid Cost calculations are subject to the application of the Day-Ahead Metered Energy Adjustment Factor, and the Persistent Deviation Metric pursuant to the rules specified in Section 11.8.2.5 and Section 11.17.2.3, respectively. In addition, if the CAISO commits a Bid Cost Recovery Eligible Resource in the Day-Ahead and receives a Day-Ahead Schedule and subsequently the CAISO de-commits the resource in the Real-Time Market, the IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. If the CAISO commits a Multi-Stage Generating Resource in the Day-Ahead Market and the resource receives a Day-Ahead Schedule and subsequently the CAISO de-commits the Multi-Stage Generating Resource to a lower MSG Configuration where its Minimum Load capacity in the Real-Time Market is lower than the CAISO IFM Commitment Period MSG Configuration’s Minimum Load, the resource’s IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. The CAISO will determine the IFM Energy Bid Cost for a Multi-Stage Generating Resource at the Generating Unit or Dynamic Resource Specific System Resource level.</p>

		<p>11.8.2.1.6 IFM AS Bid Cost For any Settlement Interval, the IFM AS Bid Cost shall be the product of the IFM AS Award from each accepted IFM AS Bid and the relevant AS Bid Price, divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine and calculate IFM AS Bid Cost for a Multi-Stage Generating Resource at the Generating Unit or Dynamic Resource-Specific-System Resource level. The IFM AS Bid Cost shall also include Mileage Bid Costs. For any Settlement Interval, the IFM Mileage Bid Cost shall be the product of Instructed Mileage associated with a Day Ahead Regulation capacity award, as adjusted for accuracy consistent with Section 11.10.1.7, and the relevant Mileage Bid price, divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine and calculate IFM Mileage Bid Cost for a Multi-Stage Generating Resource at the Generating Unit or Dynamic Resource-Specific-System Resource level.</p>	<p>less than zero. The CAISO will determine the IFM Energy Bid Cost for a Multi-Stage Generating Resource at the Generating Unit or Dynamic Resource-Specific System Resource level. The CAISO will determine the applicable net IFM Energy Bid Cost surplus or net IFM Energy Bid Cost shortfalls as described in Section 11.8.2.4.</p> <p>11.8.2.1.6 IFM AS Bid Cost For any Settlement Interval, the IFM AS Bid Cost shall be the product of the IFM AS Award from each accepted IFM AS Bid and the relevant AS Bid Price, divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine and calculate IFM AS Bid Cost for a Multi-Stage Generating Resource at the Generating Unit or Dynamic Resource-Specific System Resource level. The IFM AS Bid Cost shall also include Mileage Bid Costs. For any Settlement Interval, the IFM Mileage Bid Cost shall be the product of Instructed Mileage associated with a Day Ahead Regulation capacity award, as adjusted for accuracy consistent with Section 11.10.1.7, and the relevant Mileage Bid price, divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine and calculate IFM Mileage Bid Cost for a Multi-Stage Generating Resource at the Generating Unit or Dynamic Resource-Specific System Resource level.</p>	<p>11.8.2.1.6 IFM AS Bid Cost For any Settlement Interval, the IFM AS Bid Cost shall be the product of the IFM AS Award from each accepted IFM AS Bid and the relevant AS Bid Price, divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine and calculate IFM AS Bid Cost for a Multi-Stage Generating Resource at the Generating Unit or Dynamic Resource-Specific-System Resource level. The IFM AS Bid Cost shall also include Mileage Bid Costs. For any Settlement Interval, the IFM Mileage Bid Cost shall be the product of Instructed Mileage associated with a Day Ahead Regulation capacity award, as adjusted for accuracy consistent with Section 11.10.1.7, and the relevant Mileage Bid price, divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine and calculate IFM Mileage Bid Cost for a Multi-Stage Generating Resource at the Generating Unit or Dynamic Resource-Specific-System Resource level.</p>
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Section	Explanation of Tariff Overlap	[1] Marked Tariff language from filing with earlier effective date (or lower eTariff Record Priority value in the event both filings have the same effective date)	[2] Marked Tariff language from filing with later effective date (or higher eTariff Record Priority value in the event both filings have the same effective date)	[3] Marked Tariff language from [1] added to currently effective tariff record
<p>11.8.3, 11.8.3.1.1, 11.8.3.1.2, 11.8.3.1.4.1, 11.8.3.2, 11.8.3.3.2</p>	<p>Version 10.0.0 of the tariff record for Section 11.8.3 as filed with the Mandatory MSG Delay Amendment, Oct. 17, 2013, Docket No. ER13-2063-001, did not include the changes to these sections reflected in Version 9.0.0 as filed with the Renewable Integration Market Product Review (RIMPR1) Bid Cost Recovery Tariff Amendment, Sept. 25, 2013, Docket No. ER13-2452, and accepted by FERC Order Dec. 19, 2013 (145 FERC ¶ 61,254).</p>	<p>11.8.3 RUC Bid Cost Recovery Amount</p> <p>For purposes of determining the RUC Unrecovered Bid Cost Uplift Payments as determined in Section 11.8.5 and for the purposes of allocating Net RUC Bid Cost Uplift as described in Section 11.8.6.5, the CAISO shall calculate the RUC Bid Cost Shortfall or the RUC Bid Cost Surplus as the algebraic difference between the RUC Bid Cost and the RUC Market Revenues for each Bid Cost Recovery Eligible Resource for each Settlement Interval. The RUC Bid Costs shall be calculated pursuant to Section 11.8.3.1 and the RUC Market Revenues shall be calculated pursuant to Section 11.8.3.2. <u>The CAISO will include</u> Bid Cost Recovery costs related to Short Start Units committed in Real-Time because as a result of awarded RUC Capacity will be included in <u>RTMRUC</u> Compensation Costs.</p> <p style="text-align: center;">* * * *</p> <p>11.8.3.1.1 RUC Start-Up Cost</p> <p>The RUC Start-Up Cost for any Settlement Interval in a RUC Commitment Period shall consist of Start-Up Cost of the Bid Cost Recovery Eligible Resource submitted to the CAISO for the applicable RUC Commitment Period divided by the number of Settlement Intervals in the applicable RUC Commitment Period. For each Settlement Interval, only the RUC Start-Up Cost in a CAISO RUC Commitment Period is eligible for Bid Cost Recovery. The CAISO will determine the RUC Start-Up Cost for a Multi-Stage Generating Resource based on the MSG Configuration committed by the CAISO in RUC.</p> <p>The following rules shall be applied in sequence and shall qualify the RUC Start-Up Cost in a RUC Commitment Period:</p> <ul style="list-style-type: none"> (a) The RUC Start-Up Cost for a RUC Commitment Period is zero if there is an IFM Commitment Period within that RUC Commitment Period. (b) The RUC Start-Up Cost for a RUC Commitment Period is zero if the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an RMR Contract prior to the Day-Ahead Market or is flagged as an RMR Dispatch in the Day-Ahead 	<p>11.8.3 RUC Bid Cost Recovery Amount</p> <p>For purposes of determining the RUC Unrecovered Bid Cost Uplift Payments as determined in Section 11.8.5 and for the purposes of allocating Net RUC Bid Cost Uplift as described in Section 11.8.6.5, the CAISO shall calculate the RUC Bid Cost Shortfall or the RUC Bid Cost Surplus as the algebraic difference between the RUC Bid Cost and the RUC Market Revenues for each Bid Cost Recovery Eligible Resource for each Settlement Interval. The RUC Bid Costs shall be calculated pursuant to Section 11.8.3.1 and the RUC Market Revenues shall be calculated pursuant to Section 11.8.3.2. Bid Cost Recovery costs related to Short Start Units committed in Real-Time as a result of awarded RUC Capacity will be included in RUC Compensation Costs.</p> <p style="text-align: center;">* * * *</p> <p>11.8.3.1.1 RUC Start-Up Cost</p> <p>The RUC Start-Up Cost for any Settlement Interval in a RUC Commitment Period shall consist of Start-Up Cost of the Bid Cost Recovery Eligible Resource submitted to the CAISO for the applicable RUC Commitment Period divided by the number of Settlement Intervals in the applicable RUC Commitment Period. For each Settlement Interval, only the RUC Start-Up Cost in a CAISO RUC Commitment Period is eligible for Bid Cost Recovery. The CAISO will determine the RUC Start-Up Cost for a Multi-Stage Generating Resource based on the MSG Configuration committed by the CAISO in RUC.</p> <p>The following rules shall be applied in sequence and shall qualify the RUC Start-Up Cost in a RUC Commitment Period:</p> <ul style="list-style-type: none"> (a) The RUC Start-Up Cost for a RUC Commitment Period is zero if there is an IFM Commitment Period within that RUC Commitment Period. (b) The RUC Start-Up Cost for a RUC Commitment Period is zero if the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an RMR Contract prior to the Day-Ahead Market or is flagged as an RMR Dispatch in the Day-Ahead 	<p>11.8.3 RUC Bid Cost Recovery Amount</p> <p>For purposes of determining the RUC Unrecovered Bid Cost Uplift Payments as determined in Section 11.8.5 and for the purposes of allocating Net RUC Bid Cost Uplift as described in Section 11.8.6.5, the CAISO shall calculate the RUC Bid Cost Shortfall or the RUC Bid Cost Surplus as the algebraic difference between the RUC Bid Cost and the RUC Market Revenues for each Bid Cost Recovery Eligible Resource for each Settlement Interval. The RUC Bid Costs shall be calculated pursuant to Section 11.8.3.1 and the RUC Market Revenues shall be calculated pursuant to Section 11.8.3.2. <u>The CAISO will include</u> Bid Cost Recovery costs related to Short Start Units committed in Real-Time because as a result of awarded RUC Capacity will be included in <u>RTMRUC</u> Compensation Costs.</p> <p style="text-align: center;">* * * *</p> <p>11.8.3.1.1 RUC Start-Up Cost</p> <p>The RUC Start-Up Cost for any Settlement Interval in a RUC Commitment Period shall consist of Start-Up Cost of the Bid Cost Recovery Eligible Resource submitted to the CAISO for the applicable RUC Commitment Period divided by the number of Settlement Intervals in the applicable RUC Commitment Period. For each Settlement Interval, only the RUC Start-Up Cost in a CAISO RUC Commitment Period is eligible for Bid Cost Recovery. The CAISO will determine the RUC Start-Up Cost for a Multi-Stage Generating Resource based on the MSG Configuration committed by the CAISO in RUC.</p> <p>The following rules shall be applied in sequence and shall qualify the RUC Start-Up Cost in a RUC Commitment Period:</p> <ul style="list-style-type: none"> (a) The RUC Start-Up Cost for a RUC Commitment Period is zero if there is an IFM Commitment Period within that RUC Commitment Period. (b) The RUC Start-Up Cost for a RUC Commitment Period is zero if the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an RMR Contract prior to the Day-Ahead Market or is flagged as an RMR Dispatch in the Day-Ahead

		<p>Schedule anywhere within that RUC Commitment Period.</p> <p>(c) The RUC Start-Up Cost for a RUC Commitment Period is zero if there is no RUC Start-Up at the start of that RUC Commitment Period because the RUC Commitment Period is the continuation of an IFM, RUC, or RTM Commitment Period from the previous Trading Day.</p> <p>(d) The RUC Start-Up Cost for a RUC Commitment Period is zero if the Start-Up is delayed beyond the RUC Commitment Period in question or cancelled by the Real-Time Market prior to the Bid Cost Recovery Eligible Resource starting its start-up process.</p> <p>(e) If a RUC Start-Up is terminated in the Real-Time within the applicable RUC Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource is starting up the, RUC Start-Up Cost is prorated by the ratio of the Start-Up Time before termination over the RUC Start-Up Time.</p> <p>(f) The RUC Start-Up Cost for a RUC Commitment Period is qualified if an actual Start-Up occurs within that RUC Commitment Period. An actual Start-Up is detected between two consecutive Settlement Intervals when the relevant metered Energy in the applicable Settlement Intervals increases from below the Minimum Load Energy and reaches or exceeds the relevant Minimum Load Energy. The Minimum Load Energy is the product of the relevant Minimum Load and the duration of the Settlement Interval. The CAISO will determine the Minimum Load Energy for Multi-Stage Generating Resources based on the CAISO-committed MSG Configuration.</p> <p>(g) The RUC Start-Up Cost shall be qualified if an actual Start-Up occurs earlier than the start of the RUC 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 RUC Start-Up, otherwise the Start-Up Cost is zero for the RUC Commitment Period. <u>An actual Start-Up is detected when the relevant metered Energy in the applicable Settlement Intervals</u></p>	<p>Schedule anywhere within that RUC Commitment Period.</p> <p>(c) The RUC Start-Up Cost for a RUC Commitment Period is zero if there is no RUC Start-Up at the start of that RUC Commitment Period because the RUC Commitment Period is the continuation of an IFM, RUC, or RTM Commitment Period from the previous Trading Day.</p> <p>(d) The RUC Start-Up Cost for a RUC Commitment Period is zero if the Start-Up is delayed beyond the RUC Commitment Period in question or cancelled by the Real-Time Market prior to the Bid Cost Recovery Eligible Resource starting its start-up process.</p> <p>(e) If a RUC Start-Up is terminated in the Real-Time within the applicable RUC Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource is starting up the, RUC Start-Up Cost is prorated by the ratio of the Start-Up Time before termination over the RUC Start-Up Time.</p> <p>(f) The RUC Start-Up Cost for a RUC Commitment Period is qualified if an actual Start-Up occurs within that RUC Commitment Period. An actual Start-Up is detected between two consecutive Settlement Intervals when the relevant metered Energy in the applicable Settlement Intervals increases from below the Minimum Load Energy and reaches or exceeds the relevant Minimum Load Energy. The Minimum Load Energy is the product of the relevant Minimum Load and the duration of the Settlement Interval. The CAISO will determine the Minimum Load Energy for Multi-Stage Generating Resources based on the CAISO-committed MSG Configuration.</p> <p>(g) The RUC Start-Up Cost shall be qualified if an actual Start-Up occurs earlier than the start of the RUC 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 RUC Start-Up, otherwise the Start-Up Cost is zero for the RUC Commitment Period.</p>	<p>Schedule anywhere within that RUC Commitment Period.</p> <p>(c) The RUC Start-Up Cost for a RUC Commitment Period is zero if there is no RUC Start-Up at the start of that RUC Commitment Period because the RUC Commitment Period is the continuation of an IFM, RUC, or RTM Commitment Period from the previous Trading Day.</p> <p>(d) The RUC Start-Up Cost for a RUC Commitment Period is zero if the Start-Up is delayed beyond the RUC Commitment Period in question or cancelled by the Real-Time Market prior to the Bid Cost Recovery Eligible Resource starting its start-up process.</p> <p>(e) If a RUC Start-Up is terminated in the Real-Time within the applicable RUC Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource is starting up the, RUC Start-Up Cost is prorated by the ratio of the Start-Up Time before termination over the RUC Start-Up Time.</p> <p>(f) The RUC Start-Up Cost for a RUC Commitment Period is qualified if an actual Start-Up occurs within that RUC Commitment Period. An actual Start-Up is detected between two consecutive Settlement Intervals when the relevant metered Energy in the applicable Settlement Intervals increases from below the Minimum Load Energy and reaches or exceeds the relevant Minimum Load Energy. The Minimum Load Energy is the product of the relevant Minimum Load and the duration of the Settlement Interval. The CAISO will determine the Minimum Load Energy for Multi-Stage Generating Resources based on the CAISO-committed MSG Configuration.</p> <p>(g) The RUC Start-Up Cost shall be qualified if an actual Start-Up occurs earlier than the start of the RUC 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 RUC Start-Up, otherwise the Start-Up Cost is zero for the RUC Commitment Period. <u>An actual Start-Up is detected when the relevant metered Energy in the applicable Settlement Intervals</u></p>
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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 Intervals that fall within the CAISO RUC Commitment Period.

11.8.3.1.2 RUC Minimum Load Cost

The Minimum Load Cost for the applicable Settlement Interval shall be the Minimum Load Cost of the Bid Cost Recovery Eligible Resource divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RUC Minimum Load Cost in a CAISO RUC Commitment Period is eligible for Bid Cost Recovery. The RUC Minimum Load Cost for any Settlement Interval is zero if: (1) the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an RMR Contract or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule in that Settlement Interval; (2) the Bid Cost Recovery Eligible Resource is not ~~actually On~~committed or Dispatched in the Real-time Market in the applicable Settlement Interval; or (3) the applicable Settlement Interval is included in an IFM Commitment Period. For the purposes of determining RUC Minimum Load Cost, ~~for~~ a Bid Cost Recovery Eligible Resource ~~recovery of the RUC Minimum Load Costs is subject to the Real-Time Performance Metric as specified in Section 11.8.4.4.~~ ,except for a Multi-Stage Generating Resource, is assumed to be On if its metered Energy in a Settlement Interval is equal to or greater than the difference between its Minimum Load Energy and the Tolerance Band. Otherwise, such non-Multi-Stage Generating Resources are determined to be Off. For Multi-Stage Generating Resources, the commitment period is determined based on application of section 11.8.1.3. ~~If application of section 11.8.1.3 dictates that RUC is the commitment period, then the calculation of the RUC Minimum Load Costs will depend on whether the metered MSG Configuration is equal to or different from the RUC committed MSG Configuration. If the metered MSG Configuration is equal to the RUC committed MSG Configuration, then the RUC Minimum Load Costs will be based on the Minimum Load Costs of the RUC committed MSG Configuration. If the metered MSG Configuration is different from the RUC committed MSG Configuration, then the RUC Minimum Load Costs will be based on the lower of the Minimum Load Costs of the~~

11.8.3.1.2 RUC Minimum Load Cost

The Minimum Load Cost for the applicable Settlement Interval shall be the Minimum Load Cost of the Bid Cost Recovery Eligible Resource divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RUC Minimum Load Cost in a CAISO RUC Commitment Period is eligible for Bid Cost Recovery. The RUC Minimum Load Cost for any Settlement Interval is zero if: (1) the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an RMR Contract or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule in that Settlement Interval; (2) the Bid Cost Recovery Eligible Resource is not actually On in the applicable Settlement Interval; or (3) the applicable Settlement Interval is included in an IFM Commitment Period. For the purposes of determining RUC Minimum Load Cost, a Bid Cost Recovery Eligible Resource, except for a Multi-Stage Generating Resource, is assumed to be On if its metered Energy in a Settlement Interval is equal to or greater than the difference between its Minimum Load Energy and the Tolerance Band. Otherwise, such non-Multi-Stage Generating Resources are determined to be Off. For Multi-Stage Generating Resources, the commitment period is ~~further~~ determined based on application of section 11.8.1.3. If application of section 11.8.1.3 dictates that RUC is the commitment period, then the calculation of the RUC Minimum Load Costs will depend on whether the metered MSG Configuration is equal to or different from the RUC committed MSG Configuration. If the metered MSG Configuration is equal to the RUC committed MSG Configuration, then the RUC Minimum Load Costs will be based on the Minimum Load Costs of the RUC committed MSG Configuration. If the metered MSG Configuration is different from the RUC committed MSG Configuration, then the RUC Minimum Load Costs will be based on the lower of the Minimum Load Costs of the metered MSG Configuration and the Minimum Load Costs of the RUC committed MSG Configuration. The metered MSG Configuration is determined based on the

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 Intervals that fall within the CAISO RUC Commitment Period.

