

Stakeholder Comments

Draft Tariff Language – Order 764

Submitted by	Company	Date Submitted
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The following are Southern California Edison’s (SCE) comments on the California Independent System Operator’s (CAISO) Draft Tariff Language¹. SCE presents some comments (section I) on the proposed Tariff language and then details edits (section II) for the remainder of this document.

I. SCE comments on Draft Tariff

Section 4.8.1 PIRP “Transition Measures”

This section needs to clearly state that opting into Protective Measures is a choice, not a requirement. (i.e., a Participating Intermittent Resource can choose whether or not to receive protective measures). It currently reads as if PIR’s must register for Protective Measures.

The section also erroneously states that measures would last 1122 days. SCE requests the CAISO to correct this number. The Board has approved a 3 years duration, which at 365 days per year is 1095 days (1096 with a leap year).

This section should also state that there is no voluntary opt-out, except for the PIR meeting the stated criteria (i.e., having a new PPA). There is a statement that the measures would be in effect until the earlier of 1122th day or new PPA – which may be sufficient (if corrected for number of days).

Definition of Operational Adjustment

The new 15-minute market is now called FMM (Fifteen Minute Market) and the CAISO has expanded from one single definition of Optimal Energy to two definitions – FMM Optimal Energy and RTD Optimal Energy, the reason being that they are now priced with two different market LMPs. Likewise, the CAISO also needs to expand the definition of Operational Adjustment to FMM Operational Adjustment and RTD Operational Adjustment, because the intertie schedule changes will also receive two different market prices.

¹ <http://www.caiso.com/Documents/DraftTariffLanguage-FERCOrder764MarketChanges.doc>

II. SCE edits to Draft Tariff

This tariff draft is based on the following architecture concept changes.

Section 33, which currently covers HASP, will be removed. The aspects of section 33 that still will be applicable to the market, along with the new market processes, will be consolidated in section 34.

Section 34 covers the RTM. This consolidation makes clear that all of the activities that happen in the hour-ahead timeframe are considered part of the RTM.

Bids to RTM can take the following form:

- (1) Economic Bids (for internal and Intertie transactions)*
- (2) Self-Schedule (for internal and Intertie transactions)*
- (3) Self-Schedule Hourly Block (for Intertie transactions only)*
- (4) VER Self-Schedule (for VERs outside the ISO BAA)*
- (5) Economic Hourly Block Bid (for Intertie transactions only)*
- (6) Economic Hourly Block Bid with Intra-Hour Option (for Intertie transactions only)*

- (1) The parts of section 34 that would now relate to hour-ahead activities involve the ISO conducting the following steps: Accept bids and self-schedules for all processes of the RTM.*
- (2) Run the MPM process to mitigate bids. The existing 15-minute mitigation would be unchanged.*
- (3) Accept the self-scheduled hourly blocks (normal self-schedule and VER self-schedule) and post the results for self-scheduled AS and energy.*
- (4) Optimize the hourly economic bids and the hourly economic bids with intra-hour scheduling changes.*
- (5) Issue advisory schedules for each of the four FMM intervals to all other resources.*

Steps three, four, and five, taken together, tentatively would comprise the newly-defined HASP. As this project carries forward a different term can be substituted for "HASP." There should, however, be a single term to refer to these three steps, all of which involve scheduling-related activities in the hour-ahead timeframe. Updates to tariff provisions other than those identified in this document may also be needed to align terminology, including existing references to "HASP."

The FMM – the "Fifteen Minute Market" – replaces the RTUC as a tariff matter and largely fulfills the same functions. The main difference is that each of the four fifteen-minute FMM intervals is financially binding. To accommodate the new intra-hour variability in intertie transactions, there will be complementary new e-tagging rules.

The RTD and the Day-Ahead processes remain largely unchanged.

Apart from the new market processes, there will also be changes relating to:

- (1) VER forecasting;*
- (2) How Participating Intermittent Resources can continue to use PIRP, including the protective measures for existing intermittent resources; and*
- (3) Reinstitution of convergence bidding on interties.*

** * **

4.8 Relationships Between CAISO And Intermittent Resources

The CAISO shall not accept Bids for an Eligible Intermittent Resource other than through a Scheduling Coordinator. Any Eligible Intermittent Resource that is not a Participating Intermittent Resource subject to Protective Measures pursuant to Section 4.8.1 of this Tariff, or any Participating Intermittent Resource for which Bids are submitted shall be bid and settled as a Generating Unit for the associated Settlement Periods (except that the Forecast Fee shall apply in such Settlement Periods).

