California ISO

Stakeholder Comments Template

Day-Ahead Market Enhancements (DAME) Initiative

Submitted by	Organization	Date Submitted
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Please provide written comments on each of the revised straw proposal topics listed below:

1. **Updated market formulation:**

Calpine supports efforts to reform the Day-Ahead market in ways that remove systemic differences between DA and RT.

We have historically been frustrated by understandable, but disruptive CAISO Operator intervention in markets (and therefore price formation) after the IFM market closes. In particular, we have objected to, and now hope to eliminate or dramatically reduce, the frequency and magnitude of load conformance adjustments (load biasing) and operation of the much-maligned evil twin, the load conformance limiter (and seek the CAISO commitment to do so).

We believe that the development of a locationally-specific, Imbalance Reserve product in the DA should result in schedules and capacity that will offset the expected and unexpected variability in resources, particularly during ramps when operators historically have been most-inclined to intervene in the market.

As such, we are unwaveringly in support of the creation of a co-optimized Imbalance Reserve product. We are willing to suffer the added complexity of a new co-optimized capacity product for the clear benefits expected. This should be the minimally acceptable change to the DA market.

We also understand the locational deliverability of this product is critical to meeting RT operational needs. Of course, we also understand that as one moves to a locational capacity product, one must consider the need for possible market power mitigation, as we discuss below.

Calpine also understands the need for a Reliability Capacity product, the intent of which is to ensure that the DA market has a robust physical solution to the ISO's probabilistic view of RT load and supply. If the CAISO needs to re-position or pre-position physical resources for RT – as it currently does in RUC – we see the benefit of co-optimizing this capacity with other DA market products. There is a marginal efficiency gain to performing this analysis in one co-optimized market rather than in two sequential markets, as is today.

In summary, Calpine supports the market formulation changes to introduce an Imbalance Reserve product. We also see the marginal benefits to combining the IFM and RUC runs through the introduction of a Reliability Capacity product.

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

The ISO proposes to implement a RT energy bid cap for DA awards of upward Imbalance Reserves and Reliability Capacity in order to differentiate between identical DA capacity bids. As we understand the proposal, this hypothetical problem would only occur if the co-optimization found that the sum of the opportunity cost of the underlying DA energy bids plus the capacity bids resulted in an identical total cost – in our view a highly unlikely circumstance that is hardly worth the potentially negative impacts of setting a bid cap well below that currently allowed in the tariff and compressing the time available to meet bid submission deadlines. Rather, it seems rather straightforward to accept the DA capacity bid that is paired with the lowest DA energy bid thereby resolving the equal-cost dilemma while preserving the reasonableness of the RT market. Subsequent LMPM (or SMPM) mechanisms can be used to manage the abuse of market power in RT.

Separately, the creation of that RT energy bid cap presents the ISO with a chicken-or-the-egg problem that is unresolved and could fatally curse this proposal[1]. It seeks to establish a RT energy bid cap based on DA bids, but they also seek to create that bid cap before the DA market closes so as to allow market participants the opportunity to reflect any possible RT revenue shortfalls in its capacity bids.

Setting aside the infrequency of the problem or the difficulties of determining an energy bid cap, Calpine suggests that the CAISO discuss further implications such as the effect this bid cap would have on uncommitted capacity – that is, if some small part of available capacity is awarded (say 10 MW of Imbalance Reserves where there is 100 MW of uncommitted capacity), and the energy bid is mitigated to the pre-determined level in RT, would the uncommitted capacity above that award also be mitigated? Also, how would this mitigation interact with local Market Power Mitigation as well as the prospective System Market Power Mitigation?? Which if the possible three mitigated RT prices would apply? If LMPM or SMPM resulted in a mitigated RT bid lower than that presumptively allowed by the

[1] The CAISO says: "CAISO is determining how to forecast the P97.5 net load price and evaluating the implementation feasibility"

contemplated RT cap, it appears that revenues could be systemically below cost. Moreover, if awarded Imbalance Reserves possesses market power in RT (for instance because it is pivotal in a local area) why wouldn't LMPM (or SMPM) effectively limit energy bid manipulation?

Resolution of these matters would greatly affect Calpine's view of this proposal. We look forward to clarifications in future drafts.

3. **Variable energy resources:**

   No Comment

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

   Calpine understands that as the CAISO moves toward locationally deliverable capacity products, that market power should be considered. However, we also understand that the CAISO intends on including demand curves and a hard bid cap on Imbalance Reserves and Reliability Capacity. The demand curve is a form of mitigation, since the quantity demanded will depend on the price offered. The top end of the demand curve will likely include the current capacity bid cap, which presumably would relax the capacity constraint and cease all procurement. We do not see the need for an additional and arbitrary mitigated bid cap (especially at a price as low as $30.) In fact the creation of such a bid cap could force the optimization engine to purchase Reliability Capacity (and/or Imbalance Reserves) with bid-based priority over higher quality (or WECC-required) capacity products such as Regulation Up or Spin. In any regard, the procurement mechanisms of these highly substitutable products must be harmonized.

   That said, if demand curves are envisioned for Imbalance Capacity and Reliability Capacity, we would strongly support their development early in this stakeholder initiative, as well as their integration with other capacity product procurement mechanisms.

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

   No comments.

   Thanks.