

Memorandum

To: ISO Board of Governors
From: Eric Hildebrandt, Executive Director, Market Monitoring
Date: March 9, 2022
Re: Department of Market Monitoring Comments

This memorandum does not require Board action.

EXECUTIVE SUMMARY

This memo provides comments by the Department of Market Monitoring (DMM) on management's proposed phase 1 enhancements to the reliability demand response resource (RDRR) design. Currently, reliability demand response resources must bid between \$1,000 and \$950/MWh. This represents a bid floor equal to 95 percent of the \$1,000/MWh energy bid cap normally in effect. The ISO proposes that reliability demand response resources must bid at least 95 percent of the hard energy bid cap (\$1,900/MWh) when the bid cap is temporarily raised to \$2,000/MWh.

DMM supports this proposal. When the bid cap is raised to \$2,000/MWh under extraordinary conditions, maintaining the \$950/MWh bid floor for this summer would likely be more problematic than requiring emergency demand response resources to bid at least \$1,900/MWh. However, allowing emergency demand response resources to bid below \$1,900/MWh when their marginal cost is less than \$1,900/MWh could increase market efficiency. Therefore, DMM recommends that in a future initiative, the ISO more carefully consider allowing emergency demand response resources to bid less than \$1,900/MWh if this better reflects their marginal cost in emergency situations.

BACKGROUND

Reliability demand response resources currently account for about 57 percent (over 1,000 MW) of resource adequacy requirements met by all demand response resources.¹ These reliability resources are comprised primarily of larger commercial and industrial loads under California's Base Interruptible Program (BIP), along with agricultural and pumping loads.

¹ See DMM's recent report on *Demand response issues and performance*, January 12, 2022, <http://www.caiso.com/Documents/Demand-Response-Issues-Performance-Report-Jan-12-2022.pdf>

Under CPUC and ISO rules, these resources can only receive a real-time dispatch after the ISO issues a Stage 2 system emergency warning.

Currently, emergency demand response resources must bid into the real-time market at prices at or above 95 percent of the \$1,000/MWh soft bid cap. If these resources want to bid above \$1,000/MWh in intervals when the ISO raises the hard cap to \$2,000/MWh, they would need to submit specific requests before the market opens to justify costs over \$1,000/MWh.

The ISO intended for these rules to align its market design with principles from a 2010 multi-party settlement with the CPUC that described how the ISO will design the reliability demand response product. Some important terms describing the intended product design under this settlement include the following:

- Reliability resources are not “price responsive”, but will be economically dispatched once triggered.
- ISO dispatch of the resources will recognize that participating customers have a high “strike price” that is well above the running cost of conventional supply-side resources.
- The resources will help mitigate or limit the duration of scarcity pricing events.

The multi-party settlement with the CPUC did not specify that reliability resources would be subject to a bid floor of \$950/MWh or 95 percent of the \$1,000/MWh hard bid cap in effect at that time.

MANAGEMENT PROPOSAL

The ISO proposes to amend the tariff so that bids for emergency demand response resources must be at least 95 percent of the hard energy bid cap (\$1,900/MWh) in real-time market intervals when the ISO raises the bid cap to \$2,000/MWh. If the ISO raises the real-time bid cap to \$2,000/MWh and scheduling coordinators take no action, the ISO will automatically scale up bids for emergency demand response resources from the \$950 to \$1,000/MWh range allowed under normal conditions when the \$1,000/MWh cap is in effect. For example, a bid of \$950/MW (or 95 percent of the \$1,000/MWh cap) will be automatically scaled up to \$1,900/MW (or 95 percent of the \$2,000/MWh bid cap).

COMMENTS

DMM supports the ISO's proposal.

Scheduling coordinators for emergency demand response resources have indicated it will be difficult to resubmit bids with cost justification in situations when the ISO raises the hard cap to \$2,000/MWh. DMM believes that this creates risk that in tight supply conditions, emergency demand response resources could have \$950/MWh bids in the market when other resources have higher cost-based bids. Therefore, the current rules could create

inefficient outcomes that could be inconsistent with the CPUC settlement if the ISO does not change its rules before this summer.

As a result, DMM supports the ISO's proposal for this summer. DMM has not been able to assess the extent to which some emergency demand response resources may have marginal costs below \$1,900/MWh. Under extreme conditions when other resources may have cost-based bids over \$1,000/MWh, forcing emergency demand response to bid at \$1,900/MWh is likely to be less problematic than bids in the \$950 to \$1,000/MWh range.

However, allowing emergency demand response resources to bid less than \$1,900/MWh when their marginal cost may be between \$1,000/MWh and the \$2,000/MWh bid cap could increase market efficiency. Therefore, DMM recommends that in a future initiative, the ISO more carefully consider allowing emergency demand response resources to bid marginal cost in emergency situations.

DMM recommends the ISO consider a straightforward market design enhancement in a future initiative

DMM understands that emergency demand response resources have not historically had real-time bids based on marginal cost. However, DMM believes the ISO could facilitate more efficient market outcomes by making one enhancement in a future initiative. The ISO could still automatically adjust real-time bids as proposed when the ISO raises the hard cap to \$2,000/MWh. However, instead of requiring that these resources use the adjusted bids of at least \$1,900/MWh, the ISO could allow a lower bid between \$1,000 and \$1,900/MWh, if such a value more accurately reflects cost.

DMM believes this enhancement would maintain consistency with the CPUC settlement while increasing efficiency in emergency situations. It would continue to only make these resources available in emergency conditions. But it could increase efficiency in these scenarios by allowing the resources to mitigate scarcity pricing events and by allowing the ISO to dispatch them economically before resources with higher bids.

The ISO should carefully consider the future implication of continuing to position emergency demand response resources near bid caps or scarcity pricing levels as these levels may continue to evolve.

Emergency demand response resources represent resource adequacy capacity procured to meet the needs of ISO load. Current market design requires that these resources have an administrative price floor in real-time that positions them near the top of the real-time bid stack. However, the ISO can only access these resources in real-time emergency situations, independent of this placement in the bid stack.

The ISO's forthcoming scarcity pricing initiative may allow prices and bids significantly higher than the current \$2,000/MWh hard bid cap. There is some bid cap or scarcity pricing level at which the opportunity cost of dispatching some emergency demand response will be less than 95 percent of that bid cap. Therefore, in order to mitigate the exercise of market power under extremely high bid caps, it would be appropriate to dispatch emergency demand

response at some price level or range before dispatching other resources bidding at 95 percent of that cap.

DMM supports the ISO's proposal because it has not yet determined that any emergency demand response has a marginal or opportunity cost below \$1,900/MWh. However, DMM cautions against establishing the precedent that the ISO should always position emergency demand response near the bid or price cap in effect.