California ISO

Stakeholder Comments Template

Extended Day-Ahead Market Issue Paper

Submitted by	Organization	Date Submitted
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I. NW Public Power Day-Ahead Market Design Interests

The Public Generating Pool (PGP[1]) appreciates the opportunity to submit comments on the Extended Day-Ahead Market (EDAM) issue paper that was posted on October 10, 2019. The initiation of the EDAM stakeholder initiative is a significant development that, if implemented, will fundamentally change commercial transactions and how load is served in the Western Interconnection for those entities that choose to join EDAM *and* for those that may not. While EIM has already begun a major shift in how entities transact in the real-time market, EIM is limited to intra-hour, 5-minute and 15-minute transactions that encompass a very small percentage of energy traded in the West. EDAM will have an impact on nearly all generation transacted across the West. The majority of generation is committed in the day-ahead timeframe and in the long-run, EDAM will affect prices and liquidity in forward contracting as well.

Given the importance of this market evolution, PGP has partnered with other public power utilities[2] in the Northwest (NW Public Power) to develop common interests on principles and elements that we believe should be applied to any centralized day-ahead market that develops in the Northwest, including EDAM. These interests are not intended to offer support or opposition to any specific new or expanded market proposals but provides NW Public Power's perspectives on market design.

The interests below address market design only. The governance structure of an extended day-ahead market is also of critical importance to PGP and the broader NW Public Power and we understand that proposed changes to EIM governance that will be necessary for EDAM will be developed through the Governance Review Committee process. We will actively engage and provide perspectives and comment on governance-related changes as part of that separate initiative process.

[1] PGP represents eleven consumer-owned utilities in Washington and Oregon that own almost 8,000 MW of generation, approximately 7,000 MW of which is hydro and over 97% of which is carbon free. Four of the PGP members operate their own balancing authority areas (BAAs), while the remaining members have service territories within the Bonneville Power Administration's (BPA) BAA. As a group, PGP members also purchase over 45 percent of BPA's preference power.

[2] The NW Public Power Interests for a Day-Ahead Market (insert link) were developed by PGP, the Public Power Council and Northwest Requirements Utilities.

NW Public Power Market Design Interests

Fair Compensation for Services and Transparent Price Formation

- The market solution co-optimizes the procurement of energy, capacity, flexibility, and ancillary services (if included in design) needed to meet reliability needs through the market and minimizes the need for out of market actions
- Bidding rules allow resources to reflect true costs of dispatching units, including opportunity costs
- Market rules send proper price signals for the attributes and/or products required to meet reliability needs
- Products and price formation recognize and appropriately compensate resources for the attributes supplied to the market
- Market prices accurately reflect shortages and scarcity conditions

Resource Sufficiency Promotes Reliability, Ensures Equity and is Applied Consistently

- Requirements ensure sufficient resources and flexibility to meet a wide range of potential real-time conditions with a high level of confidence to ensure reliable operation of the system
- Counting rules appropriately account for the capacity, energy, and flexibility that different resources contribute towards meeting requirements
- Requirements assure resources are deliverable to load
- Effectively prevents entities from leaning on the market for energy, capacity, and flexibility needs
- Enforcement measures do not allow Resource Sufficiency compliance to be a discretionary economic alternative
- Requirements and counting rules are applied consistently to all entities subject to the test and avoid double-counting of transactions
- Timelines allow continued participation in bilateral markets

External Resources are able to participate and are treated comparably

- Market rules provide external resources the ability to economically participate in the day-ahead market and be treated comparably to internal resources

Transmission Framework meets Open Access Principles and Minimizes Cost Shifts

- Open access and reservation priority principles are upheld
- Transmission framework minimizes cost shifts to load and results in no adverse impacts to existing transmission rights

- Transmission Owners and Service Providers receive sufficient compensation to cover the costs of existing transmission and those costs are appropriately assigned to users based on cost causation.
- Transmission rights holders are ensured congestion/financial rights to mitigate congestion costs