4.8.1 Transition Measures for Participating Intermittent Resources

No later than thirty (30) days after the effective date of this Section, the Scheduling Coordinator responsible for resources that ~~wish to receive Protective Measures, and qualify for Protective Measures~~ pursuant to the criteria specified below, ~~must complete~~ their election for Protective Measures. ~~Eligible resources have the option whether or not to elect receiving Protective Measures within this one-time election period.~~ In electing for the Protective Measures, ~~the resource~~ qualifying for Protective Measures must be qualified as a Participating Intermittent Resource for the term over which they are to receive the Protective Measures. A representative of the Scheduling Coordinator, Participating Intermittent Resource owner and counterparty to any existing bilateral agreement for power purchases from the Participating Intermittent Resource, such as a power purchase agreement, authorized to legally and financially bind the Participating Intermittent Resource must sign an affidavit certifying: 1) the resource meets all criteria items a. through d. below, and the commitments specified in this Section; and 2) the Scheduling Coordinator, Participating Intermittent Resource owner and counterparty to any existing bilateral agreement for power purchases from the Participating Intermittent Resource, such as a power purchase agreement, as applicable, agree that during the term of the three year transition period, it will seek modifications to their power purchase agreement or seek to enter into a new power purchase agreement to address their Imbalance Energy settlement and/or will take necessary steps to upgrade the resource so that it is capable of responding to Dispatch Instructions. The transitional Protective Measure shall be in effect until the earlier of (1) the ~~1,122th-096th day~~ after the effective date of this Section, or (2) until the Participating Intermittent Resource has executed a new ~~or amended~~ power purchase agreement or similar contract for its services. The CAISO will post on its Website the names of the Participating Intermittent Resources that have elected and, subsequently who has been qualified to receive Protective

Comment [GS1]: Suggested edit to clarify that election of Protective Measures is optional and not required.

Comment [A2]: This statement is unclear – it’s not “must complete” but rather “must complete if they wish to participate in the program” – the suggested sentence was added to make this point.

Comment [A3]: The measures are supposed to last for 3 years. $3 \times 365 = 1095$ days (1096 if there is a leap year)

Measures. The Participating Intermittent Resource ~~eligible for~~electing to receive Protective Measures must meet the following eligibility criteria:

- a. More than fifty (50) percent of the Participating Intermittent Resource is composed technology that is unable to curtail output without significant investment. Participating Intermittent Resources that only lack Dispatch, control, and telemetry or metering and require upgrades will not qualify. Participating Intermittent Resources that require production facility investments, such as turbine replacements, will qualify; or
- b. Pursuant to an existing bilateral agreement for power purchases from the Participating Intermittent Resource, such as a power purchase agreement, that is in effect the date on which this Section becomes effective, specifies that the Participating Intermittent Resource is prohibited from responding to CAISO dispatch signals; or
- c. Qualifying Facilities that are of greater than twenty (20) MW may qualify if they meet the remaining criteria specified in this Section 4.8.1; and
- d. Pursuant to an existing bilateral agreement for power purchases from the Participating Intermittent Resource, such as a power purchase agreement, that is in effect the date on which this Section becomes effective, specifies that the Participating Intermittent Resource is directly or indirectly responsible for Real-Time Energy Settlement under the CAISO Tariff; or no such agreement exists and therefore the resource is itself subject to Real-time Energy settlement under the CAISO Tariff.

4.8.2 Forecast Requirements

All Scheduling Coordinators for Eligible Intermittent Resources must provide at a minimum a three-hour rolling forecast with fifteen (15) minute granularity. Eligible Intermittent Resources, except for Variable Energy Resources that are not in the CAISO Balancing Authority Area that are not subject to a Dynamic Scheduling Agreement, may also submit a five-minute forecast to be used in the Real-time Dispatch as described further in Section ~~---~~-[missing reference]-. Scheduling Coordinators for Eligible Intermittent Resources have the option to use the CAISO forecast created by an expert, independent forecasting service, or the resource's own forecast, pursuant to specifications discussed further below. Once the election is completed, the CAISO will specify the election status in the Eligible Intermittent

Resource's Master File. Any changes to this election will be subject to the timeline and rule changes that apply to Master File as specified in Section ~~---~~[\[missing reference\]](#). For Eligible Intermittent Resources that are in the CAISO Balancing Authority Area, that opt to provide the forecast in the five-minute granularity only, the CAISO will use the average of the projected energy output for the relevant three 5-minute forecasts to determine the Variable Energy Resource Self-Schedule for the Fifteen Minute Market as specified in Section 34.

