



**COMMENTS OF NV ENERGY
UPDATES TO REVISED STRAW PROPOSAL
DAY-AHEAD MARKET ENHANCEMENTS
DATED JUNE 19, 2018
CAISO STAKEHOLDER PROCESS**

July 10, 2018

NV Energy appreciates the opportunity to comment on the CAISO's Updated Revised Straw Proposal for the Day-Ahead Market Enhancements. Our comments are in response to the proposed changes to the existing Day-Ahead Market, therefore the proposals should be reexamined in any future regional or expanded Day-Ahead Market (EDAM) stakeholder initiative. Additionally, NV Energy is looking forward to CAISO's draft impact assessment, and respectively requests for that assessment to address the potential impact to market prices for the Day-Ahead and Real-Time Markets. The most notable change in the update was the name modification of the Imbalance Reserve Product to the Day Ahead Flexible Ramp Product and the addition of a demand curve. The use of the demand curve more closely aligns the design of the Day-Ahead Flexible Ramp Product to the current Real-Time Flexible Ramp Product. However, a Day-Ahead Flexible Ramp Product is still a form of an ancillary service reservation of capacity, a reserve product, in the day ahead timeframe.

I. Impacts to the EIM of a 15 Minute Day-Ahead Market

NV Energy agrees that a 15 minute Day-Ahead Market award should schedule resources to better handle large intra hour ramps that occur with net load changes. However, as stated in previous comments, NV Energy requests that CAISO continue to allow the submission of hourly base schedules for non-participating resources. Hourly scheduling has been a longstanding scheduling practice under the OATT and transmission customers may have arranged their supply contracts with this as the scheduling practice. Further, there may be cost impacts for modifying various systems to accommodate sub-hourly data submissions that may be significant to smaller entities.

II. Impacts of the Day-Ahead Flexible Ramping Product

NV Energy does not support the day ahead flexible ramping product. CAISO stated that "the current Day-Ahead Market structure results in a suboptimal (higher cost) unit commitment solution because it is achieved in two stages with different objectives."¹ This statement refers to the need to combine the IFM and RUC optimization runs. NV Energy agrees that a combined optimization run should provide a more optimal (lower cost) solution. Nevertheless, NV Energy is concerned that adding a day ahead flexible ramping product (capacity reservation product) to this optimization run would create a suboptimal unit commitment solution. A suboptimal unit commitment solution would increase the bid cost recovery (BCR) uplift paid by load. Resources will be committed in the Day-Ahead Market solution to provide enough up and down capacity to meet the flexible ramp need that is determined by the demand curve.



The demand curve is a step in the right direction by limiting the flexible ramp procurement by the calculated need, but this day ahead product will commit additional resources for uncertainty needs. This additional procurement will impact the costs paid by load (capacity cost plus a potential increase in BCR payments) and may impact market prices as there might be surplus of energy available to the market. In addition to the potential increase in uplift, the load will be paying for additional capacity to meet uncertainty that may or may not be realized. Therefore, it is very important that CAISO perform market analysis of these impacts to the Day-Ahead and Real-Time Markets.

CAISO states that the day ahead flexible ramping product is needed to ensure there is enough flexible ramping capacity to meet ramping needs in real time. CAISO has provided data illustrating the imbalances between the day ahead and real time markets. From NV Energy's perspective the imbalances between these markets are due to the nature of having the day ahead and real time markets. CAISO has never provided data showing the lack of economic real time market bids to satisfy these imbalances. Without this demonstration, it is difficult for NV Energy and other stakeholders to assess related questions such as: Does CAISO not have enough resources available for the fifteen minute market and real time market flexible ramp product? Does CAISO have a lack of economic bids in real time to meet imbalances? Consequently, can CAISO demonstrate the hours of deficiency and quantity of the deficiency (excluding any hours deemed not necessary to procure per the demand curve)?

