

Comments on RDRR Bidding Enhancements Revised Straw Proposal

Department of Market Monitoring

January 11, 2022

Summary

The Department of Market Monitoring (DMM) appreciates the opportunity to comment on the *RDRR Bidding Enhancements – Revised Straw Proposal*.¹

In this policy, the ISO proposes changes to bidding rules for reliability demand response resources (RDRR) when the ISO's hard bid cap is increased to \$2,000/MWh. The ISO also proposes an approach for RDRR resources to avoid infeasible real-time dispatch by automatically rerating their minimum operating level (or PMIN) to a value near the upper economic limit and inserting a non-zero minimum load cost based on energy bids. Finally, the ISO proposes to maintain a 50 MW size cap on RDRR resources under the discrete dispatch option.

DMM continues to recommend that the ISO allow RDRR resources to bid up to the hard bid cap (\$2,000/MWh) when in effect, but not require them to bid at least 95 percent of the hard cap when such bids exceed resource costs.

On the issue of minimum load costs for RDRR resources, DMM supports an approach to RDRR modeling that allows these resources to reflect both an accurate PMIN and accurate costs of operating at minimum load. Regardless of the approach the ISO ultimately chooses to allow RDRR resource to reflect minimum load costs, DMM recommends that resources be able to reflect a resource-specific PMIN and the corresponding costs of operating at minimum load, subject to a robust process to assess the reasonableness of submitted minimum load bids.

DMM supports the ISO's proposal to maintain the current cap of 50 MW for the maximum size of RDRR resources. The ISO has determined that a larger cap would be of limited applicability, and that a larger cap has potential to increase market inefficiencies and potential reliability issues when a discrete resource sets price.

¹ *RDRR Bidding Enhancements – Revised Straw Proposal*, California ISO, December 23, 2021:
<http://www.caiso.com/InitiativeDocuments/RevisedStrawProposal-ReliabilityDemandResponseResourceBiddingEnhancements.pdf>

Comments

I. RDRR Real-Time Bidding Alignment with FERC Order No. 831

DMM continues to recommend that the ISO allow RDRR resources to bid in real-time between \$950 and the hard bid cap (\$2,000/MWh) when in effect, rather than requiring them to bid at least 95 percent of the hard cap

The ISO states in the revised straw proposal that in the time since CAISO's compliance filing for FERC Order 831, stakeholders have raised concerns about their inability to bid RDRR resources greater than \$1,000/MWh in real-time in conditions when the energy bid cap is raised to \$2,000/MWh. In an effort to address stakeholder concerns, the ISO has proposed in this initiative to require RDRR resources to submit real-time energy bids of at least 95 percent of the hard bid cap of \$2000/MW, when the hard cap is in effect.

DMM suggested in earlier comments that instead of forcing RDRR to offer at a higher floor (at least \$1,900/MWh) in real-time when the energy bid cap is raised to \$2,000/MWh, the ISO could simply allow RDRR to bid between the current bid floor (\$950/MWh) and the hard bid cap under these conditions.² DMM continues to recommend that the ISO allow RDRR resources to bid up to the hard bid cap when in effect, rather than requiring them to do so. This approach would promote efficient market outcomes when RDRR resources are able to accurately reflect costs, while addressing the concerns of stakeholders that are currently unable to submit bids over \$1,000/MWh for RDRR resources when the hard cap is in effect.

In the Revised Straw Proposal, the ISO states that it understands DMM's concern that requiring RDRR resources to submit bids of at least 95 percent of the hard cap would result in prices more frequently being set at \$1,900 or higher, but that this would still be an infrequent occurrence since the hard cap is not frequently in effect.

DMM notes that the issue is not simply one of prices being set at or above a particular level (\$1,900/MWh or higher). Rather, the concern is one of market inefficiency that can result when a group of resources may be forced to potentially bid above their cost. This can lead to inefficient market outcomes at any price level when market prices result from bids that are not representative of the marginal cost of the underlying resources. However, the magnitude of this inefficiency maybe amplified at prices near the bid cap if such prices significantly exceed costs of market resources.

² *Comments on RDRR Bidding Enhancements – Issue Paper/Straw Proposal*, Department of Market Monitoring, November 12, 2021: <http://www.caiso.com/Documents/DMM-Comments-RDRR-Bidding-Enhancements-Issue-Paper-Straw-Proposal-Nov-12-2021.pdf>

Additionally, the ISO's proposal to require bids of at least 95 percent of the hard bid cap when in effect appears to be intended to serve partially as a form of scarcity pricing mechanism, rather than to develop a framework that allows RDRR resources to more accurately reflect their costs.

The Revised Straw Proposal states:

Further, this proposal reflects the need to uniquely position RDRRs in the market in response to the energy bid increase to \$2000/MWh in order to provide appropriate scarcity pricing signals to the market when they are conditionally released for dispatch.³

As the ISO notes, the Price Formation Enhancements initiative is scheduled to address scarcity pricing issues later this year. Addressing scarcity pricing issues in their own initiative appears to be a superior approach to one that places requirements on RDRR resources to bid potentially above cost in order to achieve higher prices during tight supply conditions.