Market Power Mitigation recognizes the unique attributes of resources

- Mitigation methods accept and provide for the complex and dynamic nature of hydropower planning, operational constraints, and opportunity costs. Therefore, opportunity costs for hydropower should recognize the trade-off between producing energy today instead of producing energy in the future, as well as the opportunity costs of alternative real-time bilateral market transactions
- Market Power Mitigation should only occur where the opportunity to exercise market power exists
- Market Power Mitigation methodology should consider the unique aspects of a voluntary market which includes choices surrounding the nature of a voluntary market (access to other opportunities, opportunity costs, the cost of water in various time increments, etc.)

Greenhouse Gas Accounting Accurately accounts GHG attributes of resources

- Accurately accounts for and values the GHG attribution of resources being dispatched to serve load in a carbon-regulated state and credits those resources accordingly
- Methodology is compatible with carbon and clean energy legislation of all states that impact day-ahead market participants

Respects Existing Laws, Statutory Obligations, Regulations, and Local Regulatory Authorities

- Organized markets with different kinds of participants (e.g. IOUs, POUs, PMAs, etc.) must respect existing laws, statutory obligations, regulation, and local regulatory authorities
- Resource Sufficiency requirements do not supplant local regulatory decision authority for resource procurement

Proper Market Function is Assured

- An independent market expert provides routine review and reporting, evaluating the market design and function relative to fair and competitive market principles
- Mechanisms are in place to signal when the resource sufficiency framework is not functioning properly
- Mechanisms are in place to evaluate proper price formation relative to costs of energy, capacity and flexibility
- Mechanisms are in place to assure proper GHG accounting and compensation

II. Stakeholder Process

PGP appreciates CAISO providing an initial proposed timeline for the EDAM stakeholder process. Given the magnitude of this this initiative and the wide-spread impacts of its potential implementation, PGP requests CAISO consider the following modifications to the EDAM stakeholder process and schedule:

- Include significantly more time in-between workshops/proposals and comment deadlines to allow for sufficient coordination and collaboration amongst stakeholders; at a minimum 30 days between workshops and stakeholder comment submission deadline and 60 days between proposals and stakeholder comment submission deadline.
- Be open and responsive to the need for additional workshops, proposal revisions, etc. beyond what is in the current schedule
- Add workshops for the other topics included in the EDAM Issue Paper that are not included in the schedule (e.g., external resource participation, convergence bidding, etc.)
- Allot more time in the workshops and stakeholder meetings for different stakeholders to present proposed solutions and provide their perspectives on issues.
- Hold workshops and stakeholder meetings in different locations around the West to allow for broader stakeholder participation.
- Move the Business Practice Manual and Tariff development needed for EDAM to after the EIM Governing Body and ISO Board approves policy proposals.

The market design and policy considerations needed for EDAM are complex and will impose significant changes for CAISO and for market participants. PGP requests the overall timeline for the EDAM initiative be significantly extended to provide ample time for robust market design discussions and consideration of multiple alternatives.

III. Market Design and Policy Considerations

Below are PGP's responses to the market design and policy considerations discussed in the EDAM Issue Paper.

1. Transmission Provision

The benefits that can be achieved through EDAM are highly dependent on the availability of transmission for EDAM transfers. Transmission availability may be complicated by the fact that EDAM is a voluntary day-ahead market where transmission service providers (TSPs) will maintain their functional roles and must comply with Open Access Transmission Tariff requirements that include providing transmission service on a first come, first served basis and offering the same level of transmission service at the same rate.

Given that EDAM entities would rely on EDAM transactions to meet load in their BAA, it is essential that energy is deliverable with a relatively high degree of certainty. In terms of the transmission underlying energy transactions, this may suggest that transmission made available for energy transfers in EDAM be of a high curtailment priority, ideally curtailment priority 7-F with consideration of allowing curtailment priority 6-NN or 6-

CF. PGP is open to other solutions that minimize the risk transmission being curtailed.

