

November 12, 2013

**COMMENTS ON BEHALF OF THE CITIES OF ANAHEIM, AZUSA, BANNING, COLTON,
PASADENA, AND RIVERSIDE, CALIFORNIA ON THE REVISED DRAFT TARIFF
LANGUAGE FOR FERC ORDER NO. 764 AMENDMENTS**

In response to the ISO's request, the Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside, California (collectively, the "Six Cities") submit the following comments on the ISO's revised draft tariff language for the FERC Order No. 764 amendments, posted on October 30, 2013:

Section 11.31 c

In the next to last line of this sub-section, there is a non-specific reference to "the threshold." For clarity, please consider a specific cross-reference to the thresholds described in Sections 11.31.1 and 11.31.2.

Definition of
Expected Energy

The next to last sentence of the definition as drafted does not make sense. Should the word "Schedules" remain in the text?

Definition of
FMM AS Award

As drafted, this definition suggests that the only AS awards made in the FMM are for imports. Is this correct?

In addition, typographical errors are identified on the attached marked-up pages

Submitted by,

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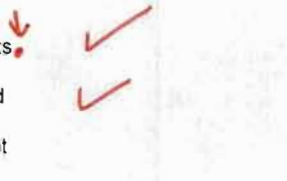
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Colton, Pasadena, and Riverside, California

Energy; and (5) FMM Pumping Energy. Payments and charges for FMM IIE attributable to each resource in each Settlement Interval shall be settled by debiting or crediting, as appropriate, the specific Scheduling Coordinator's FMM IIE Settlement Amount. The FMM IIE Settlement Amounts for FMM Optimal Energy, FMM Minimum Load Energy, FMM Derate Energy, and FMM Pumping Energy, ~~and~~ shall be calculated as the product of the sum of all of these types of Energy and the FMM LMP. For MSS Operators that have elected net Settlement, the FMM IIE Settlement Amounts for Energy dispatched through the FMM, FMM Minimum Load Energy from System Units dispatched ~~in~~ ^{the} FMM, FMM Derate Energy, ^{and} FMM Pumping Energy shall be calculated as the product of the sum of all of these types of Energy and the FMM MSS Price. For MSS Operators that have elected gross Settlement, regardless of whether that entity has elected to follow its Load or to participate in RUC, the FMM IIE for such entities is settled similarly to non-MSS entities as provided in this Section 11.5.1. The remaining FMM IIE Settlement Amounts for Exceptional Dispatches are settled pursuant to Section 11.5.6.



11.5.1.2 RTD Instructed Imbalance Energy Settlements

For each Settlement Interval, RTD IIE consists of the following types of Energy: (1) RTD Optimal Energy; (2) ~~HASP-Scheduled Energy~~; (3) Residual Imbalance Energy; (34) ~~RTDReal-Time~~ Minimum Load Energy; (45) RTD Exceptional Dispatch Energy; (56) Regulation Energy; (67) Standard Ramping Energy; (78) Ramping Energy Deviation; (89) ~~RTD~~ Derate Energy; (940) ~~Real-Time-Self-Scheduled Energy~~; (1014) MSS Load Following Energy; (11+2) ~~RTD Real-Time~~ Pumping Energy; and (123) Operational Adjustments ~~for the Day-Ahead and Real-Time Payments~~. ~~Charges~~ for RTD IIE attributable to each resource in each Settlement Interval shall be settled by debiting or crediting, as appropriate, the specific Scheduling Coordinator's RTD IIE Settlement Amount. The RTD IIE Settlement Amounts for the Standard Ramping Energy shall be zero. The RTD IIE Settlement Amounts for RTD Optimal Energy, ~~RTDReal-Time~~ Minimum Load Energy, Regulation Energy, Ramping Energy Deviation, ~~RTD~~ Derate Energy, ~~and~~ ~~RTDReal-Time~~ Pumping Energy, ~~and Real-Time-Self-Scheduled Energy~~, shall be calculated as the product of the sum of all of these types of Energy and the Resource-Specific Settlement Interval RTD LMP. For MSS Operators that have elected net Settlement, the RTD IIE Settlement Amounts for Energy



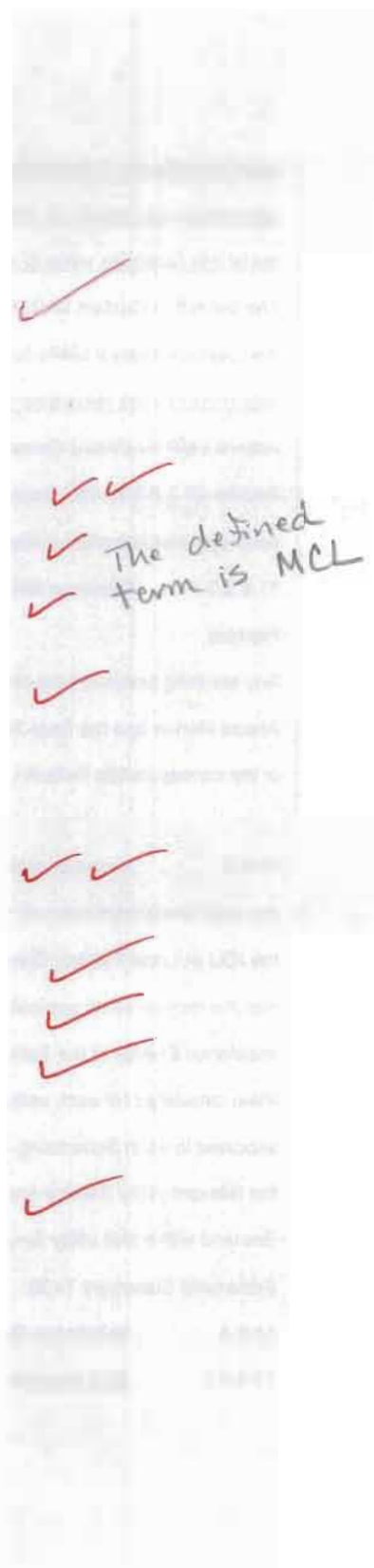
between the Day-Ahead Scheduled CAISO Demand and Metered Demand (MWh) will be settled at the Default Hourly Real-Time LAP Price or the Custom LAP Hourly Real-Time Price as appropriate.

For each Default LAP, the ^{CA}ISO will calculate the applicable Default Hourly Real-Time LAP Price as the weighted average LMP of the four Default LAP FMM LMPs and the twelve (12) five-minute Default LAP RTD LMPs. The weighted average LMP for each Default LAP will be calculated as the summation of the weighted average SMEC, the weighted average MCC, and the weighted average ^SMCC for that Default LAP. The weighted average SMEC, MCC, and ^SMCC for each hour will be calculated based upon the four applicable Default LAP FMM SMECs, MCCs, and ^SMCCs, respectively, and the twelve (12) applicable Default LAP RTD SMECs, MCCs, and ^SMCCs, respectively.

For each Custom LAP, the ^{CA}ISO will calculate the applicable Custom Hourly Real-Time LAP Price as the weighted average LMP of the four Custom LAP FMM LMPs and the twelve (12) five-minute Custom LAP RTD LMPs. The weighted average LMP for each Custom LAP will be calculated as the summation of the weighted average SMEC, the weighted average MCC, and the weighted average ^SMCC for that Custom LAP. The weighted average SMEC, MCC, and ^SMCC for each hour will be calculated based upon the four applicable Custom LAP FMM SMECs, MCCs, and ^SMCCs, respectively, and the twelve (12) applicable Custom LAP RTD SMECs, MCCs, and ^SMCCs, respectively.

In calculating the weighted average SMEC, MCC, and ^SMCC for each hour for either the Default LAPs or Custom LAPs, the CAISO shall weight according to the difference between DAM LAP schedules and the FMM Forecast multiplied by the relevant FMM LAP price plus the difference between ^{the} FMM Forecast and RTD Forecast multiplied by the relevant RTD LAP Price divided by the sum of the difference between DAM LAP schedules and the FMM Forecast plus the difference between FMM Forecast and RTD Forecast.

Furthermore, the Default or Custom Hourly Real-Time LAP Price ~~Hourly Real-Time LAP Price~~ will be bounded by the maximum positive LMP and the lowest negative LMP for the applicable Trading Hour from those relevant intervals. If the calculated price exceeds ~~upper~~ exceeds the



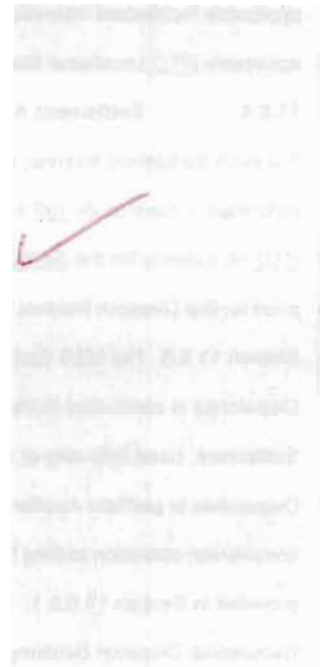
applies Mitigation Measures to Exceptional Dispatch of resources pursuant to Section 39.10 shall be calculated as set forth in Section 11.5.6.7.

11.5.6.1 Settlement for FMM or RTD IIE from Exceptional Dispatches used for System Emergency Conditions, for a Market Interruption, to Mitigate Overgeneration Conditions or to Prevent or Relieve Imminent System Emergencies

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

The Exceptional Dispatch Settlement price for decremental IIE that is delivered as a result of an Exceptional Dispatch Instruction for a Market Interruption, or to prevent or relieve a System Emergency is the minimum of (a) ^{the} FMM or RTD ~~the Resource-Specific Settlement Interval LMP~~, (b) the Energy Bid price subject to Section 39.6.1.4, (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price, or (d) the negotiated price as applicable to System Resources. All Energy costs for decremental IIE associated with this type of Exceptional Dispatch are included in the total IIE Settlement Amount described in Section 11.5.1.1.

