

Energy Storage and Distributed Energy Resources (ESDER) Phase 3

Straw Proposal

Comments by Department of Market Monitoring

April 9, 2018

I. Overview

DMM appreciates the opportunity to comment on the ISO's *Energy Storage and Distributed Energy Resources (ESDER) Phase 3 Straw Proposal*.

The ISO's Straw Proposal identifies a set of market design changes to address within the ESDER3 initiative scope. These changes include: new bid options for demand response (DR) resources, removing the single load serving entity (LSE) requirement for DR aggregations, developing a load shift product, allowing sub-metering for electric vehicle supply equipment (EVSE) load, and developing a process to define use-limited status for Non Generator Resources (NGRs).

DMM supports the ISO's proposed bidding enhancements for demand response resources. DMM has raised the same concerns as the ISO in past reports regarding the commitment of DR resources in the Residual Unit Commitment (RUC) process that cannot respond to 5-minute dispatch.¹ The proposed bid enhancements should provide effective methods for scheduling coordinators to prevent infeasible 5-minute dispatches for certain DR resources. DMM has observed instances where DR that cannot respond to 5-minute dispatch contributes to setting RTD prices when dispatched by the ISO. Reducing the occurrence of infeasible schedules for certain DR resources will also enhance the efficiency of 5-minute market prices.

DMM reiterates prior comments regarding NGR resources seeking use-limited status.² Contractual obligations, negotiated performance guarantees, or other purely economic considerations are not an appropriate basis to justify use-limited status for NGRs or any other resource. DMM supports the ISO's request that stakeholders seeking use-limited status for NGRs provide examples of qualifying factors and documents that could justify receiving this status. These examples and documentation will help the ISO to design enhancements in the way it models NGR resources and will help to reveal what types of physical limitations NGRs face that could still warrant use-limited status after the ISO implements all potential modeling enhancements. Valid documentation provided to the ISO could then also be used as a basis for calculating opportunity costs and reference level calculations for NGR resources.

¹ *2016 Annual report of Market Issues and Performance*, Department of Market Monitoring, May 2017, pp. 34-35: <http://www.caiso.com/Documents/2016AnnualReportonMarketIssuesandPerformance.pdf>

² *Comments on Energy Storage and Distributed Energy Resource Phase 2 (ESDER 2) Third Revised Straw Proposal*, Department of Market Monitoring, May 24, 2017: <http://www.caiso.com/Documents/DMMComments-EnergyStorageandDistributedEnergyResourcesPhase2-ThirdRevisedStrawProposal.pdf>

Finally, the ISO noted in its stakeholder call that market design changes needed to comply with FERC Order 841 will be considered within ESDER3.³ DMM discusses items related to FERC Order 841 we believe should be addressed within the ESDER3 stakeholder process.

DMM provides more detail on these concepts below.

II. Demand Response Bidding Enhancements

Additional bid options for DR resources

The ISO notes in its Straw Proposal that modeling limitations exist that can result in RUC committing DR resources that are unable to respond to 5-minute dispatches. DMM has raised this same concern in prior market performance reports.⁴ These occurrences can further impact the efficiency of RTD prices when DR resources that cannot respond to 5-minute dispatch are in fact dispatched and contribute to setting LMPs. DMM supports new bid functionality that will reduce the quantity of infeasible DR dispatches in the 5-minute market. The proposed bid options will help DR resources better manage their schedules, supporting feasible market awards and efficient market outcomes.

DMM supports the ISO's proposal to allow certain DR resources to use bid functionality currently available for intertie transactions. These options – hourly block, hourly block with single change, and 15 minute dispatchable will allow DR resources to be scheduled in the Hour Ahead Scheduling Process (HASP) or 15-minute market (FMM), providing these resources sufficient lead time to meet dispatch instructions. With this functionality, DMM believes additional enhancements to the intertie bid framework may be necessary to accommodate DR resources.

