

Extended Day-Ahead Market Stakeholder Initiative

BAMx Comments on Two-Day Workshop (2/11/2020 and 2/12/2020)

Comments Date: 3/4/2020

Summary

The Bay Area Municipal Transmission Group (BAMx¹) appreciates the opportunity to comment on the Extended Day-Ahead Market (EDAM) stakeholder initiative and wishes to acknowledge all involved parties for their diligent attention to the complex issues being raised and addressed in this and the related stakeholder initiatives (specifically to the contemporaneous Day-Ahead Market Enhancements, DAME, initiative).

The opportunities presented by the CAISO in the EDAM stakeholder initiative include the potential to facilitate lower costs to meet load by expanding the participation of entities outside of the CAISO into the Day-Ahead Market (DAM) optimization process. In particular, savings are expected to be realized due to 1) more efficient Day-Ahead hourly trading and use of available transmission through an organized market; 2) more efficient day-ahead unit commitment; 3) co-optimized footprint wide resources for a more efficient and cost effective day-ahead solution; and, 4) diversity of imbalance reserves.² Concerns raised to date by stakeholders include:

1. Interactions between the contemplated rule changes in EDAM and those in the DAME process.
2. Unresolved issues of equitable allocation of congestion rents resulting from the greater availability and usage of inter-BAA transmission through DAM optimization.

BAMx recognizes that there likely will be no single optimal solution to design problems as complex as those being considered in this EDAM process. BAMx believes that the stakeholder process will be more successful if participants have a shared understanding of relevant underlying facts, principles and objectives as the CAISO develops design proposals that perhaps simplify the process and the resulting market design.

The most pressing concerns BAMx encourages the CAISO to consider are:

¹ BAMx consists of City of Palo Alto Utilities and City of Santa Clara, Silicon Valley Power.

² See <http://www.caiso.com/InitiativeDocuments/Presentation-ExtendedDay-AheadMarketFeasibilityAssessmentUpdate-ElMEntities-Oct3-2019.pdf>, Slide 5.

- Are the currently contemplated rule changes (including the various stakeholder processes such as RA Imports, MIC Stabilization, DAME, and EDAM) of sufficiently wide scope and impact that a more holistic stakeholder process such as was conducted in Market Redesign and Technology Upgrade (MRTU) is appropriate?
- Will the currently contemplated set of rule changes result in improved efficiency without negatively affecting equitability concerns? For example:
 - Assuming EDAM results in lower costs/higher social utility, will these benefits be equitably distributed?
- Are there rule changes that can simplify the overall market processes, or align those among Balancing Authority Areas (BAAs), without sacrificing efficiency, equitability, or reliability? For example:
 - Benefit from extending unit commitment and dispatch across a greater pool of resources and a longer-lookahead period (EDAM) but potentially could simplify market processes by eliminating current and proposed market features such as Virtual Bidding and/or Reliability Capacity (DAME)?
- Will those entities who paid/pay for inter-BAA transmission continue to receive commensurate value from their investments?
- Do the contemplated rules continue to encourage all parties to make meaningful commitments to specific actions while providing incentives for such parties to adhere to such actions as real-time approaches? For example, will market participants and the CAISO have sufficient confidence that those entities making transmission capacity available in the DAM continue to do so with EDAM, rather than attempting to game availability in EDAM vs Real-Time?
- Are the potentially competing issues of efficiency (cost savings), reliability, equitability, and simplicity being properly and fairly balanced in implementation?

Comments Outline:

Establishing Facts

- Unit commitment and dispatch across a larger portfolio of resources and geographic region can support better outcomes (lower production costs, greater reliability, and improved social utility).
- Such above actions occurring further ahead of real-time increases freedom of action (for example, allowing lowest-cost and highest flexibility supply resources to be pre-positioned to meet energy needs), additionally supporting better outcomes.
 - More advanced planning has the adverse result of greater uncertainty of uncontrollable variables (demand and Variable Energy Resources (VERS), forecast error).
- Common ultimate objectives are efficiency, equitability, reliability, and simplicity/predictability.
- Objectives are frequently in conflict.

Establishing Principles/Objectives

The Energy Imbalance Market (EIM) Entities' presentations in the February 11-12 workshops on Resource Sufficiency, Transmission and Congestion Revenues each identified principles related to those topics. BAMx appreciates the efforts made to refer back implementation details to guiding principles, but suggests that clarifying a higher-level set of principles should guide development and evaluation of the potential EDAM solutions. This suggested set is below, and BAMx encourages stakeholders to consider these proposed principles and methods for achieving an optimal weighting among each to ensure EDAM benefits fairly accrue to all EDAM participants, including the load serving entities within each of the BAAs:

- **Efficiency:** Maximization of social utility (generally meeting identified constraints at lowest cost).
- **Equitability:** Alignment of cost/benefit allocation with causation.
- **Reliability:** The objective of maintaining risk of adverse outcomes below an acceptable threshold.
- **Simplicity/Predictability:** The objective of ensuring that market rules are no more complex than absolutely necessary and supporting efforts to continually evaluate market rules in order to reevaluate previous assumptions and simplify/streamline where possible.