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



Settlement Amount described in Section 11.5.1.1; and (2) the decremental Energy Bid costs in excess of the applicable LMP at the relevant Location are settled per Section 11.5.6.2.3.

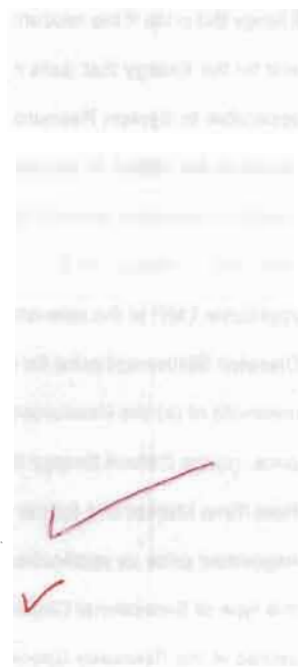
11.5.6.2.2 [NOT USED]

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

The Excess Cost Payment for Exceptional Dispatches used for transmission-related modeling limitations as described in Section 34.9.3 is calculated for each resource for each Settlement Interval as the cost difference between the Settlement amount calculated pursuant to Section 11.5.6.2.1 or 11.5.6.2.2 for the applicable delivered Exceptional Dispatch quantity at the Resource-Specific Settlement Interval FMM or RTD LMP and one of the following three costs: (1) the resource's Energy Bid Cost, 2) the Default Energy Bid cost, or 3) the Energy cost at the negotiated price, as applicable for System Resources, for the relevant Exceptional Dispatch.

11.5.6.2.4 Exceptional Dispatches for Non-Transmission-Related Modeling Limitations

The Exceptional Dispatch Settlement price for incremental IIE that is consumed or delivered as a result of an Exceptional Dispatch to mitigate or resolve Congestion that is not a result of a transmission-related modeling limitation in the FNM as described in Section 34.910.3 is the maximum of the (a) ~~Resource-Specific Settlement Interval~~ FMM or RTD LMP, (b) Energy Bid price, (c) the Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price, or (d) the negotiated price as applicable to System Resources. All costs for incremental Energy for this type of Exceptional Dispatch will be included in the total IIE Settlement Amount described in Section 11.5.1.1. The Exceptional Dispatch Settlement price for decremental IIE for this type of Exceptional Dispatch is the minimum of the (a) ~~Resource-Specific Settlement Interval~~ FMM or RTD LMP, (b) Energy Bid Price, (c) ~~or the~~ Default Energy Bid price if the resource has been mitigated through the MPM in the Real-Time Market and for the Energy that does not have an Energy Bid price, or (d) ~~the~~ negotiated price as applicable to System Resources. All costs for



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

11.5.7 Congestion Credit And Marginal Cost Of Losses Credit

11.5.7.1 ~~HASP and~~ RTM Congestion Credit for ETCs and TORs

The CAISO shall not apply charges or payments to Scheduling Coordinators related to the MCC associated with all Points of Receipt and Points of Delivery pairs associated with valid and balanced ETC Self-Schedules or TOR Self-Schedules after the Day-Ahead market. The balanced portion for each ETC or TOR contract for each Settlement Interval will be based on the difference between: (1) the minimum of (a) the total CAISO Demand, (b) the total ETC or TOR Supply Self-Schedule submitted in the HASPRTM, including up to T-20 minutes schedule changes if permitted by the Existing Contract, or (c) the Existing Contract maximum capacity as specified in the TRTC Instructions and subject to prevailing transmission constraints for the relevant interval; and (2) the valid and balanced portion of the Day-Ahead Schedule. In determining the balanced portions, the ISO will evaluate the amounts based on the following variables: a) For all exports and imports, the CAISO shall use the schedule quantity specified in the Interchange schedule for as-checked-out between CAISO and other balancing authority areas; b) for all CAISO Demand excluding exports, the CAISO shall use the metered CAISO Demand associated with the applicable ETC or TOR; and c) For all Generation Supply excluding imports, the CAISO shall use the quantity specified in the Dispatch Instructions. For each Scheduling Coordinator, the CAISO shall determine for each Settlement Interval the applicable ~~HASP and~~ RTM Congestion Credit for Imbalance Energy, which can be positive or negative, as the sum of the product of the relevant MWh quantity and the weighted average MCC at each Point of Receipt and Point of Delivery associated with the valid and balanced portions of that Scheduling Coordinator's ETC or TOR Self-Schedules. The weights in the two markets will

the CAISO shall use the MWh quantity specified in the HASP Intertie Schedule. For all Demand settled in the Real-Time Market the CAISO shall use the metered CAISO Demand associated with the applicable TOR. For all Supply settled in the Real-Time Market the CAISO shall use the quantity specified in the Dispatch Instructions. For applicable losses charge specified in Ssection 17.3.3, the specific loss charge amount shall be the product of (a) the loss percentage specific to the TOR contract, (b) the weighted average SMEC price from the FMM and RTD markets with weights based on the absolute values of (1) deviation of FMM schedule or Load forecast from Day-Ahead Schedules and (2) deviation of RTD schedule or Load forecast from Day-Ahead Schedules, and (c) the balanced contract quantity mentioned in Ssection 11.5.7.1.

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

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

the seller's justification of this higher price. The CAISO will provide notice of its determination whether to pay such a higher price within thirty (30) days after receipt of the cost support information. Any dispute regarding the CAISO's determination whether to pay a higher price for emergency assistance based on cost support information shall be subject to the CAISO ADR Procedures. Payment by the CAISO for such emergency assistance will be made in accordance with the Settlement process, billing cycle, and payment timeline set forth in the CAISO Tariff. The costs for such emergency assistance, including the payment of a price based on cost support information, will be settled in two payments: (1) the costs will first be settled at the simple average of the relevant Dispatch Interval LMPs and included in the total IIE Settlement Amount as described in Section 11.5.24.1; and (2) costs in excess of the simple average of the relevant Dispatch Interval LMPs plus other applicable charges will be settled in accordance with Section 11.5.8.1.1. The allocation of the amounts settled in accordance with Section 11.5.1.1 will be settled according to Section 11.5.4.2.

11.5.9 ^{the} Settlement Of Scheduling Points in Real-Time Market

The CAISO shall settle both incremental and decremental Energy at the relevant Scheduling Points for Non-Dynamic System Resources [#] scheduled in the FMM based on the FMM LMP in accordance with Sections 11.5.9.1, 11.5.9.2 and 11.32.

11.5.9.1 Exports Settlements

For each Settlement Period that the CAISO accepts Energy transactions at Scheduling Points the Settlement for such transactions will be the CAISO FMM LMP multiplied by the MWh quantity of export scheduled in the FMM Schedule at the individual Scheduling Point, in excess of or less than the Day-Ahead Schedule, respectively. For Scheduling Coordinators whose exports scheduled at the individual Scheduling Point ^{are} is subject to an upward price correction as specified in Section 11.21, the CAISO will use the Price Correction Derived LMP to settle the MWh quantity of Energy exports scheduled in excess of the Day-Ahead Schedule at the relevant Scheduling Point.

11.5.9.2 Imports Settlements

For each Settlement Period that the CAISO accepts Energy transactions at Scheduling Points for all Non-Dynamic System Resources in ^{the} RTM, the CAISO shall pay or charge Scheduling Coordinators for each System Resource an amount equal to the FMM LMP multiplied by the MWh quantity of import scheduled at the individual Scheduling Point as specified in the FMM Schedule in excess of or less than the import at that Scheduling Point scheduled in the Day-Ahead Schedule, respectively.



11.8 Bid Cost Recovery

For purposes of determining the Unrecovered Bid Cost Uplift Payments for each Bid Cost Recovery Eligible Resource as determined in Section 11.8.5 and the allocation of Unrecovered Bid Cost Uplift Payments for each Settlement Interval, the CAISO shall sequentially calculate the Bid Costs, which can be positive (IFM, RUC or RTM Bid Cost Shortfall) or negative (IFM, RUC or RTM Bid Cost Surplus) in the IFM, RUC and the Real-Time Market, as the algebraic difference between the respective IFM, RUC or RTM Bid Cost and the IFM, RUC or RTM Market Revenues as further described below in this Section 11.8. The RTM Energy Bid Costs and RTM Market Revenues include the FMM Energy Bid Costs. In any Settlement Interval a resource is eligible for Bid Cost Recovery payments pursuant to the rules described in the subsections of Section 11.8 and Section 11.17. Bid Cost Recovery Eligible Resources for different MSS Operators are supply resources listed in the applicable MSS Agreement. All Bid Costs shall be based on Bids as mitigated pursuant to the requirements specified in Section 39.7. Virtual Awards are not eligible for Bid Cost Recovery. Virtual Awards are eligible for make-whole payments due to price corrections pursuant to Section 11.21.2. In order to be eligible for Bid Cost Recovery, Non-Dynamic Resource-Specific System Resources must provide to the CAISO SCADA data by telemetry to the CAISO's EMS in accordance with Section 4.12.3 demonstrating that they have performed in accordance with their CAISO commitments. Scheduling Coordinators for Non-Generator Resources are not eligible to recover Start-Up Costs, Minimum Load Costs, Pumping