The EDAM Issue Paper offers several potential mechanisms for making transmission available to support EDAM energy transfers between BAAs. To the extent such a practice is allowed under the TSP's tariff, any option that involves a transmission rights holder making its transmission rights available to EDAM appears workable and would minimize the risk of shifting costs to load or resulting in adverse impacts to other existing transmission rights, as the transmission rights holder has reserved the transmission in advance and is paying for the transmission service.

It is less clear how a TSP would set aside or make transmission available to EDAM. Under this option, some questions that would need to be addressed include:

- How would a TSP determine what inventory to make available to EDAM? What would be the curtailment priority? In what timeframe is it made available? And how does the TSP honor open access and reservation priority principles when making that transmission available?
- How would the usage rate for EDAM transmission be determined? Would the transmission be hourly firm? Would the rate be determined by the individual TSP or would EDAM require a uniform transmission rate across the EDAM footprint?
- While not included in the issue paper, there have been suggestions made about making Transmission Reliability Margin (TRM) or Capacity Benefit Margin (CBM) available to EDAM. If TRM or CBM would be made available to EDAM, what would be the justification for releasing those margins to be used for EDAM rather than making them available for bilateral transactions? What curtailment priority would the release of TRM and/or CBM inventory be?

PGP acknowledges that the provision of BPA's transmission may pose additional challenges and complexities that may not be shared amongst all transmission providers in the EDAM footprint. And as BPA's transmission footprint expands throughout the majority of the Pacific Northwest, BPA's involvement early in this process is vital to the success of any transmission provision solution proposed in this process.

It is important to PGP members when considering an EDAM transmission framework is that the cost of transmission is paid for by the users of that transmission. In other words, the TSP should be able to recover the costs of its existing transmission and appropriately assign those costs to users based on cost causation. To the extent a mechanism is developed for a TSP to make transmission available for EDAM energy transfers, the usage rate for that transmission should be determined in such a way that minimizes cost shifts to load and results in no adverse impacts to existing transmission rights.

2. Distribution of congestion rents

PGP supports the exploration of extending appropriate elements of the Congestion Revenue Rights (CRRs) market design to EDAM. To the extent the allocation of CRRs are used to compensate transmission customers for making transmission available to EDAM, consideration should be given to allocation CRRs directly to such transmission customers and not only to EDAM entities as suggested in the issue paper. PGP requests CAISO start this discussion with a workshop explaining how CRRs function in the CAISO market today and how it might work in a voluntary market framework where TSPs don't use a transmission access charge to recover the costs of their transmission.

3. Resource sufficiency evaluation (including forward planning and procurement; trading imbalance reserves and capacity; EIM resource sufficiency evaluation)

In a voluntary day-ahead market, a robust and well-functioning resource sufficiency framework is key to ensuring entities do not lean on the market for their energy, capacity, and flexibility needs. A robust framework would ensure entities demonstrate sufficient resources, including capacity and flexibility, to meet a wide range of potential real-time conditions with a high-level of confidence. And the counting rules should appropriately reflect the capacity and flexibility values that each resource contributes towards meeting resource sufficiency requirements and take into account the unique characteristics and availability of each resource type.

A day-ahead resource sufficiency evaluation should also incorporate a deliverability test that identifies areas of congestion and where resources may not be deliverable to load. Given the low rate of deliverability for some of the current products in the EIM, such as the flexible ramping product, it is important that deliverability be a key focus area when considering requirements for a day-ahead resource sufficiency test.

The procurement target for imbalance reserves has been analyzed and discussed up to this point solely for the CAISO BAA as part of CAISO's Day-Ahead Market Enhancements. Now that the EDAM stakeholder process has been initiated, the conversation must be expanded to consider the application of imbalance reserves to BAAs outside of CAISO. We expect that the procurement target for imbalance reserves sets the standard day-ahead resource sufficiency flexible ramping capacity targets for each BAA and would also be used to calculate a diversity credit. PGP requests that these requirements consider the level of imbalance reserves BAAs outside of CAISO are holding out today, how other BAAs calculate and determine their imbalance reserves, and what procurement target is workable for those external BAAs.

