

Sacramento Municipal Utility District (SMUD) comments on CAISO's Proposed Revision Request 1282

Submitted by	Company	Date Submitted
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SMUD supports the CAISO's efforts to clarify export priorities in the real-time market (RTM). SMUD periodically exports from the CAISO, primarily self-scheduling non-RA capacity as a Supporting Resource in the day-ahead market (DAM). This DAM self-schedule is critical for SMUD to serve its load and meet its obligations as a load serving utility. The CAISO rules around this practice are in various parts of the Tariff and BPM, and therefore having a clearer explanation and section cross references would help entities better understand market operations and plan for expected schedules and curtailments during high demand times. This is a great opportunity for the CAISO to do a holistic review of its export rules and may require additional changes that are not covered in the three sections identified in this PRR, such as additional clarifications in the Tariff.

The CAISO explained the changes to the business practice manual (BPM) at its September 9th Market Performance and Planning Forum, which went into effect September 5th on an emergency basis. These slides provide important details about the different forms of export priorities and risk of curtailments. This information should be included in the changes to the BPM, not just the current revision which is limited to self-schedules based on the RUC schedules. However, the slides are not entirely clear and further clarification is requested. We have attempted to add this information from the slides in Section 7.1.6 below, but this should not limit the CAISO from further clarifying this issue even more.

SMUD has the following specific comments on each section:

Section 6.6.6 IFM Outputs

The CAISO addition to this section seems out of place. This section covers IFM output information, but the CAISO's addition explains schedules and prices and is not an output.

We suggest moving this change to Section 6.7.4.1 RUC Schedules.

Section 7.1.6 RTM Self-Schedules

SMUD believes the CAISO should add details included in Slides 9-12 of the September 9th presentation. SMUD suggests the changes below. Also, SMUD requests clarification of what "high priority" and "low priority" mean and where in the curtailment order these fall. Accordingly, SMUD recommends the CAISO add a priority list in the BPM to further clarify the export priority. This may result in needed changes to Section 31.4 of the Tariff, and SMUD would support updates to the Tariff to align the BPM and Tariff to avoid any future confusion. In addition, the CAISO may want to consider creating a priority category Export Self-Schedules (or something similar), and under this category provide the subcategories of non-RA RUC export, non-RA IFM export, other IFM export.

Lastly, SMUD requests the CAISO provide data/analysis of the IFM and RUC schedules during the August heatwave for entities to better understand the potential impact of this change.

Thank you.

Changes to Market Operations BPM related scheduling of export resources in RTM

6.6.6 IFM Outputs

The following IFM output information is produced and is financially and operationally binding:

- Optimal Unit Commitment status (on/off) over the Time Horizon
- Type of Unit Commitment status (self-commitment and CAISO-commitment)
- Optimal Energy Schedule for all resources over the Time Horizon
- Virtual Supply and Virtual Demand Awards
- Optimal AS Award for all resources over the Time Horizon
- The total Energy and AS Bid Cost over the Time Horizon
- The Start-Up Cost (\$) for each Generation resource or minimum curtailment payment (\$) for each dispatchable Demand/Curtailable Demand resource during each CAISO-commitment period
- The Minimum Load Cost (\$) for each Generation resource or minimum hourly payment (\$) in each hour during each CAISO-commitment period
- The Start-Up Cost/Bid function (\$, Minute) or minimum curtailment payment (\$) used for each resource in each CAISO-Commitment Period.
- LMPs for each price Location including all resources; also LMP components (Energy, Marginal Loss, and Congestion components)
- RASMP for each AS Region
- ASMP for all resources providing Ancillary Services.

- Resources at their effective minimum or maximum MW in each time interval
- The level of control and Constraint priority used in obtaining the solution. This informs the CAISO's operator as to how much of uneconomic Bid segments and/or Constraint violations were necessary to solve the optimization.
- Amount of any relaxed constraint violations, i.e., the extent to which any constraint was relaxed (in MW) in order to solve the optimization.

~~Both schedules and prices are derived from the pricing run of the IFM market to ensure consistency between schedules and prices. This consistency is important for prices that are financially binding to settle energy schedules.~~

6.7.4.1 RUC Schedules

The total MW per hour amount of capacity committed by RUC including the MW per hour amounts committed in the Day-Ahead Schedule. Consistent with Section 31.5 of the Tariff, RUC schedules are derived from the scheduling run to ensure schedules are physically feasible.

~~Both schedules and prices are derived from the pricing run of the IFM market to ensure consistency between schedules and prices. This consistency is important for prices that are financially binding to settle energy schedules.~~

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7.1.6 RTM Self-Schedules

Resources may self-schedule in the RTM in addition to or without providing Energy Bids. Resources with Day-Ahead Schedules that do not Bid in the RTM, are assumed to be self-scheduling their Day-Ahead Schedules. Consistent with section 34.1.1 of the CAISO Tariff, the CAISO takes the Day-Ahead Market results as inputs into the Real Time Market RTM. As discussed in Section 31.8.1 of the CAISO Tariff requires market export schedules up to the cleared RUC schedule to determine what part of the Day-Ahead Schedule is feasible. Consistent with this Tariff section, the CAISO enforces a constraint at each Intertie such 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. Through this RUC constraint the CAISO determines what portion of what Day-Ahead Schedules can have an E-Tag submitted Day-Ahead.

-Accordingly, for all resources but exports, the self-schedules in the real-time will be based on the IFM schedules. For exports, self-schedules in real-time will be based on the RUC schedules and have PT status. Any self-schedule in real-time above this level will not have a day-ahead self-schedules PT status priority. However, day-ahead self-schedules above the RUC schedule will have high priority if supported by a non-RA Supporting Resource (see Section XXXX of Tariff), and low priority if not supported by a non-RA Supporting Resource. When RUC assesses the need to curtail exports, RUC schedules will be lower than IFM schedules and the market will make uneconomical adjustments from lowest to highest priority. Consistent with Section 31.4 of the Tariff, the following is the priority sequence for curtailments, from highest to lowest priority:

- a. XXXX
- b. XXXX
- c. Export Self Schedules
 - i. RUC non-RA Supporting Resource
 - ii. IFM non-RA Supporting Resource
 - iii. IFM other not supported by a Supporting Resource

-However, Energy Bids are required for resources that have AS or RUC Awards, Bid or Self-Provided AS, or are under a Resource Adequacy Obligation. In order to get TOR/ETC priorities in RTM, resources need to re-submit self-schedules of type 'ETC' or 'TOR' in RTM. Otherwise, Day-Ahead Schedules of resources roll into RTM and are protected in RTM at Self-Schedule priorities and not at 'ETC' or 'TOR' priority.

Commented [AM1]: What is the definition of "high priority"? Is this something other than PT or LPT status?

Commented [AM2]: What is definition of "low priority"? Is this different than LPT status?