Finally, in emergency conditions where RDRR is made available for dispatch, it may not be appropriate to award higher cost, potentially non-RA resources (e.g., imports) that may have cost verified bids over the \$1,000/MWh soft cap before an RDRR resource that may have lower cost, but is forced to bid near the \$2,000/MWh hard cap under the ISO's proposal. A related, but slightly different issue appears to have been contemplated in the CPUC settlement that serves as the basis of RDRR:

Most importantly, the reliability-triggered demand response program will be triggered prior to the California Independent System Operator's canvassing of neighboring balancing authorities for energy or capacity. This new practice would eliminate the anomalous treatment whereby emergency-triggered demand response counts for Resource Adequacy yet, unlike all other power that counts for Resource Adequacy, the California Independent System Operator currently procures costly "exceptional dispatch energy or capacity" before using this energy resource, a practice that has led to charges that ratepayers "pay twice" for this power.⁴

³ Ibid, pg.7

⁴ See CPUC Reliability-Based Demand Response Settlement, pg. 2:
https://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/119815.PDF

II. RDRR “Infeasible Dispatch” and Minimum Load Costs

DMM supports an approach to RDRR modeling that allows these resources to reflect an accurate PMIN and accurate costs of operating at minimum load

The Revised Straw Proposal states that the ISO is electing not to develop a framework for RDRR resources to register a non-zero minimum load cost. Instead, the ISO proposal appears to leverage existing market functionality that calculates minimum load costs based on default energy bids for resources with a PMIN rerate. To effectuate this for RDRR resources with a 0 MW PMIN and no default energy bids, the ISO proposes to automatically rerate the PMIN of an RDRR resource in real-time to a value just below the upper economic limit of the resource when it does not have a day-ahead schedule, and use the submitted energy bids in place of default energy bids. This will avoid the perception by the market optimization that the resource is “free” to commit, while also avoiding infeasible movements in real-time back and forth between the OMW PMIN and the upper economic limit.

DMM requests clarification of reasons why the ISO did not further consider stakeholder proposals of minimum load costs for RDRR resources. For instance, the ISO noted that stakeholders did not provide rationale for why a minimum load cost calculated based on bids would be appropriate. However, this approach appears to be what the ISO ultimately proposes, but implemented using existing technology to calculate minimum load cost for PMIN rerates rather than allowing the resource to set its own PMIN and explicitly specify that minimum load costs may be calculated from energy bids. As the ISO also notes, program costs associated with RDRR resources are likely to be reflected in bids. For RDRR resources where program costs per MWh are not significantly different at any level of output, energy bids may be an acceptable basis to estimate minimum load costs.

DMM suggests that regardless of the approach used to calculate minimum load costs, RDRR resources be able to specify an accurate PMIN specific to the resource, and not be dependent on automatic PMIN rerates by the ISO to be able to reflect minimum load costs. DMM also suggests that the ISO have robust measures in place to check the reasonableness of minimum load cost submissions.

If minimum load costs are ultimately based on energy bids, minimum load cost submissions would need to align with energy bid requirements for RDRR resources. For RDRR resources participating economically in the day-ahead market, minimum load costs could be based on an extension of economic day-ahead energy bids, with a robust approach for the ISO to review and assess the reasonableness of submitted minimum load cost bids. In real-time, when the hard energy bid cap is not in effect, minimum load cost bids could be a straightforward extension of current RDRR bidding rules requiring bids between \$950/MWh and \$1,000/MWh. When the hard cap is in effect, minimum load costs could be allowed – not required – to be based on bids between \$950/MWh and the hard cap. In this situation however, it would again be important

for the ISO to have measures in place to assess the reasonableness of minimum load cost submissions that equate to values exceeding the soft cap of \$1,000/MWh.

III. RDRR Registration

DMM supports the ISO's proposal to maintain the 50 MW discrete dispatch cap

The ISO proposes to maintain the current 50 MW cap on the size of an RDRR resource using the discrete dispatch option. DMM supports this proposal.

In earlier comments, DMM suggested that the ISO consider the potential detrimental impacts of increasing the size cap for discrete RDRR. DMM also asked that the ISO provide additional information on the magnitude of issues described under this part of the proposal. In the Revised Straw Proposal, the ISO addresses both of these issues in reaching the proposal to maintain the current cap.

The ISO acknowledges that when a discrete resource sets prices in the pricing run, it will often set a higher price than the price that would be set by the most expensive continuous resource dispatched in the scheduling run based on its marginal cost. The ISO further acknowledges that this inefficiency will create incentives for some continuous resources to deviate from dispatch instructions, potentially leading to reliability issues. As DMM noted in previous comments, increasing the 50 MW cap on discrete RDRR would exacerbate the detrimental impacts that allowing discrete resources to set price has on incentives for other continuous resources to follow ISO dispatch.

In assessing the magnitude of issues described under the proposal, the ISO has been able to clarify that a higher discrete cap for RDRR would be of limited applicability. DMM appreciates that the ISO has considered the potential for negative market impacts and weighed them against the limited applicability of a higher discrete cap for RDRR resources in proposing to maintain the discrete cap at 50 MW.

Finally, the Revised Straw Proposal states that there is concern that some RDRR resources modeled as continuous resources may not in fact have continuous dispatch capability. DMM notes that CAISO resources are required to register resource characteristics that are consistent with their physical operating capability. For resources exceeding 50 MW in size that are limited to discrete dispatch functionality, DMM suggests the ISO continue working with stakeholders to more accurately model those resources. Allowing RDRR resources to establish minimum load costs and to set a sufficiently high PMIN may help to better facilitate the market participation of these resources, without the need to raise the discrete RDRR cap.