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



11.8.4.1.4 RTM Pumping Bid Cost

For Pumped-Storage Hydro Units and Participating Load only, the RTM Pumping Bid Cost for the applicable Settlement Interval shall be the Pumping Cost submitted to the CAISO in the HASP or RTM divided by the number of Settlement Intervals in a Trading Hour. The Pumping Cost is negative since it represents the amount the entity is willing to pay to pump or serve Load. The Pumping Cost is included in RTM Bid Cost computation for a Pumped-Storage Hydro Unit and Participating Load committed by the Real-Time Market to pump or serve Load, if it actually operates in pumping mode or serves Load in that Settlement Interval. The RTM Energy Bid Cost for a Participating Load for any Settlement Interval is set to zero for any Energy consumed in excess of instructed Energy. The RTM Pumping Bid Cost for any Settlement Interval is zero if: (1) the Settlement Interval is included in a RTM Self-Commitment Period for the Bid Cost Recovery Eligible Resource; (2) the Bid Cost Recovery Eligible Resource has been manually dispatched under an RMR Contract or the resource has been flagged as an RMR Dispatch in the Day-Ahead Schedule or the Real-Time Market in that Settlement Interval; (3) the Bid Cost Recovery Eligible Resource is not actually in pumping mode in that Settlement Interval; (4) that Settlement Interval is included in an IFM or RUC Commitment Period; or (5) the

11.17.1.2.1 Rule 1

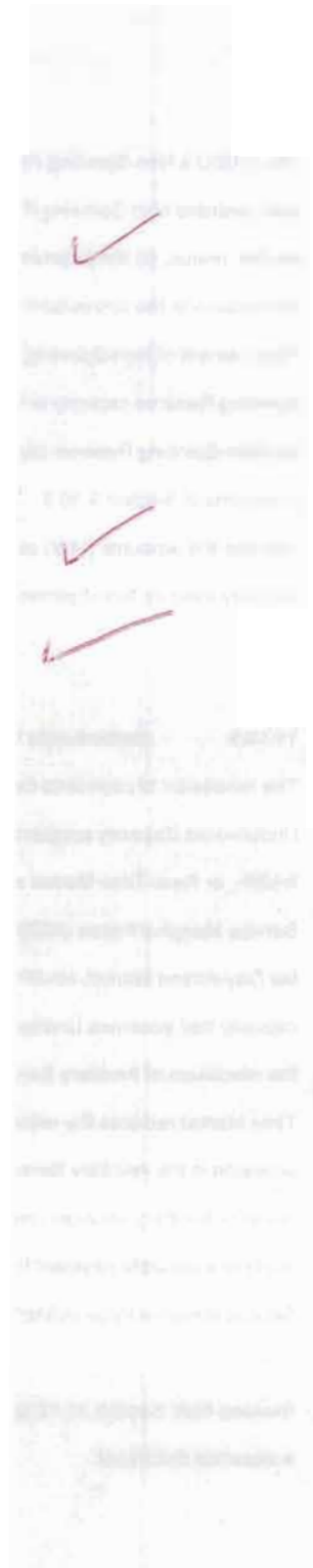
If ~~six three-(63)~~ or fewer Settlement Intervals out of the previous ~~twenty four twelve-(2412)~~ Settlement Intervals are flagged pursuant to the rules in Section 11.17.1.1, then: (a) the RTM Energy Bid Costs will be based on the applicable Energy Bid price as specified in Section 11.8.4.1.5, and (b) Residual Imbalance Energy will be settled based on the reference hour Energy Bid as specified in Section 11.5.5.

11.17.1.2.2 Rule 2

If seven ~~four-(74)~~ or more Settlement Intervals of the previous ~~twenty four twelve-(2412)~~ Settlement Intervals are flagged as exceeding the Persistent Deviation Metric Threshold, then for all the previous ~~twenty four twelve-(2412)~~ Settlement Intervals in the two-hour window: (a) the RTM Energy Bid Costs specified in Section 11.8.4.1.5 (i) for Optimal Energy above the Day-Ahead Scheduled Energy will be based on the lesser of the applicable Default Energy Bid price, the applicable Energy Bid price, as mitigated, or the applicable FMM or RTD Locational Marginal Price, and (ii) for Optimal Energy below the Day-Ahead Scheduled Energy the greater of the applicable Default Energy Bid price, the applicable Energy Bid price, as mitigated, or the applicable FMM or RTD Locational Marginal Price; and (b) Residual Imbalance Energy as specified in Section 11.5.5 (i) for Residual Imbalance Energy above the Day-Ahead Scheduled Energy will be based on the lesser of the applicable Default Energy Bid price, the relevant Energy Bid Price, as mitigated, or the applicable RTD Locational Marginal Price, and (ii) Residual Imbalance Energy below the Day-Ahead Scheduled Energy -will be based on the greater of the applicable Default Energy Bid price, the relevant Energy Bid Price, or the applicable RTD Locational Marginal Price.

11.21.1 CAISO Demand and Exports

If the CAISO corrects an LMP in the upward direction pursuant to Section 35 that impacts Demand in the Day-Ahead Market and the HASP-FMM such that either a portion of or the entire cleared CAISO Demand or export Economic Bid curve becomes uneconomic, then the CAISO



11.31 **HASP-Intertie Schedules Decline Charges**

The Decline Potential Charge – Imports shall apply to the following intertie and internal schedules:

- a. ~~a~~ Any ~~HASP Block Intertie Schedule~~ ~~HASP Intertie Schedule~~ for an Energy import when the ~~HASP Block Intertie Schedule~~ ~~HASP Intertie Schedule~~ is not delivered for any reason (with no exceptions based on the circumstances of a particular failure to deliver), to the extent the decline is made prior to the start of the applicable FMM interval. The Decline Potential Charge – Exports shall apply to any ~~HASP~~ ~~HASP Block Intertie Schedule~~ for an Energy export when the ~~HASP~~ ~~HASP Block Intertie Schedule~~ is not delivered for any reason (with no exceptions based on the circumstances of a particular failure to deliver), to the extent the decline is made prior to the start of the applicable FMM interval. The Decline Potential Charge will not apply if the decline is made after the applicable E-tag deadline, as defined in Section 30.6.2.
- b. Imports and exports accepted in an HASP Block Intertie Schedule that are incremental to Day-Ahead Schedules are subject to the Decline Potential Decline Charge to the extent the decline is made prior to the start of the applicable FMM interval. The Potential Decline Potential Charge will not apply if the decline is made after the applicable E-tag deadline, as defined in Section 30.6.2. To the extent the incremental import or export ~~is~~ schedule is curtailed through the FMM, for the 15-minute FMM interval in which the resource follows the CAISO instructions ~~will not be subject to Potential Declines Potential Charge.~~
- c. Imports from Variable Energy Resource using their own forecast are subject to the ~~Potential~~ Decline Potential Charge to the extent the resource over-forecasts over the month. For each hour, the CAISO



^{the}
compares maximum 15-minute FMM binding schedule (that is submitted
37.5 minutes prior to flow) to the maximum 15-minute advisory schedule
from the Hour-Ahead Scheduling Process to accept Self-Schedule
Intertie Blocks (based upon the hourly forecast received 75 minutes prior
to flow) and calculates the differences between the two. These hourly
differences are summed over the month. If the maximum advisory
schedule exceeds the actual financially ^{binding} ~~binding~~ schedule by the threshold
over the course of the month, the Decline Potential Charge applies.



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

11.31.1 Decline Monthly Charge – Imports

The Decline Monthly Charge – Imports shall be applied to each Scheduling Coordinator on the Settlement Statements issued for the last Trading Day of each Trading Month, and shall be the sum of the Scheduling Coordinator's Decline Potential Charges – Imports for each Settlement Period during that Trading Month multiplied by a ratio. The ratio will represent the portion of the Scheduling Coordinator's declined HASP Block Intertie Schedule [§] ~~HASP Intertie Schedules~~ for Energy imports [§] ~~or the VER Self-Schedule~~ that exceed the applicable exemption threshold during the Trading Month.



(a) The ratio will be calculated as follows:

- (i) the Scheduling Coordinator's total MWh quantity of HASP Block Intertie Schedule ~~HASP Intertie Schedules~~ for Energy imports that were not delivered during that Trading Month minus the applicable exemption threshold, divided by
 - (ii) the Scheduling Coordinator's total MWh quantity of HASP Block Intertie Schedule ~~HASP Intertie Schedules~~ for Energy imports that were not delivered during the Trading Month.
- (b) The applicable exemption threshold is the greater of the following:
- (i) the Decline Threshold Quantity – Imports/Exports; or
 - (ii) the total MWh quantity of HASP Block Intertie Schedule ~~HASP Intertie Schedules~~ for Energy imports during the Trading Month multiplied by the Scheduling Coordinator's Decline Threshold Percentage – Imports/Exports.

Notwithstanding the foregoing, the Decline Monthly Charge – Imports shall equal zero if either:

- a) The percentage of the MWh quantity of HASP Block Intertie Schedule ~~HASP Intertie Schedules~~ for Energy imports that the Scheduling Coordinator did not deliver during the Trading Month is less than the Decline Threshold Percentage – Imports/Exports; or
- b) The total MWh quantity of HASP Block Intertie Schedule ~~HASP Intertie Schedules~~ for Energy imports that the Scheduling Coordinator did not deliver in the applicable Trading Month is less than the Decline Threshold Quantity – Imports/Exports.