11.8.3.1.2 RUC Minimum Load Cost

The Minimum Load Cost for the applicable Settlement Interval shall be the Minimum Load Cost of the Bid Cost Recovery Eligible Resource divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RUC Minimum Load Cost in a CAISO RUC Commitment Period is eligible for Bid Cost Recovery. The RUC Minimum Load Cost for any Settlement Interval is zero if: (1) the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an RMR Contract or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule in that Settlement Interval; (2) the Bid Cost Recovery Eligible Resource is not committed or Dispatched in the Real-time Market in the applicable Settlement Interval; or (3) the applicable Settlement Interval is included in an IFM Commitment Period. For the purposes of determining RUC Minimum Load Cost, ~~for~~ a Bid Cost Recovery Eligible Resource ~~recovery of the RUC Minimum Load Costs is subject to the Real-Time Performance Metric as specified in Section 11.8.4.4.~~ ,except for a Multi-Stage Generating Resource, is assumed to be On if its metered Energy in a Settlement Interval is equal to or greater than the difference between its Minimum Load Energy and the Tolerance Band. Otherwise, such non-Multi-Stage Generating Resources are determined to be Off. For Multi-Stage Generating Resources, the commitment period is further determined based on application of section 11.8.1.3. ~~If application of section 11.8.1.3 dictates that RUC is the commitment period, then the calculation of the RUC Minimum Load Costs will depend on whether the metered MSG Configuration is equal to or different from the RUC committed MSG Configuration. If the metered MSG Configuration is equal to the RUC committed MSG Configuration, then the RUC Minimum Load Costs will be based on the Minimum Load Costs of the RUC committed MSG Configuration. If the metered MSG Configuration is different from the RUC committed MSG Configuration, then the RUC Minimum Load Costs will be based on the lower of the Minimum Load Costs~~

~~metered MSG Configuration and the Minimum Load Costs of the RUC committed MSG Configuration. The metered MSG Configuration is determined based on the highest MSG Configuration submitted to the RUC for which the Metered Data is within or above the three (3) percent (or 5 MW) Tolerance Band of the PMin of that highest MSG Configuration submitted to the RUC. Between two (2) (or more) MSG Configurations, the highest MSG Configuration is the MSG Configuration with the PMin value that is the greatest MW value. The RUC Minimum Load Cost calculation will be subject to the Shut-Down State Variable and disqualified as specified in Section 11.17.2.~~

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11.8.3.1.4.1 RUC Transition Costs Applicability
Within any eligible RUC CAISO Commitment Period determined pursuant to the rules specified in Section 11.8.1.3, the CAISO shall apply the RUC Transition Costs for the Settlement Intervals in which the Multi-Stage Generating Resources is actually transitioning from the “from” MSG Configuration and reaches the Minimum Load of the “to” MSG Configuration to which the Multi-Stage Generating Resource is transitioning, subject to the Tolerance Band.

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11.8.3.3.2 MSS Elected Net Settlement
For an MSS Operator that has elected net Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the RUC Bid Costs and RUC Market Revenue are ~~calculated combined with RTM Bid Cost and and RTM Market Revenue~~ on an MSS level, consistent with the Energy Settlement as calculated according to Section 11.8.4.3.2. The RUC Bid Cost Shortfall or Surplus is also settled at the MSS level as opposed to the individual resource level as is done for MSS Operators that have elected gross Settlement.

highest MSG Configuration submitted to the RUC for which the Metered Data is within or above the three (3) percent (or 5 MW) Tolerance Band of the PMin of that highest MSG Configuration submitted to the RUC. Between two (2) (or more) MSG Configurations, the highest MSG Configuration is the MSG Configuration with the PMin value that is the greatest MW value.

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11.8.3.1.4.1 RUC Transition Costs Applicability
Within any eligible RUC CAISO Commitment Period determined pursuant to the rules specified in Section 11.8.1.3, the CAISO shall apply the RUC Transition Costs for the Settlement Intervals in which the Multi-Stage Generating Resources reaches the Minimum Load of the MSG Configuration to which the Multi-Stage Generating Resource is transitioning, subject to the Tolerance Band.

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11.8.3.3.2 MSS Elected Net Settlement
For an MSS Operator that has elected net Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the RUC Bid Costs and RUC Market Revenue are calculated on an MSS level, consistent with the Energy Settlement. The RUC Bid Cost Shortfall or Surplus is also settled at the MSS level as opposed to the individual resource level as is done for MSS Operators that have elected gross Settlement.

~~of the metered MSG Configuration and the Minimum Load Costs of the RUC committed MSG Configuration. The metered MSG Configuration is determined based on the highest MSG Configuration submitted to the RUC for which the Metered Data is within or above the three (3) percent (or 5 MW) Tolerance Band of the PMin of that highest MSG Configuration submitted to the RUC. Between two (2) (or more) MSG Configurations, the highest MSG Configuration is the MSG Configuration with the PMin value that is the greatest MW value. The RUC Minimum Load Cost calculation will be subject to the Shut-Down State Variable and disqualified as specified in Section 11.17.2.~~

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11.8.3.1.4.1 RUC Transition Costs Applicability
Within any eligible RUC CAISO Commitment Period determined pursuant to the rules specified in Section 11.8.1.3, the CAISO shall apply the RUC Transition Costs for the Settlement Intervals in which the Multi-Stage Generating Resources is actually transitioning from the “from” MSG Configuration and reaches the Minimum Load of the “to” MSG Configuration to which the Multi-Stage Generating Resource is transitioning, subject to the Tolerance Band.

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11.8.3.3.2 MSS Elected Net Settlement
For an MSS Operator that has elected net Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the RUC Bid Costs and RUC Market Revenue are ~~calculated combined with RTM Bid Cost and RTM Market Revenue~~ on an MSS level, consistent with the Energy Settlement as calculated according to Section 11.8.4.3.2. The RUC Bid Cost Shortfall or Surplus is also settled at the MSS level as opposed to the individual resource level as is done for MSS Operators that have elected gross Settlement.

Section	Explanation of Tariff Overlap	[1] Marked Tariff language from filing with earlier effective date (or lower eTariff Record Priority value in the event both filings have the same effective date)	[2] Marked Tariff language from filing with later effective date (or higher eTariff Record Priority value in the event both filings have the same effective date)	[3] Marked Tariff language from [1] added to currently effective tariff record
11.8.5, 11.8.5.1, 11.8.5.2	Version 6.0.0 of the tariff record for Section 11.8.5 as filed with the Mandatory MSG Delay Amendment, Oct. 17, 2013, Docket No. ER13-2063-001, did not include the changes to these sections reflected in Version 5.0.0 as filed with the Renewable Integration Market Product Review (RIMPR1) Bid Cost Recovery Tariff Amendment, Sept. 25, 2013, Docket No. ER13-2452, and accepted by FERC Order Dec. 19, 2013 (145 FERC ¶ 61,254).	<p>11.8.5 Unrecovered Bid Cost Uplift Payment</p> <p><u>Bid Cost Recovery Eligible Resources will receive an Unrecovered Bid Cost Uplift Payment as described in this Section below. For Multi-Stage Generating Resources, Unrecovered Bid Cost Uplift Payments will be calculated and made at the Generating Unit level and not the MSG Configuration level. MSS Bid Cost Recovery Eligible Resources by MSS Operators that have elected net settlement will receive Unrecovered Bid Cost Uplift Payment for MSS Bid Cost Recovery Eligible Resources at the MSS level and not by individual resource. MSS Bid Cost Recovery Eligible Resources by MSS Operators that have elected gross settlement will receive Unrecovered Bid Cost Uplift Payments at the MSS Bid Cost Recovery Eligible Resource level like all other resources.</u></p> <p>11.8.5.1 IFM Unrecovered Bid Cost Uplift Payment</p> <p>Scheduling Coordinators shall receive an <u>IFM</u> Unrecovered Bid Cost Uplift Payment for a Bid Cost Recovery Eligible Resource, including resources for MSS Operators that have elected gross Settlement, if the net of all IFM Bid Cost Shortfalls and IFM Bid Cost Surpluses calculated pursuant to Section 11.8.2, RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses calculated pursuant to Section 11.8.3, and the RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses calculated pursuant to Section 11.8.4 for that Bid Cost Recovery Eligible Resource over a Trading Day is positive. For Multi-Stage Generating Resources, Unrecovered Bid Cost Uplift Payments will be calculated and made at the Generating Unit level or Dynamic Resource Specific System Resource and not the MSG Configuration level. For MSS Operators that have elected net Settlement, the Unrecovered Bid Cost Uplift Payment is at the MSS level. The MSS IFM, RUC, and RTM Bid Cost Shortfall or IFM. RUC, and RTM Bid Cost Surplus for each market for each Trading Hour is the sum of the IFM, RUC, and RTM Bid Cost Shortfalls and IFM. RUC, and RTM Bid Cost Surpluses for all resources in the MSS. Scheduling Coordinators for MSS Operators that have elected net Settlement will receive an Unrecovered Bid Cost Uplift Payment if the net of all IFM, RUC, and RTM Bid Cost Shortfalls and IFM, RUC, and RTM Bid Cost Surpluses for that MSS over a Trading Day is positive.</p>	<p>11.8.5 Unrecovered Bid Cost Uplift Payment</p> <p>Scheduling Coordinators shall receive an Unrecovered Bid Cost Uplift Payment for a Bid Cost Recovery Eligible Resource, including resources for MSS Operators that have elected gross Settlement, if the net of all IFM Bid Cost Shortfalls and IFM Bid Cost Surpluses calculated pursuant to Section 11.8.2, RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses calculated pursuant to Section 11.8.3, and the RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses calculated pursuant to Section 11.8.4 for that Bid Cost Recovery Eligible Resource over a Trading Day is positive. For Multi-Stage Generating Resources, Unrecovered Bid Cost Uplift Payments will be calculated and made at the Generating Unit level or Dynamic Resource Specific System Resource and not the MSG Configuration level. For MSS Operators that have elected net Settlement, the Unrecovered Bid Cost Uplift Payment is at the MSS level. The MSS IFM, RUC, and RTM Bid Cost Shortfall or IFM. RUC, and RTM Bid Cost Surplus for each market for each Trading Hour is the sum of the IFM, RUC, and RTM Bid Cost Shortfalls and IFM. RUC, and RTM Bid Cost Surpluses for all resources in the MSS. Scheduling Coordinators for MSS Operators that have elected net Settlement will receive an Unrecovered Bid Cost Uplift Payment if the net of all IFM, RUC, and RTM Bid Cost Shortfalls and IFM, RUC, and RTM Bid Cost Surpluses for that MSS over a Trading Day is positive.</p>	<p>11.8.5 Unrecovered Bid Cost Uplift Payment</p> <p><u>Bid Cost Recovery Eligible Resources will receive an Unrecovered Bid Cost Uplift Payment as described in this Section below. For Multi-Stage Generating Resources, Unrecovered Bid Cost Uplift Payments will be calculated and made at the Generating Unit level and not the MSG Configuration level. MSS Bid Cost Recovery Eligible Resources by MSS Operators that have elected net settlement will receive Unrecovered Bid Cost Uplift Payment for MSS Bid Cost Recovery Eligible Resources at the MSS level and not by individual resource. MSS Bid Cost Recovery Eligible Resources by MSS Operators that have elected gross settlement will receive Unrecovered Bid Cost Uplift Payments at the MSS Bid Cost Recovery Eligible Resource level like all other resources.</u></p> <p>11.8.5.1 IFM Unrecovered Bid Cost Uplift Payment</p> <p>Scheduling Coordinators shall receive an <u>IFM</u> Unrecovered Bid Cost Uplift Payment for a Bid Cost Recovery Eligible Resource, including resources for MSS Operators that have elected gross Settlement, if the net of all IFM Bid Cost Shortfalls and IFM Bid Cost Surpluses calculated pursuant to Section 11.8.2, RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses calculated pursuant to Section 11.8.3, and the RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses calculated pursuant to Section 11.8.4 for that Bid Cost Recovery Eligible Resource over a Trading Day is positive. For Multi-Stage Generating Resources, Unrecovered Bid Cost Uplift Payments will be calculated and made at the Generating Unit level and not the MSG Configuration level. For MSS Operators that have elected net Settlement, the Unrecovered Bid Cost Uplift Payment is at the MSS level. The MSS IFM, RUC, and RTM Bid Cost Shortfall or IFM. RUC, and RTM Bid Cost Surplus for each market for each Trading Hour is the sum of the IFM, RUC, and RTM Bid Cost Shortfalls and IFM. RUC, and RTM Bid Cost Surpluses for all resources in the MSS. Scheduling Coordinators for MSS Operators that have elected net Settlement will receive an Unrecovered Bid Cost Uplift Payment if the net of all IFM,</p>

		<p>Unrecovered Bid Cost Uplift Payment if the net of all IFM, RUC, and RTM Bid Cost Shortfalls and IFM, RUC, and RTM Bid Cost Surpluses for that MSS over a Trading Day is positive.</p> <p><u>11.8.5.2 RUC and RTM Unrecovered Bid Cost Uplift Payment</u> <u>Scheduling Coordinators shall receive RUC and RTM Unrecovered Bid Cost Uplift Payments for a Bid Cost Recovery Eligible Resource, if the net of all RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses calculated pursuant to Section 11.8.3, and the RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses calculated pursuant to Section 11.8.4, for that Bid Cost Recovery Eligible Resource over a Trading Day is positive. For Metered Subsystems that have elected net settlement, the Unrecovered Bid Cost Uplift Payment will be the sum, if positive, of the RUC, and RTM Bid Cost Shortfall or RUC, and RTM Bid Cost Surplus for each Trading Hour over the Trading Day for all Bid Cost Recovery Eligible Resources in the MSS.</u></p>		<p>RUC, and RTM Bid Cost Shortfalls and IFM, RUC, and RTM Bid Cost Surpluses for that MSS over a Trading Day is positive.</p> <p><u>11.8.5.2 RUC and RTM Unrecovered Bid Cost Uplift Payment</u> <u>Scheduling Coordinators shall receive RUC and RTM Unrecovered Bid Cost Uplift Payments for a Bid Cost Recovery Eligible Resource, if the net of all RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses calculated pursuant to Section 11.8.3, and the RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses calculated pursuant to Section 11.8.4, for that Bid Cost Recovery Eligible Resource over a Trading Day is positive. For Metered Subsystems that have elected net settlement, the Unrecovered Bid Cost Uplift Payment will be the sum, if positive, of the RUC, and RTM Bid Cost Shortfall or RUC, and RTM Bid Cost Surplus for each Trading Hour over the Trading Day for all Bid Cost Recovery Eligible Resources in the MSS.</u></p>
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Section	Explanation of Tariff Overlap	[1] Marked Tariff language from filing with earlier effective date (or lower eTariff Record Priority value in the event both filings have the same effective date)	[2] Marked Tariff language from filing with later effective date (or higher eTariff Record Priority value in the event both filings have the same effective date)	[3] Marked Tariff language from [1] added to currently effective tariff record
30.5.1	Version 7.0.0 of the tariff record for Section 30.5. 1 as filed with the Order 764 Market Changes Amendment, Nov. 26, 2013, Docket No. ER14-480, did not include the changes to this section reflected in Version 6.0.0 as filed with the Mandatory MSG Delay Amendment, Oct. 17, 2013, Docket No. ER13-2063-001, and accepted by FERC Order Mar. 20, 2014 (146 FERC ¶ 61,191).	<p>30.5.1 General Bidding Rules</p> <p>(a) All Energy and Ancillary Services Bids of each Scheduling Coordinator submitted to the DAM for the following Trading Day shall be submitted at or prior to 10:00 a.m. on the day preceding the Trading Day, but no sooner than seven (7) days prior to the Trading Day. All Energy and Ancillary Services . . .</p> <p style="text-align: center;">* * * *</p> <p>(k) For any given Trading Hour, a Scheduling Coordinator may submit Self-Schedules and/or Submissions to Self-Provide Ancillary Services in only one MSG Configuration for each Generating Unit or Dynamic Resource-Specific System Resource.</p>	<p>30.5.1 General Bidding Rules</p> <p>(a) All Energy and Ancillary Services Bids of each Scheduling Coordinator submitted to the DAM for the following Trading Day shall be submitted at or prior to 10:00 a.m. on the day preceding the Trading Day, but no sooner than seven (7) days prior to the Trading Day. All Energy and Ancillary Services . . .</p> <p style="text-align: center;">* * * *</p> <p>(k) For any given Trading Hour, a Scheduling Coordinator may submit Self-Schedules and/or Submissions to Self-Provide Ancillary Services in only one MSG Configuration for each Generating Unit or Dynamic Resource-Specific System Resource.</p>	<p>30.5.1 General Bidding Rules</p> <p>(a) All Energy and Ancillary Services Bids of each Scheduling Coordinator submitted to the DAM for the following Trading Day shall be submitted at or prior to 10:00 a.m. on the day preceding the Trading Day, but no sooner than seven (7) days prior to the Trading Day. All Energy and Ancillary Services . . .</p> <p style="text-align: center;">* * * *</p> <p>(k) For any given Trading Hour, a Scheduling Coordinator may submit Self-Schedules and/or Submissions to Self-Provide Ancillary Services in only one MSG Configuration for each Generating Unit or Dynamic Resource-Specific System Resource.</p>

