

Comments on Extended Day-Ahead Market ISO Balancing Authority Area Participation Rules Track A1 Draft Final Proposal

Department of Market Monitoring

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Introduction

The Department of Market Monitoring (DMM) appreciates the opportunity to comment on the *Extended Day-Ahead Market ISO Balancing Authority Area Participation Rules Track A1 Draft Final Proposal* (Proposal).¹ DMM recognizes that this initiative focuses on market rules for only the CAISO balancing area's participation in the extended day-ahead market (EDAM). However, one of DMM's core duties is to "review existing and proposed market rules, tariff provisions, and market design elements and recommend proposed rule and tariff changes to the CAISO, the CAISO Governing Board..."² As the proposed market rules will be decided by the CAISO Governing Board, it is within the scope of DMM's role to review and make recommendations on the policy.

While this initiative develops rules specific to the CAISO balancing area, we have attempted to make our recommendations apply generally to any potential EDAM balancing area. We hope aspects of these comments may be useful to stakeholders in other balancing areas as they redesign their OATTs to facilitate EDAM participation.

Setting the net export transfer constraint

DMM continues to support the EDAM proposal to allow each balancing authority area (BAA) to utilize a net export constraint to determine hourly limits on net exports of EDAM energy, imbalance reserve up (IRU) and reliability capacity up (RCU). Under the proposed EDAM design, each balancing area needs a mechanism to help ensure EDAM transfers do not cause it to take responsibility for load curtailment caused by another balancing area with a capacity shortfall during tight system conditions.

The EDAM should continue to increase coordination and collaboration between Western balancing areas. However, the ISO did not ultimately propose that all EDAM balancing areas share load curtailment if there is a collective supply shortfall. Instead, if there is a collective supply deficiency in real-time, the real-time optimization will identify EDAM balancing areas

¹ *Extended Day-Ahead Market ISO Balancing Authority Area Participation Rules Track A1 Draft Final Proposal*, California ISO, July 25, 2023: <http://www.caiso.com/InitiativeDocuments/TrackA1DraftFinalProposal-EDAMISOBAAAParticipationRules.pdf>

² *Appendix P to CAISO Tariff*, CAISO, April 1, 2017, p. 3: https://www.caiso.com/Documents/AppendixP_CAISODepartmentOfMarketMonitoring_asof_Apr1_2017.pdf

that do not have sufficient supply to meet their real-time load, export and EDAM transfer obligations.

As a result, if one or more balancing areas do not bring sufficient capacity to the EDAM in tight system conditions, EDAM transfers can shift responsibility for potential load curtailment from balancing areas that have insufficient capacity in the day-ahead time frame to balancing areas that had sufficient capacity in the day-ahead time frame. One way this shift of responsibility can occur is when greater net load uncertainty materializes than the imbalance reserve up product is designed to procure.³ In addition, if an EDAM area allows convergence bidding, virtual supply can also cause the balancing area to assume responsibility for real-time load curtailment even if the area provided sufficient capacity to cover its obligations in EDAM.⁴

Therefore, under this market design each EDAM balancing area needs a mechanism to help ensure EDAM transfers do not cause that area to take responsibility for load curtailment caused by another balancing area with a capacity shortfall during tight system conditions. The net export constraint is intended to provide this critical function in the EDAM design.

EDAM balancing areas that do not have day-ahead must offer obligations and that do not allow virtual bidding could potentially prevent this adverse outcome by withholding capacity in excess of their EDAM resource sufficiency evaluation (RSE) requirements. However, even for these balancing areas, utilizing a net export constraint would be more efficient because it would allow the balancing area to bid its excess capacity into EDAM. This would allow this additional capacity to be efficiently re-dispatched within its own balancing area through the EDAM optimization and to be shared with other balancing areas for the benefit of all.

For a balancing area that allows convergence bidding or has day-ahead must offer obligations in excess of its EDAM resource sufficiency evaluation requirements, the net export constraint could be critical for ensuring its reliability in situations when other EDAM balancing areas' capacity shortfalls could cause the EDAM footprint to have insufficient supply in real-time.