The provision of a diversity credit as part of the day-ahead resource sufficiency test can be a big benefit provided for EDAM. To realize that benefit and ensure an EDAM Entity is not taking on increased reliability risk in doing so, it is of critical importance that EDAM transactions counted towards meeting day-ahead resource sufficiency requirements are firm and can be relied upon with a high degree of certainty.

Likewise, it is essential that the resource sufficiency test is functioning properly and

effectively prevents leaning. The test should ensure that there is no double-counting or under-counting of resources and that there are no inappropriate credits provided to entities. Additionally there should be mechanisms in place to signal when the resource sufficiency test is not functioning appropriately, either falsely failing entities when they are in fact resource sufficient or falsely passing entities when in fact they are resource insufficient. Allowing a BAA to incorrectly pass the resource sufficiency test and effectively lean on other EDAM Entities is an unacceptable outcome.

Assuming the resource sufficiency test is functioning appropriately, compliance with the test should not be a discretionary economic alternative. In other words, the consequence of failure of the test should not be more economically advantageous than it is to procure the energy, capacity, and flexibility needed to pass the test.

PGP supports the concept of allowing parties to bilaterally trade bid range prior to the operating month, day, and/or, hour. Deliverability of imbalance reserves and traded bid range will need to be considered.

Finally, noting the statement on page 10 in the EDAM Issue Paper that "Under the EDAM, it may be necessary to change the resource sufficiency evaluation to only count resources whose capacity is contracted to an EDAM balancing authority area on a forward basis," PGP requests clarification that capacity contracted to LSEs *within an EDAM balancing authority area,* and not only capacity contracted to EDAM entities, should be counted towards the resource sufficiency evaluation.

4. Ancillary services

PGP recognizes there may be efficiency benefits to co-optimizing energy and ancillary services and supports the exploration of ancillary services procurement through the EDAM, including the ability to trade ancillary services between BAAs. As is the case for other products, deliverability of ancillary services must be considered. Any procurement of ancillary services should be co-optimized with energy, flexibility, and capacity to ensure a robust and efficient market solution. And the ability for external resources to provide ancillary services to EDAM Entities should be explored.

For entities in the Northwest, the deployment of ancillary services requires dynamic transfer capability over Bonneville's transmission system. It is important that in the early part of this initiative, ample discussions are had with BPA to understand the arrangements that may be needed over BPA's transmission system to enable deployment of ancillary services.

5. Modeling of non-EDAM imports and exports

The modeling of non-EDAM imports and exports will have a profound impact on scheduling and pricing. The impacts of using "scheduling hubs" as representations of import and export sources and sinks in non-EDAM BAAs should be fully examined and

minimize adverse impacts to commercial transactions.

6. External participation

PGP[3] supports the exploration of external resource participation in EDAM as it provides numerous benefits:

- The ability for an EDAM Entity to fully meet its resource sufficiency obligations, such as procurement of sufficient imbalance reserves, may require resources to be procured that are able and/or required to submit economic bids under a must offer obligation. Allowing external resources to economically bid into EDAM enables increased bilateral trading opportunities for an EDAM Entity and enhances its ability to be resource sufficient.
- Some entities interested in joining EDAM may not be able to do so as part of the EDAM initial onboarding scheduled for Spring of 2022. External resource participation will allow those entities to continue to trade with EDAM counterparties and serve as an important bridge to full participation in EDAM.
- External resource participation increases liquidity and results in more efficient and effective dispatch of resources as it reduces self-schedules and allows CAISO to dispatch resources based on least-cost dispatch.
- External resource participation allows more supply to be made available to the market, reducing the risk of market power mitigation concerns.

