

**Comments on Day-Ahead Market Enhancements:
June 20, 2019 Technical Workshop
Department of Market Monitoring**

July 24, 2019

The Department of Market Monitoring (DMM) appreciates the opportunity to comment on the June 20, 2019 Day-Ahead Market Enhancements (DAME): Technical Workshop.¹ The ISO has asked for feedback on two options for moving forward with the Day-Ahead Market Enhancements initiative.

DMM does not support the ISO moving forward with Option 2 Integrated IFM-RUC at this time based on the following:

- Integrating the IFM and RUC is not needed to meet the ISO's objectives for DAME, and meeting those objectives will require substantial design work.
- It is not clear that integrating IFM and RUC will lower combined commitment costs.
- The ISO has not made a compelling case for changing how energy supply offers compete in the day-ahead market.
- The ISO's Option 1 (Sequential IFM-RDA), or other options with a separated IFM and reliability unit commitments, can achieve the ISO's objectives in the DAME initiative without the complications of an integrated IFM-RUC.

Introducing a day-ahead flex ramp product requires careful consideration of how this product will relate to the real-time market design and real-time flex ramp products. The value of the day-ahead flex ramp product may be significantly reduced, or its costs increased, if it is not properly aligned with the real-time market design. Dropping the 15-minute day-ahead granularity has only made this more important.

DMM continues to recommend local (i.e. transmission constrained) procurement for both the day-ahead and real-time flex ramp products, and increasing the time horizon over which the real-time products are procured.² Without local procurement flex ramp capacity may not actually be available for an energy procurement that is transmission constrained. Without an increased real-time flex ramp product horizon, the real-time market may less efficiently and less fully use the flexible capacity procured in the day-ahead market.

¹ *Day-Ahead Market Enhancements: Stakeholder Technical Workshop*, California ISO presentation, June 20, 2019: <http://www.caiso.com/Documents/Presentation-Day-AheadMarketEnhancementsWorkshop-Jun20-2019.pdf>

² Department of Market Monitoring *2018 Annual Report on Market Issues and Performance*, May 2019, pp.23: <http://www.caiso.com/Documents/2018AnnualReportonMarketIssuesandPerformance.pdf>

The design of both the day-ahead and real-time flex ramp products needs more attention and work in the DAME initiative process. The flexible ramp products are key to achieving the objectives of the DAME initiative. The focus should be on the design of these products.

The ISO does not need an integrated IFM-RUC to meet its objectives for DAME

The ISO's goals for this initiative, as DMM understands them, are to procure flexible reserves in the day-ahead market that 1) meet ramping needs arising from market interval granularity differences, 2) address net load uncertainty, and 3) are deliverable.³ Combining the day-ahead integrated forward market (IFM) and residual unit commitment (RUC) process is not needed to achieve these goals.

The purpose of combining the IFM and RUC into a single process appears to be minimizing the joint unit commitment cost across the IFM and RUC.⁴ This is a separate goal from the ISO's stated goals in the DAME initiative.

Not clear that integrating IFM and RUC will lower combined commitment costs

The idea that combining the IFM and RUC into a single optimization will reduce commitment costs implicitly assumes that the current RUC commitments are binding, i.e. that the resources committed in RUC will actually run and incur costs. But this is not always the case. Many RUC commitments are not binding and the ISO forecast is not always correct. Because this implicit assumption does not always hold, integrating IFM and RUC can also increase commitment costs (and other costs) compared to the current process.

For example, take the case from the technical description where the IFM commitment has insufficient online capacity to meet the ISO's load forecast.⁵ The RUC commits an additional resource that, if committed in the IFM, would cause an IFM committed resource to not be committed. Now consider what happens if the RUC commitment is not binding and the real-time load comes in lower than the ISO forecast such that the additional capacity from the RUC committed resource is not needed.

In the current process of running IFM and subsequently running RUC, the RUC committed resource is never turned on, no commitment costs are incurred, and the day-ahead awards and prices remain determined by market participant bids and offers.

In the proposed integrated IFM-RUC, the day-ahead market solution has higher costs because the less efficient solution with the RUC commitment is chosen to meet the constraint imposed

³ California ISO June 20, 2019 presentation p.6.

⁴ *Day-Ahead Market Enhancements Appendix C: Draft Technical Description of IFM-RUC*, California ISO, May 31, 2019 p.2: <http://www.caiso.com/Documents/DraftTechnicalDescription-Day-AheadMarketEnhancements-IntegratedForwardMarket-ResidualUnitCommitment.pdf>

⁵ California ISO, *Draft Technical Description of IFM-RUC*, May 31, 2019 p.2

by the ISO's incorrect forecast. The day-ahead awards and prices are also altered from what they would have been if determined only by market participant bids and offers.

In some cases an integrated IFM-RUC will lower commitment costs. In other cases it will increase costs. It is not clear what the net effect will be.

The ISO has not made a compelling case for changing how energy supply offers compete in the day-ahead market

Under the proposed integrated IFM-RUC, the ISO will determine which energy supply offers are "reliable energy" (or potentially "how reliable" they are). The market would clear based on the ISO's determination of how "reliable" an offer is and how much "reliable" energy is needed to meet the ISO's forecast in addition to the offer prices. This is a significant change from the current market clearing and alters how energy supply offers compete in the day-ahead market. Such a change, in DMM's view, would require some very compelling reasons for how this change would fix significant problems with the current market design. DMM does not think the ISO has made a compelling case to change how energy supply offers compete in the day-ahead market.