



Stakeholder Comments Template

Day-Ahead Market Enhancements (DAME) Initiative

This template has been created for submission of stakeholder comments on the revised straw proposal that was published on June 8, 2020. Materials related to this initiative can be found on the ISO website at: <http://www.caiso.com/StakeholderProcesses/Day-ahead-market-enhancements>.

Upon completion of this template, please submit it to initiativecomments@caiso.com. Submissions are requested by close of business on July 6, 2020.

Submitted by	Organization	Date Submitted
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Please provide your organization's overall position on the DAME revised straw proposal:

- Support
- Support w/ caveats
- Oppose
- Oppose w/ caveats
- No position

Please provide written comments on each of the revised straw proposal topics listed below:

1. Updated market formulation:

The comments in this section refers to the example presented by the CAISO staff in the stakeholder meeting on June 17. In slide 2 of CAISO's materials for that meeting, CAISO illustrates a scenario wherein load bids 125 MW at \$50, with a forecast of 150 MW.¹ PSE is generally supportive of the updated market formulation, but is concerned that the simplicity of this scenario leaves important questions about how the proposal

¹ CAISO's meeting materials are available at <http://www.caiso.com/InitiativeDocuments/Presentation-Day-AheadMarketEnhancements-MarketFormulation.pdf>.

would work in a more realistic example unaddressed, as set forth below.

Pass 1: Page 2 refers to the first pass to find (1) commitment solution for physical generators G1, G2, G3 and (2) the RCU/RCD quantity to fill the gap between bid-in load and forecast load. This pass commits G1 and G2 for energy and G3 for RCU.

Pass 2. Generators G1, G2, G3 are fixed commit so they have to be up and running at least at Pmin.

The scenario is too simplistic in that all physical generators' Pmin = 0 while in reality nearly all physical generators have Pmin>0 and non-zero min load cost. As an example, suppose G2's Pmin=20MW and it is committed in Pass1. EN from G2 needs to be dispatched at least at Pmin=20MW even though the unit is out of merit. PSE requests that the CAISO address the following questions that flow from this more realistic scenario:

- Who is making G2 whole for running at Pmin=20MW?
- If and when out-of-merit commitments such as G2's becomes dominant due to fixing commitment from Pass 1 to Pass 2, is the market efficiency going to be compromised?
- Fixing commitment and out-of-merit dispatch as observed above tends to depress market clearing prices in the final pass. Is that a fair market signal for physical resources?
- Is there a potential market design issue where (1) high need for RCU/RCD correlate with inefficient unit commitment and (2) unfair market clearing prices for physical resources? An efficient market must be designed to strike the balance between (1) and (2).
- Can fast-start pricing play a role in setting a more efficient price?

2. Accounting for energy offer cost in upward capacity procurement:

PSE agrees that the day ahead market must consider the underlying real-time energy costs when dispatching RCU and IRU because these can be expected to be regularly dispatched due to virtual supply bidding and changes in the net load forecast. PSE agrees that an energy cap of some form is also required to ensure that resources with low RCU and IRU bids but with high real-time energy costs are not awarded RCU or IRU in the day-ahead market over resources with less expensive real-time energy costs.

PSE also agrees that ideally there would be another market pass through which the energy offer cap could be set. Recognizing that this is not possible, resources must

increase their RCU and IRU bids relative to a known energy offer cap in order to fully recover their expected costs of delivering energy in real time.

Consistent with opinions brought up on the stakeholder call, PSE does not believe, however, that a resource being required to bid below its actual cost in the real-time market due to the cap leads to an efficient market. The CAISO should not pursue an approach that incorporates this concept. PSE believes that the CAISO's approach to attempt to quantify the cap using the p97.5 net load forecast is sound, but would necessitate a mechanism to ensure that resources can bid their actual costs in the real-time market when conditions do not materialize as expected (e.g., real time gas prices rise significantly). PSE agrees that protocols developed in CCDEBE could be used to provide for a lifting of the cap, but believes this should be done before the real time market runs rather than as an uplift out of market payment to resources.

3. Variable energy resources:

By proposing a separate imbalance reserve product to address the net load uncertainty between the day-ahead and real-time markets with 15 minute granularity, CAISO has addressed the participation of VER resources in the day-ahead market.

The proposal provides that:

in the future if it was determined that variable energy resources are needed to provide the upward capacity products, the variable energy resources would be required to provide day-ahead energy bid curves with the upper economic limit established by the CAISO forecast. In addition, the calculation of reliability capacity in the market passes would need to be modified to use the energy schedule rather than the CAISO forecast and the deployment scenarios would likewise need to be modified for variable energy resources to provide the upward capacity product.²

As such, the current design proposal integrates VERS as curtailable resources with eligibility for downward balancing products only. PSE requests that CAISO provide guidelines on how it proposes to engage stakeholders for a discussion regarding making VERS fully dispatchable in the market.

4. Market power mitigation for reliability capacity and imbalance reserves:

PSE recognizes the need for market power mitigation of reliability capacity and imbalance reserves products in the day ahead market. Using the 90th percentile of spin costs as mitigation price seems to miss some important considerations such as: (1) the other 10 percent of occurrences when prices are high and there is a high

² <http://www.caiso.com/InitiativeDocuments/RevisedStrawProposal-Day-AheadMarketEnhancements.pdf>, page 27.

chance for market power mitigation; and (2) the fact that current fundamentals and market conditions may be different than historical. PSE recommends that the CAISO continue to address these concerns in subsequent versions of this proposal.

5. Please include additional comments including considerations for other possible solutions or concerns to any of the above topics:

In the first market pass, the CAISO proposed to determine the physical resources needed to meet the physical needs of needs of the system, procuring energy, imbalance reserves, and reliability capacity if bid in demand and bid in VER supply differs from the CAISO's forecast. The second pass introduces virtual supply and demand bids which, depending on their bid prices, may alter the awards from the first market pass. However, CAISO notes that in the event that virtuals drive the need for increased RCU capacity, more RCU capacity will be procured. PSE believes that this addresses potential reliability concerns with the market formulation proposed in the revised straw proposal.

The CAISO also notes that virtual supply and demand will be allocated the cost of RCU and RCD if they drive the need the need for procurement of this capacity. Physical resources that receive energy awards are not allocated these costs. This difference helps recognizes the value of energy that physical resources provide and effectively reduces the energy award forward for non-physical supply, resulting in a premium for physical supply when virtual supply is driving the need for RCU procurement. PSE supports this approach to valuing the attributes of physical supply in the DAME/EDAM markets.