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34.7(7)	Version 3.0.0 of the tariff record for Section 34.7 as filed with the Order 764 Market Changes Amendment, Nov. 26, 2013, Docket No. ER14-480, moved the content of former Section 34.5 to Section 34.7 but did not include the changes to this subsection reflected in Version 15.0.0 for Section 34.5 as filed with the RDRR Compliance filing, August 19, 2013, Docket No. ER13-2192, and accepted by FERC Order March 28, 2014 (146 FERC ¶ 61,233).	<p>34.5 General Dispatch Principles</p> <p>The CAISO shall conduct all Dispatch activities consistent with the following principles:</p> <p style="text-align: center;">* * * *</p> <p>(7) Through Start-Up Instructions the CAISO may instruct resources to start up or shut down, or may reduce Load for Participating Loads, <u>Reliability Demand Response Resources</u>, and Proxy Demand Resources, over the forward-looking time period for the RTM based on submitted Bids, Start-Up Costs and Minimum Load Costs, Pumping Costs and Pump Shut-Down Costs, as appropriate for the resource, or for Multi-Stage Generating Resource as appropriate for the applicable MSG Configuration, consistent with operating characteristics of the resources that the SCED is able to enforce. In making Start-Up or Shut-Down decisions in the RTM, the CAISO may factor in limitations on number of run hours or Start-Ups of a resource to avoid exhausting its maximum number of run hours or Start-Ups during periods other than peak loading conditions;</p>	<p>34.57 General Dispatch Principles</p> <p>The CAISO shall conduct all Dispatch activities consistent with the following principles:</p> <p style="text-align: center;">* * * *</p> <p>(7) Through Start-Up Instructions the CAISO may instruct resources to start up or shut down, or may reduce Load for Participating Loads and Proxy Demand Resources, over the forward-looking time period for the RTM based on submitted Bids, Start-Up Costs and Minimum Load Costs, Pumping Costs and Pump Shut-Down Costs, as appropriate for the resource, or for Multi-Stage Generating Resource as appropriate for the applicable MSG Configuration, consistent with operating characteristics of the resources that the SCED is able to enforce. In making Start-Up or Shut-Down decisions in the RTM, the CAISO may factor in limitations on number of run hours or Start-Ups of a resource to avoid exhausting its maximum number of run hours or Start-Ups during periods other than peak loading conditions;</p>	<p>34.7 General Dispatch Principles</p> <p>The CAISO shall conduct all Dispatch activities consistent with the following principles:</p> <p style="text-align: center;">* * * *</p> <p>(7) Through Start-Up Instructions the CAISO may instruct resources to start up or shut down, or may reduce Load for Participating Loads, <u>Reliability Demand Response Resources</u>, and Proxy Demand Resources, over the forward-looking time period for the RTM based on submitted Bids, Start-Up Costs and Minimum Load Costs, Pumping Costs and Pump Shut-Down Costs, as appropriate for the resource, or for Multi-Stage Generating Resource as appropriate for the applicable MSG Configuration, consistent with operating characteristics of the resources that the SCED is able to enforce. In making Start-Up or Shut-Down decisions in the RTM, the CAISO may factor in limitations on number of run hours or Start-Ups of a resource to avoid exhausting its maximum number of run hours or Start-Ups during periods other than peak loading conditions;</p>
34.7(12)	Version 3.0.0 of the tariff record for Section 34.7 as filed with the Order 764 Market Changes Amendment, Nov. 26, 2013, Docket ER14-480, moved the content of former Section 34.5 to Section 34.7 but did not include the changes to this subsection reflected in Version 16.0.0 for Sect. 34.5 as filed with the Mandatory MSG Delay Amendment, Oct. 17, 2013, Docket ER13-2063-001, and accepted by FERC Order Mar. 20, 2014 (146 FERC ¶ 61,191).	<p>(12) The CAISO may issue Transition Instructions to instruct resources to transition from one MSG Configuration to another over the forward-looking time period for the RTM based on submitted Bids, Transition Costs and Minimum Load Costs, as appropriate for the MSG Configurations involved in the MSG Transition, consistent with Transition Matrix and operating characteristics of these MSG Configurations. The RTM optimization will factor in limitations on Minimum Run Time and Minimum Down Time defined for each MSG configuration and Minimum Run Time and Minimum Down Time at the Generating Unit or Dynamic Resource-Specific System Resource.</p>	<p>(12) The CAISO may issue Transition Instructions to instruct resources to transition from one MSG Configuration to another over the forward-looking time period for the RTM based on submitted Bids, Transition Costs and Minimum Load Costs, as appropriate for the MSG Configurations involved in the MSG Transition, consistent with Transition Matrix and operating characteristics of these MSG Configurations. The RTM optimization will factor in limitations on Minimum Run Time and Minimum Down Time defined for each MSG configuration and Minimum Run Time and Minimum Down Time at the Generating Unit or Dynamic Resource-Specific System Resource.</p>	<p>(12) The CAISO may issue Transition Instructions to instruct resources to transition from one MSG Configuration to another over the forward-looking time period for the RTM based on submitted Bids, Transition Costs and Minimum Load Costs, as appropriate for the MSG Configurations involved in the MSG Transition, consistent with Transition Matrix and operating characteristics of these MSG Configurations. The RTM optimization will factor in limitations on Minimum Run Time and Minimum Down Time defined for each MSG configuration and Minimum Run Time and Minimum Down Time at the Generating Unit or Dynamic Resource-Specific System Resource.</p>

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34.8	Version 3.0.0 of the tariff record for Section 34.8 as filed with the Order 764 Market Changes Amendment, Nov. 26, 2013, Docket No. ER14-480, moved the content of former Section 34.6 to Section 34.8 but did not include the changes to this section reflected in Version 6.0.0 of the tariff record for Section 34.6 as filed with the RDRR Compliance filing, August 19, 2013, Docket No. ER13-2192, and accepted by FERC Order March 28, 2014 (146 FERC ¶ 61,233).	<p>34.6 Dispatch of Dispatch to Units, Participating Loads, and PDRs, and RDRRs</p> <p>The CAISO may issue Dispatch Instructions covering:</p> <ul style="list-style-type: none"> (a) Ancillary Services; (b) Energy, which may be used for: <ul style="list-style-type: none"> (i) Congestion relief; (ii) provision of Imbalance Energy; or (iii) replacement of an Ancillary Service; (c) agency operation of Generating Units, Participating Loads or Interconnection schedules, for example: <ul style="list-style-type: none"> (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) <u>Dispatch</u> necessary to respond to a System Emergency or imminent emergency; (g) Transition Instructions; <u>or</u> (h) <u>Dispatch of Reliability Demand Response Resources pursuant to Section 34.18.</u> 	<p>34.68 Dispatch of Dispatch Instructions to Units, Participating Loads, and PDR</p> <p>The CAISO may issue Dispatch Instructions covering:</p> <ul style="list-style-type: none"> (a) Ancillary Services; (b) Energy, which may be used for: <ul style="list-style-type: none"> (i) Congestion relief; (ii) provision of Imbalance Energy; or (iii) replacement of an Ancillary Service; (c) agency operation of Generating Units, Participating Loads, Proxy Demand Resources, or Interconnection schedules, for example: <ul style="list-style-type: none"> (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) necessary to respond to a System Emergency or imminent emergency; or (g) Transition Instructions. 	<p>34.8 Dispatch Instructions to Units, Participating Loads, and PDRs, and RDRRs</p> <p>The CAISO may issue Dispatch Instructions covering:</p> <ul style="list-style-type: none"> (a) Ancillary Services; (b) Energy, which may be used for: <ul style="list-style-type: none"> (i) Congestion relief; (ii) provision of Imbalance Energy; or (iii) replacement of an Ancillary Service; (c) agency operation of Generating Units, Participating Loads, Proxy Demand Resources, or Interconnection schedules, for example: <ul style="list-style-type: none"> (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) <u>Dispatch</u> necessary to respond to a System Emergency or imminent emergency; (g) Transition Instructions; <u>or</u> (h) <u>Dispatch of Reliability Demand Response Resources pursuant to Section 34.18.</u>

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34.11.1	Version 1.0.0 of the tariff record for Section 34.11.1 as filed with the Order 764 Market Changes Amendment, Nov. 26, 2013, Docket No. ER14-480, moved the content of former Section 34.9.1 to Section 34.11.1 but did not include the changes to this section reflected in Version 5.0.0 for Section 34.9.1 as filed with the RDRR Compliance filing, August 19, 2013, Docket No. ER13-2192, and accepted by FERC Order March 28, 2014 (146 FERC ¶ 61,233).	<p>34.9.1 System Reliability Exceptional Dispatches</p> <p>The CAISO may issue a manual Exceptional Dispatch for Generating Units, System Units, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources, Dynamic System Resources, and Condition 2 RMR Units pursuant to Section 41.9, in addition to or instead of resources with a Day-Ahead Schedule dispatched by RTM optimization software during a System Emergency, or to prevent an imminent System Emergency or a situation that threatens System Reliability and cannot be addressed by the RTM optimization and system modeling. To the extent possible, the CAISO shall utilize available and effective Bids from resources before dispatching resources without Bids. To deal with any threats to System Reliability, the CAISO may also issue a manual Exceptional Dispatch in the Real-Time for Non-Dynamic System Resources that have not been or would not be selected by the RTM for Dispatch, but for which the relevant Scheduling Coordinator has submitted a Bid into the HASP.</p>	<p>34.911.1 System Reliability Exceptional Dispatches</p> <p>The CAISO may issue a manual Exceptional Dispatch for Generating Units, System Units, Participating Loads, Proxy Demand Resources, Dynamic System Resources, and Condition 2 RMR Units pursuant to Section 41.9, in addition to or instead of resources with a Day-Ahead Schedule dispatched by RTM optimization software during a System Emergency, or to prevent an imminent System Emergency or a situation that threatens System Reliability and cannot be addressed by the RTM optimization and system modeling. To the extent possible, the CAISO shall utilize available and effective Bids from resources before dispatching resources without Bids. To deal with any threats to System Reliability, the CAISO may also issue a manual Exceptional Dispatch in the Real-Time for Non-Dynamic System Resources that have not been or would not be selected by the RTM for Dispatch, but for which the relevant Scheduling Coordinator has submittedreceived a Bid into the HASP Block Intertie Schedule.</p>	<p>34.11.1 System Reliability Exceptional Dispatches</p> <p>The CAISO may issue a manual Exceptional Dispatch for Generating Units, System Units, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources, Dynamic System Resources, and Condition 2 RMR Units pursuant to Section 41.9, in addition to or instead of resources with a Day-Ahead Schedule dispatched by RTM optimization software during a System Emergency, or to prevent an imminent System Emergency or a situation that threatens System Reliability and cannot be addressed by the RTM optimization and system modeling. To the extent possible, the CAISO shall utilize available and effective Bids from resources before dispatching resources without Bids. To deal with any threats to System Reliability, the CAISO may also issue a manual Exceptional Dispatch in the Real-Time for Non-Dynamic System Resources that have not been or would not be selected by the RTM for Dispatch, but for which the relevant Scheduling Coordinator has received a HASP Block Intertie Schedule.</p>

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34.11.3	Version 0.0.0 of the tariff record for Section 34.11.3 as filed with the Order 764 Market Changes Amendment, Nov. 26, 2013, Docket No. ER14-480, moved the content of former Section 34.9.3 to Section 34.11.3 but did not include the changes to this section reflected in Version 2.0.0 for Section 34.9.3 as filed with the RDRR Compliance filing, August 19, 2013, Docket No. ER13-2192, and accepted by FERC Order March 28, 2014 (146 FERC ¶ 61,233).	<p>34.9.3 Transmission-Related Modeling Limitations</p> <p>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 34.9.3 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. <u>All reliability-based Exceptional Dispatch Instructions for Reliability Demand Response Resources, including for testing, will be issued under this Section 34.9.3.</u></p>	<p>34.911.3 Transmission-Related Modeling Limitations</p> <p>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 34.911.3 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.</p>	<p>34.11.3 Transmission-Related Modeling Limitations</p> <p>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. <u>All reliability-based Exceptional Dispatch Instructions for Reliability Demand Response Resources, including for testing, will be issued under this Section 34.9.3.</u></p>

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34.17.1	Version 1.0.0 as filed with the Order 764 Market Changes Amendment, Nov. 26, 2013, Docket No. ER14-480, moved the content of former section 34.15.1 to Section 34.17.1 but did not include the changes to this section reflected in Version 7.0.0 as filed with the Mandatory MSG Delay Amendment, Oct. 17, 2013, Docket No. ER13-2063-001, and accepted by FERC Order March 20, 2014 (146 FERC ¶ 61,191).	<p>34.15.1 Resource Constraints</p> <p>The SCED shall enforce the following resource physical constraints:</p> <p>(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.</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 Operation 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>(c) Operational Ramp Rates and Start-Up Times. The submitted 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 HASP will not be observed. Rather, the ramp of the Non-Dynamic System</p>	<p>34.15.1 34.17.1 Resource Constraints</p> <p>The SCED shall enforce the following resource physical constraints:</p> <p>(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.</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 Operation 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>(c) Operational Ramp Rates and Start-Up Times. The submitted 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 HASPFMM will not be observed. Rather, the ramp of the Non-Dynamic</p>	<p>34.17.1 Resource Constraints</p> <p>The SCED shall enforce the following resource physical constraints:</p> <p>(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.</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 Operation 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>(c) Operational Ramp Rates and Start-Up Times. The submitted 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</p>

		<p>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 applicable 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>(d) Maximum number of daily Start-Ups. The SCED shall not cause a resource to exceed its daily maximum number of Start-Ups.</p> <p>(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 or Dynamic Resource Specific System Resource and MSG Configuration.</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 34.16.3.</p> <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 Intertie Schedules are financially binding and are settled pursuant to Section 11.4.</p>	<p>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 applicable 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>(d) Maximum number of daily Start-Ups. The SCED shall not cause a resource to exceed its daily maximum number of Start-Ups.</p> <p>(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 or Dynamic Resource-Specific System Resource and MSG Configuration.</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 34.16.3.</p> <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 11.4.</p>	<p>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 applicable 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>(d) Maximum number of daily Start-Ups. The SCED shall not cause a resource to exceed its daily maximum number of Start-Ups.</p> <p>(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 or Dynamic Resource Specific System Resource and MSG Configuration.</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 34.18.3.</p> <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 11.4.</p>
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		(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.	(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.	(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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Section	Explanation of Tariff Overlap	[1] Marked Tariff language from filing with earlier effective date (or lower eTariff Record Priority value in the event both filings have the same effective date)	[2] Marked Tariff language from filing with later effective date (or higher eTariff Record Priority value in the event both filings have the same effective date)	[3] Marked Tariff language from [1] added to currently effective tariff record
34.20.2.2 34.20.2.3	Version 0.0.0 of the tariff record for Section 34.20.2 as filed with the Order 764 Market Changes Amendment, Nov. 26, 2013, Docket No. ER14-480, moved the content of former Section 34.19.2 to Section 34.20.2 but did not include the changes to this section reflected in Version 5.0.0 for Section 34.19.2 as filed with the RDRR Compliance filing, August 19, 2013, Docket No. ER13-2192, and accepted by FERC Order March 28, 2014 (146 FERC ¶ 61,233).	<p>34.19.2.2 Computation</p> <p>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.</p> <p>34.19.2.3 Eligibility to Set the Real-Time LMP</p> <p>All Generating Units, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources (other than those Reliability Demand Response Resources addressed below in this Section 34.19.2.3), Dynamic System Resources, System Units, or COGs subject to the provisions in Section 27.7, with Bids, including Generated Bids, that are unconstrained due to Ramp Rates or other temporal constraints are eligible to set the LMP, provided that (a) a Generating Unit or a Dynamic Resource-Specific System Resource is Dispatched between its Minimum Operating Limit and the highest MW value in its Economic Bid or Generated Bid, or (b) a Participating Load, a Proxy Demand Resource, a Reliability Demand Response Resource, a Dynamic System Resource that is not a Resource-Specific System Resource, or a System Unit is Dispatched between zero (0) MW and the highest MW value within its submitted Economic Bid range or Generated Bid. A Reliability Demand Response Resource that is dispatched in Real-Time by an entity other than the CAISO in order to 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 to perform a test, will not be eligible to set the LMP. If a resource is Dispatched below its Minimum Operating Limit or above the highest MW value in its Economic Bid range or Generated Bid, or the CAISO enforces a resource-specific constraint on the resource due to an RMR or Exceptional Dispatch, the resource will not be eligible to set the LMP. Resources</p>	<p>34.1920.2.2 Computation</p> <p>For each Dispatch Interval, the CAISO will compute updated Imbalance Energy needs and will Dispatch Generating Units, System Units, Dynamic System Resources, Participating Load, 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.</p> <p>34.1920.2.3 Eligibility to Set the Real-Time LMP</p> <p>All Generating Units, Participating Loads, Proxy Demand Resources, Dynamic System Resources, System Units, or COGs subject to the provisions in Section 27.7, with Bids, including Generated Bids, that are unconstrained due to Ramp Rates or other temporal constraints are eligible to set the LMP, provided that (a) a Generating Unit or a Dynamic Resource-Specific System Resource is Dispatched between its Minimum Operating Limit and the highest MW value in its Economic Bid or Generated Bid, or (b) a Participating Load, a Proxy Demand Resource, a Dynamic System Resource that is not a Resource-Specific System Resource, or a System Unit is Dispatched between zero (0) MW and the highest MW value within its submitted Economic Bid range or Generated Bid. If a resource is Dispatched below its Minimum Operating Limit or above the highest MW value in its Economic Bid range or Generated Bid, or the CAISO enforces a resource-specific constraint on the resource due to an RMR or Exceptional Dispatch, the resource will not be eligible to set the LMP. Resources identified as MSS Load following resources are not eligible to set the LMP. A resource constrained at an upper or lower operating limit or dispatched for a quantity of Energy such that its full Ramping capability is constraining the ability of the resource to be dispatched for additional Energy in target interval, cannot be marginal (i.e., it is constrained by the Ramping capability) and thus is not eligible to set the Dispatch Interval LMP. Non-Dynamic System Resources are not eligible to set the Dispatch Interval LMP. Dynamic System Resources are eligible to set the Dispatch Interval LMP. A</p>	<p>34.20.2.2 Computation</p> <p>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.</p> <p>34.20.2.3 Eligibility to Set the Real-Time LMP</p> <p>All Generating Units, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources (other than those Reliability Demand Response Resources addressed below in this Section 34.19.2.3), Dynamic System Resources, System Units, or COGs subject to the provisions in Section 27.7, with Bids, including Generated Bids, that are unconstrained due to Ramp Rates or other temporal constraints are eligible to set the LMP, provided that (a) a Generating Unit or a Dynamic Resource-Specific System Resource is Dispatched between its Minimum Operating Limit and the highest MW value in its Economic Bid or Generated Bid, or (b) a Participating Load, a Proxy Demand Resource, a Reliability Demand Response Resource, a Dynamic System Resource that is not a Resource-Specific System Resource, or a System Unit is Dispatched between zero (0) MW and the highest MW value within its submitted Economic Bid range or Generated Bid. A Reliability Demand Response Resource that is dispatched in Real-Time by an entity other than the CAISO in order to 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 to perform a test, will not be eligible to set the LMP. If a resource is Dispatched below its Minimum Operating Limit or above the highest MW value in its Economic Bid range or Generated Bid, or the CAISO enforces a resource-specific constraint on the resource due to an RMR or Exceptional Dispatch, the resource will not be eligible to set the LMP. Resources</p>