11.31.2 Decline Monthly Charge – Exports

The Decline Monthly Charge – Exports shall be applied to each Scheduling Coordinator on the Settlement Statements issued for the last Trading Day of each Trading Month, and shall be the sum of the Scheduling Coordinator's Decline Potential Charges – Exports for each Settlement Interval during that Trading Month multiplied by a ratio. The ratio will represent the portion of the

Scheduling Coordinator's declined HASP Block Intertie Schedule ~~HASP Intertie Schedules~~ for Energy exports that exceed the applicable exemption threshold during the Trading Month.

- (a) The ratio will be calculated as follows:
 - (i) the Scheduling Coordinator's total MWh quantity of HASP Block Intertie Schedule ~~HASP Intertie Schedules~~ for Energy exports that were not delivered during that Trading Month minus the applicable exemption threshold, divided by
 - (ii) the Scheduling Coordinator's total MWh quantity of HASP Block Intertie Schedule ~~HASP Intertie Schedules~~ for Energy exports that were not delivered during the Trading Month.
- (b) The applicable exemption threshold is the greater of the following:
 - (i) the Decline Threshold Quantity – Imports/Exports; or
 - (ii) the total MWh quantity of HASP Block Intertie Schedules ~~HASP Intertie Schedules~~ for Energy exports during the Trading Month multiplied by the Scheduling Coordinator's Decline Threshold Percentage – Imports/Exports.

Notwithstanding the foregoing, the Decline Monthly Charge – Exports shall equal zero if either:

- a) The percentage of the MWh quantity of HASP Block Intertie Schedules ~~HASP Intertie Schedules~~ for Energy exports that the Scheduling Coordinator did not deliver during the Trading Month is less than the Decline Threshold Percentage – Imports/Exports; or
- b) The total MWh quantity of HASP Block Intertie Schedules ~~HASP Intertie Schedules~~ for Energy exports that the Scheduling Coordinator did not deliver in the applicable Trading Month is less than the Decline Threshold Quantity – Imports/Exports.

notification must be consistent with the TRTC Instructions previously submitted to the CAISO by the Non-Participating TO. The CAISO will manually adjust or update the ~~HASP-FMM~~ Intertie Schedule for the Scheduling Coordinator to conform with the other Balancing Authority Area's net TOR Self-Schedule in Real-Time, and the notifying Scheduling Coordinator will be responsible for and manage any resulting Energy imbalance. These Imbalance Energy deviations will be priced and charged to the Scheduling Coordinator representing the holder of the TOR in accordance with the Real-Time LMP.

* * *

27 CAISO Markets And Processes

In the Day-Ahead and Real-Time time frames the CAISO operates a series of procedures and markets that together comprise the CAISO Markets Processes. In the Day-Ahead time frame, the CAISO conducts the Market Power Mitigation (MPM) process, the Integrated Forward Market (IFM) and the Residual Unit Commitment (RUC) process. In the Real-Time time frame, the CAISO does the following: 1) the accepts the Economic Bids and Self-Schedules used in the Real-Time -Market procedures, CAISO 2) conducts the MPM process for the RTM, 3) the Hour-Ahead Scheduling Process (HASP) accepts and awards HASP Block Intertie Schedules for Energy and Ancillary Services, 4) provides HASP Advisory Schedules for Energy and Ancillary Services for Bids that do not create a HASP Block Intertie Schedule, 5) conducts the Short-Term Unit Commitment (STUC), 6) conducts the Real-Time Unit Commitment (RTUC) Fifteen Minute Market (FMM), and 7) conducts the five-minute Real-Time Dispatch (RTD). The CAISO Markets Processes utilize transmission and Security Constrained Unit Commitment and dispatch algorithms in conjunction with a Base Market Model adjusted as described in Sections 27.5.1 and 27.5.6 to optimally commit, schedule and Dispatch resources and determine marginal prices for Energy, Ancillary Services and RUC Capacity. Congestion Revenue Rights are available and entitle holders of such instruments to a stream of hourly payments or charges associated with revenue the CAISO collects or pays from the Marginal Cost of Congestion component of hourly Day-Ahead LMPs. Through the operation of the CAISO Markets Processes the CAISO develops Day-Ahead Schedules, Day-Ahead AS Awards and RUC Schedules, ~~HASP Advisory Schedules,~~ HASP Block Intertie Schedules for Energy and AS

"conditionally modified." These Physical Trade notices are preliminary and subject to change until the final pre-market validation at the close of the relevant Inter-SC Trade Period. A Physical Trade with a "conditionally valid" or "conditionally modified" status may be rendered "conditionally invalid" due to the actions of the Scheduling Coordinators to that Physical Trade or by other trading activities that are linked to the Generating Unit identified for the relevant Physical Trade whenever the quantities specified in the relevant Inter-SC Trades cannot be supported by the underlying Bid. Scheduling Coordinators can use these status notices to make modifications to complete or correct invalid Physical Trades. The CAISO also performs cyclic pre-market validation prior to the close of the relevant Inter-SC Trade Period. Physical Trades that are individually valid are concatenated (daisy chained) with other supporting Physical Trades at the same PNode or Aggregated Pricing Node of the Generating Unit or Physical Scheduling Plant. Once that concatenation is complete, the CAISO will determine whether the concatenated Physical Trades are physically supported by either another Inter-SC Trade of Energy at that same location or the Bid submitted in the relevant CAISO Market on behalf of the resource for that Physical Trade, individually and in the aggregate. If a Physical Trade is not adequately physically supported, the quantities in the Physical Trades of that Scheduling Coordinator and its downstream trading counter-parties are reduced on a pro-rata basis until those Physical Trades are valid. In performing physical pre-market validation of Inter-SC Trades of Energy in *the*

RTMHASP, the CAISO also considers final Inter-SC Trades of Energy for the DAM in determining whether the HASP-RTM Physical Trades are physically supported individually or in the aggregate. Specifically, the CAISO determines whether the resource's submitted-Bid in HASP *the* RTM is greater than or equal to the sum of: (1) final Day-Ahead Inter-SC Trades of Energy at that location, (2) the additional Inter-SC Trades of Energy for the HASPRTM at that location and (3) the sum of all upward Day-Ahead Ancillary Services Awards at that location. If the amounts are greater than the resource's submitted Bids in HASPRTM *the*, the CAISO will adjust down on a prorated basis the HASP-RTM Physical Trades. Final Day-Ahead Physical Trades are not adjusted in the HASPRTM pre-market validation. The CAISO does not perform any Settlement



Regulation or Operating Reserve is Awarded in IFM for that Multi-Stage Generating Resource in that given Trading Hour.

- (n) If a Multi-Stage Generating Resource has received a binding RUC Start-Up Instruction as provided in Section 31, any Self-Schedule or Submission to Self-Provide Ancillary Services in the RTM must be in the same MSG Configuration committed in RUC.
- (o) If in any given Trading Hour the Multi-Stage Generating Resource is scheduled for Energy in the IFM, any Self-Schedules the Scheduling Coordinator submits for that Multi-Stage Generating Resource in the RTM must be for the same MSG Configuration for which Energy is scheduled in IFM for that Multi-Stage Generating Resource in that given Trading Hour.
- (p) For a Multi-Stage Generating Resource, the Bid(s) submitted for the resource's configuration(s) shall collectively cover the entire capacity range between the maximum bid-in Energy MW and the higher of the Self-Scheduled Energy MW and the Multi-Stage Generating Resource plant-level PMin. This rule shall apply separately to the Day-Ahead Market and the Real-Time Market.
- (q) ^A ~~Self-Schedule Hourly Block for the RTM can be submitted as an import or an export to or from the CAISO Balancing Authority Area. Self-Scheduled Hourly Blocks can be submitted for Ancillary Services imports. Such a Bid shall be for the same MWh quantity for each of the four fifteen (15)-minute intervals that make up the applicable Trading Hour.~~
- (r) ^A ~~Variable Energy Resource Self-Schedule for the RTM can be submitted from a Variable Energy Resource. Scheduling Coordinators can use either the CAISO forecast for expected Energy in the RTM or can provide its own forecast for expected Energy. The Scheduling~~

Coordinator must indicate in ^{the} Master File whether it is using its own forecast or the CAISO forecast for its resource in support of the Variable Energy Self-Schedule. Neither option requires that the Variable Energy Resource Self-Schedule include the same MWh quantity for each of the four fifteen (15)-minute intervals that make up the applicable Trading Hour. If an external resource submits a Variable Energy Resource Self-schedule and the expected Energy is not delivered in the FMM, the Variable Energy Resource will be subject to the Decline Potential Charge as described in Section 11.31. Scheduling Coordinators for Dynamically Scheduled Variable Energy Resources that provide the CAISO with a two-hour rolling forecast with five-minute granularity can submit VER Self-Schedules. In addition, the Scheduling Coordinator must complete the certification process defined in the CAISO Business Practice Manual to qualify as a VER using ^{its} own forecast.

(s) Scheduling Coordinators can submit Economic Hourly Block Bids to be considered for a financially binding Schedule in HASP that creates the same MW award for each of the four FMM intervals. Economic Hourly Block Bids can also be submitted for Ancillary Services. As specified in Section 11, a cleared Economic Hourly Block Bid is not eligible for Bid Cost Recovery.

(t) Scheduling Coordinators can submit Economic Hourly Block Bids with Intra-Hour Option. If accepted, such a Bid creates a binding Schedule in HASP that creates the same MW award for each of the four FMM intervals, except that the Schedule can be reoptimized through the FMM once during the Trading Hour. If reoptimized, the Schedule cannot be changed for economic reasons again during the Trading Hour. As specified in Section 11, a cleared Economic Hourly Block Bid with Intra-Hour Option is not eligible for Bid Cost Recovery.