The net export constraint will not be able to serve this critical function in the EDAM design if a balancing area has not obtained authority under its open access transmission tariff (OATT) to properly utilize the constraint in tight system conditions. Therefore, it is important that each balancing area develop and test procedures for implementing its own net export constraint prior to EDAM participation. For the constraint to be effective in preventing shifting of responsibility for load curtailment from another balancing area, these procedures must allow sufficient flexibility to cover the dynamic nature of a balancing area's load and resource

³ *Comments on extended day-ahead market straw proposal*, Department of Market Monitoring, June 17, 2022, pp. 4-6: <http://www.caiso.com/Documents/DMM-Comments-Extended-Day-Ahead-Market-Straw-Proposal-June-17-2022.pdf>

⁴ *Comments on extended day-ahead market draft final proposal*, Department of Market Monitoring, November 22, 2022, pp. 5-7: <http://www.caiso.com/Documents/DMM-Comments-Extended-Day-Ahead-Market-Draft-Final-Proposal-2022-11-22docx.pdf>

uncertainty, which can fluctuate based on the specific mix of resources a balancing area is relying on for a particular day.

The formulation of the net export constraint contains two components that a balancing area's operators can adjust to increase or decrease the amount of transfers that EDAM can schedule out of the balancing area in the day-ahead market. The first is the confidence factor. A lower confidence factor reduces the amount of transfers that EDAM could schedule out of the balancing area. It is intended to represent uncertainty in the availability of resources that bid into the day-ahead market and which could support EDAM transfers out, but which have not been counted towards meeting the balancing area's EDAM resource sufficiency requirement. The ISO proposes to set the initial confidence factor at its lowest possible setting of 0%. This setting in effect allows no supply that did not count towards meeting the EDAM RSE requirement to support EDAM transfers out of the area. While this may be overly conservative in non-stressed system conditions, it simplifies the operators' job in setting the net export constraint each hour to only determining an appropriate level for the reserve margin, discussed below. Therefore, this seems to be a reasonable initial setting at the start of EDAM.

The second component of the net export constraint that operators can use to limit the quantity of EDAM transfers out of the balancing area is the reserve margin. The reserve margin is intended to represent all other uncertainty in the demand and supply that determine the EDAM RSE requirement and the capacity that can meet that requirement. Each balancing area's operators ultimately have the responsibility for ensuring EDAM transfers out do not jeopardize their area's reliability. Therefore, DMM has recommended that each balancing area's operators have final discretion each day and hour to set the reserve margin portion of the net export constraint using the operator's judgment and good utility practice.

The ISO's proposal lists three criteria for setting the reserve margin in stressed hours: (1) replacement reserves for the most severe single contingency, (2) protection for non-credible contingency from weather events, and (3) imbalance reserve up requirement. These items seem reasonable as guidelines to help the operator determine the reserve margin. However, DMM appreciates that the ISO has clarified that these criteria will only be guidelines for the operators. DMM supports the proposal to allow CAISO BAA system operators to use their discretion to set the reliability margin above the maximum of these three criteria during stressed hours.

In non-stressed system conditions, the likelihood of EDAM transfers out of a balancing area resulting in a load shed event should be low. Placing less restrictions on EDAM transfers in these conditions should increase EDAM benefits for both the source and sink balancing areas of EDAM transfers. Therefore, the proposal to not set a pre-determined minimum level for the reserve margin in non-stressed conditions seems reasonable. DMM supports allowing the balancing area operators to use their discretion to determine the reserve margin.

DMM recognizes that the use of a net export constraint can reduce the potential efficiency benefits of an extended day-ahead market relative to not using a net export constraint. However, other fundamental elements of the EDAM design have made this constraint the critical tool for balancing areas to ensure EDAM transfers do not shift responsibility for load curtailment from another balancing area when they have brought sufficient capacity to EDAM.