		<p>identified as MSS Load following resources are not eligible to set the LMP. A resource constrained at an upper or lower operating limit or dispatched for a quantity of Energy such that its full Ramping capability is constraining the ability of the resource to be dispatched for additional Energy in target interval, cannot be marginal (i.e., it is constrained by the Ramping capability) and thus is not eligible to set the Dispatch Interval LMP. Non-Dynamic System Resources are not eligible to set the Dispatch Interval LMP. Dynamic System Resources are eligible to set the Dispatch Interval LMP. A Constrained Output Generator that has the ability to be committed or shut off within applicable time periods that comprise the RTM will be eligible to set the Dispatch Interval LMP if any portion of its Energy is necessary to serve Demand. Dispatches of Regulation resources by EMS in response to AGC will not set the RTM LMP. Dispatches of Regulation resources to a Dispatch Operating Point by RTM SCED will be eligible to set the RTM LMP.</p>	<p>Constrained Output Generator that has the ability to be committed or shut off within applicable time periods that comprise the RTM will be eligible to set the Dispatch Interval LMP if any portion of its Energy is necessary to serve Demand. Dispatches of Regulation resources by EMS in response to AGC will not set the RTM LMP. Dispatches of Regulation resources to a Dispatch Operating Point by RTM SCED will be eligible to set the RTM LMP.</p>	<p>identified as MSS Load following resources are not eligible to set the LMP. A resource constrained at an upper or lower operating limit or dispatched for a quantity of Energy such that its full Ramping capability is constraining the ability of the resource to be dispatched for additional Energy in target interval, cannot be marginal (i.e., it is constrained by the Ramping capability) and thus is not eligible to set the Dispatch Interval LMP. Non-Dynamic System Resources are not eligible to set the Dispatch Interval LMP. Dynamic System Resources are eligible to set the Dispatch Interval LMP. A Constrained Output Generator that has the ability to be committed or shut off within applicable time periods that comprise the RTM will be eligible to set the Dispatch Interval LMP if any portion of its Energy is necessary to serve Demand. Dispatches of Regulation resources by EMS in response to AGC will not set the RTM LMP. Dispatches of Regulation resources to a Dispatch Operating Point by RTM SCED will be eligible to set the RTM LMP.</p>
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Section	Explanation of Tariff Overlap	[1] Marked Tariff language from filing with earlier effective date (or lower eTariff Record Priority value in the event both filings have the same effective date)	[2] Marked Tariff language from filing with later effective date (or higher eTariff Record Priority value in the event both filings have the same effective date)	[3] Marked Tariff language from [1] added to currently effective tariff record
40.4.6.3.1.1, 40.4.6.3.2.2	Version 5.0.0 of the tariff record for Section 40.4.6 as filed with the Tariff Clarifications Compliance filing, July 11, 2013, ER13-1274-001, did not include the changes to this section reflected in Version 6.0.0 (with an earlier effective date) as filed with the Deliverability for Distributed Generation Compliance Filing, September 26, 2013, Docket No. ER12-2643-003, and accepted by FERC letter Order March 5, 2014.	<p>40.4.6.3.1.1 Developing the Assessment Model</p> <p>To develop the base case model for the DG Deliverability Assessment, the CAISO will include:</p> <ul style="list-style-type: none"> (i) The most recent GIP or GIDAP Queue Cluster Phase II Interconnection Study deliverability power flow base case, <u>which includes Distributed Generation Facilities of interconnection customers with active interconnection requests who have requested Full Capacity or Partial Capacity Deliverability Status;</u> (ii) Those Generating Facilities that have obtained Deliverability using the annual full capacity deliverability option under either Section 8.2 of the GIP, or Section 9.2 of the GIDAP, <u>or equivalent process(es) under the applicable Utility Distribution Company tariffs;</u> (iii) Transmission additions and upgrades approved in the final comprehensive Transmission Plan for the most recent Transmission Planning Process cycle; (iv) Any Generating Facilities in the most recent GIDAP Phase I Interconnection Study that have been determined to be deliverable in accordance with their requested Deliverability Status <u>(including Distributed Generation Facilities of interconnection customers with active interconnection requests who have requested Full Capacity or Partial Capacity Deliverability Status)</u> and were not assigned any Delivery Network Upgrade costs in the Phase I Interconnection Study; (v) Delivery Network Upgrades that have received governmental approvals or for which Construction Activities have commenced; (vi) The MW amounts of resources interconnected to the dDistribution sSystem below specific Nodes of the CAISO Controlled Grid contained in the most recent Transmission Planning Process base portfolio, except that the CAISO will remove each Node (by using a zero MW value) located within electrical areas for which the most recently completed GIP or GIDAP Phase I or Phase II Interconnection Study has identified a need for a Delivery Network Upgrade or for which the most 	<p>40.4.6.3.1.1 Developing the Assessment Model</p> <p>To develop the base case model for the DG Deliverability Assessment, the CAISO will include:</p> <ul style="list-style-type: none"> (i) The most recent GIP or GIDAP Queue Cluster Phase II Interconnection Study deliverability power flow base case; (ii) Those Generating Facilities that have obtained Deliverability using the annual full capacity deliverability option under either Section 8.2 of the GIP or Section 9.2 of the GIDAP; (iii) Transmission additions and upgrades approved in the final comprehensive Transmission Plan for the most recent Transmission Planning Process cycle; (iv) Any Generating Facilities in the most recent GIDAP Phase I Interconnection Study that have been determined to be deliverable in accordance with their requested Deliverability Status and were not assigned any Delivery Network Upgrade costs in the Phase I Interconnection Study; (v) Delivery Network Upgrades that have received governmental approvals or for which Construction Activities have commenced; (vi) The MW amounts of resources interconnected to the distribution system below specific Nodes of the CAISO Controlled Grid contained in the most recent Transmission Planning Process base portfolio, except that the CAISO will remove each Node (by using a zero MW value) located within electrical areas for which the most recently completed GIP or GIDAP Phase I or Phase II Interconnection Study has identified a need for a Delivery Network Upgrade or for which the most (vii) Actual distributed generation development based on the MW amount of distributed generation in applicable Utility Distribution Company and Metered Subsystem interconnection queues including non-net-energy-metering resources requesting 	<p>40.4.6.3.1.1 Developing the Assessment Model</p> <p>To develop the base case model for the DG Deliverability Assessment, the CAISO will include:</p> <ul style="list-style-type: none"> (i) The most recent GIP or GIDAP Queue Cluster Phase II Interconnection Study deliverability power flow base case, <u>which includes Distributed Generation Facilities of interconnection customers with active interconnection requests who have requested Full Capacity or Partial Capacity Deliverability Status;</u> (ii) Those Generating Facilities that have obtained Deliverability using the annual full capacity deliverability option under either Section 8.2 of the GIP, or Section 9.2 of the GIDAP, <u>or equivalent process(es) under the applicable Utility Distribution Company tariffs;</u> (iii) Transmission additions and upgrades approved in the final comprehensive Transmission Plan for the most recent Transmission Planning Process cycle; (iv) Any Generating Facilities in the most recent GIDAP Phase I Interconnection Study that have been determined to be deliverable in accordance with their requested Deliverability Status <u>(including Distributed Generation Facilities of interconnection customers with active interconnection requests who have requested Full Capacity or Partial Capacity Deliverability Status)</u> and were not assigned any Delivery Network Upgrade costs in the Phase I Interconnection Study; (v) Delivery Network Upgrades that have received governmental approvals or for which Construction Activities have commenced; (vi) The MW amounts of resources interconnected to the dDistribution sSystem below specific Nodes of the CAISO Controlled Grid contained in the most recent Transmission Planning Process base portfolio, except that the CAISO will remove each Node (by using a zero MW value) located within electrical areas for which the most recently completed GIP or GIDAP Phase I or Phase II Interconnection Study has identified a need for a Delivery Network Upgrade or for which the most

recent Phase II Interconnection Study identified and then removed a Delivery Network Upgrade to support Deliverability for MW amounts in the Interconnection queue;

- (vii) Actual distributed generation development based on the MW amount of distributed generation in applicable Utility Distribution Company and Metered Subsystem interconnection queues, including non-net-energy-metering resources requesting interconnection through state-jurisdictional interconnection processes;
- (viii) Any additional information provided by each Utility Distribution Company and Metered Subsystem regarding anticipated distributed generation development on its Distribution System; and
- (ix) Other information that the CAISO, in its reasonable discretion, determines is necessary.

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40.4.6.3.2.2.1 Eligibility to Obtain Deliverability Status Assignment from IOU Participating Transmission Owners

Distributed Generation Facilities interconnected, or seeking interconnection, to the Distribution System of an IOU Participating Transmission Owner may apply to the applicable IOU Participating Transmission Owner ~~and the CAISO~~ to be eligible to receive a Deliverability Status assignment in the current DG Deliverability Assessment cycle as follows:

- (i) Distributed Generation Facilities that are already in Commercial Operation and interconnected to the Distribution System of an IOU Participating Transmission Owner that do not have Deliverability Status may submit an application to be eligible for Full or Partial Capacity Deliverability Status, and those that have Partial Capacity Deliverability Status may apply to be eligible for a higher level of Partial Capacity Deliverability Status or Full Capacity Deliverability Status.
- (ii) Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have not requested Deliverability Status in the underlying interconnection process but have received their Phase

interconnection through state-jurisdictional interconnection processes;

- (viii) Any additional information provided by each Utility Distribution Company and Metered Subsystem regarding anticipated distributed generation development on its Distribution System; and
- (ix) Other information that the CAISO, in its reasonable discretion, determines is necessary.

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40.4.6.3.2.2.1 Eligibility to Obtain Deliverability Status Assignment from IOU Participating Transmission Owners

Distributed Generation Facilities interconnected, or seeking interconnection, to the Distribution System of an IOU Participating Transmission Owner may apply to the applicable IOU Participating Transmission Owner and the CAISO to be eligible to receive a Deliverability Status assignment in the current DG Deliverability Assessment cycle as follows:

- (i) Distributed Generation Facilities that are already in Commercial Operation and interconnected to the Distribution System of an IOU Participating Transmission Owner that do not have Deliverability Status may submit an application to be eligible for Full or Partial Capacity Deliverability Status, and those that have Partial Capacity Deliverability Status may apply to be eligible for a higher level of Partial Capacity Deliverability Status or Full Capacity Deliverability Status.
- (ii) Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have not requested Deliverability Status in the underlying interconnection process but have received their Phase

recent Phase II Interconnection Study identified and then removed a Delivery Network Upgrade to support Deliverability for MW amounts in the Interconnection queue;

- (vii) Actual distributed generation development based on the MW amount of distributed generation in applicable Utility Distribution Company and Metered Subsystem interconnection queues including non-net-energy-metering resources requesting interconnection through state-jurisdictional interconnection processes;
- (viii) Any additional information provided by each Utility Distribution Company and Metered Subsystem regarding anticipated distributed generation development on its Distribution System; and
- (ix) Other information that the CAISO, in its reasonable discretion, determines is necessary.

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40.4.6.3.2.2.1 Eligibility to Obtain Deliverability Status Assignment from IOU Participating Transmission Owners

Distributed Generation Facilities interconnected, or seeking interconnection, to the Distribution System of an IOU Participating Transmission Owner may apply to the applicable IOU Participating Transmission Owner ~~and the CAISO~~ to be eligible to receive a Deliverability Status assignment in the current DG Deliverability Assessment cycle as follows:

- (i) Distributed Generation Facilities that are already in Commercial Operation and interconnected to the Distribution System of an IOU Participating Transmission Owner that do not have Deliverability Status may submit an application to be eligible for Full or Partial Capacity Deliverability Status, and those that have Partial Capacity Deliverability Status may apply to be eligible for a higher level of Partial Capacity Deliverability Status or Full Capacity Deliverability Status.
- (ii) Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have not requested Deliverability Status in the underlying interconnection process but have received their Phase

		<p>I hinterconnection Sstudy results <u>or the equivalent thereof</u> may submit an application to be eligible to receive Partial Capacity Deliverability Status or Full Capacity Deliverability Status.</p> <p>(iii) Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have not received their Phase I hinterconnection Sstudy results <u>or the equivalent thereof</u>, irrespective of whether they requested Deliverability Status in their interconnection request, may submit an application to be eligible to receive Partial Capacity Deliverability Status or Full Capacity Deliverability Status.</p> <p>Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have <u>requested Deliverability Status in the underlying interconnection process and have</u> already received Phase I hinterconnection Sstudy results <u>or the equivalent thereof</u> are not eligible to be assigned Deliverability Status pursuant to Section 40.4.6.3 because their Deliverability Status is protected in accordance with the provisions of Section 40.4.6.3.1 and will be assigned through the applicable IOU Participating Transmission Owner’s interconnection process.</p> <p>Applications from Distributed Generation Facilities in the eligible categories specified above must be submitted by the deadline specified in the schedule for the current DG Deliverability Assessment cycle in order for the Distributed Generation Facility to be treated as eligible to receive a Deliverability Status assignment in the current cycle. Distributed Generation Facilities that fail to apply in a timely manner will be assumed not to be seeking Deliverability Status in the current cycle. The CAISO will issue a Market Notice announcing the deadline for submitting applications. The deadline will be no earlier than thirty (30) days after the CAISO publishes the results of the DG Deliverability Assessment. The form of the application shall be specified in a Business Practice Manual. The application shall be submitted to both the applicable Participating Transmission Owner, <u>which shall provide a copy of the application to and</u> the CAISO <u>within five (5) Business Days after the application was submitted.</u></p>	<p>I Interconnection Study results may submit an application to be eligible to receive Partial Capacity Deliverability Status or Full Capacity Deliverability Status.</p> <p>(iii) Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have not received their Phase I Interconnection Study results, irrespective of whether they requested Deliverability Status in their interconnection request, may submit an application to be eligible to receive Partial Capacity Deliverability Status or Full Capacity Deliverability Status.</p> <p>Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have already received Phase I Interconnection Study results are not eligible to be assigned Deliverability Status pursuant to Section 40.4.6.3 because their Deliverability Status is protected in accordance with the provisions of Section 40.4.6.3.1 and will be assigned through the applicable IOU Participating Transmission Owner’s interconnection process.</p> <p>Applications from Distributed Generation Facilities in the eligible categories specified above must be submitted by the deadline specified in the schedule for the current DG Deliverability Assessment cycle in order for the Distributed Generation Facility to be treated as eligible to receive a Deliverability Status assignment in the current cycle. Distributed Generation Facilities that fail to apply in a timely manner will be assumed not to be seeking Deliverability Status in the current cycle. The CAISO will issue a Market Notice announcing the deadline for submitting applications. The deadline will be no earlier than thirty (30) days after the CAISO publishes the results of the DG Deliverability Assessment. The form of the application shall be specified in a Business Practice Manual. The application shall be submitted to both the applicable Participating Transmission Owner and the CAISO.</p>	<p>I hinterconnection Sstudy results <u>or the equivalent thereof</u> may submit an application to be eligible to receive Partial Capacity Deliverability Status or Full Capacity Deliverability Status.</p> <p>(iii) Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have not received their Phase I hinterconnection Sstudy results <u>or the equivalent thereof</u>, irrespective of whether they requested Deliverability Status in their interconnection request, may submit an application to be eligible to receive Partial Capacity Deliverability Status or Full Capacity Deliverability Status.</p> <p>Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have <u>requested Deliverability Status in the underlying interconnection process and have</u> already received Phase I hinterconnection Sstudy results <u>or the equivalent thereof</u> are not eligible to be assigned Deliverability Status pursuant to Section 40.4.6.3 because their Deliverability Status is protected in accordance with the provisions of Section 40.4.6.3.1 and will be assigned through the applicable IOU Participating Transmission Owner’s interconnection process.</p> <p>Applications from Distributed Generation Facilities in the eligible categories specified above must be submitted by the deadline specified in the schedule for the current DG Deliverability Assessment cycle in order for the Distributed Generation Facility to be treated as eligible to receive a Deliverability Status assignment in the current cycle. Distributed Generation Facilities that fail to apply in a timely manner will be assumed not to be seeking Deliverability Status in the current cycle. The CAISO will issue a Market Notice announcing the deadline for submitting applications. The deadline will be no earlier than thirty (30) days after the CAISO publishes the results of the DG Deliverability Assessment. The form of the application shall be specified in a Business Practice Manual. The application shall be submitted to both the applicable Participating Transmission Owner, <u>which shall provide a copy of the application to and</u> the CAISO <u>within five (5) Business Days after the application was submitted.</u></p>
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Section	Explanation of Tariff Overlap	[1] Marked Tariff language from filing with earlier effective date (or lower eTariff Record Priority value in the event both filings have the same effective date)	[2] Marked Tariff language from filing with later effective date (or higher eTariff Record Priority value in the event both filings have the same effective date)	[3] Marked Tariff language from [1] added to currently effective tariff record
43.2.2.1	Version 1.0.0 of the tariff record for Section 43.2.2 as filed with the Capacity Procurement Mechanism Tariff Amendment, Dec. 1, 2010, Docket No. ER11-2256, did not include the changes to this section (under its previous section number 43.1.2.1) reflected in Version 3.0.0 (with an earlier effective date) as filed with the Tariff Clarifications Compliance filing, April 8, 2011, Docket No. ER11-2574-002, and accepted by FERC letter Order Jan. 12, 2012.	<p>43.1.2.1 LSE Opportunity to Resolve Collective Deficiency in Local Capacity Area Resources</p> <p>Where the CAISO determines that a need for ICPM Capacity exists under Section 43.1.2, but prior to any designation of ICPM Capacity, the CAISO shall issue a Market Notice, no later than sixty (60) days before the beginning of the Resource Adequacy Compliance Year, identifying the deficient Local Capacity Area and the quantity of capacity that would permit the deficient Local Capacity Area to comply with the Local Capacity Technical Study criteria provided in Section 40.3.1.1 and, where only specific resources are effective to resolve the Reliability Criteria deficiency, the CAISO shall provide the identity of such resources. Any Scheduling Coordinator may submit a revised annual Resource Adequacy Plan within thirty (30) days of the datebeginning of the Market NoticeResource Adequacy Compliance Year demonstrating procurement of additional Local Capacity Area Resources consistent with the Market Notice issued under this Section.</p> <p>Any Scheduling Coordinator that provides such additional Local Capacity Area Resources consistent with the Market Notice under this Section shall have its share of any ICPM procurement costs under Section 43.7.3 reduced on a proportionate basis. If the full quantity of capacity is not reported to the CAISO under revised annual Resource Adequacy Plans in accordance with this Section, the CAISO may designate ICPM Capacity sufficient to alleviate the deficiency.</p>	<p>43.2.2.1 LSE Opportunity to Resolve Collective Deficiency in Local Capacity Area Resources</p> <p>Where the CAISO determines that a need for ICPM Capacity exists under Section 43. 12.2, but prior to any designation of ICPM Capacity, the CAISO shall issue a Market Notice, no later than sixty (60) days before the beginning of the Resource Adequacy Compliance Year, identifying the deficient Local Capacity Area and the quantity of capacity that would permit the deficient Local Capacity Area to comply with the Local Capacity Technical Study criteria provided in Section 40.3.1.1 and, where only specific resources are effective to resolve the Reliability Criteria deficiency, the CAISO shall provide the identity of such resources. Any Scheduling Coordinator may submit a revised annual Resource Adequacy Plan within thirty (30) days of the beginning of the Resource Adequacy Compliance Year demonstrating procurement of additional Local Capacity Area Resources consistent with the Market Notice issued under this Section.</p> <p>Any Scheduling Coordinator that provides such additional Local Capacity Area Resources consistent with the Market Notice under this Section shall have its share of any ICPM procurement costs under Section 43. 78.3 reduced on a proportionate basis. If the full quantity of capacity is not reported to the CAISO under revised annual Resource Adequacy Plans in accordance with this Section, the CAISO may designate ICPM Capacity sufficient to alleviate the deficiency.</p>	<p>43.2.2.1 LSE Opportunity to Resolve Collective Deficiency in Local Capacity Area Resources</p> <p>Where the CAISO determines that a need for CPM Capacity exists under Section 43.2.2, but prior to any designation of CPM Capacity, the CAISO shall issue a Market Notice, no later than sixty (60) days before the beginning of the Resource Adequacy Compliance Year, identifying the deficient Local Capacity Area and the quantity of capacity that would permit the deficient Local Capacity Area to comply with the Local Capacity Technical Study criteria provided in Section 40.3.1.1 and, where only specific resources are effective to resolve the Reliability Criteria deficiency, the CAISO shall provide the identity of such resources. Any Scheduling Coordinator may submit a revised annual Resource Adequacy Plan within thirty (30) days of the datebeginning of the Market NoticeResource Adequacy Compliance Year demonstrating procurement of additional Local Capacity Area Resources consistent with the Market Notice issued under this Section.</p> <p>Any Scheduling Coordinator that provides such additional Local Capacity Area Resources consistent with the Market Notice under this Section shall have its share of any CPM procurement costs under Section 43.8.3 reduced on a proportionate basis. If the full quantity of capacity is not reported to the CAISO under revised annual Resource Adequacy Plans in accordance with this Section, the CAISO may designate CPM Capacity sufficient to alleviate the deficiency.</p>

