



Comments of Cogentrix Energy Power Management, LLC on Day-Ahead Market Enhancements Updated Revised Straw Proposal

Submitted by	Company	Date Submitted
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Cogentrix Energy Power Management, LLC (Cogentrix) appreciates the opportunity to comment on the *Updated Revised Straw Proposal for Day-Ahead Market Enhancements* (Proposal) and the *Agenda Presentation Day-Ahead Market Enhancements, June 19 2018, Updated* (Presentation). Upon review of the Proposal and Presentation, Cogentrix submits the following comments.

I. Comments

Cogentrix concurs with CAISO that “the purpose of the day-ahead market is to provide price certainty and to schedule resources in advance to ensure operational reliability of the bulk electricity grid in real-time.”¹ Consistent with that mandate, the purpose of the Day-Ahead Market Enhancement initiative is to improve grid reliability in the day-ahead market. Included with improvements to grid reliability is a shift from hourly to fifteen-minute granularity. Additionally, the CAISO proposes to co-optimize the integrated forward market (IFM) with the residual unit commitment (RUC) processes, and procure a new Flexible Ramping Product (FRP).

Cogentrix recognizes the importance of grid reliability and is in favor of the CAISO managing uncertainty between the day-ahead and real-time markets through economic dispatch to the extent that those efforts ultimately support grid reliability. However, the ambitious timeframe for defining the proposed enhancements and refining them through the stakeholder process is inconsistent with the historical pace of these type of initiatives, and that inconsistency is concerning. As evidenced by the comments below, there are a number of key questions that must be unequivocally addressed before this process advances to final stages to ensure that the day-ahead enhancements result in a more reliable grid that provides sufficient price signals to incent investment in ongoing maintenance and operation of critical generation resources. Cogentrix’s

¹ CAISO *Revised Straw Proposal – Day-Ahead Market Enhancements*, April 11, 2018, pg. 5

position at this stage in the initiative is that the proposed policy is in too nascent of a stage, with too many foundational questions outstanding, to support proceeding to CAISO Board or FERC approval of tariff revisions to implement the market changes.

II. Specific Comments

A. Ability for a resource to express its relative willingness to provide flexible ramping versus other ancillary services

Under the updated revised day-ahead enhancement proposal, resources will not have the ability to fully differentiate price and quantity for flexible ramping versus other ancillary services in the day-ahead and real-time markets. This is due to the initial proposal to mandate \$0 bids for RA capacity for the FRP product and \$0 for any resource that has a DA FRP schedule for spinning and non-spinning reserves. Cogentrix submits that even in processes that result in temporary or transitional provisions, efforts should be made to determine appropriate market structures and enable price formation. Anything other than such action raises red flags. Cogentrix seeks resolution of the following material issues:

1. How can the CAISO ensure that limiting ability to differentiate products will result in an optimal resource mix in the day-ahead and in the real-time?
2. Will this approach not increase the burden of work on CAISO operators to evaluate the resources best suited to provide energy and those best suited to provide ancillary services in real-time, rather than delivering a framework that allows bids to deliver an economic outcome?
3. Is there the potential that this structure results in CAISO overpaying for certain products and underpaying for others, i.e. establishing an inherently inefficient market?
4. If the market for certain products consistently clears below the cost of providing those services, is the change likely to result in increased exceptional dispatch and backstop procurements by the CAISO?
5. What if the term for initial proposal mandating \$0 bids for RA in the day-ahead is extended? Is it appropriate to indefinitely require \$0 bids for a product?

B. Potential impact of minimum load reliability capacity and uncertainty capacity on the day-ahead LMP

Cogentrix is also concerned about the potential incorrect suppressive impact of minimum load energy for reliability capacity and uncertainty capacity on the LMP. The minimum load impact makes sense as it is currently experienced in the market when minimum load is being scheduled for energy purposes. When minimum load is scheduled for reliability capacity and uncertainty capacity, the LMP should not be impacted. Cogentrix seeks clarification that this is not the intent of the draft proposal and that it will either not occur, or that if this risk does exist under the

current draft that it will be corrected to address this concern. This concern is best illustrated through an example.

Example:

For purposes of the example, bid-in demand is 30,000 MW (no congestion, no losses).