(u) A Scheduling Coordinator submitting Bids to the RTM is not required to submit either a Self-Schedule Hourly Block, a Variable Energy Resource Self-Schedule, an Economic Hourly Block Bid, or an Economic Hourly Block Bid with Intra-Hour Option. A Scheduling Coordinator may choose to participate in the RTM through regular Economic Bids or Self-Schedules.



30.5.2 Supply Bids

30.5.2.1 Common Elements for Supply Bids

In addition to the resource-specific Bid requirements of this Section, all Supply Bids must contain the following components: Scheduling Coordinator ID Code; Resource Location or Resource ID, as appropriate; MSG Configuration ID, as applicable; PNode or Aggregated Pricing Node as applicable; Energy Bid Curve; Self-Schedule component; Ancillary Services Bid; RUC Availability Bid as applicable, the CAISO Market to which the Bid applies; Trading Day to which the Bid applies; Priority Type (if any). Supply Bids offered in the CAISO Markets must be monotonically increasing. Energy Bids in the RTM must also contain a Bid for Ancillary Services to the extent the resource is certified and capable of providing Ancillary Service in the RTM up to the registered certified capacity for that Ancillary Service less any Day-Ahead Ancillary Services Awards.

Scheduling Coordinators must submit the applicable Supply Bid components, including Self-Schedules, for the submitted MSG Configuration.

Scheduling Coordinators submitting bids for Intertie Schedules must adhere to the e-Tagging requirements outlined in Section 30.6.2.

* * *

30.5.2.4 Supply Bids for System Resources

In addition to the common elements listed in Section 30.5.2.1, Supply Bids for System Resources shall also contain: the relevant Ramp Rate; Start-Up Costs; and Minimum Load Costs.

Resource-Specific System Resources may elect the Proxy Cost option or Registered Cost option

Coordinator must, by twenty minutes before the start of the FMM interval to which the Schedule change applies, ensure that an updated energy profile reflects the change. Where feasible, the CAISO automatically will update Energy profiles on E-tags for Energy Schedules that change from HASP to the FMM within a Trading Hour. However, it is ultimately the responsibility of the Scheduling Coordinator to ensure that the E-tag Energy profile reflects the delivered quantity. The changed energy profile will apply for the balance of the operating hour unless it is subsequently changed by a further updated energy profile.

30.6.2.1 Self-Scheduled Hourly Blocks

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

30.6.2.2 Variable Energy Resource Self-Schedule

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

30.6.2.3 Economic Hourly Block Bid

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

30.6.2.4 Economic Hourly Block Bid with Intra-Hour Option

By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in support of an Economic Hourly Block Bid. The transmission profile must be greater than or equal to the Energy profile, and the Energy profile must equal the Economic Hourly Block

c) Position limits of twenty-five (25) percent will apply during the time period beginning on the first day of the ~~twentieth~~twenty-first month of the anniversary following the effective date of this tariff provision through the last day of the twenty-fourth month following the effective date of this tariff provision.

d) Position limits of fifty (50) percent will apply during the time period beginning on the first day of the ~~twenty-fourth~~^{Fifth} month of the anniversary following the effective date of this tariff provision through the last day of the twenty-eighth month following the effective date of this tariff provision.

e) Position limits will cease to apply beginning on the first day of the ~~twenty-~~^{month} ~~ninth~~ day following the effective date of this tariff provision.

The CAISO will enforce the locational limits for Interties at Bid submission and at Market Close for Virtual Bids. The CAISO will utilize the 9:00 AM Operating Transfer Capability for Bids submitted after 9:00 AM until the close of the Day-Ahead Market for the next Trading Day.

30.7.4 ~~HASP and~~ RTM Validation

~~The HASP and~~ RTM Bids will include the same validation process implemented in the DAM except that the CAISO will not validate the Bid before and again after the Master File Data update. ~~HASP and~~ RTM Bids are only validated based on the current Master File Data on the relevant Trading Day.

30.7.6 Validation And Treatment Of Ancillary Services Bids

30.7.6.1 Validation of Ancillary Services Bids

Throughout the validation process described in Section 30.7, the CAISO will verify that each Ancillary Services Bid conforms to the content, format and syntax specified for the relevant Ancillary Service. If the Ancillary Services Bid does not so conform, the CAISO will send a notification to the Scheduling Coordinator notifying the Scheduling Coordinator of the errors in the Bids as described in Section 30.7. When the Bids are submitted, a technical validation will

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certified Regulation capacity, if there no Bid for Regulation in the Real-Time Market, but there is a Day-Ahead award for Regulation Up or Regulation Down or a submission to self-provide Regulation Up or Regulation Down, respectively, the CAISO will generate a Regulation Up or Regulation Down Bid at the default Ancillary Service Bid price of \$0 up to the certified Regulation capacity for the Generating Unit minus any Regulation awarded or self-provided in the Day- Ahead. If there is a Bid for Regulation Up or Regulation Down in the Real-Time Market, the CAISO will increase the respective Bid up to the certified Regulation capacity for the Generating Unit minus any Regulation awarded or self-provided in the Day-Ahead. If a Self-Schedule amount is greater than the Regulation Limit for Regulation Up, the Regulation Up Bid will be erased.

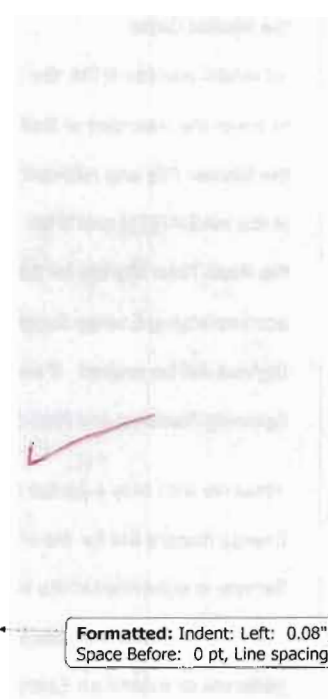
~~amount is greater than the Regulation Limit for Regulation Up, the Regulation Up Bid will be erased.~~

Notwithstanding any of the provisions of Section 30.7.6.1 set forth above, the CAISO will not insert or extend any Bid for Regulation Up or Regulation Down for a Use-Limited Resource of a Load Following MSS Operator. The CAISO will not insert a Spinning Reserve and Non-Spinning Reserve Ancillary Service Bid at \$0 in the Real-Time Market for any certified Operating Reserve capacity of a resource unless that resource submits an Energy Supply Bid but fails to submit an Ancillary Service Bid in the Real-Time Market.

30.7.6.2 Treatment of Ancillary Services Bids

When Scheduling Coordinators bid into the Regulation Up, Regulation Down, Spinning Reserve, and Non-Spinning Reserve markets, they may submit Bids for the same capacity into as many of these markets as desired at the same time by providing the appropriate Bid information to the CAISO. The CAISO optimization will evaluate AS Bids simultaneously with Energy Bids. A Scheduling Coordinator may specify that its Bid applies only ⁱⁿ the markets it desires. A Scheduling Coordinator shall also have the ability to specify different capacity prices for the Spinning

Reserve, Non-Spinning Reserve, and Regulation markets. A Scheduling Coordinator providing one or more Regulation Up, Regulation Down, Spinning Reserve or Non-Spinning Reserve

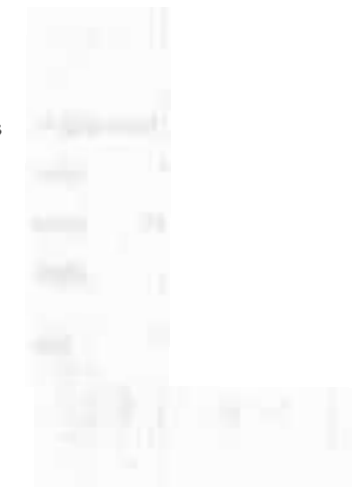


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services may not change the identification of the Generating Units or Proxy Demand Resources offered in the Day-Ahead Market or in the Real-Time Market for such services unless specifically approved by the CAISO (except with respect to System Units, if any, in which case Scheduling Coordinators are required to identify and disclose the resource specific information for all Generating Units, Participating Loads, and Proxy Demand Resources constituting the System Unit for which Bids and Submissions to Self-Provide Ancillary Services are submitted into the CAISO's Day-Ahead Market and Real-Time Market).

The following principles will apply in the treatment of Ancillary Services Bids in the CAISO Markets:

- (a) not differentiate between bidders for Ancillary Services and Energy other than through cost, price, effectiveness, and capability to provide the Ancillary Service or Energy, and the required locational mix of Ancillary Services;
- (b) select the bidders with most cost effective Bids for Ancillary Service capacity which meet its technical requirements, including location and operating capability to minimize the costs to users of the CAISO Controlled Grid;
- (c) evaluate the Day-Ahead Bids over the twenty-four (24) Settlement Periods of the following Trading Day along with Energy, taking into account Transmission Constraints and AS Regional Limits;
- (d) evaluate Import Bids along with Bids from internal resources (which includes Pseudo-Ties of Generating Units to the CAISO Balancing Authority Area);
 - (e) establish Real-Time Ancillary Service Awards through ~~RTUC~~^{the} ~~FMM~~ from imports and resources internal to the CAISO Balancing Authority Area (which includes Pseudo-Ties of Generating Units to the CAISO



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1 and Condition 2 RMR Units, when mitigation is triggered, a single RMR Proxy Bid for the entire Trading Hour is calculated using the same methodology described above for non-RMR Units. For a Condition 1 RMR Unit that has submitted Bids and has not been issued a Manual RMR Dispatch, to the extent that the non-competitive Congestion component of an LMP calculated in the MPM process is greater than zero, and that MPM process dispatches a Condition 1 RMR Unit at a level such that some portion of its market Bid exceeds the Competitive LMP at the RMR Unit's Location, the resource will be flagged as an RMR dispatch if it is dispatched at a level higher than the dispatch level determined by the Competitive LMP. Both Condition 1 and Condition 2 RMR Units may be issued manual RMR dispatches at any time to address local reliability needs or to resolve non-competitive constraints.