Section	Explanation of Tariff Overlap	[1] Marked Tariff language from filing with earlier effective date (or lower eTariff Record Priority value in the event both filings have the same effective date)	[2] Marked Tariff language from filing with later effective date (or higher eTariff Record Priority value in the event both filings have the same effective date)	[3] Marked Tariff language from [1] added to currently effective tariff record
43.8.1	Version 1.0.0 as filed with the Capacity Procurement Mechanism Tariff Amendment, Dec. 1, 2010, Docket No. ER11-2256, did not include the changes to this section (under its previous section number 43.7.1) reflected in Version 3.0.0 (with an earlier effective date) as filed with the Tariff Clarifications Compliance filing, April 8, 2011, Docket No. ER11-2574-002, and accepted by FERC letter Order Jan. 12, 2012.	<p>43.7.1 LSE Shortage Of Local Capacity Area Resources In Annual Plan</p> <p>If the CAISO makes ICPM designations under Section 43.1.1.1 to address a shortage resulting from the failure of a Scheduling Coordinator for an LSE to identify sufficient Local Capacity Area Resources to meet its applicable Local Capacity Area capacity requirements in its annual Resource Adequacy Plan, then the CAISO shall allocate the total costs of the ICPM Capacity Payments for such ICPM designations (for the full term of those ICPM designations) pro rata to each Scheduling Coordinator for an LSE based on the ratio of its Local Capacity Area Resource Deficiency to the sum of the deficiency of Local Capacity Area Resources in the deficient Local Capacity Area(s) within a TAC Area. The Local Capacity <u>Area</u> Resource Deficiency under this Section shall be computed on a monthly basis and the ICPM Capacity Payments allocated based on deficiencies during the month(s) covered by the ICPM designation(s).</p>	<p>43.7.1 LSE Shortage Of Local Capacity Area Resources In Annual Plan</p> <p>If the CAISO makes ICPM designations under Section 43.1.1.1 to address a shortage resulting from the failure of a Scheduling Coordinator for an LSE to identify sufficient Local Capacity Area Resources to meet its applicable Local Capacity Area capacity requirements in its annual Resource Adequacy Plan, then the CAISO shall allocate the total costs of the ICPM Capacity Payments for such ICPM designations (for the full term of those ICPM designations) pro rata to each Scheduling Coordinator for an LSE based on the ratio of its Local Capacity Area Resource Deficiency to the sum of the deficiency of Local Capacity Area Resources in the deficient Local Capacity Area(s) within a TAC Area. The Local Capacity Resource Deficiency under this Section shall be computed on a monthly basis and the ICPM Capacity Payments allocated based on deficiencies during the month(s) covered by the ICPM designation(s).</p>	<p>43.8.1 LSE Shortage Of Local Capacity Area Resources In Annual Plan</p> <p>If the CAISO makes CPM designations under Section 43.2.1.1 to address a shortage resulting from the failure of a Scheduling Coordinator for an LSE to identify sufficient Local Capacity Area Resources to meet its applicable Local Capacity Area capacity requirements in its annual Resource Adequacy Plan, then the CAISO shall allocate the total costs of the CPM Capacity Payments for such CPM designations (for the full term of those CPM designations) pro rata to each Scheduling Coordinator for an LSE based on the ratio of its Local Capacity Area Resource Deficiency to the sum of the deficiency of Local Capacity Area Resources in the deficient Local Capacity Area(s) within a TAC Area. The Local Capacity <u>Area</u> Resource Deficiency under this Section shall be computed on a monthly basis and the CPM Capacity Payments allocated based on deficiencies during the month(s) covered by the CPM designation(s).</p>
Expected Energy	Version 5.0.0 as filed with the Order 764 Market Changes Amendment, Nov. 26, 2013, Docket No. ER14-480, did not include the changes to this section reflected in Version 3.0.0 as filed with the RDRR Compliance filing, August 19, 2013, Docket No. ER13-2192, and accepted by FERC Order March 28, 2014 (146 FERC ¶ 61,233).	<p>- Expected Energy</p> <p>The total Energy that is expected to be generated or consumed by a resource, based on the Dispatch of that resource, as calculated by the Real-Time Market (RTM), and as finally modified by any applicable Dispatch Operating Point corrections. Expected Energy includes the Energy scheduled in the IFM, and it is calculated the applicable Trading Day. Expected Energy is calculated for Generating Units, System Resources, Resource-Specific System Resources, Participating Loads, <u>Reliability Demand Response Resources</u>, and Proxy Demand Resources. The calculation is based on the Day-Ahead Schedule and the Dispatch Operating Point trajectory for the three-hour period around the target Trading Hour (including the previous and following hours), the applicable Real-Time LMP for each Dispatch Interval of the target Trading Hour, and any Exceptional Dispatch Instructions. Energy from Non-Dynamic System Resources is converted into HASP Intertie Schedules. Expected Energy is used as the basis for Settlements.</p>	<p>- Expected Energy</p> <p>The total Energy that is expected to be generated or consumed by a resource, based on the Dispatch of that resource, as calculated by the Real-Time Market (RTM), and as finally modified by any applicable Dispatch Operating Point corrections. Expected Energy includes the Energy scheduled in the IFM, and it is calculated for the applicable Trading Day. Expected Energy is calculated for Generating Units, System Resources, Resource-Specific System Resources, Participating Loads, and Proxy Demand Resources. The calculation is based on the Day-Ahead Schedule and the Dispatch Operating Point trajectory for the three-hour period around the target Trading Hour (including the previous and following hours), the applicable Real-Time<u>FMM or RTD</u> LMP for each Dispatch Interval of the target Trading Hour, and any Exceptional Dispatch Instructions. Energy from Non-Dynamic System Resources is converted into HASP Intertie<u>FMM</u> Schedules. Expected Energy is used as the basis for Settlements.</p>	<p>- Expected Energy</p> <p>The total Energy that is expected to be generated or consumed by a resource, based on the Dispatch of that resource, as calculated by the Real-Time Market (RTM), and as finally modified by any applicable Dispatch Operating Point corrections. Expected Energy includes the Energy scheduled in the IFM, and it is calculated for the applicable Trading Day. Expected Energy is calculated for Generating Units, System Resources, Resource-Specific System Resources, Participating Loads, <u>Reliability Demand Response Resources</u>, and Proxy Demand Resources. The calculation is based on the Day-Ahead Schedule and the Dispatch Operating Point trajectory for the three-hour period around the target Trading Hour (including the previous and following hours), the applicable FMM or RTD LMP for each Dispatch Interval of the target Trading Hour, and any Exceptional Dispatch Instructions. Energy from Non-Dynamic System Resources is converted into FMM Schedules. Expected Energy is used as the basis for Settlements.</p>

Attachment B – Marked Tariff Records

Compliance Filing to Reconcile Overlapping Commission-Approved Tariff Records

November 18, 2015

California Independent System Operator Corporation

4.6 Relationship Between CAISO And Generators

The CAISO shall not accept Bids for any Generating Unit interconnected to the electric grid within the CAISO Balancing Authority Area (which includes a Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area) otherwise than through a Scheduling Coordinator. The CAISO shall further not be obligated to accept Bids from Scheduling Coordinators relating to Generation from any Generating Unit interconnected to the electric grid within the CAISO Balancing Authority Area (which includes a Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area) unless the relevant Generator undertakes in writing, by entering into a Participating Generator Agreement or, if eligible to enter such an agreement under the applicable terms of the CAISO tariff, a Net Scheduled PGA, Pseudo-Tie Participating Generator Agreement, or Metered Subsystem Agreement, with the CAISO to comply with all applicable provisions of this CAISO Tariff as they may be amended from time to time, including, without limitation, the applicable provisions of this Section 4.6 and Section 7.7. The CAISO shall not accept Bids from Scheduling Coordinators relating to Generation from a Non-Generator Resource unless the resource owner or operator undertakes in writing, by entering into a Participating Generator Agreement and Participating Load Agreement, to comply with all applicable provisions of this CAISO Tariff as they may be amended from time to time including, without limitation, the applicable provisions of this Section 4.6 and Section 7.7.

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6.5.2.3 Public Market Information

6.5.2.3.1 Demand Forecasts

6.5.2.3.1.1 Beginning seven (7) days prior to the target Day-Ahead Market, and updated as necessary, the CAISO will publish the CAISO Forecast of CAISO Demand.

6.5.2.3.1.2 By 6:00 p.m. the day prior to the target Day-Ahead Market, the CAISO will publish the updated CAISO Forecast of CAISO Demand.

6.5.2.3.2 Network and System Conditions

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

6.5.2.3.3 Ancillary Services Requirements

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

6.5.2.3.4 Natural Gas and Greenhouse Gas Price Indices

The CAISO will publish relevant natural gas price indices and greenhouse gas price indices when available.

6.5.2.3.5 Extremely Long-Start Unit Commitment

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

6.5.2.3.6 Virtual Bid Reference Prices

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

* * * *

8.2.2 Time-Frame For Revising Ancillary Service Standards

The CAISO shall periodically undertake a review of the CAISO Controlled Grid operation to determine any revision to the Ancillary Services standards to be used in the CAISO Balancing Authority Area. At a minimum the CAISO shall conduct such reviews to accommodate revisions to NERC and WECC Reliability Standards and any requirements of the NRC. If the CAISO modifies its Ancillary Services standards, including its rules to determine minimum procurement requirements for Ancillary Services, the CAISO will notify Market Participants. The CAISO may adjust the Ancillary Services standards temporarily to take into account, among other things, variations in system conditions, Real-Time Dispatch constraints, contingencies, and voltage and dynamic stability assessments. Where practicable, the CAISO will provide notice, via the CAISO Website, of any temporary adjustments to Ancillary Service standards by 6:00 p.m. two (2) days ahead of the Operating Day to which the adjustment will apply. Periodic reviews by the CAISO may include, but are not limited to: (a) analysis of the deviation between actual and forecast Demand; (b) analysis of patterns of unplanned Generating Unit resource Outages; (c) analysis of compliance with NERC and WECC Reliability Standards and any requirements of the NRC;

(d) analysis of operation during system disturbances; (e) analysis of patterns of shortfalls between Day-Ahead Schedules and actual Generation and Demand; and (f) analysis of patterns of unplanned transmission Outages.

* * * *

8.4.5 Communication Equipment

Unless otherwise authorized by the CAISO, all Scheduling Coordinators wishing to submit an Ancillary Service Bid must have the capability to submit to and receive information from the CAISO's secure communication system. In addition, they must be capable of receiving Dispatch Instructions electronically and they must provide the CAISO with a telephone number, or fax number through which Dispatch Instructions for each resource may be given if necessary. The CAISO will determine which method of communication is appropriate; provided that the CAISO will consult with the Scheduling Coordinator, if time permits, and will consider the method of communication then utilized by such Scheduling Coordinator; provided further, that the CAISO shall make the final determination as to the additional communication methods. Ancillary Service Providers whose resources are scheduled, bid in or under contract, shall ensure that there is a twenty-four (24) hour personal point of contact with the CAISO for the resource. Scheduling Coordinators representing Proxy Demand Resources that are scheduled, bid in or under contract shall ensure that there is a twenty-four (24) hour personal point of contact with the CAISO for the Proxy Demand Resource. An Ancillary Service Provider wishing to offer any Ancillary Service must provide a direct ring down voice communications circuit (or a dedicated telephone line available twenty-four (24) hours a day every day of the year) between the control room operator for the resource providing the Ancillary Service and the CAISO Control Center. Each Ancillary Service Provider must also provide an alternate method of voice communications with the CAISO from the control room in addition to the direct communication link required above. Operators of Dynamic System Resources from which Dynamic Schedules or Bids are submitted to the CAISO shall provide communications links meeting CAISO standards for dynamic imports from System Resources. Ancillary Service Providers whose resources provide Regulation shall also provide communication links meeting CAISO standards for direct digital control. Operators of System Resources providing Regulation shall provide

communications links meeting CAISO standards for imports of Regulation. If any communication system becomes unavailable, the relevant Ancillary Service Provider and the CAISO shall take immediate action to identify the cause of the interruption and to restore the communication system. A Scheduling Coordinator that has provided a Submission to Self-Provide an Ancillary Service, or has submitted a Bid to provide or contracted for Ancillary Services, shall ensure that the resource concerned is able to receive and implement Dispatch Instructions.

* * * *

8.9 Verification, Compliance Testing, And Auditing

Availability of contracted and Self-Provided Ancillary Services shall be verified by the CAISO by unannounced testing of ~~Generating Units, Loads and System Resources~~resources, by auditing of response to CAISO Dispatch Instructions, and by analysis of the appropriate Meter Data, or Interchange Schedules. The CAISO may test the capability of any ~~Generating Unit, System Unit, System Resource, external import of a System Resource, Participating Load, or reactive device~~resource providing Ancillary Services. Participating Generators, owners or operators of Participating Loads, Scheduling Coordinators representing owners or operators of Proxy Demand Resources, operators of System Units or System Resources, owners or operators of reactive devices and Scheduling Coordinators shall notify the CAISO immediately whenever they become aware that an Ancillary Service is not available in any way. All ~~Participating Generators, owners or operators of Loads, operators of System Units or System Resources and owners or operators of reactive devices~~Ancillary Service Providers shall check, monitor and/or test their system and related equipment routinely to assure availability of the committed Ancillary Services. These requirements apply to Ancillary Services whether the Ancillary Services are contracted or self-provided. For a duration specified by the CAISO, the CAISO may suspend the technical eligibility certificate of a Scheduling Coordinator for a ~~Generating Unit, System Unit, Load or System Resource~~,resource which repeatedly fails to perform. The CAISO shall develop measures to discourage repeated non-performance on the part of both bidders and self-providers. Further, all of these requirements apply to each MSG Configuration.

* * * *

8.9.2 Compliance Testing for Regulation

The CAISO may test the capability of any ~~Generating Unit or System Resource~~resource providing Regulation by using the CAISO EMS to move that ~~Generating Unit's or System Resource's~~resource's output over the full range of its Regulation capacity within a ten ~~-(10)~~ minute period. For a Multi-Stage Generating Resource the full range of Regulation capacity is evaluated at the applicable MSG Configuration.

* * * *

8.10.2 Spinning Reserve

The CAISO shall test the Spinning Reserve capability of a ~~Generating Unit, System Unit or System Resource~~resource by issuing unannounced Dispatch Instructions requiring the ~~Generating Unit, System Unit or System Resource~~resource to ramp up to its ten (10) minute capability. The CAISO shall measure the response of the ~~Generating Unit, System Unit or System Resource~~resource to determine compliance with requirements. Such tests may not necessarily occur on the hour. The Scheduling Coordinator for the ~~Generating Unit, System Unit or System Resource~~resource shall be paid pursuant to Section 11.5.6. For a Multi-Stage Generating Resource the range of Spinning capacity evaluated is the range for the applicable MSG Configuration.

8.10.3 Non-Spinning Reserve

The CAISO may test the Non-Spinning Reserve capability of a ~~Generating Unit, Load, System Unit or System Resource~~resource by issuing unannounced Dispatch Instructions requiring the ~~Generating Unit, Load, System Unit or System Resource~~resource to ~~come on line and ramp up or to reduce Demand~~to its ~~certified capacity within~~ ten (10) minutes ~~s-capability~~. The CAISO shall measure the response of the ~~Generating Unit, System Unit, System Resource~~resource or Load to determine compliance with requirements. The Scheduling Coordinator for the ~~Generating Unit, System Unit, Load or System Resource~~resource shall be paid pursuant to Section 11.5.6. For a Multi-Stage Generating Resource the range of Non-Spinning capacity evaluated is the range at the applicable MSG Configuration.

* * * *

8.10.8.2 Rescission of Payments for Unavailable Ancillary Service Capacity

If the CAISO determines that a Scheduling Coordinator has supplied Uninstructed Imbalance Energy to the CAISO during a Settlement Interval from the capacity of a resource that is obligated to supply Spinning Reserve or Non-Spinning Reserve to the CAISO, payments to the Scheduling Coordinator for the Ancillary Service capacity used to supply Uninstructed Imbalance Energy shall be eliminated to the extent of the deficiency, in accordance with the provisions of Section 11.10.9.2. For Multi-Stage Generating Resources that have supplied Uninstructed Imbalance Energy from capacity obligated to supply Spinning or Non-Spinning Reserves, the CAISO shall calculate the capacity for which payments will be rescinded at the Generating Unit ~~or Dynamic Resource Specific System Resource~~ level, as applicable, and will use the MSG Configuration-specific Maximum Operating Limit.

* * * *

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 a UIE quantity for each Settlement Interval. UIE 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 UIE for such entities is settled similarly to how UIE for non-MSS entities is settled as provided in this Section 11.5.2. The CAISO shall account for UIE 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 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 UIE 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 UIE quantity and its Real-Time Settlement Interval MSS Price.

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11.8.2.1.5 IFM Energy Bid Cost

For any Settlement Interval, the IFM Energy Bid Cost for Bid Cost Recovery Eligible Resources, except Participating Loads, shall be the integral of the relevant Energy Bid used in the IFM, if any, from the higher of the registered Bid Cost Recovery Eligible Resource's Minimum Load and the Day-Ahead Total Self-Schedule up to the relevant MWh scheduled in the Day-Ahead Schedule, divided by the number of Settlement Intervals in a Trading Hour. The IFM Energy Bid Cost calculations are subject to the application of the Day-Ahead Metered Energy Adjustment Factor, and the Persistent Deviation Metric pursuant to the rules specified in Section 11.8.2.5 and Section 11.17.2.3, respectively. In addition, if the CAISO commits a Bid Cost Recovery Eligible Resource in the Day-Ahead and receives a Day-Ahead Schedule and subsequently the CAISO de-commits the resource in the Real-Time Market, the IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. If the CAISO commits a Multi-Stage Generating Resource in the Day-Ahead Market and the resource receives a Day-Ahead Schedule and subsequently the CAISO de-commits the Multi-Stage Generating Resource to a lower MSG Configuration where its Minimum Load capacity in the Real-Time Market is lower than the CAISO IFM Commitment Period MSG Configuration's Minimum Load, the resource's IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. The CAISO will determine the IFM Energy Bid Cost for a Multi-Stage Generating Resource at the Generating Unit ~~or Dynamic Resource-Specific System Resource~~ level.