DMM continues to believe the ideal EDAM design would involve a stringent day-ahead resource requirement sufficient for meeting all participating EDAM balancing areas' reliability thresholds. This would then allow mutually agreed upon sharing of any supply shortfalls that ultimately materialize in real-time.⁵ DMM understands that it would have been extremely difficult for diverse balancing areas to agree upon a uniform set of day-ahead reliability standards for this initial phase of EDAM implementation.

DMM continues to recommend that the ISO and participating EDAM balancing areas work towards this goal in upcoming initiatives to enhance the EDAM design. In the meantime, some loss of potential EDAM efficiency due to the use of the net export constraint in tight system conditions is an unfortunate, but necessary, cost for the implementation of this initial design.

Allocation of RSE failure costs

DMM does not oppose the ISO's Track A1 interim RSE failure surcharge allocation proposal. The ISO has explained that policy to better align the surcharge allocation with the entities causing an EDAM RSE failure could not be implemented by the start of EDAM. Therefore, the proposal to allocate the surcharge costs and revenues each hour based on each scheduling coordinator's share of the balancing area's metered demand seems to be a reasonable interim approach to facilitate EDAM's initial implementation.

To the extent possible, balancing areas should allocate EDAM RSE failure costs to those who can act to avoid or cause the costs. RSE failure costs should be allocated to resources contracted to provide EDAM RSE capacity that do not bid into the EDAM because they contribute to the failure by not making the capacity available to the EDAM. Similarly, if the amount of contracted capacity is less than needed to pass the EDAM RSE, the load serving entities responsible for contracting to provide EDAM RSE capacity should pay the failure costs.

It follows that EDAM RSE failure costs should be allocated to contracted resources not bidding into the EDAM first, with the remainder allocated to the load serving entities contracting capacity to meet RSE requirements. For example, if a balancing area is short by 100 MW, and 70 MW of contracted capacity did not bid into EDAM, then total procurement was 30 MW short. The load serving entities contracting to meet RSE requirements should be allocated costs based on their 30 MW of under procurement. The contracted resources that did not bid into the EDAM should be allocated costs based on their 70 MW of unavailable contracted capacity.

⁵ DMM's 6-17-2022 comments on EDAM Straw Proposal, pp. 1-3.

This cost allocation framework appears similar to the ISO's Track B Option 2. DMM recommends that each EDAM balancing area work towards developing and implementing this form of two-tiered cost allocation policy that first assigns costs to unavailable contracted supply. In Track B of this initiative, DMM looks forward to working with the ISO and stakeholders on developing the details of EDAM RSE failure surcharge allocation policy that better assigns the cost to entities causing those costs.

Tagging non-resource specific imports that count towards EDAM RSE

The final EDAM proposal stated that if prior to the start of the STUC run for an hour, an EDAM BAA does not e-tag non-resource specific imports that counted towards the EDAM RSE, "the proposal is to remove the BAA from the pooled WEIM RSE approach."⁶ The proposal also "allows the EDAM entity to cure these failures through resupply of the capacity by the STUC horizon, through additional real-time bids, to replace the supply previously not tagged."⁷

DMM supports the clarification of EDAM policy on bids and schedules that can cure untagged non-resource specific import awards.

The extended day-ahead market updated revised draft tariff language states:

An EDAM Entity Scheduling Coordinator will have until 5 hours before the start of the Operating Hour to submit E-Tags and/or replace the capacity with other firm schedules or physical resources for schedules that lack a valid Day-Ahead E-Tag within the timeframe. If the EDAM Entity Scheduling Coordinator does not E-Tag the outstanding import schedules, including import EDAM Transfers, and fails to resupply by submitting additional incremental Energy Bids from internal supply EDAM Resources above the resource's Day-Ahead Schedule not encumbered by Day-Ahead capacity awards to cover the E-Tag insufficiency prior to the deadline, the CAISO will remove the EDAM Entity Balancing Authority Area from the group of Balancing Authority Areas that comprise the EDAM Upward Pool.⁸

DMM supports the ISO clarifying that firm schedules, or bids from specific resources in excess of day-ahead energy, IRU, and RCU awards, can count towards curing untagged non-source specific imports. DMM noted in prior comments on EDAM policy that ambiguity in the Final Proposal language seemed to leave open the problematic possibility of only counting real-time

⁶ *Extended Day-Ahead Market – Final Proposal*, CAISO, December 7, 2022, p. 67: <http://www.caiso.com/InitiativeDocuments/FinalProposal-ExtendedDay-AheadMarket.pdf>

⁷ *Ibid*, pp. 67-68.

