



Stakeholder Comments Template

Day-Ahead Market Enhancements Phase 1 Initiative

This template has been created for submission of stakeholder comments on the third revised straw proposal that was published on February 28, 2019. The proposal, Stakeholder meeting presentation, and other information related to this initiative may be found on the initiative webpage at:

<http://www.caiso.com/informed/Pages/StakeholderProcesses/Day-AheadMarketEnhancements.aspx>

Upon completion of this template, please submit it to initiativecomments@caiso.com. Submissions are requested by close of business on March 21, 2019.

Submitted by	Organization	Date Submitted
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Bonneville Power Administration (Bonneville) appreciates the opportunity to comment on the third revised straw proposal for the Day-Ahead Market Enhancements Phase 1: Fifteen-Minute Granularity.

Bonneville is a federal power marketing administration within the U.S. Department of Energy that markets electric power from 31 federal hydroelectric projects and some non-federal projects in the Pacific Northwest with a nameplate capacity of 22,500MW. Bonneville currently supplies 30 percent of the power consumed in the Northwest. Bonneville also operates 15,000 miles of high voltage transmission that interconnects most of the other transmission systems in the Northwest with Canada and California. Bonneville is obligated by statute to serve Northwest municipalities, public utility districts, cooperatives and other regional entities prior to selling power out of the region.

Please provide your organization's comments on the following issues and questions.

1. Fifteen-Minute Granularity Design Features

Bonneville appreciates the additional details and information provided by the CAISO in the third straw proposal for the Day Ahead Market Enhancements Phase 1.

Bonneville understands and supports the need for ramping flexibility in a VERs-dominated system and understands the CAISO's need to explore alternatives to hourly Day-Ahead market awards.

Bonneville supports DAME Phase 1 so long as participants retain the ability to submit hourly economic bids that ensure hourly awards are assessed using an average of the

four 15-min price clears. Bonneville also encourages the CAISO consider potential negative impacts of DAME Phase 1 to future Day-Ahead market enhancements.

Bonneville encourages the CAISO to re-evaluate its decision to prohibit Day-Ahead hourly block resources from converting to a 15-min resource in Real-Time. Removing this optionality will hinder market participants collective participation in Day-Ahead and Real-Time 15-min markets.

Bonneville also encourages the CAISO to clarify two things: 1) the only optionality the CAISO is proposing to change in DAME Phase 1 is the ability to convert a Day-Ahead hourly block resource to a 15-min resource in Real-Time and 2) that scheduling coordinators submitting Day Ahead bids for 15-min resources can vary the bid quantity and price for each Day Ahead 15-min interval.

Finally, Bonneville believes changing the CAISO Day Ahead Market to a 15-min market will increase PAC NW hydro's participation in the 15-min market only if the resulting 15 min price intervals can provide adequate financial compensation and operational benefits. Bonneville's experience is that PAC NW hydro's participation in Day Ahead and Real Time 15-min markets is not limited due to a lack of scheduling capabilities, but rather to hourly PAC NW transmission, insufficient 15-min price volatility and NW/SW price spreads, and by the dominance of seasonal, daily and hourly power and non-power hydro obligations. These power and non-power elements are rarely driven by or supported by 15-min dispatch granularity. The financial benefits of participating in the 15-min versus hourly Day-Ahead or Real-Time markets is rarely sufficient to increase the frequency or magnitude of PAC NW resource owners participation in 15-min markets.

Hourly unit commitment is proposed for the 15-minute Day Ahead market expansion. Bonneville understands the CAISO's constraints and shares CAISO's disappointment that finer resolutions are unsolvable. If hourly unit commitment is required, the CAISO should be prepared to receive 15-minute economic bids, which include the hourly opportunity cost of energy and transmission.

Ancillary Services Bonneville would like to reiterate our Ancillary Services comments previously submitted on the CAISO's second straw proposal. While Bonneville understands the logic for a 15-minute day ahead Ancillary Services market, Bonneville remains concerned with the following aspects of the Ancillary Services:

1) The opportunity cost of the required hourly unit commitment and hourly intertie transmission, as well as the CAISO's 30-minute availability requirement will likely be included in 15-minute Day Ahead Ancillary service intertie bids, increasing costs to CAISO while not necessarily increasing reliability. Because of hourly opportunity costs, intertie resources could be priced out of the CAISO Ancillary Services markets.

2) A 15-minute Ancillary services Day Ahead market may see reduced participation from intertie resources because of competing intertie values to seller (e.g. benefits of energy awards vs 15-minute Ancillary Service awards.)

3) There is an apparent disconnect between Appendix K, Part A of the CAISO's Tariff and the proposed 15-minute Day Ahead Ancillary service awards. Appendix K

requires resources to be available for 30 minutes, but the CAISO is proposing to only award on a 15-minute basis. Bonneville encourages the CAISO clarify that only Ancillary service offers that are also bid in the next interval will be held to the Appendix K 30 minute availability standard. Specifically, Bonneville is concerned that ancillary services awards made in the last 15-minute interval of the operating hour, and then not offered in the first 15-minute interval of the next operating hour, will be deliverable for **only** the 15-minutes in the 4th interval of the first operating hour and not available for the entire 30-minute requirement described in Appendix K.

