

**Stakeholder Comments Template
Day-Ahead Market Enhancements Initiative**

This template has been created for submission of comments on proposed market design options discussed with stakeholders during the August 13, 2019 Day-Ahead Market Enhancements working group meeting. Information related to this initiative is available on the initiative webpage at:

<http://www.caiso.com/informed/Pages/StakeholderProcesses/Day-AheadMarketEnhancements.aspx>.

Upon completion of this template, please submit it to initiativecomments@caiso.com. Submissions are requested by close of business on August 27, 2019.

Submitted by	Organization	Date Submitted
<i>Brian Theaker</i>	<i>NRG Energy, Inc.</i>	<i>August 23, 2019</i>

Please provide comments on the preferred market structures that were discussed during the August 13, 2019 working group meeting. Include the pros and cons for each option.

- At this time, does your organization support moving forward with **Option 1: Financial**, **Option 2: Financial + Forecast**, or **undecided**. Provide supportive comments (in favor of, or in opposition to) below.

Please double click on check box below to select your position:

<p><u>Option 1:</u></p> <p><input type="checkbox"/> Support</p> <p><input type="checkbox"/> Support with caveats</p> <p><input checked="" type="checkbox"/> Oppose</p> <p><input type="checkbox"/> Uncdecided</p>	<p><u>Option 2:</u></p> <p><input type="checkbox"/> Support</p> <p><input type="checkbox"/> Support with caveats</p> <p><input type="checkbox"/> Oppose</p> <p><input checked="" type="checkbox"/> Uncdecided</p>
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Option 1: Financial

- Co-optimizes bid-in demand, ancillary services and imbalance reserves
- Imbalance reserves cover historical uncertainty between IFM cleared net load and FMM net load
- Exceptional dispatch if IFM clears inconsistent with operational needs

Please provide comments to explain your position on option #1:

NRG's primary objection to Option 1 is that it relies on Exceptional Dispatch to direct units to meet the CAISO's forecast demand and other operational needs.

Pros of option #1:

- Procuring imbalance reserves in the Day-Ahead time frame to cover the P95 uncertainty envelope.

Cons of option #1:

- Relying on Exceptional Dispatch to position units to meet the CAISO's demand forecast and other forecast operational needs.

Option 2: Financial + Forecast

- Co-optimizes bid-in demand, ISO reliability capacity, ancillary services and imbalance reserves
- Imbalance reserves cover historical uncertainty between ISO's day-ahead net load forecast and FMM net load
- Reliability capacity covers differences between ISO net load and cleared net load
- Exceptional dispatch if IFM/RUC clears inconsistent with operational needs

Please provide comments to explain your position on option #2:

NRG supports both the procurement of market-based imbalance reserves in the day-ahead time frame to provide an "uncertainty envelope" and the procurement of market-based reliability capacity to meet forecast demand and operational needs that are not met through the energy market clear. NRG does not support clearing the energy market at the CAISO's demand forecast. NRG also does not support creating a market structure that could result in virtual and physical supply being priced differently.

Pros of option #2:

- Using a biddable, market-based product to meet forecast reliability needs.
- Procuring imbalance reserves in the Day-Ahead time frame to cover the P95 uncertainty envelope.

Cons of option #2:

Option 2 clears the day-ahead energy market at the CAISO's demand forecast, rather than at the "natural" clearing that would result from bid-in supply and bid-in demand. This, in turn, changes the fundamental nature of virtual bidding; instead of acting to converge DA and RT prices, virtual bids would allow market participants to take a position relative to the CAISO's demand forecast. Unless the CAISO's demand forecast error was symmetrical and unpredictable – which NRG believes is it not – this changed nature and impact of virtual bidding could produce adverse results. NRG also does not support a market structure that could price physical supply and virtual supply differently. That result clouds the meaning and value of convergence bids and, as the CAISO observes, could create unintended consequences.

Please offer any other feedback your organization would like to provide on presentation materials and discussion for August 13, 2019 Day-Ahead Market Enhancements stakeholder working group meeting.

Comments:

While NRG supports the idea of a biddable, market-based capacity product (what the CAISO calls "reliability capacity") to better position resources to meet the CAISO's forecast reliability needs after the day-ahead market run, NRG does not support clearing the energy market at the CAISO's demand forecast.

NRG requests the CAISO consider an "Option 3". Option 3 would consist of:

- Procuring imbalance reserves at P95 in the day-ahead time frame
- Clearing the energy market at the intersection of bid-in supply and bid-in demand
- Procuring market-based reliability capacity to position generating units as needed to meet forecast demand and forecast operational needs

With regards to ensuring the deliverability of energy from set-aside capacity, whether that set-aside happens in the day-ahead or real-time time frames, NRG remains skeptical that a "regional" approach to assessing the deliverability of energy from procured capacity will result in energy from those reserves being fully deliverable. Considering that the CAISO will be procuring significant amounts of imbalance reserves (if the CAISO procures at the P95 level, which NRG supports), an ineffective deliverability analysis could compromise the value of those procured reserves.

The CAISO has proposed (1) procuring imbalance reserves at the P95 level and (2) stepped relaxation parameters for the procurement of imbalance reserves. How those relaxation parameters are "stepped" is a critical piece of how these reserves will be

priced. While it is early in this initiative, NRG requests the CAISO provide additional information as to its thinking regarding how the relaxation parameters will be stepped.