Figure 1: Illustrative incremental supply curve in day-ahead market (Present Market Design)

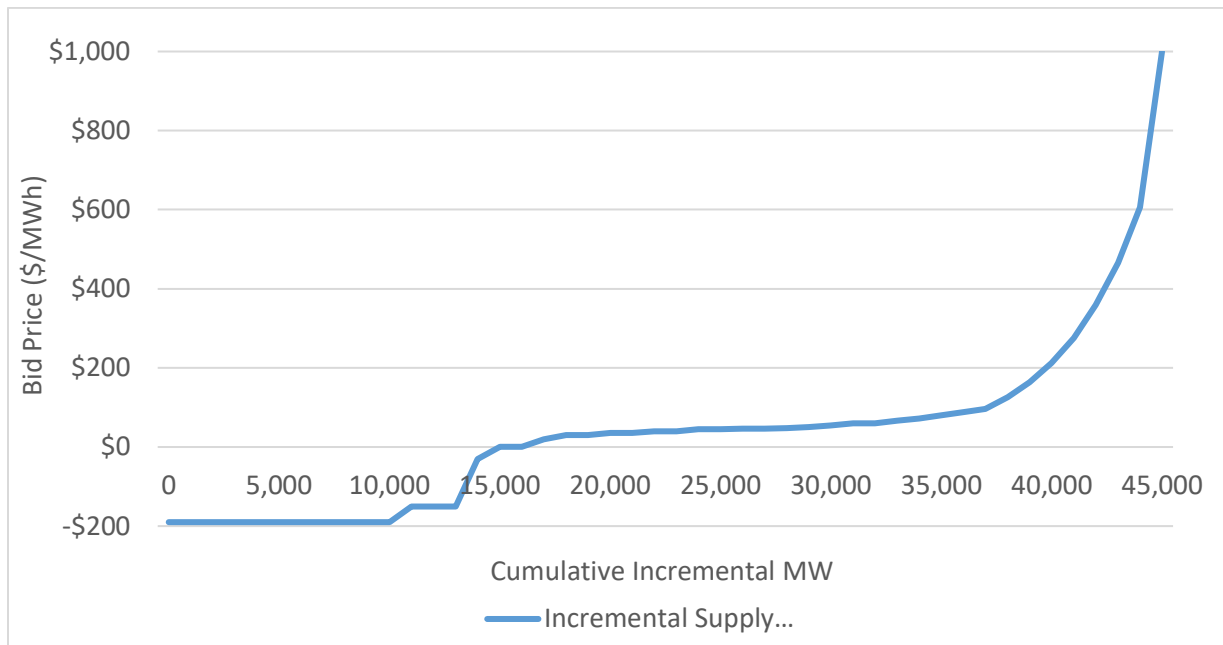
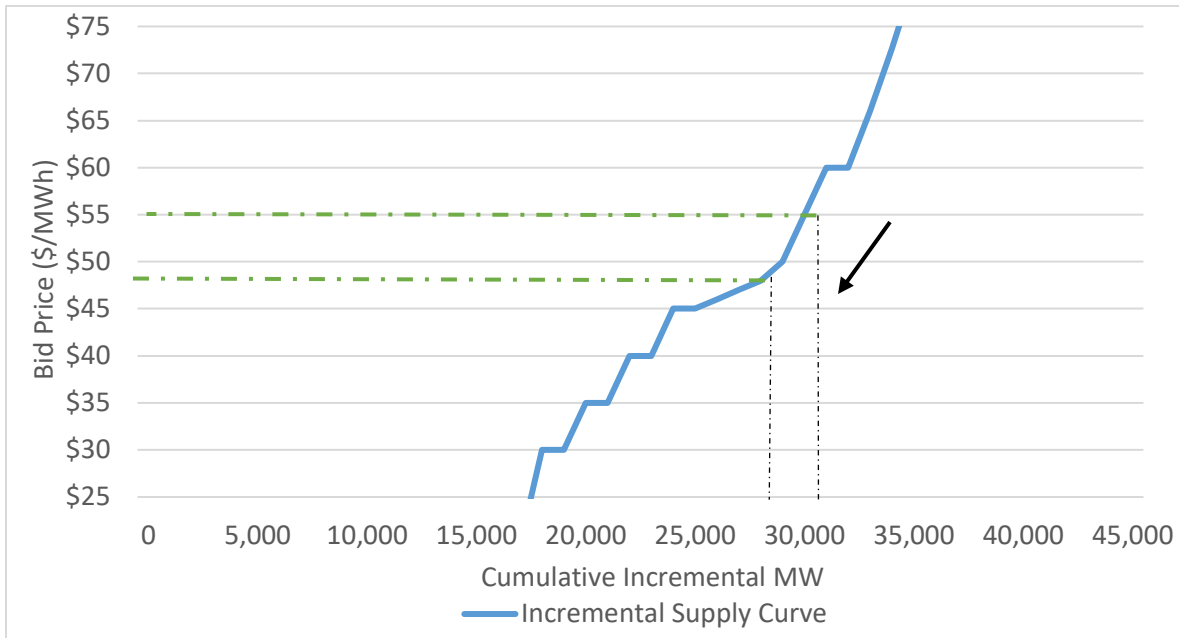