Because of proposed hourly commitment and 30-minute availability rules, Bonneville encourages the CAISO to retain an option for block ancillary services in the Day Ahead Ancillary Service market.

Resource Sufficiency. In section 3.1, the CAISO states that they propose “to modify the frequency of the resource sufficiency evaluation from an hourly basis to a fifteen-minute basis.” Bonneville seeks clarification as to whether the CAISO would conduct the resource sufficiency tests on a 15-min granularity, while the resource sufficiency evaluation would continue to be conducted on an hourly basis at T-75’, T-55’, and T-40’.

In section 3.1, the CAISO describes changes to the Capacity Test and states that “the histogram of intertie declines used in the capacity test will utilize fifteen-minute data.” Bonneville requests that the CAISO provide more detailed information on how the intertie declines are calculated today versus how they will be calculated using fifteen minute data. For example, assuming that T equals the start of the next hour, Bonneville would like confirmation on whether CAISO expects to calculate the intertie declines using fifteen minute data as follows:

- The difference between the base net scheduled interchange (BNSI) at T-40’ of the 1st interval of the next hour versus the tagged interchange at T-20’ of the 1st interval of the next hour
- The difference between the BNSI at T-40’ of the 2nd interval of the next hour versus the tagged interchange at T-5’ of the 2nd interval of the next hour
- The difference between the BNSI at T-40’ of the 3rd interval of the next hour versus the tagged interchange at T+10’ for the 3rd interval of the next hour
- The difference between the BNSI at T-40’ of the 4th interval of the next hour versus the tagged interchange at T+25’ of the 4th interval of the next hour

Bonneville’s understanding of the current hourly Capacity test is that within-interval curtailments would NOT impact the requirement for the test. With the proposed 15-min test, Bonneville is concerned that potentially large within-interval tag curtailments for transmission congestion could significantly raise the incremental requirement of the Capacity Test, and thus increase the amount of bid-in capacity an EIM Entity would need to pass the Capacity Test during an extended period of time, such as thirty days or more. To reduce the likelihood of such an event, Bonneville recommends that the CAISO consider using a sufficiently large range of historical intertie decline data to

construct the histogram or offer a process for an EIM Entity to be able to remove, under certain conditions, specific tag curtailments from the histogram.

Over and Under Scheduling. In section 3.2, the CAISO proposes modifying the over and under scheduling evaluation from an hourly evaluation to a fifteen-minute evaluation. Bonneville supports the CAISO's proposed modification of the over and under scheduling charges from an hourly evaluation to a fifteen-minute evaluation with a minimum load imbalance level of 2 MW.

Settlement of Regulation Energy. Finally, in section 3.3, the CAISO proposes automatically calculating regulation energy. Bonneville cannot make a determination in support of or otherwise regarding the CAISO's proposal to automatically calculate the regulation energy without additional details from the CAISO. Bonneville requests that CAISO explain how they propose to use the regulation up and down MW quantities included in the hourly resource plan to automatically calculate the regulation energy. Also, would EIM Entities specify upward and downward available balancing capacity quantities in their hourly resource plan in addition to the regulation quantities?

Bonneville understands that the proposal for settlement of regulation energy would eliminate the need for the EIM Scheduling Coordinator to inform the CAISO through a manual dispatch to ensure the deviations are classified as instructed imbalance energy as indicated in Section 3.3.

Bonneville requests the option to inform the CAISO through manual dispatch to continue to be available for EIM Entities to ensure that regulation energy can accurately be classified as instructed imbalance energy. For instance, Bonneville has these two foreseen needs to do this: a) the sale of regulation energy from Bonneville to another balancing authority area (which could be the CAISO BAA and/or an EIM Entity BAA); and b) the use of regulation energy in concert with Overlapping Resource Aggregation.

2. Energy Imbalance Market Governing Body Role

Please provide your organization's feedback on the EIM Governing Body Role as described in section 4 of the proposal. Please explain your rationale and include examples if applicable.

Bonneville reiterates its support for the expansion of the primary authority of the EIM Governing Body over the real-time market and any extension of the day-ahead market to EIM Entities that we have provided in the EIM Governance Review. Bonneville anticipates a robust dialogue in the CAISO's recently initiated EIM Governance Review.

Bonneville supports the CAISO staff's interpretation of the current EIM decision classification rules for this initiative described in Section 4.

The proposal offers a reasonable opportunity for the EIM Governing Body to provide its approval on two elements and advice to the CAISO Board of Governors on the balance of the proposal. Regarding the two approval elements, Bonneville concurs that the settlement of regulation energy should remain severable and agrees that the 15-minute base schedules would not be severable. As a result, the 15-minute base schedules would need to be approved first by the EIM Governing Body and then included in the consent agenda of the CAISO Board of Governors.

Additional comments