34.1.5 Eligible Intermittent Resources Forecast

For Eligible Intermittent Resources that have elected to use the resource's own forecast as specified in Section 4, the responsible Scheduling Coordinator must submit to the CAISO their forecast to the ISO for the binding interval at 37.5 minutes prior to flow (the start of the market optimization for the binding interval). If no forecast is provided, the CAISO will use the resource's direct-telemetry-MW output for dispatch. The ISO will use the forecast data received 37.5 minutes prior to start of the applicable FMM optimization run.

For Participating Intermittent Resources that have elected Protective Measures, ninety (90) minutes prior to the applicable Trading Hour the responsible Scheduling Coordinator must submit to the Real-time Market an hourly Self-Schedule of MWs that is equal to the MWs specified in the independent forecast provided under the Participating Intermittent Resource Program.

34.2 The HASP – Schedules Without Prices

The following RTM processes constitute the HASP: 1) accepting Self-Schedule Hourly Blocks for Energy and Ancillary Services, 2) accepting VER Self-Schedules for Energy, 3) optimizing Economic Hourly Block Bids for Energy and Ancillary Services, 4) optimizing Economic Hourly Block Bids with Intra-Hour Option for Energy and providing an hourly schedule that can be changed at most once in the Trading Hour, and 5) providing purely advisory FMM Energy

schedules and Ancillary Services awards and binding unit commitment for all other resources participating in the RTM. No resource will be settled using a price generated through the HASP.

34.2.1 The HASP Optimization

After the Market Close for the RTM for the relevant Trading Hour, the RTM Bids have been validated, and the RTM Bids have been mitigated and the MPM process has been performed, the CAISO then conducts the HASP optimization.

The HASP, like the other runs of the RTM, utilizes the same SCUC optimization and Base Market Model ~~adjusted as described in Sections 27.5.1 and 27.5.6~~ as the IFM, with the Base Market Model adjusted as described in Sections 27.5.1 and 27.5.6 updated to reflect changes in system conditions as appropriate, to ensure that RTM Intertie Energy Schedules and Ancillary Services Awards are feasible. Instead of clearing against Demand Bids as in the IFM, the HASP clears Supply against the CAISO Forecast of CAISO Demand plus submitted Export Bids, to the extent the Export Bids are selected in the MPM process. The HASP optimization also factors in forecasted unscheduled flow at the Interties. The HASP optimization does not produce Settlement prices for Energy or Ancillary Services. The Energy and Ancillary Services are Settled based on LMPs resulting from ^{the}FMM and RTD and ASMPs from ^{the}FMM.

34.2.2 Treatment of Self-Schedules in HASP

The HASP optimization does not adjust submitted Self-Schedules or Self-Provided Hourly Blocks, or Self-Scheduled Variable Energy Resources unless it is not possible to balance Supply and the CAISO Forecast of CAISO Demand plus Export Bids and manage Congestion using the available Economic Bids, in which case the HASP performs non-economic adjustments to Self-Schedules to accommodate operational restrictions. Once accepted, HASP Intertie Self-Schedules or Self-Provision are considered as Self-Schedules or Self-Provision in each of the four FMM intervals. For Variable Energy Resource Self-Schedules, the CAISO uses the Self-Schedule in the HASP optimization and the Scheduling Coordinator can update the Self-Schedule based on the most current Energy forecast, if it registers in ^{the}Master File to submit its own forecast. The HASP produces advisory MWh schedules for each of the four fifteen-minute intervals for FMM Economic Bids cleared in HASP, which can vary from the MWhs schedules cleared in the ^{FMM}~~Fifteen Minute~~.

Market. The MWh quantities of Self-Schedules of Supply that clear in the HASP constitute a feasible Dispatch for the RTM at the time HASP is run, but the HASP results do not constitute a final Schedule for Generating Units because these resources may be adjusted non-economically in the RTD if necessary to manage Congestion and clear Supply and Demand. Scheduling Coordinators representing Participating Intermittent Resources whose output is being used to satisfy a resource adequacy requirement must submit Variable Energy Resource Self-Schedules ^{the} in HASP in accordance with the forecast provided by the independent forecast service provider. The submission of a change to an ETC Self-Schedule beyond the deadline specified in Section 16.9.1, that is permitted pursuant to the terms of the applicable ETC, shall not be deemed to be an unbalanced ETC Self-Schedule for the purposes of Settlement, consistent with the ETC and TOR Self-Schedule Settlement treatment described in Section 11.5.7.

34.2.3 Ancillary Services in the HASP and FMM

All Operating Reserves procured in ^{the} RTM are Contingency Only Operating Reserves, as described in Section 30.5.2.6. Scheduling Coordinators submitting Ancillary Services Bids for Non-Dynamic System Resources in the RTM must also submit an Energy Bid under the same Resource ID for the associated Ancillary Services Bid. For these Non-Dynamic System Resources, the CAISO will only use the Ancillary Services Bid in the HASP optimization and will not Schedule Energy in ^{the} HASP, FMM, or RTD from the Energy Bid provided under the same Resource ID as the Ancillary Services Bid. The CAISO may dispatch Energy from the Contingency Only Operating Reserves awarded to Non-Dynamic System Resources in ^{the} HASP through the Real-Time Contingency Dispatch as described in Section 34.3.2.

34.2.4 HASP Results

The CAISO publishes the results of the HASP processes no later than forty-five (45) minutes prior to the Trading Hour.

34.2.5 Cessation of the HASP

If, despite the variation of any time requirement or omission of any step, the CAISO is unable to operate any or all of the HASP processes, the CAISO may abort the HASP and perform all remaining RTM processes.

34.23 Real-Time Unit Commitment Fifteen-Minute Market

The Real-Time Unit Commitment (RTUC) process FMM uses SCUC and is run every fifteen (15) minutes to: (1) make commitment decisions for Fast Start and Short Start Units having Start-Up Times within the applicable time periods described below in this section; (2) determine financially binding FMM Schedules and corresponding LMPs; (3) determine financially and operationally binding Ancillary Services Awards and corresponding ASMPs procure required additional Ancillary Services and calculate ASMP used for settling procured Ancillary Service capacity for the next fifteen-minute Real-Time Ancillary Service interval; (4) determine LAP LMPs that are the basis for settling Demand; and (5) receive and process all Variable Energy Resources forecasts (as selected by CAISO) and establish the Upper Economic Limit for the resource with an Economic Bid or Self-Schedule for the FMM. The FMM optimization may factor in forecasted unscheduled flow at the Interties.

In any fifteen (15) minute RTUC FMM interval (which consists of fifteen minutes) that falls within a time period in which a Multi-Stage Generating Resource is transitioning from one MSG Configuration to another MSG Configuration, the CAISO: (1) will not award any incremental Ancillary Services; (2) will disqualify any Day-Ahead Ancillary Services Awards; (3) will disqualify Day-Ahead qualified Submissions to Self-Provide Ancillary Services Award, and (4) will disqualify Submissions to Self-Provide Ancillary Services in RTM. For Multi-Stage Generating Resources the RTUC FMM will issue a binding Transition Instruction separately from the binding Start-Up or Shut Down instructions.

The FMM will clear against the CAISO Forecast of CAISO Demand. The FMM issues Energy Schedules and Ancillary Services Awards by twenty-two and a half minutes prior to the binding fifteen-minute interval.

The RTUC FMM can also be run with the Contingency Flag activated, in which case the RTUC FMM can commit Contingency Only Operating Reserves. If RTUC FMM is run without the Contingency Flag activated, it cannot commit Contingency Only Operating Reserves. RTUC FMM is run at the following time intervals: (1) at approximately 7.5 minutes prior to the next Trading

The RTUC FMM ✓

Hour, in conjunction with the HASP run, for T-45-30 minutes to T+60 minutes; (2) at approximately 7.5 minutes into the current hour for T-1530 minutes to T+60 minutes; (3) at approximately 22.5 minutes into the current hour for T-15 minutes to T+60 minutes; and (4) at approximately 37.5 minutes into the current hour for T+15 to T+60 minutes where T is the beginning of the next Trade Hour. The HASP, ~~described in Section 33,~~ is a special RTUCFMM run that is performed at approximately 67.5 minutes before each Trading Hour and has the additional responsibility of pre-dispatching Energy and awarding Ancillary Services for HASP Block Intertie Schedules ~~hourly dispatched System Resources~~. A Day-Ahead Schedule or RUC Schedule for an MSG Configuration that is later impacted by the resource's derate or outages, will be reconsidered in the RTUCFMM process taking into consideration the impacts of the derate or outage on the available MSG Configurations. Each particular FMM market optimization produces binding settlement prices for Energy and AS for the first FMM interval in the FMM horizon but the optimization considers the advisory results from subsequent market intervals within the FMM horizon. Hourly Intertie Schedules and Hourly AS Awards are settled in accordance with Section 11.4 and 11.10.1.2, respectively. In the event that a FMM run fails, the CAISO reverts to the advisory results for the same interval from the previous FMM market run.

