

Comments on EIM Resource Sufficiency Evaluation Enhancements Phase 1 Revised Draft Final Proposal

Department of Market Monitoring

January 11, 2022

Summary

The Department of Market Monitoring (DMM) appreciates the opportunity to comment on the *EIM Resource Sufficiency Evaluation Enhancements Revised Draft Final Proposal*.¹

DMM supports the revised draft final proposal. The changes proposed in the first phase – along with the issues already identified and fixed by the ISO – will significantly improve the EIM resource sufficiency evaluations and will more accurately reflect the capacity made available to the Western EIM.

The second phase will allow for discussion of further potential changes and improvements. In particular, the ISO should more carefully consider the uncertainty requirements used in the sufficiency tests. The uncertainty used in the resource sufficiency tests is the same uncertainty that is used in the ISO's real-time market flexible ramping product. However, the ISO's persistent use of load biasing in the HASP and RTPD markets shows that the flexible ramping product uncertainty may not adequately represent load and resource uncertainty that CAISO balancing area operators need the resource fleet to cover. DMM believes carefully considering how to measure and transparently include uncertainty in the sufficiency tests will better accomplish the tests' goal of discouraging capacity leaning.

DMM looks forward to providing ongoing reporting and data analysis on the EIM tests before and after changes are adopted through this stakeholder process. DMM has developed numerous metrics and has also begun to develop additional metrics and analysis aimed at helping to assess the potential impact and implications of the proposed changes.² Additionally, DMM would appreciate additional suggestions on data, metrics, and analysis that EIM entities would find helpful.³ DMM requests that any participating balancing areas or market participants with concerns about the publication of data related to the tests share those concerns with the ISO and DMM through the stakeholder process.

¹ *EIM Resource Sufficiency Evaluation Enhancements Revised Draft Final Proposal*, California ISO, December 16, 2021: <http://www.aiso.com/InitiativeDocuments/RevisedDraftFinalProposal-EIMResourceSufficiencyEvaluationEnhancements.pdf>

² The first four monthly EIM resources sufficiency reports are available on DMM's website: <http://www.aiso.com/market/Pages/MarketMonitoring/MarketMonitoringReportsPresentations/Default.aspx#evaluation>

³ Please submit comments within the stakeholder process. If unable to do so, please submit comments to DMM directly via email to dmm@aiso.com.

Comments

The first phase changes will improve the EIM resource sufficiency evaluations.

The changes proposed in the first phase – along with the issues already identified and fixed by the ISO – will allow the bid-range capacity test to make a much more nuanced and accurate assessment of the amount of capacity that has been made available in each balancing area for the Western EIM optimization to utilize. In particular, the proposed Phase 1 enhancements to how the bid range capacity test treats resources' intertemporal constraints will significantly improve how the tests count resources that bid into the real-time market but which the real-time market may or not be able to utilize due to intertemporal constraints. DMM recommends that in Phase 2 the ISO consider further refinements to how the tests consider ramping constraints and battery storage capacity.

The other main elements of the ISO's proposal seem reasonable. These include accounting for demand response in the tests; treating BAAs taking emergency actions as being short of capacity; and counting interchange schedules using the available e-tag transmission data. DMM therefore supports the ISO's proposed changes for the first phase of this initiative.

DMM supports the ISO considering potential changes to the tests' uncertainty requirements in the initiative's second phase.

DMM understands that the ISO will suspend the use of the inertia and net load uncertainty in the near term, while continuing its efforts to develop a better approach for incorporating uncertainty into the requirements in phase 2. DMM supports this as a temporary measure while a better approach is developed.

The uncertainty component used in the capacity and flexible ramping sufficiency tests is currently pulled from the fifteen-minute market flexible ramping product uncertainty calculations. These uncertainty requirements do not appear to account for the actual amount of uncertainty that the CAISO and EIM balancing areas face and may want to procure capacity to meet.

The uncertainty used in the sufficiency tests is calculated from the error between binding 5-minute market net load and advisory 15-minute market net load. However, this short-term uncertainty is less than the actual uncertainty that needs to be covered by the capacity supply made available to the EIM.