a. Day Ahead Flexible Ramp Product Bid

CAISO has proposed to allow a day ahead flexible ramping product and contingency modeling enhancement bid at the same bid price in the day ahead market. Yet, it is unclear how the bidding structure will work for the flexible ramping product. Additionally, CAISO has stated that only the contingency modeling enhancement cost will be mitigated when the dynamic competitive path assessment is not competitive. Moreover, this contingency modeling enhancement cost should not include the opportunity cost of the flexible ramping product. NV Energy seeks clarification from the CAISO on the following areas: Why does CAISO believe the flexible ramping product bid may not be mitigated during non-competitive conditions? Additionally, how will the contingency modeling enhancement bids not include the opportunity cost if it is the same bid as the flexible ramp product bid? What opportunity costs should be included in a flexible ramp product bid? In addition, NV Energy encourages the CAISO to provide a detailed section around the flexible ramping product bidding structure in the next paper, including a formulaic calculation of the costs to be included in a flexible ramp product bid.

b. Reliability Capacity

NV Energy is supportive of CAISO procuring physical capacity to meet the reliability capacity or demand forecast. Commitment decisions in day ahead should be determined by meeting cleared load with enough unloaded capacity (flexible ramp capacity) to meet the demand forecast. This portion should not be an optional portion of the demand curve.

c. Uncertainty Requirement

NV Energy is supportive of the ensemble option presented by CAISO to calculate the uncertainty requirement. This option looks as if it calculates a less overstated uncertainty requirement. However, there are still instances where the requirement may be overstated by 1,000 MWs in the CAISO balancing authority area.² NV Energy proposes that CAISO also cap the ensemble or quantile options by the histogram approach. This would incorporate a cap for the highest uncertainty procured.

i. 95 Percentile

CAISO has initially proposed to use the 95th percentile to calculate the uncertainty requirement. NV Energy does not support this level of uncertainty in a day ahead timeframe. This level of uncertainty is more appropriate for real time, and would result in an over procurement of capacity in day ahead to meet uncertainty that may not be realized.

ii. Extended Short Term Unit Commitment (ESTUC)

The extended short term unit commitment (ESTUC) should be able to commit enough resources to meet the uncertainty from day ahead to real time. NV Energy questions the need of a day ahead flexible ramp product when CAISO plans to also extend the short term unit commitment run to 18 hours.

“The STUC uses binding commitments from the day-ahead market in its optimization. STUC analyzes existing binding commitments, real-time bids, and the current demand forecast in its market re-optimization. If it recognizes the need to change commitments, or it can more economically achieve the necessary solution, it will commit or de-commit resources with a start-up or shut-down time within its horizon.”³

The STUC optimization run uses more up to date forecast data to determine when to issue commitment instructions. NV Energy respectfully requests the CAISO to demonstrate why there is also a need for a day ahead flexible ramping product, which potentially creates a suboptimal unit commitment solution and requires load to pay for capacity that it may or may not need in real time.

d. Proposal for ESTUC and Day Ahead Flexible Ramp Product

NV Energy proposes a different solution to obtain flexible ramping capacity prior to real time, but only proposes this solution if there is a need for this excess ramping capacity. Day ahead should continue to commit resources to meet cleared load with additional unloaded capacity to meet the demand forecast (reliability capacity). The flexible ramp product could be procured in real time on the extended short term unit commitment optimization run. This captures a better forecast and ensures there are enough resources online to meet any uncertainty. From NV Energy’s perspective, flexible ramping is a real time market issue that is difficult at best to identify with any accuracy beyond the real-time horizon. NV Energy therefore questions whether or not it is appropriate to solve that issue with capacity procured in day ahead.



—¹Appendix C – Day Ahead Market Enhancement Draft Technical Description.

<http://www.caiso.com/Documents/RevisedAppendixC-Day-AheadMarketEnhancementsDraftTechnicalDescription.pdf>

² Day Ahead Market Enhancements Presentation. <http://www.caiso.com/Documents/Agenda-Presentation-Day-AheadMarketEnhancements-Jun19-2018-Updated.pdf>. Slide 62

³ Extended Short-Term Unit Commitment Draft Final Proposal.

<http://www.caiso.com/Documents/DraftFinalProposal-ExtendedShortTermUnitCommitment.pdf>