34.32.1 Commitment Of Fast Start And Short Start Units

The FMMRTUC produces binding and advisory Start-Up and Shut-Down Dispatch Instructions for Fast Start and Short Start Units that have Start-Up Times that would allow the resource to be committed prior to the end of the relevant time period of the RTUCFMM run as described in Section 34.23. A Start-Up Dispatch Instruction is considered binding in any given RTUC-FMM run if the Start-Up Time of the resource is such that there would not be sufficient time for a subsequent RTUCFMM run to Start-Up the resource. A Start-Up Instruction is considered advisory if it is not binding, such that the resource could achieve its target Start-Up Time as determined in the current RTUCFMM run in a subsequent RTUCFMM run based on its Start-Up Time. A Shut-Down Instruction is considered binding if the resource could achieve the target Shut-Down Time as determined in the current RTUCFMM ^{run} in a subsequent RTUCFMM run. A Shut-Down Dispatch Instruction is considered advisory if the resource Shut-Down Instruction is

not binding such that the resource could achieve its target Shut-Down time as determined in the current RTUCFMM run in a subsequent RTUCFMM run. A binding Dispatch Instruction that results in a change in Commitment Status will be issued, in accordance with Section 6.3, after review and acceptance of the Start-Up Instruction by the CAISO Operator. An advisory Dispatch Instruction changing the Commitment Status of a resource may be modified by the CAISO Operator to a binding Dispatch Instruction and communicated in accordance with Section 6.3 after review and acceptance by the CAISO Operator. Only binding and not advisory Dispatch Instructions will be issued by the CAISO. For Multi-Stage Generating Resources the CAISO will also issue binding Transition Instructions when the Multi-Stage Generating Resource must change from one MSG Configuration to another. A Transition Instruction is considered binding in any given RTUCFMM run if the Transition Time for the Multi-Stage Generating Resource is such that there would not be sufficient time for a subsequent RTUCFMM run to transition the resource.

34.32.2 Real-Time Ancillary Services Procurement

If the CAISO determines that additional Ancillary Services are required, other than those procured in the IFM ^{and the} HASP, the RTUCFMM will procure Ancillary Services on a fifteen (15) minute basis as necessary to meet reliability requirements and will determine Real-Time Ancillary Service interval ASMPs for such AS for the next Commitment Period. All Operating Reserves procured in the RTM are considered Contingency Only Operating Reserves. Any Ancillary Service awarded in ^{the} RTUCFMM will be taken as fixed for the three (3) five (5) minute RTD intervals of its target fifteen (15) minute interval. In the RTUCFMM, all resources certified and capable of providing Operating Reserves that have submitted Real-Time Energy Bids shall also submit applicable Spinning or Non-Spinning Reserves Bids, respectively, depending on whether the resource is online or offline. The CAISO will utilize the FMMRTUC to procure Operating Reserves to restore its Operating Reserve requirements in cases when: (1) Operating Reserves awarded in ^{the} IFM, HASP or RTUCFMM have been dispatched to provide Energy, (2) resource(s) awarded to provide Operating Reserves in the IFM, HASP or RTUCFMM are no longer capable of providing such awarded Operating Reserves, or (3) the Operator determines that additional Operating Reserves are necessary to maintain Operating Reserves within NERC and WECC reliability standards, and

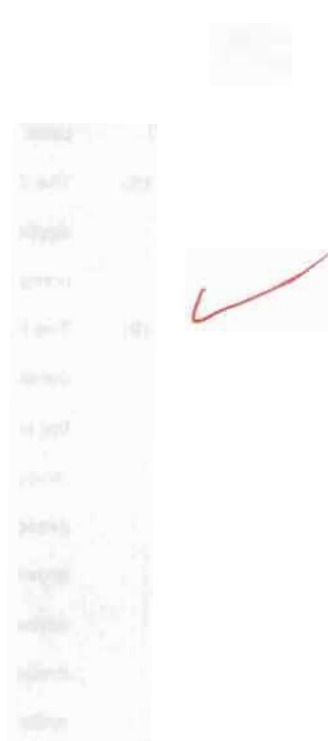
- (10) For resources that are both providing Regulation and have submitted Energy Bids for the RTM, Dispatch Instructions will be based on the Regulation Ramp Rate of the resource rather than the Operational Ramp Rate if the Dispatch Operating Point remains within the Regulating Range. The Regulating Range will limit the Ramping of Dispatch Instructions issued to resources that are providing Regulation;
- (11) For Multi-Stage Generating Resources the CAISO will issue Dispatch Instructions by Resource ID and Configuration ID;
- (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.

34.6-7

Dispatch of ^{Instructions} Dispatch to Units, Participating Loads, and PDR

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:



RTM are exhausted, all Self-Schedules between the Minimum Load and the lowest Energy level of the first Energy Bid point will be subject to uneconomic adjustments based on assigned scheduling priorities. This functionality of the optimization software is implemented through the setting of scheduling parameters as described in Section 27.4.3 and specified in Section 27.4.3.1 and the BPMs. Through this process, imports and exports may be reduced to zero, Demand may be reduced to zero, and Generation may be reduced to a lower operating limit (or Regulation Limit) (or to a lower Regulation Limit plus any qualified Regulation Down Award or Self-Provided Ancillary Services, if applicable). Any Self-Schedules below the Minimum Load level are treated as fixed Self-Schedules and are not subject to uneconomic adjustments for Congestion Management but may be subject to decommitment via an Exceptional Dispatch if necessary as a last resort to relieve Congestion that could not otherwise be managed.

34.1011.1 Increasing Supply

The scheduling priorities as defined in the RTM optimization to meet the need for increasing Supply as reflected from higher to lower priority are as follows:

- (a) Non-Participating Load reduction, exports explicitly identified in a Resource Adequacy Plan to be served by Resource Adequacy Capacity explicitly identified and linked in a Supply Plan to the exports, or Self-Schedules for exports at Scheduling Points in HASP^{the}RTM served by Generation from non-Resource Adequacy Capacity or from non-RUC Capacity;
- (b) Self-Schedules for exports at Scheduling Points in HASP^{me}RTM not offered by Generation from non-Resource Adequacy Capacity or not offered by Generation from non-RUC Capacity, except those exports explicitly identified in a Resource Adequacy Plan to be served by Resource Adequacy Capacity explicitly identified and linked in a Supply Plan to the exports as set forth in Section 34.110.1(a); and

- (f) Operating (Spinning and Non-Spinning) Reserve. The SCED shall Dispatch Spinning and Non-Spinning Reserve subject to the limitations set forth in Section 34.167.3.
- (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.

34.1516.2 Calculation Of Dispatch Operating Points After Instructions

The RTED process shall calculate Dispatch Operating Points as follows:

- (a) After ^{the}RTUC-FMM issues a Start-Up Instruction, RTED moves the Dispatch Operating Point of a resource immediately from zero (0) MW to the PMin, as defined in the Master File or as modified via SLIC, of a Generating Unit at the start of the Dispatch Interval pertaining to the Start-Up Instruction. The Dispatch Operating Point shall then be determined using the resource's applicable Operational Ramp Rate as further described in Sections 34.15.4, 34.15.5, and 34.15.6.
- (b) After ^{the}RTUC-FMM issues a Shut-Down Instruction, RTED shall first ramp the Dispatch Operating Point down to the PMin, as defined in the Master File or as modified via SLIC, of a Generating Unit at the end of the Dispatch Interval pertaining to the Shut-Down Instruction, using the

resource's applicable Operational Ramp Rate. The Dispatch Operating Point shall then be set immediately to zero (0) MW.

- (c) After ^{the} RTUCFMM issues a Transition Instruction: (1) for MSG Configurations where the operating ranges of the two MSG Configurations do not overlap, the RTD will move the Dispatch Operating Point of the resource immediately from the boundary of the "from" MSG Configuration to the boundary of the "to" MSG Configuration, as defined in the Master File or as modified via the CAISO's outages reporting mechanism, of a Multi-Stage Generating Resource; and (2) for MSG Configurations for which the operating ranges of the two MSG Configurations do overlap, RTD will move the Dispatch Operating Point of the resource within the overlapping operating range of the MSG Configuration until the MSG Transition is complete.

34.1516.3 [NOT USED]

34.1516.4 Inter-Hour Dispatch Of Resources With Real-Time Energy Bids

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

41.5.2 RMR Payments

RMR Units operating as Condition 1 RMR Units or Condition 2 RMR Units that receive an RMR Dispatch Notice will be paid in accordance with the RMR Contract.

41.5.3 RMR Units And Ancillary Services Requirements

The CAISO may call upon RMR Units in any amounts that the CAISO has determined is necessary at any time after the issuance of Day-Ahead Schedules for the Trading Day if: (i) the CAISO determines that it requires more of an Ancillary Service than it has been able to procure, except that the CAISO shall not be required to accept Ancillary Services Bids that exceed the price caps specified in Section 39 or any other FERC-imposed price caps; and (ii) the CAISO has notified Scheduling Coordinators of the circumstances existing in this Section 41.5.3, and after such notice, the CAISO determines that a bid insufficiency condition in accordance with the RMR Contract exists in the HASP-RTM and the CAISO requires more of an Ancillary Service. The CAISO must provide the notice specified in sub paragraph (ii) of this Section 41.5.3 as soon as possible after the CAISO determines that additional Ancillary Services are needed for which Bids are not available. The CAISO may only determine that a Bid insufficiency exists after the Market Close of the HASP-RTM, unless an earlier determination is required in order to accommodate the RMR Unit's operating constraints. For the purposes of this Section 41.5.3, a Bid insufficiency exists in HASP-RTM if, and only if: (i) Bids in the HASP-RTM for the particular Ancillary Service that can be used to satisfy that particular Ancillary Services requirement that remain after first procuring the megawatts of the Ancillary Service that the CAISO had notified Scheduling Coordinators it would procure in the HASP ("remaining Ancillary Services requirement") represent, in the aggregate, less than two times such remaining Ancillary Services requirement; or (ii) there are less than two unaffiliated bidders to provide such remaining Ancillary Services requirement. If the CAISO determines that a Bid insufficiency condition exists as described in this Section 41.5.3, the CAISO may nonetheless accept available Bids if it determines in its sole discretion that the prices specified in the Bids and the Energy Bid Curves created by the Bids indicate that the Scheduling Coordinators were not attempting to exercise market power.