DMM does not believe the uncertainty component currently used in the resource sufficiency tests accounts for the actual amount of uncertainty that the CAISO balancing area needs to procure capacity for. The shortcomings in the uncertainty requirement for the CAISO balancing area are made particularly visible by large and persistent load biasing and other out of market operator actions. Operators take these out-of-market actions despite the flexible ramping

product already being designed to dispatch and commit resources to cover the same short-term uncertainty used in the resource sufficiency tests.⁴

It is also likely that the uncertainty used in the tests does not cover the actual uncertainty that other EIM balancing areas may account for with reserves or other non-participating EIM capacity or other non-transparent manual actions. These out of market actions may be for uncertainties over various periods, some of which may not be appropriate to consider in the resource sufficiency tests. Some out of market actions may in part be for issues other than uncertainty, such as biasing load down to account for non-participating resources ramping up or coming online, or biasing the load up in RTPD in order to better align the HASP and RTPD load and prices.

Furthermore, some balancing area operators – CAISO in particular – may use load bias to procure capacity in excess of the quantity that EIM entities would view as sufficient for indicating that a balancing area is not leaning on other EIM balancing areas. DMM’s understanding is that a goal of the resource sufficiency test design is to develop objective criteria for bid range capacity and flexible ramping tests that participating balancing areas can agree suffices for concluding that an area is not using the EIM to “lean” on other EIM balancing areas. Individual balancing areas may want to procure capacity in excess of the standards established by the EIM resource sufficiency tests.

It would therefore be inappropriate to set the resource sufficiency test requirements based on the amount of capacity that each balancing area wants to procure, as a balancing area may want to procure more capacity than the standard that the EIM design deems necessary for passing the resource sufficiency tests. Non-CAISO EIM entities can utilize bilateral transactions before base schedules are due to procure capacity in excess of the resource sufficiency test requirements. The CAISO balancing area currently must rely on biasing the load in HASP and RTPD to procure additional capacity. Therefore, incorporating out-of-market actions, such as load bias, directly into the sufficiency tests warrants careful consideration in order to avoid potential problematic unintended consequences.⁵

⁴ See *Enhancing the flexible ramping product to better address net load uncertainty*, Department of Marketing Monitoring presentation at Western EIM Body of State Regulators Webinar, June 12, 2020: <http://www.caiso.com/Documents/Presentation-Real-TimeFlexRampProductEnhancements-WesternEIMBodyofStateRegulators-June122020.pdf>

⁵ By a similar argument, DMM recommends that in Phase 2 the ISO and stakeholders more carefully consider the conditions under which “emergency actions” by a balancing area would automatically cause a balancing area to fail the resource sufficiency tests. Some balancing areas may be more conservative, and take emergency actions sooner or for longer duration, than other EIM balancing areas. Having “emergency actions” automatically trigger resource sufficiency test failures may have unintended reliability consequences, such as discouraging a balancing area from initiating or extending actions that the tests deem to be “emergency actions”. It may be more appropriate to develop more robust, objective criteria for capacity relative to load and uncertainty that suffices for passing the tests rather than using “emergency actions” as automatic triggers for failing the tests. DMM

DMM appreciates that the ISO has committed to considering how load bias should be incorporated into the tests in the second phase of this initiative. We recommend that this aspect of the initiative incorporate a broader assessment and much more careful consideration of how uncertainty should be considered in the tests for all EIM balancing areas.

Calculating the capacity test based on total capacity levels rather than capacity incremental to base schedules could increase clarity and accuracy.

Some stakeholders have previously pointed out that calculating the capacity in the bid range capacity test as the capacity that is incremental to base schedules is less clear than simply assessing the total level of capacity that each EIM entity makes available. DMM agrees and recommends that the ISO alter the bid range capacity test to simply compare each EIM area's total non-participating schedules and participating schedules and capacity to the area's load forecast. This would make the capacity test clearer and could also help to eliminate some issues and complications that arise when trying to count available capacity as the capacity that is incremental to base schedules.⁶

supports the Phase 1 proposal to use "emergency actions" as a trigger for automatically failing the tests as there seems to be consensus amongst EIM entities to do so. However, DMM recommends that the ISO and stakeholders revisit this aspect of the policy in Phase 2.

⁶ DMM comments on EIM Resource Sufficiency Evaluation Enhancements Straw Proposal, September 8, 2021, p.2: <http://www.caiso.com/Documents/DMM-Comments-on-EIM-Resource-Sufficiency-Evaluation-Enhancements-Issue-Paper-Sep-8-2021.pdf>