To realize all of these benefits, the evaluation of participation of external resources should also consider rules for all external resources, not just those bilaterally contracted for by an EDAM BAA to meet its resource sufficiency requirements. Additionally, the interplay between external resources economically bidding in the day-ahead market and what requirements may be needed for participation in the real-time market will need to be examined.

7. Accounting for greenhouse gas costs

When considering a solution for the accounting of GHG costs in EDAM, two separate issues must be addressed: (a) The shortcomings of the current EIM GHG accounting approach and (b) incorporating multiple state carbon legislation into the solution.

A. Shortcomings of the current EIM GHG accounting approach

The current EIM GHG accounting approach results in several unintended consequences:

[3] Tacoma Power is still reviewing and considering the section entitled "External Participation" and for this reason, does not join that portion of these comments.

- Results in the wrong dispatch and incorrect GHG accounting as it allows higher emitting resources outside of California to make new sales into California and those resources are dispatched instead of clean resources. The methodology also results in more efficient California thermal resources being displaced by higher cost/higher emitting external thermal resources.
- "Deemed" deliveries mask emissions deliveries. Incremental emissions incurred outside of California ("secondary leakage") are not addressed by CARB's program.
- The GHG shadow price is artificially suppressed as true costs of external resources being imported into California are not captured.

While the enhancements CAISO put in place in November 2018 reduce the magnitude of inappropriate "deemed" deliveries to California, the shortcomings of the methodology still exist and need to be addressed as part of this initiative. And whatever solution is determined for EDAM should also be adopted for the EIM.

PGP requests that CAISO begin this initiative with a workshop that provides an overview of the current GHG accounting approach and shortcomings that exist in the methodology today and solicit stakeholder ideas and proposals to address these shortcomings. This feedback could be then incorporated into a straw proposal.

B. Multi-state Carbon Legislation

The carbon-reduction and/or clean energy related legislation and compliance requirements of all states that impact day-ahead market participants will need to be considered as part of the GHG accounting solution. PGP's interest is that the GHG accounting methodology for EDAM accurately account and provide appropriate compensation for the GHG attribution of resources being dispatched to serve load in any state with carbon or clean energy regulations. This initiative will require increased coordination and collaboration with impacted entities, regulatory bodies, and stakeholders in those other states to ensure solutions are workable and compatible.

8. Convergence bidding

PGP would like to better understand the implications of convergence bidding in EDAM. PGP requests that CAISO begin this initiative with a thorough description of convergence bidding in the CAISO markets today and what the benefits and drawbacks of enabling convergence bidding in EDAM would be.

9. Price formation

PGP is pleased to see that the discussion of the Financial + Forecast option of the market formulation will move forward into a straw proposal as part of the Day-Ahead Market

Enhancements. The co-optimization of reliability capacity with other products is a necessary foundational step towards extending CAISO's day-ahead market to EIM Entities.

PGP supports the exploration of fast-start pricing and scarcity pricing as part of this initiative. PGP requests that CAISO consider price formation practices of other RTOs/ISOs in its evaluation and consider how CAISO's price formation practices may need to be changed to conform to industry best practices.

10. EDAM administrative fee

No comments.

11. Review of day-ahead settlement charge codes

No comments.

12. Miscellaneous (inter SC trades)

No comments.

13. EIM Governing Body classification

Given that EDAM is fundamentally about expanding the existing EIM to include an opportunity for day-ahead participation, PGP strongly agrees that the EIM Governing Body must participate in the approval of all aspects of the proposed EDAM market design. PGP supports the "joint authority" construct proposed by CAISO that would require all aspects of the proposed EDAM market design to be brought to both the EIM Governing Body and the CAISO Board of Governors for approval and that any tariff amendments needed to implement EDAM move forward *only if* both the EIM Governing Body and the CAISO Board of Governors have approved the proposed market design.

14. Additional items to be added to scope:

PGP requests that a review of market power mitigation in the day-ahead timeframe be included within the scope of the EDAM stakeholder initiative.