Figure 1 shows an incremental supply curve in the day-ahead market for an average weekday in March. Under current market design, the day-ahead market minimizes total costs rather than incremental costs. The optimization ensures bid-in demand is met through both minimum load energy and incremental energy. Therefore, resources' minimum load energy impacts the day-ahead energy price, regardless of whether the resource has a binding or non-binding commitment. This makes sense for energy being committed in the day-ahead market and, in order to not over-commit resources, the optimization must account for all energy, including minimum load.

Figure 2 illustrates this conceptually and shows that the optimization must account for the minimum load energy. In the example, the total requirement on a purely incremental basis would set a price of \$55/MWh. The total amount of supply, however, must be net of minimum load which will cause the price to fall lower on the supply curve, at say \$48/MWh. The marginal price then, is not \$55/MWh, but instead \$48/MWh. This is a simplified example, but illustrates a reasonable approximation of a typical impact of minimum load energy on LMP.

Figure 2: Price impacts of accounting for minimum load energy in market optimization



Presently, RUC minimum load is not included in the LMP formation. Therefore, regardless of the amount of energy committed in the RUC process, the energy and the minimum load does not impact the day-ahead market price.

It is Cogentrix’s understanding that the CAISO’s proposal to co-optimize RUC and IFM will change this logic. If the CAISO needs additional MW to meet the day-ahead flexible ramping up requirement, Cogentrix is concerned that the associated minimum load energy, which does not set LMP, will be included in the price formation and consequently push down the day-ahead LMP.

Cogentrix requests that the CAISO confirm whether the impact outlined above of co-optimizing DA and RUC is accurate. If the impact of co-optimizing DA and RUC is downward pricing pressure, Cogentrix inquires whether there are alternative methodologies that the CAISO could consider along with the current proposed design so that all potential options, with pros and cons, can be discussed.

C. Other pricing impacts

The pricing impacts of requiring RA resources to bid \$0 in the day-ahead market during the transition period until the end of 2020 or the implementation of the Extended Day-Ahead Market (EDAM), whichever comes first, is unclear. While the CAISO states that resources will be compensated for “any opportunity cost for not providing energy to meet the day-ahead FRP uncertainty requirement,”² the methodology governing the opportunity cost formulation requires clarification. Opportunity cost is key to understanding the ramifications of this process, and

² CAISO Agenda Presentation Day-Ahead Market Enhancements_Jun19 2018_Updated, pg. 35

deferring the presentation of opportunity cost calculations until the end of the process has the potential to undermine the integrity of the process. In addition, the necessity of transition bidding rules further highlights the need for a longer, more in-depth, stakeholder process.

D. Demand curve procurement

According to the CAISO's *Agenda Presentation Day-Ahead Market Enhancements, June 19 2018, Updated*, CAISO plans to procure the day-ahead FRP using a demand curve. However, no details were provided around the conceptual methodology for calculating the associated demand curve. Cogentrix requests additional information on the proposed demand curve methodology. In particular, Cogentrix would like to understand how the CAISO will guarantee that, at a minimum, the CAISO forecast will be met with FRP being procured on a demand curve. Additionally, Cogentrix would like to understand how the CAISO plans to ensure that procurement on a demand curve will not lead to an increase in backstop procurement by the CAISO.

III. Conclusion

Cogentrix reiterates the importance of establishing robust price and market formation that ensures reliability and incents necessary investments in flexible resources so that they can continue contributing critical grid reliability. Cogentrix thanks the CAISO for the opportunity to provide these comments and looks forward to its response.