11.8.2.1.6 IFM AS Bid Cost

For any Settlement Interval, the IFM AS Bid Cost shall be the product of the IFM AS Award from each accepted IFM AS Bid and the relevant AS Bid Price, divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine and calculate IFM AS Bid Cost for a Multi-Stage Generating Resource at the Generating Unit ~~or Dynamic Resource-Specific System Resource~~ level. The IFM AS Bid Cost shall also include Mileage Bid Costs. For any Settlement Interval, the IFM Mileage Bid Cost shall be the product of Instructed Mileage associated with a Day Ahead Regulation capacity award, as adjusted for accuracy consistent with Section 11.10.1.7, and the relevant Mileage Bid price, divided by the number

of Settlement Intervals in a Trading Hour. The CAISO will determine and calculate IFM Mileage Bid Cost for a Multi-Stage Generating Resource at the Generating Unit ~~or Dynamic Resource Specific System Resource~~ level.

* * * *

11.8.3 RUC Bid Cost Recovery Amount

For purposes of determining the RUC Unrecovered Bid Cost Uplift Payments as determined in Section 11.8.5 and for the purposes of allocating Net RUC Bid Cost Uplift as described in Section 11.8.6.5, the CAISO shall calculate the RUC Bid Cost Shortfall or the RUC Bid Cost Surplus as the algebraic difference between the RUC Bid Cost and the RUC Market Revenues for each Bid Cost Recovery Eligible Resource for each Settlement Interval. The RUC Bid Costs shall be calculated pursuant to Section 11.8.3.1 and the RUC Market Revenues shall be calculated pursuant to Section 11.8.3.2. The CAISO will include Bid Cost Recovery costs related to Short Start Units committed in Real-Time because as a result of awarded RUC Capacity ~~will be included~~ in RTMRUC Compensation Costs.

* * * *

11.8.3.1.1 RUC Start-Up Cost

The RUC Start-Up Cost for any Settlement Interval in a RUC Commitment Period shall consist of Start-Up Cost of the Bid Cost Recovery Eligible Resource submitted to the CAISO for the applicable RUC Commitment Period divided by the number of Settlement Intervals in the applicable RUC Commitment Period. For each Settlement Interval, only the RUC Start-Up Cost in a CAISO RUC Commitment Period is eligible for Bid Cost Recovery. The CAISO will determine the RUC Start-Up Cost for a Multi-Stage Generating Resource based on the MSG Configuration committed by the CAISO in RUC.

The following rules shall be applied in sequence and shall qualify the RUC Start-Up Cost in a RUC Commitment Period:

- (a) The RUC Start-Up Cost for a RUC Commitment Period is zero if there is an IFM Commitment Period within that RUC Commitment Period.

- (b) The RUC Start-Up Cost for a RUC Commitment Period is zero if the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an RMR Contract prior to the Day-Ahead Market or is flagged as an RMR Dispatch in the Day-Ahead Schedule anywhere within that RUC Commitment Period.
- (c) The RUC Start-Up Cost for a RUC Commitment Period is zero if there is no RUC Start-Up at the start of that RUC Commitment Period because the RUC Commitment Period is the continuation of an IFM, RUC, or RTM Commitment Period from the previous Trading Day.
- (d) The RUC Start-Up Cost for a RUC Commitment Period is zero if the Start-Up is delayed beyond the RUC Commitment Period in question or cancelled by the Real-Time Market prior to the Bid Cost Recovery Eligible Resource starting its start-up process.
- (e) If a RUC Start-Up is terminated in the Real-Time within the applicable RUC Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource is starting up the, RUC Start-Up Cost is prorated by the ratio of the Start-Up Time before termination over the RUC Start-Up Time.
- (f) The RUC Start-Up Cost for a RUC Commitment Period is qualified if an actual Start-Up occurs within that RUC Commitment Period. An actual Start-Up is detected between two consecutive Settlement Intervals when the relevant metered Energy in the applicable Settlement Intervals increases from below the Minimum Load Energy and reaches or exceeds the relevant Minimum Load Energy. The Minimum Load Energy is the product of the relevant Minimum Load and the duration of the Settlement Interval. The CAISO will determine the Minimum Load Energy for Multi-Stage Generating Resources based on the CAISO-committed MSG Configuration.
- (g) The RUC Start-Up Cost shall be qualified if an actual Start-Up occurs ~~earlier than the start of the RUC 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 RUC Start-Up, otherwise the Start-Up Cost is zero for the RUC Commitment Period. An actual Start-Up is detected when the relevant metered Energy in the applicable Settlement Intervals 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 Intervals that fall within the CAISO RUC Commitment Period.~~

11.8.3.1.2 RUC Minimum Load Cost

The Minimum Load Cost for the applicable Settlement Interval shall be the Minimum Load Cost of the Bid Cost Recovery Eligible Resource divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RUC Minimum Load Cost in a CAISO RUC Commitment Period is eligible for Bid Cost Recovery. The RUC Minimum Load Cost for any Settlement Interval is zero if: (1) the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an RMR Contract or the resource is flagged as an RMR Dispatch in the Day-Ahead Schedule in that Settlement Interval; (2) the Bid Cost Recovery Eligible Resource is not ~~committed or Dispatched in the Real-time Market~~ actually On in the applicable Settlement Interval; or (3) the applicable Settlement Interval is included in an IFM Commitment Period. For the purposes of determining RUC Minimum Load Cost, ~~for~~ a Bid Cost Recovery Eligible Resource recovery of the RUC Minimum Load Costs is subject to the Real-Time Performance Metric as specified in Section 11.8.4.4., except for a Multi-Stage Generating Resource, is assumed to be On if its metered Energy in a Settlement Interval is equal to or greater than the difference between its Minimum Load Energy and the Tolerance Band. Otherwise, such non-Multi-Stage Generating Resources are determined to be Off. For Multi-Stage Generating Resources, the commitment period is further determined based on application of section 11.8.1.3. ~~If application of section 11.8.1.3 dictates that RUC is the commitment period, then the calculation of the RUC Minimum Load Costs will depend on whether the metered MSG Configuration is equal to or different from the RUC committed MSG Configuration. If the metered MSG Configuration is equal to the RUC committed MSG Configuration, then the RUC Minimum Load Costs will be based on the Minimum Load Costs of the RUC committed MSG Configuration. If the metered MSG Configuration is different from the RUC committed MSG~~

~~Configuration, then the RUC Minimum Load Costs will be based on the lower of the Minimum Load Costs of the metered MSG Configuration and the Minimum Load Costs of the RUC committed MSG Configuration. The metered MSG Configuration is determined based on the highest MSG Configuration submitted to the RUC for which the Metered Data is within or above the three (3) percent (or 5 MW) Tolerance Band of the PMin of that highest MSG Configuration submitted to the RUC. Between two (2) (or more) MSG Configurations, the highest MSG Configuration is the MSG Configuration with the PMin value that is the greatest MW value. The RUC Minimum Load Cost calculation will be subject to the Shut-Down State Variable and disqualified as specified in Section 11.17.2.~~

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11.8.3.1.4.1 RUC Transition Costs Applicability

Within any eligible RUC CAISO Commitment Period determined pursuant to the rules specified in Section 11.8.1.3, the CAISO shall apply the RUC Transition Costs for the Settlement Intervals in which the Multi-Stage Generating Resources is actually transitioning from the “from” MSG Configuration and reaches the Minimum Load of the “to” MSG Configuration to which the Multi-Stage Generating Resource is transitioning, subject to the Tolerance Band.

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11.8.3.3.2 MSS Elected Net Settlement

For an MSS Operator that has elected net Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the RUC Bid Costs and RUC Market Revenue are calculated combined with RTM Bid Cost and RTM Market Revenue on an MSS level, consistent with the Energy Settlement as calculated according to Section 11.8.4.3.2. ~~The RUC Bid Cost Shortfall or Surplus is also settled at the MSS level as opposed to the individual resource level as is done for MSS Operators that have elected gross Settlement.~~

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11.8.5 Unrecovered Bid Cost Uplift Payment

Bid Cost Recovery Eligible Resources will receive an Unrecovered Bid Cost Uplift Payment as described in this Section below. For Multi-Stage Generating Resources, Unrecovered Bid Cost Uplift Payments will be calculated and made at the Generating Unit level and not the MSG Configuration level. MSS Bid Cost Recovery Eligible Resources by MSS Operators that have elected net settlement will receive Unrecovered Bid Cost Uplift Payment for MSS Bid Cost Recovery Eligible Resources at the MSS level and not by individual resource. MSS Bid Cost Recovery Eligible Resources by MSS Operators that have elected gross settlement will receive Unrecovered Bid Cost Uplift Payments at the MSS Bid Cost Recovery Eligible Resource level like all other resources.

11.8.5.1 IFM Unrecovered Bid Cost Uplift Payment

Scheduling Coordinators shall receive an IFM Unrecovered Bid Cost Uplift Payment for a Bid Cost Recovery Eligible Resource, ~~including resources for MSS Operators that have elected gross Settlement, if~~ the net of all IFM Bid Cost Shortfalls and IFM Bid Cost Surpluses calculated pursuant to Section 11.8.2, ~~RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses calculated pursuant to Section 11.8.3, and the RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses calculated pursuant to Section 11.8.4 for that Bid Cost Recovery Eligible Resource~~ over a Trading Day is positive. ~~For Multi-Stage Generating Resources, Unrecovered Bid Cost Uplift Payments will be calculated and made at the Generating Unit level and not the MSG Configuration level. For MSS Operators that have elected net Settlement, the Unrecovered Bid Cost Uplift Payment is at the MSS level. The MSS IFM, RUC, and RTM Bid Cost Shortfall or IFM, RUC, and RTM Bid Cost Surplus for each market for each Trading Hour is the sum of the IFM, RUC, and RTM Bid Cost Shortfalls and IFM, RUC, and RTM Bid Cost Surpluses for all resources in the MSS. Scheduling Coordinators for MSS Operators that have elected net Settlement will receive an Unrecovered Bid Cost Uplift Payment if the net of all IFM, RUC, and RTM Bid Cost Shortfalls and IFM, RUC, and RTM Bid Cost Surpluses for that MSS over a Trading Day is positive.~~

11.8.5.2 RUC and RTM Unrecovered Bid Cost Uplift Payment

Scheduling Coordinators shall receive RUC and RTM Unrecovered Bid Cost Uplift Payments for a Bid Cost Recovery Eligible Resource, if the net of all RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses

calculated pursuant to Section 11.8.3, and the RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses calculated pursuant to Section 11.8.4, for that Bid Cost Recovery Eligible Resource over a Trading Day is positive. For Metered Subsystems that have elected net settlement, the Unrecovered Bid Cost Uplift Payment will be the sum, if positive, of the RUC, and RTM Bid Cost Shortfall or RUC, and RTM Bid Cost Surplus for each Trading Hour over the Trading Day for all Bid Cost Recovery Eligible Resources in the MSS.

* * * *

30.5.1 General Bidding Rules

- (a) All Energy and Ancillary Services Bids of each Scheduling Coordinator submitted to the DAM for the following Trading Day shall be submitted at or prior to 10:00 a.m. on the day preceding the Trading Day, but no sooner than seven (7) days prior to the Trading Day. All Energy and Ancillary Services Bids of each Scheduling Coordinator submitted to the RTM for the following Trading Day shall be submitted starting from the time of publication, at 1:00 p.m. on the day preceding the Trading Day, of DAM results for the Trading Day, and ending seventy-five (75) minutes prior to each applicable Trading Hour in the RTM. Scheduling Coordinators may submit only one set of Bids to the RTM for a given Trading Hour, which the CAISO uses for all Real-Time Market processes. The CAISO will not accept any Energy or Ancillary Services Bids for the following Trading Day between 10:00 a.m. on the day preceding the Trading Day and the publication, at 1:00 p.m. on the day preceding the Trading Day, of DAM results for the Trading Day;

* * * *

- (k) For any given Trading Hour, a Scheduling Coordinator may submit Self-Schedules and/or Submissions to Self-Provide Ancillary Services in only one MSG Configuration for each Generating Unit ~~or Dynamic Resource Specific System Resource.~~

* * * *

34.7 General Dispatch Principles

The CAISO shall conduct all Dispatch activities consistent with the following principles:

- (1) The CAISO shall issue AGC instructions electronically as often as every four (4) seconds from its Energy Management System (EMS) to resources providing Regulation and on Automatic Generation Control to meet NERC and WECC performance requirements;

* * * *

- (7) Through Start-Up Instructions the CAISO may instruct resources to start up or shut down, or may reduce Load for Participating Loads, Reliability Demand Response Resources, and Proxy Demand Resources, over the forward-looking time period for the RTM based on submitted Bids, Start-Up Costs and Minimum Load Costs, Pumping Costs and Pump Shut-Down Costs, as appropriate for the resource, or for Multi-Stage Generating Resource as appropriate for the applicable MSG Configuration, consistent with operating characteristics of the resources that the SCED is able to enforce. In making Start-Up or Shut-Down decisions in the RTM, the CAISO may factor in limitations on number of run hours or Start-Ups of a resource to avoid exhausting its maximum number of run hours or Start-Ups during periods other than peak loading conditions;

* * * *

- (12) The CAISO may issue Transition Instructions to instruct resources to transition from one MSG Configuration to another over the forward-looking time period for the RTM based on submitted Bids, Transition Costs and Minimum Load Costs, as appropriate for the MSG Configurations involved in the MSG Transition, consistent with Transition Matrix and operating characteristics of these MSG Configurations. The RTM optimization will factor in limitations on Minimum Run Time and Minimum Down Time defined for each MSG configuration and

Minimum Run Time and Minimum Down Time at the Generating Unit ~~or Dynamic Resource-Specific System Resource.~~

* * * *

34.8 Dispatch Instructions to Units, Participating Loads, ~~and 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
 - (iii) replacement of an Ancillary Service;
- (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; or
- (h) Dispatch of Reliability Demand Response Resources pursuant to Section 34.18.

* * * *

34.11.1 System Reliability Exceptional Dispatches

The CAISO may issue a manual Exceptional Dispatch for Generating Units, System Units, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources, Dynamic System Resources, and Condition 2 RMR Units pursuant to Section 41.9, in addition to or instead of resources

with a Day-Ahead Schedule dispatched by RTM optimization software during a System Emergency, or to prevent an imminent System Emergency or a situation that threatens System Reliability and cannot be addressed by the RTM optimization and system modeling. To the extent possible, the CAISO shall utilize available and effective Bids from resources before dispatching resources without Bids. To deal with any threats to System Reliability, the CAISO may also issue a manual Exceptional Dispatch in the Real-Time for Non-Dynamic System Resources that have not been or would not be selected by the RTM for Dispatch, but for which the relevant Scheduling Coordinator has received a HASP Block Intertie Schedule.

* * * *

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 34.9.3.

* * * *

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 Operation 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 submitted 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 applicable 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 ~~or Dynamic Resource-Specific System Resource~~ 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 34.18.3.
- (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 11.4.
- (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.

* * * *

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.

34.30.2.3 Eligibility to Set the Real-Time LMP

All Generating Units, Participating Loads, Proxy Demand Resources, [Reliability Demand Response Resources \(other than those Reliability Demand Response Resources addressed below in this Section 34.19.2.3\)](#), Dynamic System Resources, System Units, or COGs subject to the provisions in Section 27.7, with Bids, including Generated Bids, that are unconstrained due to Ramp Rates or other temporal constraints are eligible to set the LMP, provided that (a) a Generating Unit or a Dynamic Resource-Specific System Resource is Dispatched between its Minimum Operating Limit and the highest MW value in its Economic Bid or Generated Bid, or (b) a Participating Load, a Proxy Demand Resource, [a Reliability Demand Response Resource](#), a Dynamic System Resource that is not a Resource-Specific System Resource, or a System Unit is Dispatched between zero (0) MW and the highest MW value within its submitted Economic Bid range or Generated Bid. [A Reliability Demand Response Resource that is dispatched in Real-Time by an entity other than the CAISO in order to 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 to perform a test, will not be eligible to set the LMP.](#) If a resource is Dispatched below its Minimum Operating Limit or above the highest MW value in its Economic Bid range or Generated Bid, or the CAISO enforces a resource-specific constraint on the resource due to an RMR or Exceptional Dispatch, the resource will not be eligible to set the LMP. Resources identified as MSS Load following resources are not eligible to set the LMP. A resource constrained at an upper or lower operating limit or dispatched for a quantity of Energy such that its full Ramping capability is constraining the ability of the resource to be dispatched for additional Energy in target interval, cannot be marginal (i.e., it is constrained by the Ramping capability) and thus is not eligible to set the Dispatch Interval LMP. Non-Dynamic System Resources are not eligible to set the Dispatch Interval LMP. Dynamic System Resources are eligible to set the Dispatch Interval LMP. A Constrained Output Generator that has the ability to be committed or shut off within applicable time periods that comprise the RTM will be eligible to set the Dispatch Interval LMP if any portion of its Energy is necessary to serve Demand. Dispatches of Regulation resources by EMS in response to AGC will not set the RTM LMP.

Dispatches of Regulation resources to a Dispatch Operating Point by RTM SCED will be eligible to set the RTM LMP.

* * * *

40.4.6.3.1.1 Developing the Assessment Model

To develop the base case model for the DG Deliverability Assessment, the CAISO will include:

- (i) The most recent GIP or GIDAP Queue Cluster Phase II Interconnection Study deliverability power flow base case, which includes Distributed Generation Facilities of interconnection customers with active interconnection requests who have requested Full Capacity or Partial Capacity Deliverability Status;
- (ii) Those Generating Facilities that have obtained Deliverability using the annual full capacity deliverability option under either Section 8.2 of the GIP, ~~or~~ Section 9.2 of the GIDAP, or equivalent process(es) under the applicable Utility Distribution Company tariffs;
- (iii) Transmission additions and upgrades approved in the final comprehensive Transmission Plan for the most recent Transmission Planning Process cycle;
- (iv) Any Generating Facilities in the most recent GIDAP Phase I Interconnection Study that have been determined to be deliverable in accordance with their requested Deliverability Status (including Distributed Generation Facilities of interconnection customers with active interconnection requests who have requested Full Capacity or Partial Capacity Deliverability Status) and were not assigned any Delivery Network Upgrade costs in the Phase I Interconnection Study;
- (v) Delivery Network Upgrades that have received governmental approvals or for which Construction Activities have commenced;
- (vi) The MW amounts of resources interconnected to the ~~d~~Distribution ~~s~~System below specific Nodes of the CAISO Controlled Grid contained in the most recent Transmission Planning Process base portfolio, except that the CAISO will remove each Node (by using

a zero MW value) located within electrical areas for which the most recently completed GIP or GIDAP Phase I or Phase II Interconnection Study has identified a need for a Delivery Network Upgrade or for which the most recent Phase II Interconnection Study identified and then removed a Delivery Network Upgrade to support Deliverability for MW amounts in the Interconnection queue;

- (vii) Actual distributed generation development based on the MW amount of distributed generation in applicable Utility Distribution Company and Metered Subsystem interconnection queues including non-net-energy-metering resources requesting interconnection through state-jurisdictional interconnection processes;
- (viii) Any additional information provided by each Utility Distribution Company and Metered Subsystem regarding anticipated distributed generation development on its Distribution System; and
- (ix) Other information that the CAISO, in its reasonable discretion, determines is necessary.