- CAISO Markets Processes

The MPM, IFM, RUC, STUC, ~~FMMRTUC~~, and RTD. ~~HASP is an hourly run of the RTUC.~~

- RTD Derate Energy

Extra-marginal RTD IIE, exclusive of FMM IIE, Standard Ramping Energy, Ramping Energy Deviation, Residual Imbalance Energy, MSS Load Following Energy, and RTD Real-Time Minimum Load Energy produced or consumed due to Minimum Load overrates or PMax derates. RTD Derate Energy is produced above the higher of the ~~Day-Ahead FMM Schedule~~ or, the registered Minimum Load, ~~or the FMM HASP Intertie Schedule~~, and below the lower of the overrated Minimum Load and the Dispatch Operating Point, or consumed below the lower of the ~~Day-Ahead Schedule or the FMM HASP Intertie Schedule~~, and above the higher of the derated PMax or the Dispatch Operating Point. There could be two RTD Derate Energy slices, one for the Minimum Load overrate, and one for the PMax derate. RTD Derate Energy does not overlap with FMM IIE, Standard Ramping Energy, Ramping Energy Deviation, Residual Imbalance Energy, RTD Real-Time Minimum Load Energy, RTD Exceptional Dispatch Energy, or RTD Optimal Energy, but it may overlap with ~~Day-Ahead Scheduled Energy, HASP Scheduled Energy, FMM Schedule~~ and MSS Load Following Energy. ~~RTD Derate Energy~~ [#] is settled as described in Section 11.5.1, and it is not included in BCR as described in Section 11.8.4.

- Eligible Intermittent Resource

A Variable Energy Resource that is a Generating Unit or Dynamic System Resource subject to a Participating Generator Agreement, Net Scheduled PGA, Dynamic Scheduling Agreement for Scheduling Coordinators, or Pseudo-Tie Participating Generator Agreement ~~that is powered by wind or solar energy, except for a de minimis amount of Energy from other sources.~~

- Exceptional Dispatch

A Dispatch Instruction issued for the purposes specified in Section 34.109. Energy from Exceptional Dispatches shall not set any FMM or RTD Dispatch Interval LMP.



produced above the LMP index and below the lower of the FMM Schedule or the FMM Exceptional Dispatch Instruction, or consumed below the LMP index and above the higher of the FMM Schedule or the FMM Exceptional Dispatch Instruction. The LMP index is the capacity in the relevant Energy Bid that corresponds to a Bid price equal to the relevant LMP. FMM Exceptional Dispatch Energy does not overlap with FMM Minimum Load Energy, FMM Derate Energy, or FMM Optimal Energy, but it may overlap with Day-Ahead Scheduled Energy, RTD Optimal Energy, and MSS Load Following Energy. FMM Exceptional Dispatch Energy is settled as described in Section 11.5.6, and it is not included in BCR as described in Section 11.8.4.

* * *

- FMM IIE Settlement Amount

The payment due a Scheduling Coordinator for positive FMM Instructed Imbalance Energy or the charge assessed on a Scheduling Coordinator for negative FMM Instructed Imbalance Energy, as calculated pursuant to Section 11.5.1.1

- FMM Instructed Imbalance Energy (FMM IIE)

The portion of Imbalance Energy resulting from Day-Ahead Schedules and FMM Schedules determined pursuant to Section 11.5.1.

- FMM Minimum Load Energy

FMM IIE produced due to the Minimum Load of a Generating Unit that is committed in the RUC or the FMM and does not have a Day-Ahead Schedule or of a Constrained Output Generator (COG) that is committed in the IFM with a Day-Ahead Schedule below the registered Minimum Load. If the resource is committed in ^{the} FMM for Load following by an MSS Operator, the FMM Minimum Load Energy is accounted as MSS Load Following Energy instead. FMM Minimum Load Energy is FMM IIE above the Day-Ahead Schedule (or zero if there is no Day-Ahead Schedule of Energy) and below the registered Minimum Load. FMM Minimum Load Energy does not overlap with any other Expected Energy type. FMM Minimum Load Energy is settled as described in Section 11.5.1, and it is included in BCR as described in Section 11.8.4.1.2. FMM IIE that is consumed when a resource that is scheduled in the DAM is shut down in the FMM is accounted as FMM Optimal Energy and not as FMM Minimum Load Energy.



- **RTD Imbalance Energy**

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

- **RTD IIE Settlement Amount**

The payment due a Scheduling Coordinator for positive RTD Instructed Imbalance Energy or the charge assessed on a Scheduling Coordinator for negative RTD Instructed Imbalance Energy, as calculated pursuant to Section 11.5.1.2.

- **RTD Instructed Imbalance Energy (RTD IIE)**

The portion of Imbalance Energy resulting from Dispatch Instructions and ~~HASP Intertie Schedules~~FMM Schedules.

- **Market Clearing**

The act of conducting any of the process^{es} used by the CAISO to determine LMPs, Day-Ahead Schedules, RUC Awards or AS Awards, HASP Intertie Block SchedulesSchedules-a, FFM Schedules and Dispatch Instructions based on Supply Bids and Demand Bids or CAISO Demand Forecast.

- **Market Close**

The time after which the CAISO is no longer accepting Bids for its CAISO Markets which: 1) for the DAM is 10:00 A.M. Pacific Time of the Day-Ahead; and 2) for the ~~HASP and the RTM~~ is approximately seventy-five minutes prior to the Operating Hour.

- **MSS Load Following Energy**

RTD IIE, exclusive of Standard Ramping Energy, Ramping Energy Deviation, and Residual Imbalance Energy, produced or consumed due to Load following by an MSS. MSS Load



Following Energy is the RTD IIE that corresponds to the algebraic Qualified Load Following Instruction, relative to the Day-Ahead Schedule. MSS Load Following Energy does not coexist with FMM Optimal Energy~~HASP-Scheduled Energy~~, and it does not overlap with Standard Ramping Energy, Ramping Energy Deviation, or Residual Imbalance Energy, but it may overlap with Day-Ahead Scheduled Energy, RTD Derate Energy, RTD Exceptional Dispatch Energy, Real-Time Self-Scheduled Energy, ^{and} RTD Optimal Energy. MSS Load Following Energy is settled as provided in Section 11.5.1, and it is not included in BCR as described in Section 11.8.4. ✓

- Net Procurement

The awarded amount (MW) of a given Ancillary Service in the Day-Ahead, ~~HASP~~, and Real-Time Markets, minus the amount of that Ancillary Service associated with payments rescinded pursuant to any of the provisions of Section 8.10.2.

- Non-priced Quantity

As set forth in Section 27.4.3, a quantitative value in a CAISO Market that may be adjusted by the SCUC or SCED in the CAISO market optimizations but that does not have an associated bid price submitted by a Scheduling Coordinator. The Non-priced Quantities that may be so adjusted are: Energy Self-Schedules, Transmission Constraints, market energy balance constraints, Ancillary Service requirements, conditionally qualified and conditionally unqualified Ancillary Service self-provision, limits in RUC on minimum load energy, quick start capacity and minimum generation, Day-Ahead Energy Schedules resulting from the IFM, and estimated FMM~~HASP~~ Energy_Self-Schedules used in RUC.

- RTD Non-Overlapping Optimal Energy

The portions of RTD Optimal Energy that are not RTD Overlapping Optimal Energy, which are indexed against the relevant Energy Bid and sliced by Energy Bid price.

- Operational Adjustment

An algorithm performed by a computer program over multiple hours that determines the Commitment Status and Day-Ahead Schedules, AS Awards, RUC Awards, Hourly ASP-Intertie Block Schedules, FMM Schedules and Dispatch Instructions for selected resources and minimizes production costs (Start-Up, Minimum Load and Energy Bid Costs in IFM, HASP and RTM; Start-Up, Minimum Load and RUC Availability Bid Costs) while respecting the physical operating characteristics of selected resources and Transmission Constraints.


- Self-Provided Ancillary Services

A Submission to Self-Provide Ancillary Services in the Day-Ahead Market, ~~HASP~~, or Real-Time Market that has been accepted by the CAISO. Acceptance will occur prior to Ancillary Service Bid evaluation in the relevant market and indicates that the CAISO has determined the submission is feasible with regard to resource operating characteristics and regional constraints and is qualified to provide the Ancillary Service in the market for which it was submitted. Self-Provided Ancillary Services consist of self-provided Regulation Up reserves, self-provided Regulation Down reserves, self provided Spinning Reserves, and self-provided Non-Spinning Reserves.

- Set Point

Scheduled operating level for each Generating Unit or other resource scheduled to run in the FMM~~HASP~~_Schedule and FMM Award and ~~HASP Awards~~.

- Settlement Interval

The five-minute time period equal to or a multiple of the Dispatch Interval, over which the CAISO settles cost compensation amounts or deviations in Generation and Demand in ~~RTM~~^{the} CAISO Markets. 

- Spinning Reserve Cost

The revenues paid to the suppliers of the total awarded Spinning Reserve capacity in the Day-Ahead Market, ~~HASP~~, and Real-Time Market for the Settlement Period, minus the payments