Eligibility for not providing 5-minute dispatch capability

DMM believes that any new bid framework that the ISO proposes in this policy initiative should allow resources to continue offering ancillary services if capable of providing these services today. Additionally, if a subset of DR resources are capable of responding to 5-minute dispatches today, those resources should continue to utilize the current bid structure. As part of this proposal, the ISO should ensure that resources qualified to provide ancillary services and with 5-minute dispatch capability are not able to use new bid options to withhold this capacity from the market. This is especially important for resources being compensated for Resource Adequacy attributes. DMM suggests that scheduling coordinators should be required to justify the need for a DR resource to use the new bid options. Requiring DR resources to show a need to use new bid options will prevent DR that can respond to 5-minute dispatches from opting for

³ *Energy Storage and Distributed Energy Resources Phase 3 (ESDER 3)*, California ISO, p. 28:
<http://www.caiso.com/Documents/Agenda-Presentation-EnergyStorage-DistributedEnergyResourcesPhase3-StrawProposal.pdf>

⁴ *2016 Annual report of Market Issues and Performance*, Department of Market Monitoring, pp. 34-35:
<http://www.caiso.com/Documents/2016AnnualReportonMarketIssuesandPerformance.pdf>

less flexible bid options. This check will ensure that fast responding DR capacity and ancillary services provided by DR resources are not withheld from the market.

DR reference levels for determining commitment cost bid caps

The ISO references the Commitment Costs and Default Energy Bids Enhancements (CCDEBE) initiative as introducing the ability for DR resources to submit non-zero commitment costs (minimum load and startup costs). However, DMM believes the proposal's applicability to DR requires further clarity. We refer the ISO to DMM's comments on the CCDEBE Revised Draft Final Proposal.⁵

Specifically, it is unclear what criteria the ISO will use to calculate reference levels for DR resources. Under CCDEBE, the ISO proposes to allow resources to submit market-based commitment cost offers subject to dynamic commitment cost mitigation. Reference levels are necessary for the ISO to calculate new market-based commitment cost bid caps. Thus, the ISO will need to develop criteria for determining reference levels for DR resources before DR resources can submit market-based commitment costs. DR scheduling coordinators should be given clear expectations on how commitment cost bids, reference levels, and mitigation will apply to DR going forward under CCDEBE and ESDER3.

III. NGR use-limitations

DMM agrees with the ISO that further documentation and examples are needed before developing a process to define use-limited status for NGRs. DMM maintains that contractual obligations, negotiated performance guarantees, or other limitations based on economic considerations are not appropriate bases for use-limited status for NGRs or any other resources. Use-limitations should only be based on actual physical resource limitations.

DMM appreciates the ISO continuing to work with stakeholders to fully understand costs faced by storage resources. DMM supports the ISO's request for examples and documentation from scheduling coordinators seeking use-limited status for NGR resources. These will help the ISO to design enhancements in the way it models NGR resources and will help to reveal what types of physical limitations NGRs face that could still warrant use-limited status after the ISO implements all potential modeling enhancements. Further, this documentation could be used to develop reference calculations and opportunity costs for NGR resources going forward.

IV. Issues related to FERC Order 841

In its stakeholder presentation, the ISO noted that market changes necessary to comply with FERC Order 841 will be considered within ESDER3. Below, DMM discusses items that may

⁵ *DMM Comments on Commitment Cost and Default Energy Bid Enhancements Revised Draft Final Proposal*, DMM, February 28, 2018, p. 23: <http://www.caiso.com/Documents/DMMComments-CommitmentCostsandDefaultEnergyBidEnhancementsRevisedDraftFinalProposal.pdf>

require further development and thought based on its reading of FERC Order 841 and the capabilities of the ISO's current NGR model.

Storage model enhancements

FERC Order 841 requires that the ISO's energy storage model account for physical and operational characteristics of electric storage resources such as Minimum Charge Time, Minimum Run Time, Minimum Charge Limit, and Minimum Discharge Limit. DMM believes these parameters will require the NGR model, or a new storage model, to allow for commitment decisions as the NGR model today only allows resources to be dispatched.

Reference levels for storage resources

Commitment decisions introduce the concept of commitment costs for NGR resources. If NGR resources are able to submit non-zero commitment cost offers, the ISO will need to consider how to develop reference levels and opportunity costs for these resources' energy, minimum load, and startup costs. A process to calculate reference levels for storage resources should be developed before allowing these resources to submit market-based commitment costs as envisioned under the CCDEBE proposal. The ISO should also clarify whether resources participating under the energy storage model will be subject to mitigation.

TAC charges and CRR allocation

The Commission finds that TAC charges should apply to charging load for electric storage resources in FERC Order 841.⁶ To the extent that TAC applies to charging load, DMM believes storage resource nodes should be designated as eligible CRR sinks in the CRR allocation process, just as pumped hydro resource nodes are today. If an entity pays TAC for charging load, that entity should be eligible to nominate CRRs in the CRR allocation process to hedge its exposure to congestion costs.

⁶ Order No. 841. *Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators*, 162 FERC ¶ 61,127, February 15, 2018, p. 191: <https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14823759>