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40.4.6.3.2.2.1 Eligibility to Obtain Deliverability Status Assignment from IOU Participating Transmission Owners

Distributed Generation Facilities interconnected, or seeking interconnection, to the Distribution System of an IOU Participating Transmission Owner may apply to the applicable IOU Participating Transmission Owner ~~and the CAISO~~ to be eligible to receive a Deliverability Status assignment in the current DG Deliverability Assessment cycle as follows:

- (i) Distributed Generation Facilities that are already in Commercial Operation and interconnected to the Distribution System of an IOU Participating Transmission Owner that do not have Deliverability Status may submit an application to be eligible for Full or Partial Capacity Deliverability Status, and those that have Partial Capacity Deliverability Status may apply to be eligible for a higher level of Partial Capacity Deliverability Status or Full Capacity Deliverability Status.

- (ii) Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have not requested Deliverability Status in the underlying interconnection process but have received their Phase I ~~interconnection~~ ~~Study~~ results or the equivalent thereof may submit an application to be eligible to receive Partial Capacity Deliverability Status or Full Capacity Deliverability Status.
- (iii) Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have not received their Phase I ~~interconnection~~ ~~Study~~ results or the equivalent thereof, irrespective of whether they requested Deliverability Status in their interconnection request, may submit an application to be eligible to receive Partial Capacity Deliverability Status or Full Capacity Deliverability Status.

Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have requested Deliverability Status in the underlying interconnection process and have already received Phase I ~~interconnection~~ ~~Study~~ results or the equivalent thereof are not eligible to be assigned Deliverability Status pursuant to Section 40.4.6.3 because their Deliverability Status is protected in accordance with the provisions of Section 40.4.6.3.1 and will be assigned through the applicable IOU Participating Transmission Owner's interconnection process.

Applications from Distributed Generation Facilities in the eligible categories specified above must be submitted by the deadline specified in the schedule for the current DG Deliverability Assessment cycle in order for the Distributed Generation Facility to be treated as eligible to receive a Deliverability Status assignment in the current cycle. Distributed Generation Facilities that fail to apply in a timely manner will be assumed not to be seeking Deliverability Status in the current cycle. The CAISO will issue a Market Notice announcing the deadline for submitting applications. The deadline will be no earlier than thirty (30) days after the CAISO publishes the results of the DG Deliverability Assessment. The form of the application shall be specified in a Business Practice Manual. The application shall be submitted to ~~both~~

the applicable Participating Transmission Owner, which shall provide a copy of the application to and the CAISO within five (5) Business Days after the application was submitted.

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43.2.2.1 LSE Opportunity to Resolve Collective Deficiency in Local Capacity Area Resources

Where the CAISO determines that a need for CPM Capacity exists under Section 43.2.2, but prior to any designation of CPM Capacity, the CAISO shall issue a Market Notice, ~~no later than sixty (60) days before the beginning of the Resource Adequacy Compliance Year,~~ identifying the deficient Local Capacity Area and the quantity of capacity that would permit the deficient Local Capacity Area to comply with the Local Capacity Technical Study criteria provided in Section 40.3.1.1 and, where only specific resources are effective to resolve the Reliability Criteria deficiency, the CAISO shall provide the identity of such resources. Any Scheduling Coordinator may submit a revised annual Resource Adequacy Plan within thirty (30) days of the ~~date beginning~~ of the ~~Market Notice Resource Adequacy Compliance Year~~ demonstrating procurement of additional Local Capacity Area Resources consistent with the Market Notice issued under this Section.

Any Scheduling Coordinator that provides such additional Local Capacity Area Resources consistent with the Market Notice under this Section shall have its share of any CPM procurement costs under Section 43.8.3 reduced on a proportionate basis. If the full quantity of capacity is not reported to the CAISO under revised annual Resource Adequacy Plans in accordance with this Section, the CAISO may designate CPM Capacity sufficient to alleviate the deficiency.

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43.8.1 LSE Shortage Of Local Capacity Area Resources In Annual Plan

If the CAISO makes CPM designations under Section 43.2.1.1 to address a shortage resulting from the failure of a Scheduling Coordinator for an LSE to identify sufficient Local Capacity Area Resources to meet its applicable Local Capacity Area capacity requirements in its annual Resource Adequacy Plan, then the CAISO shall allocate the total costs of the CPM Capacity Payments for such CPM designations (for the full term of those CPM designations) pro rata to each Scheduling Coordinator for an LSE based

on the ratio of its Local Capacity Area Resource Deficiency to the sum of the deficiency of Local Capacity Area Resources in the deficient Local Capacity Area(s) within a TAC Area. The Local Capacity Area Resource Deficiency under this Section shall be computed on a monthly basis and the CPM Capacity Payments allocated based on deficiencies during the month(s) covered by the CPM designation(s).

* * * *

Appendix A

Master Definition Supplement

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- Expected Energy

The total Energy that is expected to be generated or consumed by a resource, based on the Dispatch of that resource, as calculated by the Real-Time Market (RTM), and as finally modified by any applicable Dispatch Operating Point corrections. Expected Energy includes the Energy scheduled in the IFM, and it is calculated for the applicable Trading Day. Expected Energy is calculated for Generating Units, System Resources, Resource-Specific System Resources, Participating Loads, Reliability Demand Response Resources, and Proxy Demand Resources. The calculation is based on the Day-Ahead Schedule and the Dispatch Operating Point trajectory for the three-hour period around the target Trading Hour (including the previous and following hours), the applicable FMM or RTD LMP for each Dispatch Interval of the target Trading Hour, and any Exceptional Dispatch Instructions. Energy from Non-Dynamic System Resources is converted into FMM Schedules. Expected Energy is used as the basis for Settlements.

Attachment C – Clean Tariff Records

Compliance Filing to Reconcile Overlapping Commission-Approved Tariff Records

November 18, 2015

California Independent System Operator Corporation

4.6 Relationship Between CAISO And Generators

The CAISO shall not accept Bids for any Generating Unit interconnected to the electric grid within the CAISO Balancing Authority Area (which includes a Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area) otherwise than through a Scheduling Coordinator. The CAISO shall further not be obligated to accept Bids from Scheduling Coordinators relating to Generation from any Generating Unit interconnected to the electric grid within the CAISO Balancing Authority Area (which includes a Pseudo-Tie of a Generating Unit to the CAISO Balancing Authority Area) unless the relevant Generator undertakes in writing, by entering into a Participating Generator Agreement or, if eligible to enter such an agreement under the applicable terms of the CAISO tariff, a Net Scheduled PGA, Pseudo-Tie Participating Generator Agreement, or Metered Subsystem Agreement, with the CAISO to comply with all applicable provisions of this CAISO Tariff as they may be amended from time to time, including, without limitation, the applicable provisions of this Section 4.6 and Section 7.7. The CAISO shall not accept Bids from Scheduling Coordinators relating to Generation from a Non-Generator Resource unless the resource owner or operator undertakes in writing, by entering into a Participating Generator Agreement and Participating Load Agreement, to comply with all applicable provisions of this CAISO Tariff as they may be amended from time to time including, without limitation, the applicable provisions of this Section 4.6 and Section 7.7.

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6.5.2.3 Public Market Information

6.5.2.3.1 Demand Forecasts

6.5.2.3.1.1 Beginning seven (7) days prior to the target Day-Ahead Market, and updated as necessary, the CAISO will publish the CAISO Forecast of CAISO Demand.

6.5.2.3.1.2 By 6:00 p.m. the day prior to the target Day-Ahead Market, the CAISO will publish the updated CAISO Forecast of CAISO Demand.

6.5.2.3.2 Network and System Conditions

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

6.5.2.3.3 Ancillary Services Requirements

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

6.5.2.3.4 Natural Gas and Greenhouse Gas Price Indices

The CAISO will publish relevant natural gas price indices and greenhouse gas price indices when available.

6.5.2.3.5 Extremely Long-Start Unit Commitment

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

6.5.2.3.6 Virtual Bid Reference Prices

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

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8.2.2 Time-Frame For Revising Ancillary Service Standards

The CAISO shall periodically undertake a review of the CAISO Controlled Grid operation to determine any revision to the Ancillary Services standards to be used in the CAISO Balancing Authority Area. At a minimum the CAISO shall conduct such reviews to accommodate revisions to NERC and WECC Reliability Standards and any requirements of the NRC. If the CAISO modifies its Ancillary Services standards, including its rules to determine minimum procurement requirements for Ancillary Services, the CAISO will notify Market Participants. The CAISO may adjust the Ancillary Services standards temporarily to take into account, among other things, variations in system conditions, Real-Time Dispatch constraints, contingencies, and voltage and dynamic stability assessments. Where practicable, the CAISO will provide notice, via the CAISO Website, of any temporary adjustments to Ancillary Service standards by 6:00 p.m. two (2) days ahead of the Operating Day to which the adjustment will apply. Periodic reviews by the CAISO may include, but are not limited to: (a) analysis of the deviation between actual and forecast Demand; (b) analysis of patterns of unplanned resource Outages; (c) analysis of compliance with NERC and WECC Reliability Standards and any requirements of the NRC; (d) analysis

of operation during system disturbances; (e) analysis of patterns of shortfalls between Day-Ahead Schedules and actual Generation and Demand; and (f) analysis of patterns of unplanned transmission Outages.

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8.4.5 Communication Equipment

Unless otherwise authorized by the CAISO, all Scheduling Coordinators wishing to submit an Ancillary Service Bid must have the capability to submit to and receive information from the CAISO's secure communication system. In addition, they must be capable of receiving Dispatch Instructions electronically and they must provide the CAISO with a telephone number, or fax number through which Dispatch Instructions for each resource may be given if necessary. The CAISO will determine which method of communication is appropriate; provided that the CAISO will consult with the Scheduling Coordinator, if time permits, and will consider the method of communication then utilized by such Scheduling Coordinator; provided further, that the CAISO shall make the final determination as to the additional communication methods. Ancillary Service Providers whose resources are scheduled, bid in or under contract, shall ensure that there is a twenty-four (24) hour personal point of contact with the CAISO for the resource. Scheduling Coordinators representing Proxy Demand Resources that are scheduled, bid in or under contract shall ensure that there is a twenty-four (24) hour personal point of contact with the CAISO for the Proxy Demand Resource. An Ancillary Service Provider wishing to offer any Ancillary Service must provide a direct ring down voice communications circuit (or a dedicated telephone line available twenty-four (24) hours a day every day of the year) between the control room operator for the resource providing the Ancillary Service and the CAISO Control Center. Each Ancillary Service Provider must also provide an alternate method of voice communications with the CAISO from the control room in addition to the direct communication link required above. Operators of Dynamic System Resources from which Dynamic Schedules or Bids are submitted to the CAISO shall provide communications links meeting CAISO standards for dynamic imports from System Resources. Ancillary Service Providers whose resources provide Regulation shall also provide communication links meeting CAISO standards for direct digital control. Operators of System Resources providing Regulation shall provide

communications links meeting CAISO standards for imports of Regulation. If any communication system becomes unavailable, the relevant Ancillary Service Provider and the CAISO shall take immediate action to identify the cause of the interruption and to restore the communication system. A Scheduling Coordinator that has provided a Submission to Self-Provide an Ancillary Service, or has submitted a Bid to provide or contracted for Ancillary Services, shall ensure that the resource concerned is able to receive and implement Dispatch Instructions.

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8.9 Verification, Compliance Testing, And Auditing

Availability of contracted and Self-Provided Ancillary Services shall be verified by the CAISO by unannounced testing of resources, by auditing of response to CAISO Dispatch Instructions, and by analysis of the appropriate Meter Data, or Interchange Schedules. The CAISO may test the capability of any resource providing Ancillary Services. Participating Generators, owners or operators of Participating Loads, Scheduling Coordinators representing owners or operators of Proxy Demand Resources, operators of System Units or System Resources, owners or operators of reactive devices and Scheduling Coordinators shall notify the CAISO immediately whenever they become aware that an Ancillary Service is not available in any way. All Ancillary Service Providers shall check, monitor and/or test their system and related equipment routinely to assure availability of the committed Ancillary Services. These requirements apply to Ancillary Services whether the Ancillary Services are contracted or self-provided. For a duration specified by the CAISO, the CAISO may suspend the technical eligibility certificate of a Scheduling Coordinator for a resource which repeatedly fails to perform. The CAISO shall develop measures to discourage repeated non-performance on the part of both bidders and self-providers. Further, all of these requirements apply to each MSG Configuration.

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8.9.2 Compliance Testing for Regulation

The CAISO may test the capability of any resource providing Regulation by using the CAISO EMS to move that resource's output over the full range of its Regulation capacity within a ten (10) minute period.

For a Multi-Stage Generating Resource the full range of Regulation capacity is evaluated at the applicable MSG Configuration.

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8.10.2 Spinning Reserve

The CAISO shall test the Spinning Reserve capability of a resource by issuing unannounced Dispatch Instructions requiring the resource to ramp up to its ten (10) minute capability. The CAISO shall measure the response of the resource to determine compliance with requirements. Such tests may not necessarily occur on the hour. The Scheduling Coordinator for the resource shall be paid pursuant to Section 11.5.6. For a Multi-Stage Generating Resource the range of Spinning capacity evaluated is the range for the applicable MSG Configuration.

8.10.3 Non-Spinning Reserve

The CAISO may test the Non-Spinning Reserve capability of a resource by issuing unannounced Dispatch Instructions requiring the resource to ramp to its certified capacity within ten (10) minutes. The CAISO shall measure the response of the resource or Load to determine compliance with requirements. The Scheduling Coordinator for the resource shall be paid pursuant to Section 11.5.6. For a Multi-Stage Generating Resource the range of Non-Spinning capacity evaluated is the range at the applicable MSG Configuration.

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8.10.8.2 Rescission of Payments for Unavailable Ancillary Service Capacity

If the CAISO determines that a Scheduling Coordinator has supplied Uninstructed Imbalance Energy to the CAISO during a Settlement Interval from the capacity of a resource that is obligated to supply Spinning Reserve or Non-Spinning Reserve to the CAISO, payments to the Scheduling Coordinator for the Ancillary Service capacity used to supply Uninstructed Imbalance Energy shall be eliminated to the extent of the deficiency, in accordance with the provisions of Section 11.10.9.2. For Multi-Stage Generating Resources that have supplied Uninstructed Imbalance Energy from capacity obligated to supply Spinning or Non-Spinning Reserves, the CAISO shall calculate the capacity for which payments

will be rescinded at the Generating Unit level, as applicable, and will use the MSG Configuration-specific Maximum Operating Limit.

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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 a UIE quantity for each Settlement Interval. UIE 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 UIE for such entities is settled similarly to how UIE for non-MSS entities is settled as provided in this Section 11.5.2. The CAISO shall account for UIE 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 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 UIE 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 UIE quantity and its Real-Time Settlement Interval MSS Price.

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11.8.2.1.5 IFM Energy Bid Cost

For any Settlement Interval, the IFM Energy Bid Cost for Bid Cost Recovery Eligible Resources, except Participating Loads, shall be the integral of the relevant Energy Bid used in the IFM, if any, from the higher of the registered Bid Cost Recovery Eligible Resource's Minimum Load and the Day-Ahead Total Self-Schedule up to the relevant MWh scheduled in the Day-Ahead Schedule, divided by the number of Settlement Intervals in a Trading Hour. The IFM Energy Bid Cost calculations are subject to the

application of the Day-Ahead Metered Energy Adjustment Factor, and the Persistent Deviation Metric pursuant to the rules specified in Section 11.8.2.5 and Section 11.17.2.3, respectively. In addition, if the CAISO commits a Bid Cost Recovery Eligible Resource in the Day-Ahead and receives a Day-Ahead Schedule and subsequently the CAISO de-commits the resource in the Real-Time Market, the IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. If the CAISO commits a Multi-Stage Generating Resource in the Day-Ahead Market and the resource receives a Day-Ahead Schedule and subsequently the CAISO de-commits the Multi-Stage Generating Resource to a lower MSG Configuration where its Minimum Load capacity in the Real-Time Market is lower than the CAISO IFM Commitment Period MSG Configuration's Minimum Load, the resource's IFM Energy Bid Costs are subject to the Real-Time Performance Metric for each case specified in Section 11.8.4.4. The CAISO will determine the IFM Energy Bid Cost for a Multi-Stage Generating Resource at the Generating Unit level.

11.8.2.1.6 IFM AS Bid Cost

For any Settlement Interval, the IFM AS Bid Cost shall be the product of the IFM AS Award from each accepted IFM AS Bid and the relevant AS Bid Price, divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine and calculate IFM AS Bid Cost for a Multi-Stage Generating Resource at the Generating Unit level. The IFM AS Bid Cost shall also include Mileage Bid Costs. For any Settlement Interval, the IFM Mileage Bid Cost shall be the product of Instructed Mileage associated with a Day Ahead Regulation capacity award, as adjusted for accuracy consistent with Section 11.10.1.7, and the relevant Mileage Bid price, divided by the number of Settlement Intervals in a Trading Hour. The CAISO will determine and calculate IFM Mileage Bid Cost for a Multi-Stage Generating Resource at the Generating Unit level.

* * * *

11.8.3 RUC Bid Cost Recovery Amount

For purposes of determining the RUC Unrecovered Bid Cost Uplift Payments as determined in Section 11.8.5 and for the purposes of allocating Net RUC Bid Cost Uplift as described in Section 11.8.6.5, the CAISO shall calculate the RUC Bid Cost Shortfall or the RUC Bid Cost Surplus as the algebraic difference

between the RUC Bid Cost and the RUC Market Revenues for each Bid Cost Recovery Eligible Resource for each Settlement Interval. The RUC Bid Costs shall be calculated pursuant to Section 11.8.3.1 and the RUC Market Revenues shall be calculated pursuant to Section 11.8.3.2. The CAISO will include Bid Cost Recovery costs related to Short Start Units committed in Real-Time because of awarded RUC Capacity in RTM Compensation Costs.

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11.8.3.1.1 RUC Start-Up Cost

The RUC Start-Up Cost for any Settlement Interval in a RUC Commitment Period shall consist of Start-Up Cost of the Bid Cost Recovery Eligible Resource submitted to the CAISO for the applicable RUC Commitment Period divided by the number of Settlement Intervals in the applicable RUC Commitment Period. For each Settlement Interval, only the RUC Start-Up Cost in a CAISO RUC Commitment Period is eligible for Bid Cost Recovery. The CAISO will determine the RUC Start-Up Cost for a Multi-Stage Generating Resource based on the MSG Configuration committed by the CAISO in RUC.