⁸ *Updated Revised Draft Tariff Language – Extended Day-Ahead Market – Section 33 Extended Day-Ahead Market*, CAISO, July 25, 2023, pp. 70-71: <https://stakeholdercenter.caiso.com/StakeholderInitiatives/Extended-day-ahead-market>

bids in excess of day-ahead market *bids*.⁹ Counting real-time bids in excess of day-ahead *awards*, as clarified in the tariff language, resolves this potential ambiguity.

Track B should develop incentives for imports to tag and policy for curing untagged imports

In tight conditions, EDAM policy for tagging non-resource specific imports could potentially result in a small quantity of imports untagged by the STUC run causing the entire EDAM balancing area to be removed from the EDAM pool for the WEIM RSE. Therefore, it may be important for each EDAM balancing area to develop rules in its tariff to properly incentivize imports that count towards the EDAM RSE to tag prior to the STUC run. This may warrant additional analysis of the financial consequences to an EDAM BAA from being removed from the pooled WEIM RSE in order to adequately assign these costs to the importers who caused it.

Similarly, it will also be important for each EDAM balancing area to develop policy for how it may cure any non-resource specific imports that fail to tag before the STUC run. This policy should include the conditions in which entities besides the scheduling coordinators for untagged imports should intervene to prevent EDAM RSE failure, and who should bear the costs of capacity required to cure the untagged imports. DMM recommends that Track B's development of mechanisms for avoiding RSE failures include policy for curing imports that have not tagged by 5 hours before the start of the operating hour.

Clarifying implications of a non-resource specific import counted towards EDAM RSE but that ultimately tags its source as being from an EDAM BAA

The ISO's proposal contemplates the possibility of a non-resource specific import counted towards an EDAM balancing authority area's EDAM RSE. The ISO would model the import as a distributed injection at the sink BAA's Demand Aggregation Points. The proposal then describes the policy for how the real-time market would treat such an import, if the import ultimately sourced from within the EDAM footprint:

In the real-time market, once the source of the supply is known, the scheduling coordinator would be expected to submit a bid at the resource if the source supporting the firm delivered energy is located within the EDAM footprint. The scheduling coordinator would be expected to cancel the DA schedule at the resource in the EDAM footprint through a base transfer deviation with the ISO at the applicable interface between EDAM areas. This base transfer associated with the resource in the footprint would contribute to the ISO WEIM RSE.¹⁰

⁹ Memorandum to ISO Board of Governors and WEIM Governing Body, Department of Market Monitoring, January 25, 2023, p. 9: <http://www.caiso.com/Documents/DepartmentofMarketMonitoringReport-Feb2023.pdf>

¹⁰ EDAM ISO BAA Participation Rules – Track A1 Draft Final Proposal, p. 33.

DMM continues to ask the ISO to clarify this policy. If a non-resource specific import tags as ultimately being sourced from within an EDAM BAA, it seems reasonable to automatically set the real-time tagged energy amount on the import resource that cleared the day-ahead market to 0 MWs, forcing the importer to buy back the day-ahead cleared quantity at the relevant real-time market price. This could also expose the importer to each EDAM balancing area's penalties for failing to tag an import. It is not clear if this is the intended EDAM policy.

The proposal's description of how a scheduling coordinator is "expected" to cancel the day-ahead schedule of the source resource in the EDAM balancing area is also insufficiently vague. The proposal states that DMM will monitor for non-resource specific imports ultimately tagging the supply as sourcing in an EDAM balancing area. DMM requests that in order to facilitate that monitoring, the ISO clarify in the upcoming Final Proposal and tariff language what adjustments to import, generator, and base transfer schedules will be automated, and which actions specific entities will be required to perform in these scenarios.