4.8.2.1 Use of CAISO Forecast for an Eligible Intermittent Resource

To the extent the Eligible Intermittent Resource elects to use the CAISO created forecast, the Scheduling Coordinator will be subject to the forecast fee specified in Section [\[missing reference\]](#)—of Appendix Q, but will not be subject to the HASP Decline Charge specified in Section 11, if the resource is a System Resource or the resource exports.

4.8.2.2 Use of Forecast Provided by the Eligible Intermittent Resource Scheduling Coordinator

Scheduling Coordinators may elect for use of the Eligible Intermittent Resource's own forecast to the extent the CAISO has certified that the resource has completed the certification requirements specified in the Business Practice Manuals. After the CAISO has certified an Eligible Intermittent Resource as eligible to provide its own forecast, the CAISO may terminate the resource's certification if the CAISO determines that the Eligible Intermittent Resource's forecast is regularly significantly less accurate than the forecast provided by the CAISO or if the CAISO has reasonable basis to believe that the resource is engaged in strategic forecasting to adversely impact the CAISO Markets. To the extent the Scheduling Coordinator elects to use the resource's own forecast, the Scheduling Coordinator will be subject to the forecast fee specified in Section [\[missing reference\]](#)—of Appendix Q and it will be subject to the HASP Schedules Decline charge as specified in Section 11, if the resource is a System Resource or the resource exports. ***

11.12.2 Allocation Of Participating Intermittent Resources Protective Measures Costs/Revenues

For each month, the CAISO will calculate the difference between the charges and payments made to the Scheduling Coordinator for each Participating Intermittent Resource under its Settlement as specified in Sections 11, and the Protective Measurement resettlement amounts. The CAISO will charge or credit the differences to the Scheduling Coordinator and will ~~allocated~~[allocate](#) a corresponding credit or charge to

all Scheduling Coordinators in proportion to each Scheduling Coordinator's aggregate Net Negative Uninstructed Deviations in that month relative to the aggregate Net Negative Uninstructed Deviations for all Scheduling Coordinators in the CAISO Balancing Authority Area in that month.

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30.6.2 E-Tag Rules and Treatment of Inertie Schedules

In addition to complying with all NERC/WECC E-Tagging requirements, Scheduling Coordinators must submit their E-tags consistent with the requirements specified in this Section 30.6.2. If a Scheduling Coordinator receives an intra-hour Schedule change, then the Scheduling Coordinator must, by twenty minutes before the start of the FMM interval to which the Schedule change applies, ensure that an updated energy profile reflects the change. Where feasible, the ISO will 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~~ ultimately the ~~responsibility~~ 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 Bid as awarded through HASP. The CAISO may modify the Energy profile due to Reliability related curtailments. In the case of an intra-hour redispatch from the FMM, the CAISO may increment or decrement the Energy profile to correspond to the intra-hour redispatch.

30.6.2.5. FMM Economic Bid

By twenty minutes prior to the applicable Trading Hour, the Scheduling Coordinator must submit an E-Tag in ~~support of~~ support of an FMM Economic Bid. The transmission profile must be greater than or equal to the maximum bid-in capacity for the Trading Hour, and the Energy profile must equal the MWs awarded for the first FMM interval of the Operating Hour.

If the Scheduling Coordinator intends to limit its participation in the FMM to the quantity in the HASP advisory energy schedule (including zero), the Scheduling Coordinator may update its transmission profile to the maximum amount it wants to make available to the FMM prior to the start of the binding FMM optimization, which is ~~approximately~~ thirty-seven and a half minutes before the applicable Trading Hour. If the Scheduling Coordinator does not have a transmission profile greater than its advisory Energy schedule, the resource cannot be scheduled for Energy in the FMM for amounts greater than what is listed in the transmission profile. Cleared FMM Economic Bids are eligible for Bid Cost Recovery as specified in Section 11.

30.7.3.6.3 Position Limits

For each Convergence Bidding Entity, the CAISO will reject all Virtual Bids submitted by its Scheduling Coordinator at any Eligible PNode, Eligible Aggregated PNode (other than a Default LAP or Trading Hub),

or Intertie that exceed the position limits specified in this Section 30.7.3.6.3. If the Scheduling Coordinator uses multiple SCIDs on behalf of a Convergence Bidding Entity, the position limits will apply to the sum of those Virtual Bids submitted at the Eligible PNode, Eligible Aggregated PNode (other than a Default LAP or Trading Hub), or Intertie. The CAISO will perform all position limit calculations based on the highest Virtual Bid segment MW point submitted in the Virtual Bid Curve. The CAISO will not net Virtual Supply Bids and Virtual Demand Bids in performing the position limit calculations. The affected Scheduling Coordinator will be provided notice that position limits have been violated. If the Scheduling Coordinator does not resubmit Virtual Bids within the position limits, the CAISO will reject Virtual Bids for all hours at each Eligible PNode, Eligible Aggregated PNode (other than a Default LAP or Trading Hub), and Intertie where the position limits are violated. Position limits only apply to Eligible PNodes or Eligible Aggregated PNodes (other than Default LAPs or Trading Hubs), and Interties.