In the EIM Entities' presentation on Congestion Revenues, the high-level principle discussed was equitability, and BAMx commends the attention to ensuring EDAM benefits accrue to those contributing to or having contributed to the resources generating the benefits. BAMx recommends stakeholder attention also needs to be placed on the important issue of identifying the incremental benefits arising from the EDAM (vs. business as usual DAM) and equitable allocation of the identified benefits.

The principles set forth in the EIM Entities' presentation on Transmission Elements were implementation oriented and fell respectively into one of the high-level principles within BAMx' proposed set, but omitted the principle of simplicity.³ BAMx suggests that each key principle guiding design be categorized and assessed for fitness compared with stakeholders' sometimes shared - and sometimes competing - priorities.

In the EIM Entities' presentation on Resource Sufficiency, reliability, efficiency, equitability, and simplicity⁴ are all identified, and BAMx supports continued evaluation of design within this framework.

³ See <http://www.caiso.com/InitiativeDocuments/Presentation-ExtendedDay-AheadMarket-TransmissionProvision-EIMEntities.pdf>, Slide 6.

⁴ See <http://www.caiso.com/InitiativeDocuments/Presentation-ExtendedDay-AheadMarket-ResourceSufficiencyEvaluation-EIMEntities.pdf>, Slide 6. Note that complementing existing processes falls under

Other EDAM Issues, Questions, and Options

- How should EDAM benefits (e.g., more optimal unit commitment and capacity diversity) be identified and shared? Is a methodology that considers Locational Marginal Pricing (LMP) differences across source-sink BAAs appropriate for estimating and allocating these benefits?
- Could parties' decisions about how much transmission to contribute to the EDAM vs use for scheduling at the CAISO interties change the amount and allocation of EDAM benefits or the amount and allocation of congestion revenues across the CAISO interties?
- Could load serving entities within any of the EDAM BAAs pay higher net costs (considering wheeling access charges, congestion revenues, energy and capacity costs, etc.) to serve their load with the EDAM than without it?
- Should there be limits on parties' ability to switch between EDAM vs non-EDAM CAISO DAM participation? EDAM vs EIM participation?
- What should be the EDAM transmission charge and what are implications for an EIM transmission charge?
- CAISO has identified that a BAA can fail a resource sufficiency test in the Day-Ahead timeframe and has identified that virtual supply is inferior to physical supply in terms of contribution to reliability (CAISO's primary objective).⁵
 - CAISO and EIM Entities should weigh the actual realized benefits of virtual bidding against both the actual realized costs to date, and against the potential complexities being introduced through the EDAM and DAME initiatives.
- Will the EDAM introduce rules for bidding, scheduling, and optimization among BAAs that are incompatible with the CAISO's Reliability Capacity product, or otherwise introduce incompatibilities that violate the principle of consistent resource sufficiency testing?
- Can stakeholders and the CAISO construct a methodology to determine success of the EDAM (and interrelated market design changes), accounting for efficiency, equitability, and reliability?
- Finally, BAMx strongly encourages CAISO to implement – as soon as possible - the hybrid TAC structure previously proposed by CAISO in its September 17, 2018, Transmission

both efficiency and simplicity, but BAMx encourages a mutual evaluation of alignment EDAM rules and respective BAA resource planning processes, rather than simply a fitting of EDAM rules to existing processes.

⁵ "The price formation in this option results in different prices between physical supply and virtual supply because virtual supply does not provide reliability capacity which is needed to clear against the net load forecast." See CAISO EDAM Issue Paper (<http://www.caiso.com/InitiativeDocuments/IssuePaper-ExtendedDayAheadMarket.pdf>), pp 17.

Access Charge Structure Enhancements Draft Final Proposal.⁶ The TAC Structure Enhancements Draft Final Proposal resulted from a series of initiatives spanning three years. After three years of effort and a determination by CAISO that it should adjust to a hybrid approach, the initiative was placed on hold to allow development of the EDAM initiative. As CAISO identified in the Draft Final Proposal, the hybrid approach better aligns cost allocation with cost causation. While the hybrid structure may also facilitate the move to EDAM, there is no reason to delay implementation of the improved TAC structure to coincide with EDAM. Nothing identified in the EDAM Issue Paper or recent workshop materials would indicate a need to delay implementation. Further, there may be additional benefits from staging implementation of the hybrid TAC structure first, followed by EDAM, since CAISO will gain experience with calculating the demand and energy-based rates and applying them against billing determinants in settlements prior to the potentially massive changes to the DAM design resulting from DAME and EDAM.

If you have any questions concerning these comments, please contact Paulo Apolinario (papolinario@svpower.com or (408) 615-6630.

⁶ <http://www.caiso.com/InitiativeDocuments/DraftFinalProposal-TransmissionAccessChargeStructureEnhancements.pdf>