The following rules shall be applied in sequence and shall qualify the RUC Start-Up Cost in a RUC Commitment Period:

- (a) The RUC Start-Up Cost for a RUC Commitment Period is zero if there is an IFM Commitment Period within that RUC Commitment Period.
- (b) The RUC Start-Up Cost for a RUC Commitment Period is zero if the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an RMR Contract prior to the Day-Ahead Market or is flagged as an RMR Dispatch in the Day-Ahead Schedule anywhere within that RUC Commitment Period.
- (c) The RUC Start-Up Cost for a RUC Commitment Period is zero if there is no RUC Start-Up at the start of that RUC Commitment Period because the RUC Commitment Period is the continuation of an IFM, RUC, or RTM Commitment Period from the previous Trading Day.
- (d) The RUC Start-Up Cost for a RUC Commitment Period is zero if the Start-Up is delayed beyond the RUC Commitment Period in question or cancelled by the

Real-Time Market prior to the Bid Cost Recovery Eligible Resource starting its start-up process.

- (e) If a RUC Start-Up is terminated in the Real-Time within the applicable RUC Commitment Period through an Exceptional Dispatch Shut-Down Instruction issued while the Bid Cost Recovery Eligible Resource is starting up the, RUC Start-Up Cost is prorated by the ratio of the Start-Up Time before termination over the RUC Start-Up Time.
- (f) The RUC Start-Up Cost for a RUC Commitment Period is qualified if an actual Start-Up occurs within that RUC Commitment Period. An actual Start-Up is detected between two consecutive Settlement Intervals when the relevant metered Energy in the applicable Settlement Intervals increases from below the Minimum Load Energy and reaches or exceeds the relevant Minimum Load Energy. The Minimum Load Energy is the product of the relevant Minimum Load and the duration of the Settlement Interval. The CAISO will determine the Minimum Load Energy for Multi-Stage Generating Resources based on the CAISO-committed MSG Configuration.
- (g) The RUC Start-Up Cost shall be qualified if an actual Start-Up occurs. An actual Start-Up is detected when the relevant metered Energy in the applicable Settlement Intervals 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 Intervals that fall within the CAISO RUC Commitment Period.

11.8.3.1.2 RUC Minimum Load Cost

The Minimum Load Cost for the applicable Settlement Interval shall be the Minimum Load Cost of the Bid Cost Recovery Eligible Resource divided by the number of Settlement Intervals in a Trading Hour. For each Settlement Interval, only the RUC Minimum Load Cost in a CAISO RUC Commitment Period is eligible for Bid Cost Recovery. The RUC Minimum Load Cost for any Settlement Interval is zero if: (1) the Bid Cost Recovery Eligible Resource is manually pre-dispatched under an RMR Contract or the resource

is flagged as an RMR Dispatch in the Day-Ahead Schedule in that Settlement Interval; (2) the Bid Cost Recovery Eligible Resource is not committed or Dispatched in the Real-time Market in the applicable Settlement Interval; or (3) the applicable Settlement Interval is included in an IFM Commitment Period. For the purposes of determining RUC Minimum Load Cost for a Bid Cost Recovery Eligible Resource recovery of the RUC Minimum Load Costs is subject to 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. The RUC Minimum Load Cost calculation will be subject to the Shut-Down State Variable and disqualified as specified in Section 11.17.2.

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11.8.3.1.4.1 RUC Transition Costs Applicability

Within any eligible RUC CAISO Commitment Period determined pursuant to the rules specified in Section 11.8.1.3, the CAISO shall apply the RUC Transition Costs for the Settlement Intervals in which the Multi-Stage Generating Resource is actually transitioning from the “from” MSG Configuration and reaches the Minimum Load of the “to” MSG Configuration to which the Multi-Stage Generating Resource is transitioning, subject to the Tolerance Band.

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11.8.3.3.2 MSS Elected Net Settlement

For an MSS Operator that has elected net Settlement, regardless of other MSS optional elections (Load following or RUC opt-in or out), the RUC Bid Costs and RUC Market Revenue are combined with RTM Bid Cost and RTM Market Revenue on an MSS level, consistent with the Energy Settlement as calculated according to Section 11.8.4.3.2.

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11.8.5 Unrecovered Bid Cost Uplift Payment

Bid Cost Recovery Eligible Resources will receive an Unrecovered Bid Cost Uplift Payment as described in this Section below. For Multi-Stage Generating Resources, Unrecovered Bid Cost Uplift Payments will

be calculated and made at the Generating Unit level and not the MSG Configuration level. MSS Bid Cost Recovery Eligible Resources by MSS Operators that have elected net settlement will receive Unrecovered Bid Cost Uplift Payment for MSS Bid Cost Recovery Eligible Resources at the MSS level and not by individual resource. MSS Bid Cost Recovery Eligible Resources by MSS Operators that have elected gross settlement will receive Unrecovered Bid Cost Uplift Payments at the MSS Bid Cost Recovery Eligible Resource level like all other resources.

11.8.5.1 IFM Unrecovered Bid Cost Uplift Payment

Scheduling Coordinators shall receive an IFM Unrecovered Bid Cost Uplift Payment for a Bid Cost Recovery Eligible Resource, if the net of all IFM Bid Cost Shortfalls and IFM Bid Cost Surpluses calculated pursuant to Section 11.8.2 over a Trading Day is positive.

11.8.5.2 RUC and RTM Unrecovered Bid Cost Uplift Payment

Scheduling Coordinators shall receive RUC and RTM Unrecovered Bid Cost Uplift Payments for a Bid Cost Recovery Eligible Resource, if the net of all RUC Bid Cost Shortfalls and RUC Bid Cost Surpluses calculated pursuant to Section 11.8.3, and the RTM Bid Cost Shortfalls and RTM Bid Cost Surpluses calculated pursuant to Section 11.8.4, for that Bid Cost Recovery Eligible Resource over a Trading Day is positive. For Metered Subsystems that have elected net settlement, the Unrecovered Bid Cost Uplift Payment will be the sum, if positive, of the RUC, and RTM Bid Cost Shortfall or RUC, and RTM Bid Cost Surplus for each Trading Hour over the Trading Day for all Bid Cost Recovery Eligible Resources in the MSS.

* * * *

30.5.1 General Bidding Rules

- (a) All Energy and Ancillary Services Bids of each Scheduling Coordinator submitted to the DAM for the following Trading Day shall be submitted at or prior to 10:00 a.m. on the day preceding the Trading Day, but no sooner than seven (7) days prior to the Trading Day. All Energy and Ancillary Services Bids of each Scheduling Coordinator submitted to the RTM for the following Trading Day shall

be submitted starting from the time of publication, at 1:00 p.m. on the day preceding the Trading Day, of DAM results for the Trading Day, and ending seventy-five (75) minutes prior to each applicable Trading Hour in the RTM. Scheduling Coordinators may submit only one set of Bids to the RTM for a given Trading Hour, which the CAISO uses for all Real-Time Market processes. The CAISO will not accept any Energy or Ancillary Services Bids for the following Trading Day between 10:00 a.m. on the day preceding the Trading Day and the publication, at 1:00 p.m. on the day preceding the Trading Day, of DAM results for the Trading Day;

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- (k) For any given Trading Hour, a Scheduling Coordinator may submit Self-Schedules and/or Submissions to Self-Provide Ancillary Services in only one MSG Configuration for each Generating Unit.

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34.7 General Dispatch Principles

The CAISO shall conduct all Dispatch activities consistent with the following principles:

- (1) The CAISO shall issue AGC instructions electronically as often as every four (4) seconds from its Energy Management System (EMS) to resources providing Regulation and on Automatic Generation Control to meet NERC and WECC performance requirements;

* * * *

- (7) Through Start-Up Instructions the CAISO may instruct resources to start up or shut down, or may reduce Load for Participating Loads, Reliability Demand Response Resources, and Proxy Demand Resources, over the forward-looking time period for the RTM based on submitted Bids, Start-Up Costs and Minimum Load Costs, Pumping Costs and Pump Shut-Down Costs, as appropriate for the resource, or for Multi-Stage Generating Resource as appropriate for the

applicable MSG Configuration, consistent with operating characteristics of the resources that the SCED is able to enforce. In making Start-Up or Shut-Down decisions in the RTM, the CAISO may factor in limitations on number of run hours or Start-Ups of a resource to avoid exhausting its maximum number of run hours or Start-Ups during periods other than peak loading conditions;

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- (12) The CAISO may issue Transition Instructions to instruct resources to transition from one MSG Configuration to another over the forward-looking time period for the RTM based on submitted Bids, Transition Costs and Minimum Load Costs, as appropriate for the MSG Configurations involved in the MSG Transition, consistent with Transition Matrix and operating characteristics of these MSG Configurations. The RTM optimization will factor in limitations on Minimum Run Time and Minimum Down Time defined for each MSG configuration and Minimum Run Time and Minimum Down Time at the Generating Unit.

* * * *

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
 - (iii) replacement of an Ancillary Service;
- (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; or
- (h) Dispatch of Reliability Demand Response Resources pursuant to Section 34.18.

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34.11.1 System Reliability Exceptional Dispatches

The CAISO may issue a manual Exceptional Dispatch for Generating Units, System Units, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources, Dynamic System Resources, and Condition 2 RMR Units pursuant to Section 41.9, in addition to or instead of resources with a Day-Ahead Schedule dispatched by RTM optimization software during a System Emergency, or to prevent an imminent System Emergency or a situation that threatens System Reliability and cannot be addressed by the RTM optimization and system modeling. To the extent possible, the CAISO shall utilize available and effective Bids from resources before dispatching resources without Bids. To deal with any threats to System Reliability, the CAISO may also issue a manual Exceptional Dispatch in the Real-Time for Non-Dynamic System Resources that have not been or would not be selected by the RTM for Dispatch, but for which the relevant Scheduling Coordinator has received a HASP Block Intertie Schedule.

* * * *

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 34.9.3.

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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 Operation 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 submitted 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 applicable 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 34.18.3.
- (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 11.4.

- (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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34.20.2.2 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.

34.30.2.3 Eligibility to Set the Real-Time LMP

All Generating Units, Participating Loads, Proxy Demand Resources, Reliability Demand Response Resources (other than those Reliability Demand Response Resources addressed below in this Section 34.19.2.3), Dynamic System Resources, System Units, or COGs subject to the provisions in Section 27.7, with Bids, including Generated Bids, that are unconstrained due to Ramp Rates or other temporal constraints are eligible to set the LMP, provided that (a) a Generating Unit or a Dynamic Resource-Specific System Resource is Dispatched between its Minimum Operating Limit and the highest MW value in its Economic Bid or Generated Bid, or (b) a Participating Load, a Proxy Demand Resource, a Reliability Demand Response Resource, a Dynamic System Resource that is not a Resource-Specific System Resource, or a System Unit is Dispatched between zero (0) MW and the highest MW value within its submitted Economic Bid range or Generated Bid. A Reliability Demand Response Resource that is dispatched in Real-Time by an entity other than the CAISO in order to 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 to perform a test, will not be eligible to set the LMP. If a

resource is Dispatched below its Minimum Operating Limit or above the highest MW value in its Economic Bid range or Generated Bid, or the CAISO enforces a resource-specific constraint on the resource due to an RMR or Exceptional Dispatch, the resource will not be eligible to set the LMP. Resources identified as MSS Load following resources are not eligible to set the LMP. A resource constrained at an upper or lower operating limit or dispatched for a quantity of Energy such that its full Ramping capability is constraining the ability of the resource to be dispatched for additional Energy in target interval, cannot be marginal (i.e., it is constrained by the Ramping capability) and thus is not eligible to set the Dispatch Interval LMP. Non-Dynamic System Resources are not eligible to set the Dispatch Interval LMP. Dynamic System Resources are eligible to set the Dispatch Interval LMP. A Constrained Output Generator that has the ability to be committed or shut off within applicable time periods that comprise the RTM will be eligible to set the Dispatch Interval LMP if any portion of its Energy is necessary to serve Demand. Dispatches of Regulation resources by EMS in response to AGC will not set the RTM LMP. Dispatches of Regulation resources to a Dispatch Operating Point by RTM SCED will be eligible to set the RTM LMP.

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40.4.6.3.1.1 Developing the Assessment Model

To develop the base case model for the DG Deliverability Assessment, the CAISO will include:

- (i) The most recent GIP or GIDAP Queue Cluster Phase II Interconnection Study deliverability power flow base case, which includes Distributed Generation Facilities of interconnection customers with active interconnection requests who have requested Full Capacity or Partial Capacity Deliverability Status;
- (ii) Those Generating Facilities that have obtained Deliverability using the annual full capacity deliverability option under either Section 8.2 of the GIP, Section 9.2 of the GIDAP, or equivalent process(es) under the applicable Utility Distribution Company tariffs;
- (iii) Transmission additions and upgrades approved in the final comprehensive Transmission Plan for the most recent Transmission Planning Process cycle;

- (iv) Any Generating Facilities in the most recent GIDAP Phase I Interconnection Study that have been determined to be deliverable in accordance with their requested Deliverability Status (including Distributed Generation Facilities of interconnection customers with active interconnection requests who have requested Full Capacity or Partial Capacity Deliverability Status) and were not assigned any Delivery Network Upgrade costs in the Phase I Interconnection Study;
- (v) Delivery Network Upgrades that have received governmental approvals or for which Construction Activities have commenced;
- (vi) The MW amounts of resources interconnected to the Distribution System below specific Nodes of the CAISO Controlled Grid contained in the most recent Transmission Planning Process base portfolio, except that the CAISO will remove each Node (by using a zero MW value) located within electrical areas for which the most recently completed GIP or GIDAP Phase I or Phase II Interconnection Study has identified a need for a Delivery Network Upgrade or for which the most recent Phase II Interconnection Study identified and then removed a Delivery Network Upgrade to support Deliverability for MW amounts in the Interconnection queue;
- (vii) Actual distributed generation development based on the MW amount of distributed generation in applicable Utility Distribution Company and Metered Subsystem interconnection queues including non-net-energy-metering resources requesting interconnection through state-jurisdictional interconnection processes;
- (viii) Any additional information provided by each Utility Distribution Company and Metered Subsystem regarding anticipated distributed generation development on its Distribution System; and
- (ix) Other information that the CAISO, in its reasonable discretion, determines is necessary.

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40.4.6.3.2.2.1 Eligibility to Obtain Deliverability Status Assignment from IOU Participating Transmission Owners

Distributed Generation Facilities interconnected, or seeking interconnection, to the Distribution System of an IOU Participating Transmission Owner may apply to the applicable IOU Participating Transmission Owner to be eligible to receive a Deliverability Status assignment in the current DG Deliverability Assessment cycle as follows:

- (i) Distributed Generation Facilities that are already in Commercial Operation and interconnected to the Distribution System of an IOU Participating Transmission Owner that do not have Deliverability Status may submit an application to be eligible for Full or Partial Capacity Deliverability Status, and those that have Partial Capacity Deliverability Status may apply to be eligible for a higher level of Partial Capacity Deliverability Status or Full Capacity Deliverability Status.
- (ii) Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have not requested Deliverability Status in the underlying interconnection process but have received their Phase I interconnection study results or the equivalent thereof may submit an application to be eligible to receive Partial Capacity Deliverability Status or Full Capacity Deliverability Status.
- (iii) Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have not received their Phase I interconnection study results or the equivalent thereof, irrespective of whether they requested Deliverability Status in their interconnection request, may submit an application to be eligible to receive Partial Capacity Deliverability Status or Full Capacity Deliverability Status.

Distributed Generation Facilities with an active interconnection request in the interconnection queue of an IOU Participating Transmission Owner that have requested Deliverability Status in the underlying interconnection process and have already received Phase I interconnection study results or the

equivalent thereof are not eligible to be assigned Deliverability Status pursuant to Section 40.4.6.3 because their Deliverability Status is protected in accordance with the provisions of Section 40.4.6.3.1 and will be assigned through the applicable IOU Participating Transmission Owner's interconnection process.

Applications from Distributed Generation Facilities in the eligible categories specified above must be submitted by the deadline specified in the schedule for the current DG Deliverability Assessment cycle in order for the Distributed Generation Facility to be treated as eligible to receive a Deliverability Status assignment in the current cycle. Distributed Generation Facilities that fail to apply in a timely manner will be assumed not to be seeking Deliverability Status in the current cycle. The CAISO will issue a Market Notice announcing the deadline for submitting applications. The deadline will be no earlier than thirty (30) days after the CAISO publishes the results of the DG Deliverability Assessment. The form of the application shall be specified in a Business Practice Manual. The application shall be submitted to the applicable Participating Transmission Owner, which shall provide a copy of the application to the CAISO within five (5) Business Days after the application was submitted.

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43.2.2.1 LSE Opportunity to Resolve Collective Deficiency in Local Capacity Area Resources

Where the CAISO determines that a need for CPM Capacity exists under Section 43.2.2, but prior to any designation of CPM Capacity, the CAISO shall issue a Market Notice identifying the deficient Local Capacity Area and the quantity of capacity that would permit the deficient Local Capacity Area to comply with the Local Capacity Technical Study criteria provided in Section 40.3.1.1 and, where only specific resources are effective to resolve the Reliability Criteria deficiency, the CAISO shall provide the identity of such resources. Any Scheduling Coordinator may submit a revised annual Resource Adequacy Plan within thirty (30) days of the date of the Market Notice demonstrating procurement of additional Local Capacity Area Resources consistent with the Market Notice issued under this Section.

Any Scheduling Coordinator that provides such additional Local Capacity Area Resources consistent with the Market Notice under this Section shall have its share of any CPM procurement costs under Section

43.8.3 reduced on a proportionate basis. If the full quantity of capacity is not reported to the CAISO under revised annual Resource Adequacy Plans in accordance with this Section, the CAISO may designate CPM Capacity sufficient to alleviate the deficiency.

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43.8.1 LSE Shortage Of Local Capacity Area Resources In Annual Plan

If the CAISO makes CPM designations under Section 43.2.1.1 to address a shortage resulting from the failure of a Scheduling Coordinator for an LSE to identify sufficient Local Capacity Area Resources to meet its applicable Local Capacity Area capacity requirements in its annual Resource Adequacy Plan, then the CAISO shall allocate the total costs of the CPM Capacity Payments for such CPM designations (for the full term of those CPM designations) pro rata to each Scheduling Coordinator for an LSE based on the ratio of its Local Capacity Area Resource Deficiency to the sum of the deficiency of Local Capacity Area Resources in the deficient Local Capacity Area(s) within a TAC Area. The Local Capacity Area Resource Deficiency under this Section shall be computed on a monthly basis and the CPM Capacity Payments allocated based on deficiencies during the month(s) covered by the CPM designation(s).

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Appendix A

Master Definition Supplement

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- Expected Energy

The total Energy that is expected to be generated or consumed by a resource, based on the Dispatch of that resource, as calculated by the Real-Time Market (RTM), and as finally modified by any applicable Dispatch Operating Point corrections. Expected Energy includes the Energy scheduled in the IFM, and it is calculated for the applicable Trading Day. Expected Energy is calculated for Generating Units, System Resources, Resource-Specific System Resources, Participating Loads, Reliability Demand Response Resources, and Proxy Demand Resources. The calculation is based on the Day-Ahead Schedule and the Dispatch Operating Point trajectory for the three-hour period around the target Trading Hour (including the previous and following hours), the applicable FMM or RTD LMP for each Dispatch Interval

of the target Trading Hour, and any Exceptional Dispatch Instructions. Energy from Non-Dynamic System Resources is converted into FMM Schedules. Expected Energy is used as the basis for Settlements.