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30.7.3.6.3.2 Position Limits at Interties

For an Intertie, the locational limits will be equal to a percentage of the Operating Transfer Capability of the Intertie. The percentages used to calculate the position limits of each Convergence Bidding Entity at Interties will be the following percentages of the published locational limits:

- a) Position limits of zero (0) percent will apply during the time period beginning as of the effective date of this tariff provision through the last day of the twelfth month following the effective date of this section 30.7.3.6.3.2.
- b) Position limits of five (5) percent will apply during the time period beginning as of the first day of the thirteenth month following the effective date of this tariff provision through the last day of the twentieth month following the effective date of this tariff provision.
- c) Position limits of twenty-five (25) percent will apply during the time period beginning on the first day of the twentieth month ~~of the anniversary of~~ 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 month ~~of the anniversary of~~ 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 ~~ninth~~ninth day ~~following 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.

**** 31.8 [This section number seems out of order / inconsistent]**

Within the IFM optimization, the CAISO enforces two (2) constraints at each Intertie Scheduling Point so that Virtual Bids do not result in net interchange schedules violating scheduling limits unless the bidding prohibition set forth in Section 30.8 applies. The first constraint is that physical imports net of physical exports must be less than or equal to the scheduling limit at the Scheduling Point in the applicable direction. The second constraint is that physical and virtual imports net of physical and virtual exports must be less than or equal to the scheduling limit at the Scheduling Point in the applicable direction. Although both constraints are enforced in both scheduling and pricing runs, only the second constraint Shadow Price is incorporated into the pricing run LMPs.

* * *

For RMR Units, RMR Proxy Bids resulting from the MPM process will be utilized in all RTM optimization processes for each Trading Hour. For a Condition 1 RMR Unit, the use of RMR Proxy Bids is determined based on the non-competitive Congestion component of each LMP for each fifteen (15) minute interval of the applicable Trading Hour, using the methodology set forth in Section 31.2.2 above. If a Condition 2 RMR Unit is issued a Manual RMR Dispatch by the CAISO, then RMR Proxy Bids for all of the unit's Maximum Net Dependable Capacity will be considered in the MPM process. For both Condition 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~~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 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 telemetry for dispatch. The ISO will use the forecast data received 37.5 minutes prior to start of the applicable FMM optimization run.

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

34.2

- Ancillary Service Schedule Or AS Schedule

The notification by the CAISO indicating that a Submission to Self-Provide an Ancillary Service has been selected to provide such service in the DAM or RTM.

* * *

- Bid

Either (1) an offer for the Supply or Demand of Energy or Ancillary Services, including Self-Schedules, submitted by Scheduling Coordinators for specific resources, conveyed through several components that apply differently to the different types of service offered to or demanded from any of the CAISO Markets or (2) a Virtual Bid.

* * *

- Bid Cost Recovery (BCR) Eligible Resources

Those resources eligible to participate in the Bid Cost Recovery as specified in Section 11.8, which include Generating Units, System Units, System Resources ~~that~~ with FMM Economic bids, Participating

Loads, and Proxy Demand Resources. A System Resource that has a Schedule that results from Bids submitted in violation of Section 30.5.5 shall not be a Bid Cost Recovery Eligible Resource for any Settlement Interval that occurs during the time period covered by the Schedule that results from Bids submitted in violation of Section 30.5.5. Accepted Self-Schedule Hourly Blocks are not eligible to participate in Bid Cost Recovery in the Real-Time Market.

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- CAISO Markets

Any of the markets administered by the CAISO under the CAISO Tariff, including, without limitation, the DAM, RTM, transmission, and Congestion Revenue Rights.

- CAISO Markets Processes

The MPM, IFM, RUC, STUC, FMM and RTD.

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- RTD Derate Energy

Extra-marginal RTD IIE, exclusive of Standard Ramping Energy, Ramping Energy Deviation, Residual Imbalance Energy, MSS Load Following Energy, and RTD Minimum Load Energy produced or consumed